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Final Remedial Investigation Report

Peterson Puritan Superfund Site – Operable Unit 2

Cumberland and Lincoln, Rhode Island

August 2012

Disclaimer: This document was prepared by the Potentially Responsible Parties Group under a government Administrative Consent Order. The opinions, findings, and conclusions expressed are those of the author(s) and not those of the United States Environmental Protection Agency or the Rhode Island Department of Environmental Management.

SDMS Doc ID 522047

GROUND WATER CONSULTANTS, INC.

September 21, 2012

Larry Brill
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USEPA New England, Region 1
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Subject: Peterson/Puritan, Inc. Superfund Site – Operable Unit 2,
CERCLA Docket No. 1-87-1064
Final Remedial Investigation Report

Dear Mr. Brill:

Please find enclosed the final *Remedial Investigation Report* (RI Report) incorporating the final comments for the Peterson/Puritan, Inc. Superfund Site – Operable Unit 2 located in the towns of Cumberland and Lincoln, Rhode Island.

If you have any questions, please feel free to contact me.

Sincerely,

David J. Lang /meh

David J. Lang, LSP
Ground Water Consultants, Inc.

DJL/meh
No Enclosure (cover letter only)

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Table of Contents

Executive Summary xvi

Acronyms and Abbreviations xxix

1. Introduction 1

1.1 Purpose 2

1.2 Report Organization 3

1.3 Site Background 4

1.3.1 Site Location and Description 5

1.3.2 Site History 7

1.3.2.1 Regulatory History of the Blackstone River 7

1.3.2.2 History of Surrounding Area 11

1.3.2.3 History of Operable Unit 2 15

1.3.2.4 Investigation History at Operable Unit 2 18

2. Description of Field Investigations 21

2.1 Surveys 21

2.1.1 Base Map and Horizontal Locations 21

2.1.2 Vertical Surveys 21

2.1.3 Bathymetric Survey 23

2.1.4 Electromagnetic Induction Surveys 24

2.1.5 Electrical Conductivity/Membrane Interface Probe Survey 25

2.1.6 Geophysical Survey 26

2.2 Meteorological Investigation 27

2.3 Soil Investigation 28

2.3.1 Test Trench Excavation and Soil Sampling 28

2.3.1.1 Phase 1A and 1AExp Test Pits 28

2.3.1.2 Phase 1B Test Pits 30

2.3.2 Soil Boring and Surface and Subsurface Soil Sampling 32

2.3.2.1 Phases 1A and 1AExp 32

2.3.2.2 Phase 1B Soils 35

2.3.2.3 Supplemental Unnamed Island Investigation 36

2.3.3 Geotechnical Soil Sampling 36

2.3.3.1 Phases 1A and 1AExp Geotechnical 36

2.3.3.2 Phase 1B Geotechnical 37

2.4 Groundwater Investigation 37

2.4.1 Phases 1A and 1AExp 37

2.4.2 Concurrent Non-Remedial Investigations 40

2.4.3 Phase 1B Groundwater 40

2.4.3.1 Well Installation and Development 40

2.4.3.2 Hydraulic Conductivity Testing 46

2.4.3.3 Water-Level Surveys 46

2.4.3.4 Groundwater Sampling 48

2.4.4 2009 Unnamed Island Supplemental Investigation Groundwater Sampling 50

2.4.5 Private Well Sampling 51

2.5 Sediment Investigation 51

2.5.1 Phases 1A and 1AExp Sediment 51

2.5.2 Phase 1B Sediment 53

2.5.2.1 Sediment Probing 54

2.5.2.2 Sediment Sampling 54

2.6 Surface-Water Investigation 56

2.6.1 Phases 1A and 1AExp Surface Water 57

2.6.1.1 Surface-Water Flow Survey 57

2.6.1.2 Surface-Water Quality Sampling 58

2.6.2 Phase 1B Surface-Water Quality 60

2.7 J.M. Mills Landfill Air Investigation 61

2.8 Ecological Investigation 61

2.8.1 Fish Data Investigation 62

2.8.1.1 Fish Community Survey 62

2.8.1.2 Fish Tissue Sampling 63

2.8.2 Benthic Investigation 65

2.8.3 Habitat Assessment Investigation 67

2.8.3.1 Habitat Delineation and Cover Type Mapping 67

2.8.3.2 Threatened/Endangered Species and Critical Habitats Survey 68

2.8.3.3 Wildlife and Vegetative Surveys 69

2.8.4 Vernal Pool Investigation 70

3. Physical Characteristics of the Study Area 71

3.1 Surface Features and Land Use 71

3.1.1 Surface Topography 71

3.1.2 Surface-Water Bodies and Wetlands 72

3.1.3 Land Use and Zoning 73

3.2 Geology 74

3.2.1 Regional Geology 74

3.2.2 Study Area Geology 74

3.2.2.1 Unconsolidated Deposits 74

3.2.2.2 Blackstone River Sediments 76

3.2.2.3 Bedrock 76

3.3 Groundwater Hydrology 77

3.3.1 Regional Groundwater Hydrology 77

3.3.2 Site Groundwater Hydrology 78

3.3.2.1 Hydrostratigraphic Units 78

3.3.2.2 Groundwater Movement 79

3.3.2.3 Implications for Groundwater Contaminant Migration 84

3.4 Surface-Water Hydrology 85

3.4.1 Blackstone River 85

3.4.2 Drainage Patterns 86

3.4.3 Hydraulic Connection between J.M. Mills Landfill and Wetland Areas 88

3.4.4 Surface-Water Classification and Use 89

3.5 Wetlands and Floodplains 90

3.6 Climate and Meteorology 91

4. Nature and Extent of Contamination 92

4.1 Data Reporting and Data Quality Objectives 92

4.2 Project Action Limits 94

4.3 Groundwater 95

4.3.1 Summary of Groundwater Investigations 96

4.3.2 Summary of Groundwater Sampling Results 97

4.3.2.1 2003 Sampling Event 99

4.3.2.2 2004 Sampling Event 101

4.3.2.3 2005 Sampling Event 102

4.3.2.4 2007 Sampling Event 105

4.3.2.5 2009 Unnamed Island Sampling Event 106

4.4 Soil 106

4.4.1 Summary of Soil Sampling Data 107

4.4.2 Mackland Farm 108

4.4.3 J.M. Mills Landfill 109

4.4.3.1 Surface Soil Samples 109

4.4.3.2 Subsurface Soil Samples 111

4.4.4 Unnamed Island 112

4.4.4.1 Surface Soil Results 112

4.4.4.2 Subsurface Soil Results 113

4.4.5 Nunes Parcel (Former Transfer Station) 115

4.4.5.1 Surface Soil Samples 115

4.4.5.2 Subsurface Soil Samples 116

4.4.6 Debris Fields 1 through 3 118

4.4.7 Quinnville Well Field 119

4.4.8 Wetlands A through D 121

4.4.9 Blackstone River Southern Bank 121

4.5 Sediment 123

4.5.1 Summary of Sediment Sample Results 123

4.5.2 Upstream of Site 124

4.5.3 Sampling Adjacent to the J.M. Mills Landfill 125

4.5.4 Unnamed Island 127

4.5.4.1 Pond A 127

4.5.4.2 Pond D 128

4.5.4.3 Pond E 129

4.5.4.4 Dry Ponds 130

4.5.4.5 TCO, TOC, pH, and Grain Size Samples 130

4.5.5 Nunes Parcel 130

4.5.6 Wetland 131

4.5.6.1 Wetland A 131

4.5.6.2 Wetland B 132

4.5.6.3 Wetland C 132

4.5.6.4 Wetland D 133

4.5.6.5 TCO, TOC, pH, and Grain Size Samples 134

4.5.7 Blackstone River 134

4.5.7.1 Blackstone River Sediments 134

4.5.7.2 Pond F Sediment Samples 136

4.5.7.3 Pond N 137

4.5.7.4 TCO, TOC, pH, and Grain Size Samples 137

4.6 Surface Water 137

4.6.1 Summary of Surface-Water Sample Results 138

4.6.2 Upstream of Site 138

4.6.3 Blackstone River 139

4.6.4 Ponds 142

4.6.4.1 Pond A 142

4.6.4.2 Pond C 143

4.6.4.3 Pond D 144

4.6.4.4 Pond E 144

4.6.4.5 Pond F 145

4.6.4.6 Pond I 145

4.6.4.7 Pond N 146

4.6.4.8 Pond P 147

4.6.5 Wetlands 147

4.6.5.1 Wetland A 147

4.6.5.2 Wetland B 147

4.6.5.3 Wetland C 148

4.6.5.4 Wetland D 149

4.7 Fish Tissue 149

4.7.1 Blackstone River Area 1 150

4.7.1.1 Calculated Whole Body Analysis 150

4.7.1.2 Composite Whole Body Analysis 151

4.7.1.3 Fillet Analysis 152

4.7.2 Blackstone River Area 2 153

4.7.2.1 Calculated Whole Body Analysis 153

4.7.2.2 Composite Whole Body Analysis 154

4.7.2.3 Fillet Analysis 155

4.7.3 Blackstone River Area 3 156

4.7.3.1 Calculated Whole Body Analysis 157

4.7.3.2 Composite Whole Body Analysis 158

4.7.3.3 Fillet Analysis 158

4.7.4 Pond A (P-1) 159

4.7.4.1 Calculated Whole Body Analysis 160

4.7.4.2 Composite Whole Body Analysis 161

4.7.4.3 Fillet Analysis 162

4.7.5 Pond F (P-2) 163

4.7.5.1 Calculated Whole Body Analysis 163

4.7.5.2 Composite Whole Body Analysis 164

4.7.5.3 Fillet Analysis 165

4.7.6 P-6 Area 166

4.7.6.1 Calculated Whole Body Analysis 167

4.7.6.2 Composite Whole Body Analysis 167

4.7.6.3 Fillet Analysis 168

4.8 Air Data 169

4.9 Leachate Data 170

4.9.1 Adjacent to the J.M. Mills Landfill 170

4.9.2 Unnamed Island 172

4.10 Biomonitoring Results 172

4.10.1 Sediment Probing 173

4.10.2 Wetlands 175

4.10.3 Vernal Pools 175

4.10.4 Wildlife and Vegetation Habitat 176

4.10.5 Benthic Community and Fish Survey 179

4.11 Physical Characterization of Potential Source Areas 181

4.11.1 J.M. Mills Landfill 181

4.11.1.1 Extent and Volume of Waste 182

4.11.1.2 Slope Stability 182

4.11.2 Unnamed Island 183

4.11.3 Nunes Parcel 184

4.11.4 Debris Fields 1 through 3 188

4.11.5 Debris Field 4 189

4.11.6 Summary 189

5. Applicable or Relevant and Appropriate Requirements 190

5.1 Chemical-Specific ARARs 191

5.2 Location-Specific ARARs 191

5.3 Action-Specific ARARs 191

5.4 Potential Waivers to ARARs 191

6. Baseline Human Health Risk Assessment Summary 193

7. Baseline Ecological Risk Assessment Summary 196

8. Site Conceptual Model 198

8.1 Purpose and Approach 198

8.2 Identification of Potential Sources of Contamination 199

8.3 Nature and Extent of Contamination 203

8.3.1 Groundwater Medium 203

8.3.2 Soil Medium 204

8.3.3 Sediment Medium 205

8.3.4 Surface-Water Medium 205

8.3.5 Fish Tissue 206

8.3.6 Air Medium 207

8.3.7 Leachate Medium 207

8.3.8 Waste Medium 208

8.4 Site-Specific Fate and Transport Mechanisms 209

8.5 Risk Assessment Findings 212

9. Conclusions and Recommendations 213

9.1 Site Characterization Conclusions 213

9.2 Quality and Completeness of Existing Data 215

10. References 216

Tables

1-1 Summary of Investigation Activities

2-1 Summary of Well Construction Information

2-2 Summary of Vertical Profiling Data

2-3 Sediment Probing Results

2-4 Fish Community Survey: Species Abundance

2-5 Fish Community Survey: Population Characteristics

2-6 Resident Fish Sampling: Fish Samples Collected for Analysis

2-7 Benthic Community: Water Quality Data

2-8 Benthic Community: Species Abundance

2-9 Benthic Toxicity Tests: Survival Growth Data

2-10 Wildlife Observations by Habitat

2-11 Vegetation Observations by Habitat

2-12 Rapid Bioassessment Protocol Habitat Assessment Results

3-1 Hydraulic Conductivity Summary

3-2 Groundwater Elevation Data

3-3 Vertical Hydraulic Gradients

4-1 Summary of Wells Sampled During the Remedial Investigation

4-2 Groundwater Results for VOCs (ug/L)

4-3 Groundwater Results for VOC TICs (ug/L)

4-4 Groundwater Results for PAHs (ug/L)

4-5 Groundwater Results for Non-PAH SVOCs (ug/L)

4-6 Groundwater Results for SVOC TICs (ug/L)

4-7 Groundwater Results for PCBs and Pesticides (ug/L)

4-8 Groundwater Results for Inorganics

4-9 Groundwater Results for Water Parameters

4-11 Soil Results for VOCs (ug/kg dry wt)

4-12 Soil Results for VOC TICs (ug/kg dry wt)

4-13 Soil Results for PAHs (ug/kg dry wt)

4-14 Soil Results for Non-PAH SVOCs (ug/kg dry wt)

4-15 Soil Results for SVOC TICs (ug/kg dry wt)

4-16 Soil Results for PCBs and Pesticides (ug/kg dry wt)

4-17 Soil Results for Inorganics (mg/kg dry wt)

4-18 Soil Results for PCDDs and PCDFs (ng/kg dry wt)

4-19 Soil Results for Physical Parameters

4-21 Sediment Results for VOCs (ug/kg dry wt)

4-22 Sediment Results for VOC TICs (ug/kg dry wt)

4-23 Sediment Results for PAHs (ug/kg dry wt)

4-24 Sediment Results for Non-PAH SVOCs (ug/kg dry wt)

4-25 Sediment Results for SVOC TICs (ug/kg dry wt)

4-26 Sediment Results for PCBs and Pesticides (ug/kg dry wt)

4-27 Sediment Results for Inorganics (mg/kg dry wt)

4-28 Sediment Results for AVS/SEM and TOC and Grain Size

4-29 Sediment Results for Parameters

4-30 Surface-Water Results for VOCs

4-31 Surface-Water Results for VOC TICs

4-32 Surface-Water Results for PAHs

4-33 Surface-Water Results for SVOCs

4-34 Surface-Water Results for SVOC TICs

4-35 Surface-Water Results for PCBs and Pesticides

4-36 Surface-Water Results for Inorganics

4-37 Surface-Water Results for Miscellaneous Parameters

4-38 Results for PAHs in Fish Fillet Samples (ug/kg)

4-39 Results for PAHs in Fish Whole Body Samples (ug/kg)

4-40 Results for SVOCs in Fish Fillet Samples (ug/kg)

4-41 Results for SVOCs in Fish Whole Body Samples (ug/kg)

4-42 Results for PCBs and Pesticides in Fish Fillet Samples (ug/kg)

4-43 Results for PCBs and Pesticides in Fish Whole Body Samples (ug/kg)

4-44 Results for Inorganics in Fish Fillet Samples (mg/kg)

4-45 Results for Inorganics in Fish Whole Body Samples (mg/kg)

4-46 Results for PAHs in Fish Carcass Samples (ug/kg wet wt)

4-47 Results for SVOCs in Fish Carcass Samples (ug/kg wet wt)

4-48 Results for PCB Homologs and Pesticides in Fish Carcass Samples (ug/kg wet wt)

4-49 Results for Inorganics in Fish Carcass Samples (mg/kg wet wt)

4-50 Air Results for All Parameters (ppm_v)

4-51 Grab Water Results for VOCs

4-52 Grab Water Results for VOC TICs

4-53 Grab Water Results for PAHs

4-54 Grab Water Results for SVOCs

4-55 Grab Water Results for SVOC TICs

4-56 Grab Water Results for PCBs and Pesticides

4-57 Grab Water Results for Metals and Cyanide

4-58 Grab Water Results for Water Parameters

4-59 Summary of Waste Inventory at the Nunes Parcel – November 2006

5-1 Chemical-Specific ARARs

5-2 Location-Specific ARARs

5-3 Action-Specific ARARs

Figures

1-1 Site Location Map

1-2 Site Layout

1-3 Sub Area Definition

2-1 Monitoring Wells, Piezometer and Staff Gauges

2-1a Fill Delineation

2-2 Soil Sample Locations

2-2a Test Trench and Associated Soil and Grab Water Sample Locations

2-3 Nunes Parcel Soil Sampling – November 2006

2-4 Sediment Sample Locations

2-5 Sediment Probing Transects

2-6 Surface-Water Sample Locations

2-7 Fish Community Survey and Fish Tissue Sample Locations

2-8 Habitat Characterization Areas

3-1 Geologic Cross Section Locator Map

3-2 Cross-Section A-A'

3-3 Cross-Section F-F'

3-4 Cross-Section D-D'

3-5 Bedrock Elevation Contour Map

3-6 Groundwater Contour Map

3-7 Flow Net – Profile A-A'

3-8 Flow Net – Profile C-C'

4-1 Maximum Groundwater VOC Results (µg/L) 2003-2009

4-2 Maximum Groundwater SVOC Results (µg/L) 2003-2009

4-3 Maximum Groundwater Metals Results (µg/L) 2003-2009

4-4 Surface Soil Nature and Extent of Contamination Select PAHs (ug/kg)

4-5 Surface Soil Nature and Extent of Contamination Select SVOCs, Pesticides, and PCBs (µg/kg)

4-6 Surface Soil Nature and Extent of Contamination Select Metals (mg/kg)

4-7 Subsurface Soil Nature and Extent of Contamination Select PAHs (µg/kg)

4-8 Subsurface Soil Nature and Extent of Contamination Select SVOCs, Pesticides, and PCBs (µg/kg)

4-9 Subsurface Soil Nature and Extent of Contamination Select Metals (mg/kg)

4-10 Sediment Screening Criteria Exceedances - Acetone (ug/kg)

4-11 Sediment Screening Criteria Exceedances - Acetophenone (ug/kg)

4-12 Sediment Screening Criteria Exceedances - Anthracene (ug/kg)

4-13 Sediment Screening Criteria Exceedances - Aroclor-1254 (ug/kg)

4-14 Sediment Screening Criteria Exceedances - Aroclor-1260 (ug/kg)

4-15 Sediment Screening Criteria Exceedances - Arsenic (mg/kg)

4-16 Sediment Screening Criteria Exceedances - Benzo(a)anthracene (ug/kg)

4-17 Sediment Screening Criteria Exceedances - Benzo(a)pyrene (ug/kg)

4-18 Sediment Screening Criteria Exceedances - Benzo(g,h,i)perylene (ug/kg)

4-19 Sediment Screening Criteria Exceedances - Bis(2-ethylhexyl)phthalate (ug/kg)

4-20 Sediment Screening Criteria Exceedances - Cadmium (mg/kg)

4-21 Sediment Screening Criteria Exceedances - Carbon Disulfide (ug/kg)

4-22 Sediment Screening Criteria Exceedances - Chromium (mg/kg)

4-23 Sediment Screening Criteria Exceedances - Copper (mg/kg)

4-24 Sediment Screening Criteria Exceedances - Dibenz(a,h)anthracene (ug/kg)

4-25 Sediment Screening Criteria Exceedances - Dieldrin (ug/kg)

4-26 Sediment Screening Criteria Exceedances - Fluoranthene (ug/kg)

4-27 Sediment Screening Criteria Exceedances - Lead (mg/kg)

4-28 Sediment Screening Criteria Exceedances - Phenanthrene (ug/kg)

4-29 Sediment Screening Criteria Exceedances - Pyrene (ug/kg)

4-30 Sediment Screening Criteria Exceedances - Vanadium (mg/kg)

4-61 Site Overview

Appendices

A Plates (originally prepared by Shield)

B Sample Lists

C Phases 1A/1AExp Geophysical and Bathymetric Surveys

D Phase 1B Geophysical Survey Report (Geophysical Applications)

E Phase 1A Climate Data

F Phase 1B Test Pit Logs (Nunes Parcel)

G Phases 1A/1AExp Monitoring Well Logs

H Phases 1A/1AExp Test Trench and Boring Logs and Phase 1B Well Logs

I Phase 1B and 2009 Unnamed Island Supplemental Sampling Logs

J Combined OU1/OU2 Potentiometric Surface Map

K Benthic Community Species Abundance Report (Normandeau)

L Toxicity Testing Report (Envirosystems)

M Historical Aerial Photographs and USEPA Site Analysis Summary

N Previous or Updated Figures (Cross Sections, Bedrock Surface, Potentiometric Surface Maps, Hydrographs)

O Phase 1A Hydraulic Gradient Calculations

P Hydraulic Conductivity Tests

Q Habitat Characterization Summary

R Vernal Pool Evaluation Memorandum

Z Validation Reports

AA Laboratory Data Reports

BB 2009 USEPA Residential Well Sampling

Executive Summary

Site Background

This *Remedial Investigation Report* (RI Report) documents the results of the remedial investigation (RI) for the Peterson/Puritan, Inc. Superfund Site – Operable Unit 2 (OU2) (United States Environmental Protection Agency [USEPA] ID #RID055176283), located in the towns of Cumberland and Lincoln, Rhode Island (site). This RI Report has been prepared by ARCADIS U.S., Inc. (ARCADIS BBL, formerly known as Blasland, Bouck & Lee, Inc. [BBL]) on behalf of a group of Potentially Responsible Parties (PRP) consisting of KIK Custom Products, Inc. (formerly CCL Custom Manufacturing, Inc. and prior to that Peterson/Puritan, Inc.), Conopco, Inc., d/b/a Unilever (formerly Bestfoods and prior to that CPC International, Inc.), Waste Management of Massachusetts, Inc., Waste Management Disposal Services of Massachusetts, Waste Management of Rhode Island, Inc., and Clean Harbors of Braintree Inc. (collectively referred to as the "Group"). Pursuant to the terms of the amended 1987 Administrative Order on Consent, Comprehensive Environmental Response, Compensation, and Liability Act Docket No. 1-87-1064, the Group agreed to perform and finance the RI and feasibility study (FS) at OU2 of the site.

Based on the current boundaries, OU2 is just over 1-mile-long (5,600 feet) and varies in width from approximately 1,200 to 1,900 feet, which corresponds to a total area of approximately one third of a square mile, or 200 acres. The most significant portion of the OU2 site is the land formerly owned and operated as a landfill by Mr. Joseph Marszalkowski and his agent(s)/associates for the purposes of waste transfer and disposal (referred to as the J.M. Mills Landfill). The land is commonly referred to as the J.M. Mills Landfill, and reportedly accepted wastes from 1954 through the 1980s based on interviews with former employees of J.M. Mills, interviews and depositions of many Goditt & Boyer drivers, Goditt & Boyer documents, and the absence of any J.M. Mills dump tickets after 1982. The USEPA has identified the date of closure of the J.M. Mills Landfill as occurring in 1986. Other specific subareas of the site include the following:

- the associated Debris Fields (DFs), staging areas, and suspected disposal trenches along the bank of the Blackstone River

- the gravel/paved access roads in the immediate vicinity of the site

- the former transfer station properties (now or formerly operated by Nunes Disposal, Inc.) and commonly referred to as the Nunes Parcel (owned by Michael John Realty)

- an Unnamed Island within the Blackstone River

- a series of wetlands to the northeast of the J.M. Mills Landfill and railroad easement (referred to as A through D in this RI Report)

- the former Lenox Street municipal well and the former Quinnville well field (note the latter well is also included in the Operable Unit 1 [OU1] site)

- Pratt Dam/Bikeway

- Providence & Worcester Railroad Company

Nature and Extent of Contamination

While the site has undergone a series of historical investigations, beginning as early as 1980, the majority of the RI work for OU2 has been completed since 2003. This RI Report relies on this most current RI dataset as a means to define the nature and extent of contamination. Since work was started in 2003, the following has been completed at the site:

- Ground surveys to provide for horizontal and vertical control of sampling locations and other key features.

- Bathymetric survey of the Blackstone River, its back channel, and Pond A in 2004 to aid in determining the hydraulic profile and physical characteristics of the Blackstone River.

- Electromagnetic Induction Surveys were completed in 2003 in an effort to map out potential subsurface sources.

- Electrical conductivity/membrane interface probe survey was completed in 2003 to further evaluate levels of volatile organic compounds (VOCs) located downgradient and along the toe of the J.M. Mills Landfill.

- A geophysical survey (seismic refraction and microgravity profiling) was completed in 2005 to evaluate underground features and to help refine the shape and direction of the floor of the bedrock valley below the site.

- Soil investigations were completed from 2003 through 2006 that included an extensive number of test trenches and soil borings with both surface and subsurface soil samples collected.

- Geotechnical soil samples were completed in 2003 to provide for a baseline for general geotechnical characteristics.

- Several phases of groundwater investigations were completed between 2003 and 2006, including installation of numerous monitoring wells and piezometers, permeability testing, water-level monitoring to assess groundwater flow gradients, and direction and comprehensive groundwater monitoring.

- Sediments were sampled through a series of investigations between 2003 and 2005, including a Sediment Quality Triad (SQT) study of aquatic habitats and sediment probing completed in 2005. The SQT consisted of sediment sampling, benthic community sampling, and laboratory toxicity testing. A total of 80 sediment samples were collected at 80 locations, including 15 locations upstream of the site.

- Surface-water samples were collected both in the Blackstone River and throughout some of the more significant water bodies within the site.

- Ecological community sampling were completed, including fish community survey, fish tissue sampling, benthic community survey, habitat delineation and assessment, a wildlife survey, and a Threatened/Endangered Species and Critical Habitats Survey.

- Air medium samples were collected from the current air vents located at the top of the J.M. Mills Landfill.

Groundwater Medium

Groundwater impacts related to the site appear to be relatively limited in extent and well defined. The Phase 1B groundwater investigation in 2005 completed the delineation of chemical constituents detected in the shallow and deep aquifer. The shallow aquifer contains low levels of organic chemicals typical of municipal landfills.

However, there is evidence of attenuation of site-related constituents at depth. Groundwater impacts are confined to the upper 30 feet of the glaciofluvial aquifer beneath OU2 and limited to the area immediately downgradient of the west side of the J.M. Mills Landfill, and to a lesser extent, the area immediately downgradient at the south end of the J.M. Mills Landfill. There were a few detections on the Unnamed Island and at the north end of the Nunes Parcel. The most prevalent VOCs observed in groundwater above the site screening criteria, known as project action levels (PALs), were benzene, chlorobenzene, and 1,4-dichlorobenzene primarily in shallow wells, most notably in wells downgradient of the J.M. Mills Landfill. PALs are not regulatory standards but are used by investigators to determine which chemicals should be evaluated during the risk assessment. Low concentrations of polycyclic aromatic hydrocarbons (PAHs) above screening criteria were also observed in shallow monitoring wells. Polychlorinated biphenyls (PCBs) and pesticides were observed in groundwater at very low levels with only one (out of 95) groundwater sample at GNP-705 exceeding the screening criterion for Aroclor-1254.

For the samples used in the development of the risk assessment, several metals exceeded screening criteria. In addition, upgradient or background groundwater contains levels of some of the inorganics above screening criteria. Reducing conditions that occur in groundwater beneath and near-buried waste tend to solubilize metals; therefore, some of the inorganics levels (most notably arsenic) at the site are probably a result of this condition.

The concentrations of most of the detected constituents were below the regulatory criteria, which are the maximum contaminant levels (MCLs), or Rhode Island groundwater criteria. However, collectively the data lead to the conclusion that groundwater risks at the site are present for future potential drinking water users.

The primary fate of constituents in groundwater is predicted to be a combination of natural attenuation and direct discharge to the Blackstone River, which hydrogeologically serves as a hydraulic discharge boundary in the Blackstone River Valley. The aquifer exhibits strong upward vertical hydraulic gradients toward the Blackstone River, which limits downward migration of contaminants. Furthermore, the aquifer exhibits variable but generally moderate to high hydraulic conductivity values (i.e., ranging from 8 to 4,300 feet per day at monitoring wells adjacent to the J.M. Mills Landfill), which result in moderate to relatively rapid groundwater flow rates and promote dilution and fairly rapid discharge to the Blackstone River.

Soil Medium

A number of constituents, including PAHs (as well as with a few other semivolatile organic compounds [SVOCs]), PCBs, pesticides, and metals were observed in a diverse number of locations across the site at relatively low concentrations; however, a number of the contaminants did exceed screening criteria, as well as Rhode Island Department of Environmental Management (RIDEM) regulatory standards. In addition, PAHs and inorganics were observed at Mackland Farm, in an area originally considered potentially to be "background," where a manufactured gas plant structure potentially containing coal tar was located near the Ashton Dam. VOCs were generally not detected in soil samples and none were observed at significant levels in samples collected near the J.M. Mills Landfill or the Unnamed Island. Concentrations of dioxins/furans were also below their respective screening criteria.

There are a number of locations in floodplain areas that contain concentrations of PCBs, PAHs, pesticides, and some metals; however, in many areas, these constituents are believed to be the result of historical deposition of contaminated material associated with the Blackstone River. This occurrence is observed in the Quinnville well field surface soil samples. There is evidence of elevated levels of lead on the Nunes Parcel near the Pratt Dam. That area is adjacent to an area that was remediated via soil excavation by the Rhode Island Department of Transportation when the bikeway was constructed across the Pratt Dam and down the northern side of the Blackstone River.

Sediment Medium

A broad range of sediment samples were collected from several subareas of the site, including several within the Blackstone River proper adjacent to the site, as well as upstream of the Ashton Dam. A number of detections of a broad suite of constituents, including several VOCs, SVOCs, PCBs, pesticides, and metals, were observed across the site. These detections included elevated concentrations that were also found in upstream sample locations, as well as within the defined site boundary that may indicate contributions from basin-wide sources (historically occurring industrial pollution and stormwater runoff), in addition to those contributions more indicative of disposal practices throughout the site.

Similar distributions of constituents were observed on the Unnamed Island. Some of the ponds on the Unnamed Island are partially submerged during most years as the Blackstone River rises and falls. All are submerged during significant rainfall events

(i.e., 100-year storm), several of which have occurred in the last few years. Therefore, the Unnamed Island ponds, as well as the vernal pools, may serve as "sinks" for particulate matter entrained in the Blackstone River in places where the net effect of the flooding is deposition. These features are immediately adjacent to observed waste deposits co-located on the island, so they are also possible sources of the contaminants in the ponds.

Surface-Water Medium

Generally, VOCs, SVOCs, PAHs, PCBs, pesticides, and metals were rarely detected in surface-water samples. The surface-water data do not suggest ongoing or widespread potential impacts are occurring from OU2 to adjacent surface water or to Wetlands A through D across the railroad tracks to the northeast of the J.M. Mills Landfill.

Concentrations present in upstream locations within the Blackstone River may have the potential to contaminate the areas adjacent to the J.M. Mills Landfill and the Unnamed Island with low concentrations of lead, PAHs, PCBs, and other constituents until such time as the overall water quality of upstream reaches of the Blackstone River improve further. However, overall water quality of the Blackstone River is shown to be improving over time and surface water does not appear to be a significant source for the flux of contaminants at the site.

Fish Tissue

Fish tissue samples were collected from six distinct areas: Blackstone River Area 1 (beginning approximately 1.25 miles upstream of the Ashton Dam and extending for approximately 0.5 mile downstream); Blackstone River Area 2 (beginning at the Ashton Dam and extending approximately 0.65 mile downstream); Blackstone River Area 3 (located within the boundaries of OU2); Pond A (P-1) (located on the Unnamed Island); Pond F (P-2) (located at the southeastern extent of OU2); and P-6, used as a reference pond (located approximately 1.6 miles north west of the Ashton Dam).

Due to the widespread distribution of constituents in all of the subareas, the fish tissue data are discussed in this RI Report by five classes of constituents: PAHs, SVOCs other than PAHs, PCB homologs, pesticides, and metals. In addition, a discussion of the distribution of constituents is also segregated between whole body and fillets, as well as some discussions of the variability of data among different species of fish. In total, there was over 220 discrete fish tissue samples evaluated.

In general, fish throughout the portions of the Blackstone River studied, including portions of the river upstream of OU2, have been impacted by a range of constituents, including the five classes identified above. PCBs, pesticides, and metals were the most common constituents identified above screening criteria. There was no evident pattern of "hot spots" within the Blackstone River. As the home range of fish within a riverine environment is difficult to establish, it is not plausible to accurately predict the residence time for a particular fish species to remain in contact with the site and to estimate uptake of site-specific contaminants. Therefore, with no clear evidence of an increased level of impact near the site and because these contaminants are also known to be potentially available in sediments throughout the Blackstone River basin from past industrial use, the data suggests that the impact observed in fish is more a regional matter of potential concern.

Air Medium

Several VOCs were observed in samples collected from the five air vents at the J.M. Mills Landfill. Most exhibited low levels of certain VOCs, carbon dioxide, and methane; however, more significant levels of these constituents were observed in Vent #5, with a concentration of 59% by weight of methane, which is more typical of gases resulting from active biological degradation of materials in a municipal landfill. The vents at the J.M. Mills Landfill are not representative of ambient air samples at the site; therefore, ambient air concentrations were modeled in the human health risk assessment (HHRA) to assess that specific exposure pathway.

Leachate Medium

A number of grab samples of water from test trenches near the J.M. Mills Landfill that were labeled as leachate samples were collected as part of a previous investigation. However, all of the analyses were completed on non-filtered samples from a non-decontaminated backhoe. This technique is not consistent with *Quality Assurance Project Plan Addendum* (BBL, 2005b) protocols and was not representative of leachate. It was later determined through quality assurance/quality control methodology that those samples do not accurately represent seep leachate conditions because the samples were not collected consistent with methods prescribed by the USEPA. While some seeps have been reported by the USEPA, these seeps were not present when field work was conducted. Therefore, they could not be sampled by the field crews during the RI and remain as a data gap for this RI Report.

Waste Medium

Based on the delineation of waste deposits through the use of intrusive test pitting operations, the volumes of waste for the J.M. Mills Landfill and the Unnamed Island are projected at 2,100,000 cubic yards (cy) and 40,000 cy, respectively. Additionally, there are approximately 21,000 cy of waste covering a broad area of 5.6 acres in the three DFs located adjacent to the J.M. Mills Landfill. The estimated volume of waste material at the Nunes Parcel (transfer station) is approximately 56,000 cy.

At the J.M. Mills Landfill, the waste deposits were extended into the floodplain along the Blackstone River, as well as somewhat to the north between the river and the railroad tracks. While much of the surface cover material at the J.M. Mills Landfill is sparse and thin, the east side of the landfill is currently fenced and the west side is bounded by the river. While the fencing and the river limit general access and there are warning signs alerting members of the public to the presence of hazardous substances, trespassing and vandalism of signs and fencing are ongoing problems. At the Unnamed Island, waste was encountered in two general areas: in the area surrounding Pond E (a smaller waste deposit, including several hundred tires situated between Pond D and the southern and western bank of Pond A) and in an elongated area on the west side of the Unnamed Island, parallel to the back channel of the Blackstone River (a larger waste deposit between the back channel and Ponds A and D).

Summary of Baseline Human Health Risk Assessment

The USEPA revised the HHRA last submitted by the Group in September 2008, issuing a separate revised Baseline Human Health Risk Assessment in April 2009. The conclusions of this report were as follows:

Results of the HHRA indicate that risks/hazards for soil, sediment, surface water, leachate, and/or ambient air for trespassers and recreational users, and soil, shallow groundwater, and outdoor (trench) air for construction workers were generally less than or within the USEPA target levels (i.e., risk range of 1 x 10^{-4} to 1 x 10^{-6} ; hazard index [HI] of 1). The majority of the cancer risks were on the order of 10^{-5} (i.e., above 1 x 10^{-6}).

Non-cancer hazards (expressed as a hazard quotient) for ingestion of potable groundwater by future residents and consumption of fish from the Blackstone River and OU2 ponds were greater than the USEPA target of 1. In addition, risks to

hypothetical future residential receptors from ingestion, dermal contact, and inhalation due to potable use of groundwater were greater than 1 x 10^{-4}, even though some constituents of potential concern (COPCs) contributing to elevated risks/hazards were generally present at concentrations less than their respective drinking water MCLs (e.g., benzene). The major contributors to the groundwater risk and hazard are arsenic, carcinogenic PAHs, 1,4-dioxane, 4-chloroaniline, atrazine, bis(2-ethylhexyl)phthalate, naphthalene, 1,4-dichlorobenzene, chloroform, ethylbenzene, methyl tert-butyl ether, tetrachloroethene, trichloroethene, vinyl chloride, aldrin, dieldrin, PCBs, benzene, aluminum, cadmium, cobalt, iron, manganese, and thallium.

Additionally, risks and hazards to recreational receptors eating resident fish from OU2, BR-1, and BR-2 were greater than 1 x 10^{-4} and target organ HIs of 1. However, the background/reference area pond (P-6) also had target organ hazards greater than 1 and risks in the range of 10^{-5}, which places site risks into a more regional perspective. Based on the statistical evaluation conducted for fish tissue PCB data, concentrations in fish from upstream portions of the Blackstone River are not significantly different from concentrations found in fish from OU2. Further, consumption of fish from the background/reference area pond (P-6) at the same rates as those used in the OU2 calculations resulted in hazards above the USEPA target of 1.

Risk to a future commercial worker exposed to soil and indoor air at the Nunes Parcel exceeded 1 x 10^{-4} due primarily to benzene in indoor air. Major contributors to risk are carcinogenic PAHs, bis(2-ethylhexyl)phthalate, dieldrin, dioxins, and/or arsenic in soil and benzene, naphthalene, and/or tetrachloroethene in indoor air. In addition, hazard and risk to a future resident exposed to soil and indoor air at the Nunes Parcel exceeded target organ HIs of 1 and a cancer risk of 1 x 10^{-4}. The exceedances are primarily due to benzene, naphthalene, 1,4-dichlorobenzene, ethylbenzene, tetrachloroethene, and/or vinyl chloride in indoor air and carcinogenic PAHs, PCBs, dieldrin, dioxins, bis(2-ethylhexyl)phthalate, and/or arsenic in soil.

The lead evaluation identified the following scenarios as having estimated (potential) lead risks above the USEPA target:

- *exposure of commercial workers to soils within the RIDEM Soil Removal Area*

- *exposure of construction workers to soils at Quinnville well field, Southern Bank, Nunes Parcel, and the Rhode Island Department of Environmental Management (RIDEM) Soil Removal Area*

- *exposure of hypothetical young child residents to soil and groundwater from the RIDEM Soil Removal Area*

In addition to the quantified risks and hazards mentioned above, physical hazards, such as asbestos, metal debris, tires, dilapidated buildings, and broken glass at the site may also present some risks. Asbestos, in particular, may present significant health risks due to its status as a Class A (known human) carcinogen if fibers are released into the air and inhaled. These physical hazards will be further considered in the FS.

In summary, future residential and commercial exposure to soil and indoor air at the Nunes Parcel, hypothetical future residential potable use of site-wide groundwater, and consumption of fish from the Blackstone River and site ponds by recreational receptors were the only exposure pathways with risks/hazards greater than the USEPA targets (i.e., carcinogenic risks greater than 1 x 10^{-4} and non-carcinogenic hazards greater than 1). Risks/hazards for all other receptors and pathways were less than or within the USEPA target ranges. However, an evaluation of lead indicates that the USEPA target would be exceeded for site-wide groundwater, for construction-related exposures to soil at the Quinnville well field, Southern Bank, and Nunes Parcel, and for commercial, residential, and construction-related exposures in the vicinity of the RIDEM Soil Removal Area of the Nunes Parcel.

A Supplemental HHRA, Unnamed Island was completed by the USEPA in July 2010 with some revisions in May 2011 following a supplemental investigation of the Unnamed Island in November 2009. The conclusions of this report, which pertained solely to human health risks on the Unnamed Island, were as follows:

Results of this Supplemental HHRA indicate that risks/hazards for soil, sediment, surface water, and leachate for trespassers and recreational users, and soil, shallow groundwater, and outdoor (trench) air for construction workers were within the USEPA target levels (i.e., risk range of 1 x 10^{-4} to 1 x 10^{-6}; HI of 1).

The lead evaluation identified the construction workers scenario as having estimated lead risks above the USEPA target. Estimated lead risks for future recreational users and current trespassers were less than the USEPA target.

In addition to lead, physical hazards, such as metal debris, tires, and broken glass at the Unnamed Island may also present some risks. These physical hazards will be further considered in the FS.

The Rhode Island cancer risk target of 1 $x10^{-5}$ will be considered as part of applicable regulatory requirements in evaluating remedial options in the FS.

Summary of Baseline Ecological Risk Assessment

The USEPA also issued a companion revised Baseline Ecological Risk Assessment (BERA) to replace the PRP's September 2008 version. The conclusions of that report were excerpted as follows:

The BERA evaluated potential ecological risks associated with constituents of potential environmental concern (COPECs) in OU2. The BERA used a weight-of-evidence (WOE) approach to evaluate risks for several representative receptors for each sub-area of the site. The potential receptors that were identified in the problem formulation (and subsequently evaluated in the BERA) are benthic macroinvertebrates, fish, amphibians, birds, and mammals.

The BERA identified the potential for severe ecological risk to omnivorous birds feeding at the individual terrestrial exposure units (EUs) or at all the terrestrial EUs combined. Lead is the biggest risk driver. The WOE for this measurement endpoint is "low-medium." The food chain modeling assumes a diet of 100% earthworms. Field-collected tissue residue data are not available for earthworms from any of the terrestrial EUs at OU2. Hence, the COPEC levels in earthworm tissues are estimated using generic and conservative biota-soil accumulating factor values.

The BERA also identified the potential for severe ecological risk to fish and embryo-larval stages of amphibians exposed to surface water in Ponds C, D, E, I, N, and P. Lead is the biggest risk driver in three of these EUs and a secondary risk driver in two others. The WOE for this measurement endpoint is "low-medium." Only one measurement endpoint is available for evaluation at these six EUs, namely comparing surface-water chemistry to generic benchmarks. None of the surface-water samples used in the exposure point concentration calculations were filtered before chemical analyses. Hence, the metals data used in the evaluation represent (unfiltered) total metals instead of (filtered) dissolved metals, which are more representative of the toxic fraction. Also, only one surface-water sample was collected from Ponds N and P, and two surface-water samples from Ponds C, D, E,

and I. Such small datasets may not represent the full range of exposure conditions in surface water at these habitats.

Finally, some potential for ecological risk to the benthic invertebrate community is possible at one or more locations in Ponds A, D, E, F, and I from sediment exposure. However, the cause for this risk is unclear and may result from a combination of hhabitat disturbances/differences and COPEC exposures.

A Supplemental Ecological Risk Assessment for Unnamed Island Soils (AECOM) was also completed by the USEPA in July 2010 following a supplemental investigation of the Unnamed Island in November 2009. The conclusions of this report, which pertained solely to ecological risks on the Unnamed Island, were as follows:

This supplemental risk evaluation, based on inclusion of additional soil data, resulted in identification of several additional COPCs for further evaluation, including nickel, selenium, and dioxin. Risk calculations for these COPCs resulted in confirmation that none of these poses a high risk for adverse effects on wildlife at the Unnamed Island.

The BERA identified the potential for adverse ecological risk to omnivorous birds feeding at the Unnamed Island. The current analysis confirmed lead as the primary risk driver, with bis(2-ethylhexyl)phthalate and zinc also representing adverse risk to small omnivorous birds, as documented in the BERA.

Due to possible risks to avian species from soil exposures on the Unnamed Island, further consideration in the FS is recommended.

Primary Conclusions and Recommendations

The following conclusions and associated recommendations have been reached as the result of the RI:

- *Subsurface Waste Deposits Delineation and Remedial Options* – There are three subareas (J.M. Mills Landfill, Unnamed Island, and the Nunes Parcel) where substantial volumes of wastes have been deposited. The USEPA's presumptive remedy will apply to the municipal landfill property, and various forms of appropriate remedial alternatives, including capping, appear to be appropriate for other areas within OU2. Based on the existing slopes present at the J.M. Mills Landfill area, a reconfiguration of the J.M. Mills Landfill contours will likely be required to install an appropriate cap.

Considerations for capping will also address managing waste zones within the floodplain. An analysis of the impacts of recent flood events to the J.M. Mills Landfill and Unnamed Island will provide guidance and perspectives on alternative analysis. Considerations for such details as groundwater and landfill gas management will be further developed in the FS.

- *Regional Impairment of Blackstone River and Proposed Actions* – The Blackstone River Valley has been described as the birthplace of the Industrial Revolution. Many factories, mills, and a wide variety of industries have used the Blackstone River historically for power production, assimilation of wastes, navigation, and other uses. The Blackstone River has been widely impacted on a regional scale by a number of constituents, most prominently, PCBs, pesticides, PAHs, and metals. Sampling stations located significantly upstream from the site show little statistical difference from the sampling dataset collected within OU2, indicating that the contaminants identified in the Blackstone River and associated fish tissue samples may not be site-related. The risk assessments show an unacceptable risk associated with the consumption of sport fish within the Blackstone River, primarily related to the concentrations of PCBs. The Massachusetts Department of Environmental Protection has issued fish advisories for the Blackstone River below Worcester, Massachusetts, which is upstream of the site. In addition, localized ecological receptors may also be "stressed" by the levels of PCBs in various subareas, including some of the ponds on the Unnamed Island.

- *Delineation and Proposed Management of Active Sources* – The J.M. Mills Landfill is a potentially active source. Other potentially active sources include the other waste deposits located at the Unnamed Island and the Nunes Parcel, including some tires and miscellaneous debris that is exposed or stockpiled at the surface.

  Continuation of the limited access to all three of the waste disposal subareas is recommended until such time that the final remedy has been implemented, although the calculated risks to human health and the environment are generally low. Similar to the institutional controls already in place in the Quinnville well field, as provided in the OU1 Record of Decision, such controls will also be necessary for groundwater at the OU2 site.

Acronyms and Abbreviations

ARAR	applicable or relevant and appropriate requirement
ARCADIS BBL	ARCADIS U.S., Inc.
ASTM	American Society for Testing and Materials
AVS-SEM	acid volatile sulfide-simultaneously extracted metal
BBL	Blasland, Bouck & Lee, Inc.
BERA	baseline ecological risk assessment
bgs	below ground surface
BHC	benzene hexachloride
BIA	Bureau of Indian Affairs
BOD	biological oxygen demand
CDM	Camp, Dresser & McKee
C-EE	C-E Environmental
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	cubic feet per second
cis-1,2-DCE	cis-1,2-dichloroethene
CLP	Contract Laboratory Program
cm/sec	centimeters per second
COPC	constituent of potential concern

COPEC	constituent of potential environmental concern
Corridor Management Plan	Cultural Heritage and Land Management Plan for the Blackstone River Valley National Heritage Corridor
CPT	cone penetration test
CWA	Clean Water Act
cy	cubic yards
1,1-DCE	1,1-dichloroethene
4,4'-DDD	4,4'-dichlorodiphenyldichloroethane
4,4'-DDE	4,4'-dichlorodiphenyldichloroethene
4,4'-DDT	4,4'-dichlorodiphenyltrichloroethane
DBSR2	*Revised Database Summary Report*
DF	Debris Field
DO	dissolved oxygen
DQO	data quality objective
EA	EA Engineering, Science and Technology, Inc.
EMI	electromagnetic induction
EC/MIP	electrical conductivity/membrane interface probe
EU	exposure unit
FS	Feasibility Study
^{o}F	degrees Fahrenheit

GC/MS	gas chromatograph/mass spectrometry
Geophysical	Geophysical Applications
GPS	global positioning system
HHRA	human health risk assessment
HI	hazard index
ID	inside diameter
ISCR	*Initial Site Characterization Report*
ISCR2	*Revised Initial Site Characterization Report*
MassDEP	Massachusetts Department of Environmental Protection
mcf	million cubic feet
MCL	maximum contaminant level
mcy	million cubic yards
M&E	Metcalf & Eddy
MTBE	methyl tert-butyl ether
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NAVD88	North American Vertical Datum of 1988
NCAI	National Congress of American Indians
NGVD29	National Geodetic Vertical Datum of 1929

NITHPO	Narragansett Indian Tribe Historical Preservation Office
NFO	Now of Formerly Owned By
NOAA	National Oceanic and Atmospheric Administration
Normandeau	Normandeau Associates, Inc.
NPHA	National Historic Preservation Act
NPS	National Parks Service
NWS	National Weather Service
NTU	nephelometric turbidity units
ng/kg	nanograms per kilogram
ORP	oxidation-reduction potential
OU1	Operable Unit 1
OU2	Operable Unit 2
PCE	tetrachloroethene
PAH	polycyclic aromatic hydrocarbon
PAL	project action limit
PCB	polychlorinated biphenyl
PCDD	polychlorinated dibenzo-p-dioxin
PCDF	polychlorinated dibenzo-furan
Phase 1AExp	Phase 1A Expanded

Phase 1A DBSR	Phase 1A Database Summary Report
Phase 1B DBSR	Phase 1B Database Summary Report
PID	photoionization detector
ppmv	parts per million by volume
PRP	Potentially Responsible Parties
PVC	polyvinyl chloride
P&W	Providence and Worcester (Railroad)
QAPP	Quality Assurance Project Plan
QAPP Addendum	Quality Assurance Project Plan Addendum
RBP	Rapid Bioassessment Protocol
RI	remedial investigation
RIHPHC	Rhode Island Historic Preservation & Heritage Commission
RI Report	*Remedial Investigation Report*
RIDOH	Rhode Island Department of Health
RIDEM	Rhode Island Department of Environmental Management
ROD	Record of Decision
SCM	site conceptual model
SEI	Shield Engineering, Inc.
SGA	substrate growth area

Shield	Shield Environmental Associates, Inc.
Sitewide RI Report	*Remedial Investigation Report for the Peterson/Puritan Site, Cumberland, Rhode Island*
SOW	Scope of Work
SVOC	semivolatile organic compound
SIM	selective ion monitoring
SOP	Standard Operating Procedure
SQT	sediment quality triad
SRS	Special Resource Study
SU	standard unit
TAL	Target Analyte List
TBC	to be considered
TCE	trichloroethene
TCL	Target Compound List
TCO	total combustible organics
TDS	total dissolved solid
THM	trihalomethane
TIC	tentatively identified compound
Tilton	Tilton and Associates, Inc.
TOC	total organic carbon

Total TEQ	total toxicity equivalent quotients
TSS	total suspended solid
UBWPAD	Upper Blackstone Water Pollution Abatement District
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
USCS	Unified Soil Classification System
VOA	volatile organic analytes
VOC	volatile organic compound
WOE	weight-of-evidence
Work Plan	*Soil, Sediment, and Hydrogeologic Assessment Work Plan and Field Sampling Plan Addendum*
WWTP	waste water treatment plant
XRF	X-ray fluorescence
Zebra	ZEBRA Environmental Corporation

1. Introduction

ARCADIS U.S., Inc. (ARCADIS BBL, formerly known as Blasland, Bouck & Lee, Inc. [BBL]) has prepared this *Remedial Investigation Report* (RI Report) for the Peterson/Puritan, Inc. Superfund Site – Operable Unit 2 (OU2), located in the Towns of Cumberland and Lincoln, Rhode Island (site), on behalf of the Potentially Responsible Parties (PRP) consisting of [KIK Custom Products, Inc. (formerly CCL Custom Manufacturing, Inc. and prior to that Peterson/Puritan, Inc.), Conopco, Inc., d/b/a Unilever (formerly Bestfoods and prior to that CPC International, Inc.), Waste Management of Massachusetts, Inc., Waste Management Disposal Services of Massachusetts, Waste Management of Rhode Island, Inc., and Clean Harbors of Braintree Inc. (collectively referred to as the Group). Figure 1-1 shows the general location of the site.

This RI Report summarizes and interprets available site characterization data collected during a multi-phase remedial investigation (RI). The initial two phases of the investigation (Phase 1A and Phase 1A Expanded [Phase 1AExp]) were completed during 2003 and 2004, respectively, by Shield Environmental Associates, Inc. (Shield). The second phase of the investigation (Phase 1B) was completed during 2005 and 2006 by BBL. Additional groundwater sampling was conducted in early 2007 as part of the Operable Unit 1 (OU1) 5-Year Groundwater Review. Finally, at the United States Environmental Protection Agency's (USEPA's) request, a supplemental investigation of soil and groundwater on the Unnamed Island was completed in late 2009. All of these RI data collection efforts were used to prepare this RI Report.

Summaries and preliminary interpretations of the data collected during Phase 1A and Phase 1AExp were presented to the USEPA in two database summary reports: *Revised Database Summary Report* (DBSR2) (BBL, 2006a) and *Phase 1B Database Summary Report* (Phase 1B DBSR) (BBL, 2006b) and an *Initial Site Characterization Report* (ISCR) (Shield, 2004a). This RI Report draws on information presented in these reports, including new data collected during Phase 1B that was presented to the USEPA in the Phase 1B DBSR to provide a comprehensive evaluation of the nature and extent of chemical constituents present at OU2, and evaluates the potential impact that these constituents may have on surrounding receptors through human health and ecological risk assessments.

1.1 Purpose

This RI Report presents an interpretation of the available data for the site to date. It was prepared as a comprehensive interpretive report to present the findings of the RI for OU2 starting in 1980 and continuing through 2007. This RI Report summarizes and interprets the available information for OU2 concerning:

- The physical setting of the site.
- The potential source areas of constituents of potential environmental concern (COPECs) at the site.
- The nature of the materials in those areas.
- The distribution of chemicals in the vicinity of the potential source areas.
- The risk-based screening of the COPECs at the site.
- Development of a site conceptual model (SCM) that considers the fate and transport of the COPECs in terms of potential exposures to human and ecological receptors.
- The outcomes of the human health and ecological baseline risk assessments.

In general, the approach used for this RI follows the USEPA Guidance (Presumptive Remedies: CERCLA Landfill Caps RI/FS Data Collection Guide EPA 540/F-95/009, August 1995) concerning presumptive remedies for landfills. As such, for areas of the site where wastes are known, or may be assumed, to be in place, no environmental data that characterizes this waste was gathered. Rather, these source areas are characterized as waste in place, and remedy decisions will follow the presumptive remedy approach as illustrated in the guidance. Areas of the site to which wastes have become displaced or migrated were subject to the data gathering and investigation phase of the RI.

Initially, the discovery of buried wastes on the Nunes Parcel and on the Unnamed Island led to the assumption that the remedies for those areas would follow the presumptive remedy approach. However; it was subsequently decided that because much of these buried waste areas is within the floodway of the Blackstone River, the presumptive remedy of capping would not be applicable on the Unnamed Island. Therefore,

additional sampling was done, so that the risk assessments could be expanded to include these parts of the site.

The risk assessments qualitatively and quantitatively evaluate whether unacceptable risks are identified, and if necessary, whether an evaluation of remedial alternatives may be necessary to mitigate these estimated risks.

This RI Report is intended to integrate the data collected by Shield during Phase 1A and Phase 1AExp and by BBL during Phase 1B, including supplemental data collected at the Nunes Parcel and groundwater data collected in 2007 as part of the site-wide second 5-Year Review, with the RI data collected previously by Camp Dresser & McKee (CDM; 1987), Versar, and other parties. The previous RI data was compiled and discussed in the *Remedial Investigation Report for the Peterson/Puritan Site, Cumberland, Rhode Island* (referred hereinafter as the "Sitewide RI Report"), prepared by C-E Environmental (C-EE; 1990).

1.2 Report Organization

This RI Report is organized into the following sections:

- *Section 1 – Introduction:* Includes a description of the site, regulatory background, and site history.

- *Section 2 – Description of Field Investigations:* Provides a description of field investigation activities performed during Phases 1A, 1AExp, and 1B of the RI.

- *Section 3 – Physical Characteristics of the Study Area:* Provides a summary of the geology, hydrology, hydrogeology, ecology, topography, land use, climate, and other related information for both the study area and the region.

- *Section 4 – Nature and Extent of Contamination:* Provides a description of the impacts detected in site media (i.e., soil, sediment, groundwater, surface-water, air, leachate, and fish tissue medium) and their specific locations at OU2.

- *Section 5 – Applicable or Relevant and Appropriate Requirements:* Includes a description of proposed applicable or relevant and appropriate requirements (ARARs) for evaluating regulatory compliance issues.

- *Section 6 – Baseline Human Health Risk Assessment Summary:* Presents a summary of the potential risks that site-related impacted media pose to human receptors in the OU2 area.

- *Section 7 – Baseline Ecological Risk Assessment Summary:* Presents a summary of the potential risks that site-related impacted media pose to wildlife and wildlife habitats at OU2.

- *Section 8 – Site Conceptual Model:* Provides a model describing the sources of site-related impacted media, applicable to fate and transport exposure pathways and identified receptors.

- *Section 9 – Conclusions and Recommendations:* Summarizes important conclusions based on a detailed evaluation of the investigation results and presents recommendations for the future remediation activities.

- *Section 10 – References:* Includes a summary of all reference documents used to prepare this RI Report.

1.3 Site Background

The USEPA included the site (USEPA ID #RID055176283) on the National Priorities List on September 8, 1983 pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund), as amended by the Superfund Amendments and Reauthorization Act of 1986. Pursuant to the terms of the amended 1987 Administrative Order on Consent, CERCLA Docket No. 1-87-1064, the Group agreed to perform and finance the RI and feasibility study (FS) at OU2 of the site.

In 1990, the USEPA divided the original site into OU1 (including the Pacific Anchor and CCL [formerly Peterson/Puritan, Inc.] facilities) and OU2. At that time, the USEPA also removed the Dexter Quarry (located on the Lincoln side of the Blackstone River to the west of OU2) for state response actions, and set aside Mackland Farm/Kelly House and Ashton Mills (located upstream of OU1) for potential future response actions. As shown on Figure 1-1, the site encompasses an area adjacent to and extending approximately 1 mile in length along the Blackstone River between the Towns of Lincoln and Cumberland, Rhode Island. The OU2 site is located immediately southeast and downstream of OU1.

1.3.1 Site Location and Description

The following site description is taken directly from the Scope of Work (SOW):

> *OU2 of the Peterson/Puritan, Inc. Superfund Site (hereinafter referred to as the Site) is predominately located in the town of Cumberland in the north-central portion of the State of Rhode Island, and includes a small segment within the town of Lincoln. OU2 is known locally, and in part, as the J.M. Mills Landfill. The Site is surrounded by industrial, residential, and semi rural/suburban properties. Bordering the Site to the north is the Hope Webbing Company property located at 88 Martin Street. To the south is the Stop and Shop Market (and strip mall) on Mendon Road (Route 122). To the northeast are the Mackland Sand and Gravel operations and wetlands also known locally as "New River." Finally, to the south of the Site is the Blackstone River and Canal.*

The USEPA redefined the site boundary in May 2005 through a partial deletion of the site. The deleted area included two properties, involving 29.8 acres, designated on the Town of Cumberland Tax Assessor's Map Plat 14, Lot 2 and Plat 15, Lot 1, known locally as the proposed Berkeley Commons and River Run developments, and owned by Macklands Realty, Inc. and Berkeley Realty, Co., respectively.

Figure 1-2 shows the site boundary, as revised by the USEPA in May 2005, and key features on site and in the surrounding area. Figure 1-3 shows the site and individual subareas, as defined by their geographical and physical characteristics. As currently defined by the boundary shown on these figures, OU2 is just over 1-mile-long (5,600 feet) and varies in width from approximately 1,200 to 1,900 feet, which corresponds to a total area of approximately one third of a square mile, or 200 acres.

Among other parcels that make up the site, the site includes, but is not limited to, the land formerly owned or operated as a mixed industrial and solid waste landfill by Mr. Joseph Marszalkowski and his agent(s)/associates for the purposes of waste transfer and disposal. This land is commonly referred to as the J.M. Mills Landfill and reportedly accepted wastes from 1954 through the early 1980s. The J.M. Mills Landfill occupies approximately 38 acres and is oriented in a northwest-southeast direction between the Blackstone River and the Providence and Worcester (P&W) railroad tracks. The J.M. Mills Landfill, which is shown on Figure 1-2, extends approximately 85 feet above local ground level. At least five vent pipes are present at the top of the J.M. Mills Landfill. Because the J.M. Mills Landfill was never formally closed, cover soil is thin-to-lacking in

some areas. Vegetation covering the J.M. Mills Landfill consists of small trees, brush, grasses, and weeds.

This site is further defined in the RI/FS SOW to include the following subareas (Figure 1-3 depicts the defined subareas as discussed and referenced throughout this RI Report):

- The area encompassed by the fence line erected by the USEPA during removal actions (location of the primary J.M. Mills Landfill operation, designated for purposes of this RI Report as the **J.M. Mills Landfill** [outlined or shaded in purple on most RI figures]).

- The associated **Debris Fields** (DFs) 1 through 4, staging areas, and suspected disposal trenches along the bank of the Blackstone River.

- The gravel/paved access roads in the immediate vicinity of the site.

- The transfer station properties (now or formerly owned by [NFO] Nunes Disposal, Inc.), also known as the solid waste transfer station and/or the **Nunes Parcel** (outlined or shaded in orange on most RI figures). This area contains both buried and surface waste deposits.

- The P&W railroad tracks easement that runs northwest to southeast through the central portion of the site.

- Pratt Dam, which is located near the southeastern boundary of OU2 on the Blackstone River, which also includes the bikeway that crosses the Pratt Dam.

- The associated **Blackstone River** channel(s) (river channels, ponds, and canals are shown in shaded light blue on the RI figures).

- An **Unnamed Island** within the Blackstone River currently bounded by the Blackstone River main channel and a backwater channel to the southwest (the Unnamed Island is shown outlined or shaded in yellow on most RI figures); the Unnamed Island includes manmade ponds and subareas containing buried waste deposits.

- The **Wetlands** A through D located northeast of the J.M. Mills Landfill (the Wetlands are shown outlined or shaded in dark blue on most RI figures).

- The former Lenox Street municipal well (as a potential receptor).

- The former Quinnville well field (known as **Quinnville well field**, which is outlined or shaded in brown on most RI figures); the USEPA has included the former Quinnville well field as a potential receptor to groundwater contamination in both OU1 and OU2. Additionally, the southern bank of the Blackstone River, which is outlined in purple on Figure 1-3, extends south along the backwater channel from the Quinnville well field to include the area of Pond F.

1.3.2 Site History

As site conditions today reflect the history of the Blackstone River, its association with the industrialization of the region, and its resulting historical degradation, this discussion of site history is presented in four parts: Regulatory History of the Blackstone River (Section 1.3.2.1), History of Surrounding Area (Section 1.3.2.2), National Preservation Act Section 106 Findings (Section 1.3.2.2.1) and History of Operable Unit 2 (Section 1.3.2.3).

1.3.2.1 Regulatory History of the Blackstone River

Historically, the Blackstone River provided both water supply and wastewater drainage for the industries and municipalities along the valley. The wastewater treatment plant (WWTP) for the City of Worcester discharges to the Blackstone River's headwaters, and the WWTP for Woonsocket is another major discharger upstream of the site. In studies performed by Metcalf & Eddy, Inc. (M&E) in 1948 and by the United States Geological Survey (USGS) in 1974 (described in the Sitewide RI Report [C-EE, 1990]), the Blackstone River waters were found to be noticeably degraded by municipal sewage and industrial discharges. The Worcester and Woonsocket WWTPs were upgraded to secondary treatment facilities in 1976 and 1978, respectively.

By 1969, the Blackstone Valley Sewer District, which is now known as the Narragansett Bay Commission, had installed a 42-inch reinforced concrete interceptor sewer main (located within the site and running adjacent and parallel to the P&W railroad right-of-way) to collect and treat discharges that had previously flowed into leach fields or piped to the Blackstone River. The collected wastewater is treated at the Bucklin Point Wastewater Treatment Facility in East Providence and then released into the Seekonk River (a tidal extension of the Blackstone River). Also, in 2005, the Rhode Island Department of Environmental Management (RIDEM) modified the permit for the Woonsocket, Rhode Island WWTP. The permit modifications established seasonal total

nitrogen limits from May through October. Construction of facilities required to meet these conditions was expected to be completed by 2008. The proposed improvements were intended to reduce productivity and improve dissolved oxygen conditions in the Providence and Seekonk Rivers. Lastly, in April 2009, the USEPA issued a final National Pollutant Discharge Elimination System discharge permit for the Upper Blackstone Water Pollution Abatement District (UBWPAD) for the City of Worcester. The permit sets limits that are more stringent on discharge of phosphorus and total nitrogen into the river. The permit is final and the key limits as far as water quality is concerned (nitrogen and phosphorus) will go into effect once the UBWPAD pursues its appeal rights on a single issue relative to the co-permittee provisions contained in the permit. When these limits go into effect, they are expected to improve water quality (reduce productivity and hypoxia) in the Blackstone, Seekonk, and Providence Rivers (a basin-wide improvement).

At the time of the OU1 Baseline Risk Assessment in 1993, the Blackstone River was initially rated by the State as Class C under the federal Clean Water Act (CWA) (suitable for fish and wildlife habitat, recreational boating, and industrial process supply but not suitable for bathing, agricultural uses, or potable water supply). This is, however, no longer the case. As stated in the USEPA's Second 5-Year Report (September 2007) and elsewhere, the river water quality has generally improved and is currently classified as a Class B1 surface-water body that has an established goal of *"fishable and swimmable."*

The improvement in classification from Class C to B1 reflects reduced concentration of total coliform and fecal coliform bacteria in the river. The B1 classification indicates that while all Class B uses must be supported by water quality, primary contact recreation may be at times "impacted due to pathogens from approved wastewater discharges" [RI WQR, Rule 8(B)(1)]. This rule specifically defines Class B1 as follows: "*These waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However all Class B criteria must be met."*

In addition to potential pathogens, other impairments along the river segment, which includes the site, are: hypoxia, nutrients, ammonia (unionized), phosphorus (total), polychlorinated biphenyls (PCBs), and metals (copper, mercury). This river segment is also non-supportive for fish and wildlife consumption. The State of Rhode Island has an overall objective to "restore impaired sections of the Blackstone River and its tributaries,"

which includes restoring the river segment that flows through the site. (Source: *Draft Blackstone River Action Plan*, RIDEM, September 2001). Current surface-water quality is discussed in more detail in Section 2.6.

The Rhode Island Rivers and Classification Policy was amended in 2004 by the Rhode Island Rivers Council. The plan is intended to provide guidance for the management and protection of Rhode Island's river and estuarine watershed resources at the state and local levels. Its broad objectives are to protect drinking water supplies and pristine rivers, to encourage recreational use of rivers, to foster the creation of greenways, and to provide for the cleanup of rivers. The plan classifies freshwater into four classes: Pristine Waters, Waters Supplies, Open Space Waters, and Recreational Waters. The Blackstone River near the site (from Manville Dam to the Valley Falls Marsh) is classified as non-contact recreational ("Open Space" waters as defined by the Rhode Island Rivers and Classification Policy). Recreational waters include "water bodies, rivers, or river segments that are readily accessible, that may have some development along their shorelines, and may have undergone some impoundment or diversion in the past. These shall include sections of rivers along mill villages, but shall not include sections where development may be characterized as urban. These waters are typically situated in suburban areas and are generally suitable for canoeing and other non-contact recreational activities. They may function as open space corridors or greenways."

In 1986, the Blackstone River Valley Heritage Corridor was created by an Act of Congress to celebrate the history of the Blackstone River and the areas abutting the Blackstone River. Named after the late Senator John Chafee, the legislation acknowledges the Blackstone River as the location of America's Industrial Revolution. The Corridor's Commission was extended in 2006 for 5 additional years under the National Heritage Area Act. The Heritage Corridor Commission works in partnership with a variety of federal, state, and local agencies, including many non-profit and private organizations to protect the sites and resources of the Blackstone Valley, such as the Blackstone River, the canal, and heritage sites and natural areas found throughout the Corridor. OU2 of the site falls within the boundaries of this heritage corridor, which includes an established bike path, canoe trail, and increased recreational use throughout the area. Due to this unique setting at this site, the National Parks Service (NPS) and the U.S. Fish and Wildlife Service (USFWS) share responsibilities under the Department of the Interior as a Federal Natural Resources Trustee.

On February 4, 1997, President Clinton announced the American Heritage Rivers Initiative supporting community-led efforts relating to rivers that spur economic revitalization, protect natural resources and the environment, and preserve historic and

cultural heritage. Executive Order 13061 directs agencies to establish and implement the initiative.

On June 16, 1998, the Advisory Committee recommended 10 rivers to the President for American Heritage Rivers designation, but encouraged him to make additional designations. The President chose to make 14 designations; the Blackstone and Woonasquatucket river system was one such designation. The American Heritage Rivers initiative is consistent with the existing authorities articulated by Congress in the National Environmental Policy Act of 1969, as well as other authorities granted to agencies (e.g., National Historic Preservation Act [NHPA], the housing and Community Development Act, the CWA, the Intermodal Surface Transportation Efficiency Act).

In October 2006, Congress passed legislation to reauthorize the John H. Chafee Blackstone River Valley National Heritage Corridor Commission for an additional 5 years. While the Blackstone River valley was designated a National Heritage Corridor in perpetuity by Congress, the federal management presence will only exist as long as the federally created Corridor Commission continues to operate. The reauthorization legislation also required the Secretary of the Interior to conduct a Special Resource Study (SRS) to explore the potential for a permanent NPS presence in the Blackstone Valley. On July 18, 2011, the NPS released the SRS of the Blackstone River Valley. The purpose of this study is to determine whether the sites and landscape features within the Heritage Corridor that contribute to the understanding of the Blackstone River Valley as the Birthplace of the Industrial Revolution in the United States are eligible for inclusion as a unit of the National Park System. Lastly, on October 13, 2011, bills were filed in both the United States Senate and House to "establish the John H. Chafee Blackstone River Valley National Historical Park." These bills are currently under consideration in respective sub-committees.

A plan to restore self-sustaining populations of river herring and shad to the Blackstone River was published in 2002 by the Narragansett Bay Estuary Program and RIDEM Division of Fish and Wildlife (National Bureau of Economic Research, 2002). Phase I of the restoration plan focuses on providing upstream fish passage at four dams on the lower Blackstone River (Main Street Dam, Slater Mill Dam, Elizabeth Webbing Dam in Pawtucket Rhode Island, and Valley Falls Dam in Central Falls), as well as measures to protect out-migrating juvenile fish. The Blackstone River area between the Valley Falls Dam (approximately 2 miles downstream of the site) and the Ashton Dam (at the north end of the site) represents over 80% of the total available habitat to be restored in Phase I and about 10% of the total restorable habitat in Rhode Island. The Pratt Dam (located at the south end of the site) also bisects this reach and is passable by anadramous fish

under most flow conditions. Design of fish passage facilities is underway using funding from the Natural Resources Conservation Service. The Elizabeth Webbing Dam was recently acquired by the State of Rhode Island and may also be modified for fish passage. Access agreements to provide for fish passage have been negotiated with the other three dam owners. The goal is to have construction initiated at the first two dams by 2012.

Finally, the Massachusetts Department of Environmental Protection (MassDEP) issued PCB fish advisories for the Blackstone River below Worcester, Massachusetts to Blackstone, Massachusetts, which is upstream of the site, since the early 1990s (www.mass.gov/dep/water/resources/51wqar10.doc).

1.3.2.2 History of Surrounding Area

The earliest residents of the Blackstone Valley were the Paleo-Indians, who arrived in this region about 12,000 years ago. By the early 17th century, three principal tribes lived here: the Narragansett, the Nipmuc, and the Wampanoag. The Blackstone River Valley was first settled by Europeans in the 17th century, and the area soon became one of the earliest sites for industrial development in North America. Almost everyone living in the Blackstone Valley during the colonial era farmed, but by the mid-1600s the settlers had begun to tap into the waterpower opportunities of the region with grist mills, saw mills, and iron forges. The steep drop and relatively abundant flow of water in the Blackstone River provided power for numerous mills that were built between Worcester, Massachusetts and Providence, Rhode Island. Industrial development began with the Slater Mill, the first textile mill in the country, which was built downstream of the site in Pawtucket in 1790. In the 1820s, the Blackstone Canal was constructed. Between 1870 and 1920, more than 1,000 manufacturing facilities were present in the valley, most notably cotton and wool textile mills, but also producers of flour, rubber, wood products, steel, and machinery.

In the vicinity of the site, the Lonsdale Company (owned by a Providence mercantile firm, Brown and Ives) built three mills between 1847 and 1886: the Ashton Mill, downstream of Ashton Dam (later operated by Owens Corning to manufacture fiberglass products); the Berkeley Mill, between the Ashton and Pratt Dams (in the area of the current industrial park near Martin Street); and the Lonsdale Mill (which included two main facilities: one downstream of Pratt Dam between the Blackstone River and the Blackstone Canal [referred to as the western mill] and one farther downstream on the Blackstone River, approximately 2,000 feet to the east [referred to as the eastern mill]).

Additional more regional findings were obtained for the larger Blackstone River Valley area surrounding OU2 as a result of review of on-line and historical literature materials. These are presented to provide context of more regional findings as they relate to potential sources of regional presence of certain contaminants. The referenced on-line and literature materials are included, as applicable, in the key findings listed below:

- The Blackstone River has been a part of American history since 1635 when the first English settlement in Rhode Island was established by William Blackstone in the Blackstone Valley. The valley quickly attracted other settlers and by the late 1700s, many communities were located on the river near small water-powered grist mills. Industrial development along the Blackstone changed dramatically after 1793, when Samuel Slater opened Slater Mill, the first cotton mill in the United States to use mechanical spinning machines. After the mill opened, water-power sites along the Blackstone developed rapidly. By 1800, the town of Pawtucket supported 29 cotton mills. Mill villages like Woonsocket, Blackstone, Millville, Uxbridge, and Millbury grew up all along the river. By the 1830s, there was one dam for every mile of river along the main stem and tributaries. (http://seagrant.gso.uri.edu/factsheets/blackstone_river.html)

- By the late 1800s, the Blackstone Valley included mills that produced cotton thread and wool and cotton cloth, factories that dyed material, and factories that manufactured the textile-producing machinery. The valley also supported companies that manufactured rubber, hats, and wire. The river supplied these plants with hydropower and water for their manufacturing processes. It also became a convenient site for disposing of industrial waste and sewage from the ever-expanding population of the valley. (http://seagrant.gso.uri.edu/factsheets/blackstone_river.html)

- As early as 1809, Olney and Whipple leased space at the Smithfield Cotton and Woolen Manufacturing Company (in Ashton), popularly known as "Sinking Fund Mill." The Worcester-Providence Blackstone Canal opened in 1829. By 1850, the Woonsocket area was full of factories, mostly textile mills, and these mills were served by the P&W railroad. Woonsocket is less than 5 miles upstream of the site.

- In order to dye materials, dye vats were common components of any textile mill to color the fabrics. Mordant dyes were applied only with a fixing agent, or mordant. The fixing agents are often salts of heavy metal compounds, such as chromium, aluminum, tin, copper, titanium, and bluestone (copper sulfate) (Application of Dyestuffs to Textiles, Paper, Leather and Other Materials; Matthews, 1920, pg 168). Lead was also commonly used to add color to cotton and wool in the textile mills.

Mineral pigment dyes were colored compounds of various metals formed by the precipitation in the fiber of suitable metal salts, such as chrome yellow, which was formed by the precipitation of lead acetate and potassium bichromate usually in cotton materials (Matthews, 1920, pg 158).

- Extensive sediment chemical data collected by Battelle on behalf of the United States Army Corps of Engineers (USACE), the USGS, and M&E upriver of the site show elevated concentrations of PCBs, PAHs, and certain metals, including lead, remain in the Blackstone River Basin.

The Blackstone Canal was built between 1825 and 1828 as a means of conveying goods from central and western Massachusetts to Providence, so that Providence merchants could compete with Boston traders. The Blackstone Canal was not suitable for year-round navigation and it competed with the mills for water. The P&W railroad was constructed in 1847 as a more reliable means of transport between Worcester and Providence. In the late 19th century, Pratt Dam was expanded and improved to support a railroad spur crossing the Blackstone River to a portion of the Lonsdale Mill.

Historical maps show a large dammed reservoir present in the valley upstream of Pratt Dam as early as 1870. This is confirmed on the 1940 and 1950 aerial photograph of the area. The Unnamed Island is not observed in these early photographs. On the 1949 USGS topographic quadrangle map, this reservoir is labeled “New Pond,” while it is shown as “New River” on other maps. At that time, land on both sides of the P&W railroad track was under water, and the track apparently was built on a levee running through the pond. The reservoir had two outlets: one at Pratt Dam into the main channel of the Blackstone River and one into a canal parallel to and just southwest of the railroad track. This canal led under Mendon Road to the eastern part of the Lonsdale Mill (which later became the original Ann & Hope department store and warehouse) and discharged to the Blackstone River at this location (near the area that later became the Lonsdale Drive-In Theater).

Based upon a review of aerial photographs, it appears that the reservoir (New Pond) was drained in the early 1950s. The land northeast of the tracks did not drain completely at the time and it remained a wetlands area with intermittent standing water. Substantial revegetation of this area has occurred since that time. Additional siltation of the wetlands occurred as a result of sand and gravel extraction activities that began in the late 1940s or early 1950s on the land northeast and north of the wetlands. The mills built in the 19th century were closed or were converted to new uses in the 1920s. Modern industrial development along Martin Street began in the late 1950s.

The headwaters of the Blackstone River are located near the City of Worcester in south-central Massachusetts. The river flows from there to the Seekonk River in Pawtucket, Rhode Island. The Blackstone River has a total length of 77 kilometers (48 miles) with a drainage area of 1,400 square kilometers (540 square miles). The river is the second largest freshwater tributary to the Narragansett Bay. The Blackstone River is an important natural, recreational, and cultural resource to both Rhode Island and Massachusetts.

Groundwater in the area was first developed as a public water supply by the Town of Cumberland when the Martin Street well was installed in 1950; the Lenox Street well was added in 1964. Both water supplies had problems with taste, odor, and objectionable levels of inorganics, such as manganese. By 1979, the Martin Street well had been abandoned and the Lenox Street well provided only 4% of the Town of Cumberland's water supply. The Town of Lincoln first developed the Quinnville well field in 1957, and it added the last supply well in 1975. The Quinnville well field provided approximately 45% of Lincoln's public water supply.

During a routine statewide testing program for municipal wells in October 1979 by the Rhode Island Department of Health (RIDOH), the volatile organic compounds (VOCs) 1,1,1-trichloroethane, trichloroethene (TCE), and tetrachloroethene (also known as perchloroethylene [PCE]) were reported in the Lenox Street and Quinnville well field wells. In subsequent testing, trans-1,2-dichloroethene, 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane, and trichlorofluoromethane (also known as Freon-11) were also reported in the Quinnville wells. Except for occasional short-term use of the Quinnville well field by the Town of Lincoln until 1981, neither the Lenox Street well nor the Quinnville well field has been used for public water supply since 1979.

The Town of Cumberland currently receives its drinking water from surface reservoirs north of the site that are operated by the Pawtucket Water Supply Board. The Town of Lincoln currently receives its drinking water from the Providence Water Authority, utilizing the Scituate Reservoir west of Providence. It also maintains a well in the Lonsdale area south of the site for a backup supply.

Among the findings discussed in the 1993 OU1 Record of Decision (ROD), the Blackstone River and the Quinnville well field were found to be primary receptors of the contaminated groundwater migrating from OU1 of the site. Due to the geography of the site, the Blackstone River, the Quinnville well field, and the Lenox Street municipal well are all identified as potential receptors for contamination.

Until 2009, it was believed by the USEPA and others associated with the RI/FS that no public or private groundwater supply wells were operating within or adjacent to OU2, and that the entire area was served by public water systems. However, in 2009, following a citizen inquiry concerning the site, the USEPA became aware of a home on Wildwood Street (immediately east of the site boundary and south of Lenox Street) using groundwater for consumption. Upon further investigation, the USEPA learned of two additional homes located on Dixon Street (north of Wildwood) that are also using well water. The USEPA believes that all other residents located within the site or near the site are receiving municipal drinking water. In November 2009, the USEPA conducted sampling of these three residential wells for laboratory analysis. Parameters analyzed included Base Neutral Acid organic compounds that are also known as semivolatile organic compounds (SVOC), total cyanide, total mercury, total recoverable metals, pesticides, PCBs, and volatile organic analytes (VOAs). Limited trace detections of total recoverable metals and VOAs were detected at concentrations within the USEPA's Drinking Water Regulations and Health Advisories. The few detected constituents appear to be unrelated to OU2.

Groundwater within OU2 is designated under the federal groundwater classification as Class 2B (future drinking water resource). The State of Rhode Island is designated as a natural resource trustee for groundwater; however, the State has elected not to participate in the USEPA-endorsed Comprehensive State Ground Water Protection Program. Thus, the federal classification for groundwater applies.

1.3.2.2.1 National Preservation Act Section 106 Findings

Additional findings were determined as a result of ongoing work in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, which the formal report will be included in the FS, when completed.

1.3.2.3 History of Operable Unit 2

Based on a review of aerial photographs (USEPA, 1987b) provided by the USEPA, and other parties, the New Pond remained flooded above Pratt Dam until the early 1950s. Available aerial photographs of the OU2 area and others showing close-up detail of the Unnamed Island and surrounding area are presented in Appendix M. The USEPA interpreted findings in the EPIC Report (USEPA, 1987b), which is already part of the USEPA's Administrative Record for OU2, but electronic copies of the EPIC Report are included in Appendix M. In the late 1940s and 1950s, an automotive racetrack was active in the area of the current Stop & Shop shopping center. By 1956, the Blackstone

River above Pratt Dam was drained, and the large canal running parallel to the tracks was filled. All drainage from the area was then being routed to Pratt Dam. As a result of the draining and filling activities, substantial new tracts of land had opened up in the areas of the current J.M. Mills Landfill and the Unnamed Island by the early 1950s. While it is not clear that he ever formally acquired them, these tracts of land subsequently came under the control of Mr. Joseph Marszalkowski, who developed them into the J.M. Mills Landfill and associated facilities.

According to the SOW (USEPA, 2000), disposal activities at the J.M. Mills Landfill reportedly occurred from approximately 1954 to 1986, even though some information points to an effective closure in 1983. Based upon aerial photos, the most active period of filling and regrading (including movement of the Blackstone River channel from the center to the southwest wall of the valley) occurred in the mid- to late 1960s. The filling and creation of new land in the area of the former New Pond appears to have taken place first in the area that became the transfer station by 1963. By 1970, a levee had been built from below Pratt Dam to the Unnamed Island. Active stockpiling, excavation, and filling activities on the transfer station, J.M. Mills Landfill, and the Unnamed Island are evident on the aerial photographs through the 1970s and into the early 1980s. A State Inspection Report from 1980 describes a salvage yard located in the southwest corner of the site (approximately 50 feet west of the southern tip of the J.M. Mills Landfill – between the toe of the landfill and the Blackstone River). Stacked 55-gallon drums were photographed in the central portion of the western side of the J.M. Mills Landfill, also between the toe of the landfill and the Blackstone River. The exact location of these reported areas could not be definitively identified to be shown on a site figure. The transfer station, J.M. Mills Landfill, and the Unnamed Island are shown on Figure 1-2.

Disposal activities at the J.M. Mills Landfill reportedly ended in 1986. Based upon a review of the aerial photographs, stockpiling, and disposal activities on the Unnamed Island ended at the same time. Subsequently, the levee to the Unnamed Island deteriorated. A large excavator apparently stalled on the Unnamed Island and it remained there until its removal by the RIDEM in the summer of 2003.

The RIDOH Office of Solid Waste Management conducted monthly inspections of the site. Inspections reports from 1970 through 1975 documented liquid and chemical waste violations, odor problems associated with lagoons, dumping into the water table, dumping near wetlands, dumping near open water, receipt of out of state waste, as well as, daily cover problems, wind-blown trash, and overall poor operational practices. Similar problems were noted in subsequent inspections conducted by the RIDEM, which took over inspection of the site until the J.M. Mills Landfill closed. On February 9, 1979,

landfill operations and receipt of waste were ordered suspended by the RIDEM due to numerous violations associated with daily cover and other problems. After the suspension period ended, operations resumed at the site. On January 1, 1980, a Consent Order was issued by the RIDEM, requiring the owners of the J.M. Mills Landfill to rectify the slope problems (slopes were too steep) and to address stabilization, cover, and erosion problems. On April 9, 1980, a Notice of Violation was issued to the operators of the J.M. Mills Landfill for conducting waste disposal operations within 200 feet of the floodplain of the river. The operators were ordered to restore the affected wetlands to their original state as existed in 1974. On June 11, 1980, the RIDEM issued the landfill operators a letter indicating that they were again in violation of cover requirements, as well as the slope requirements. On August 15, 1980, the RIDEM issued an order for the closure of the landfill due to failure to meet the requirements of the January 1, 1980 Consent Order. The operators appealed the Consent Order and continued to operate during the appeal process.

Bulky wastes, including large concrete slabs, demolition debris, and drums were disposed during and subsequent to the J.M. Mills Landfill operation along the northern access road and the railroad between the J.M. Mills Landfill and Martin Street, in the areas now referred to as DFs 1 through 3. The northernmost area of DFs 1 through 3 consists primarily of broken concrete pieces, asphalt, and soil. Observations and historical information provided by the USEPA has suggested that this material originated from the demolition of former gasoline stations. The southeastern extent of DFs 1 through 3 consists of large concrete slabs, railroad ties, and two areas containing drums. Other bulky wastes, concrete, and tanks were found on the floodplain at the southwest portion of the J.M. Mills Landfill.

Bulky wastes remained stockpiled on the transfer station property after disposal activities at the J.M. Mills Landfill ended. At a later date, this property was transferred to new owners and brought back into active operation as a transfer station. At the time of the RI/FS Work Plan preparation (Shield, 2003a), the area of the former transfer station for the J.M. Mills Landfill (NFO Nunes Disposal, Inc.) was an active transfer station operated by the Nunes family. Today, the transfer station area is inactive.

After the initial RI was complete and the USEPA designated separate OUs in 1990, additional actions in OU2 were limited. In 1991 and 1992, USEPA contractors constructed a fence to restrict access to the J.M. Mills Landfill. In November 1991, two drums containing paint and three empty drums were removed from the northern area of the J.M. Mills Landfill (USEPA, 1992). In November 1997, a second action was taken to address the recently disposed asbestos-containing wastes found outside the fenced

area. The security fence was extended to limit further uncontrolled dumping and to maintain access restrictions at this portion of the site.

In October 2003, Owens Corning removed 55.9 tons of fiberglass-containing waste and construction material from the Unnamed Island portion of the site. The construction material consisted of road-building material used to access the Unnamed Island for this removal action. The removal action occurred on the Unnamed Island between Pond A and the back channel of the Blackstone River (Owens Corning, 2004).

1.3.2.4 Investigation History at Operable Unit 2

Since environmental investigation activities began at OU2 in 1980, the following investigations have been completed at the site:

- Goldberg-Zoino Associates Inc., 1980 and 1981, *Lincoln/Cumberland Well Field Contamination Study*, hydrogeologic study of the aquifer in Lincoln and Cumberland (Goldberg-Zoino Associates Inc., 1982).

- GHR Engineering Corp., 1981, hydrogeologic investigation of the J.M. Mills Landfill.

- Malcolm Pirnie, Inc., 1982, *Investigation of Volatile Organic Chemical Contamination: Peterson/Puritan, Inc. Cumberland, Rhode Island*, hydrogeologic investigation of the Peterson/Puritan, Inc. plant (Malcolm-Pirnie, Inc., 1983).

- CDM, 1987, *Monitoring Well and Piezometer Installation – Final Report for the Peterson-Puritan Site*, hydrogeologic investigation (CDM, 1987).

- Sitewide RI Report, 1990, *Remedial Investigation Report for the Peterson/Puritan Site, Cumberland, Rhode Island*, soil, groundwater, surface-water, and sediment investigation (C-EE, 1990).

- Pre-Phase 1 Preparatory Assessment, 2002, *Pre-Phase 1 Preparatory Assessment, Report of Findings*, groundwater and sediment investigation (Shield, 2002).

- Bikeway Investigation, 2000 to 2002, *Remedial Action Work Plan, Blackstone River Bikeway Segment – 4B, Pratt Dam Fill Area*, soil investigation and removal action (Vanasse Hangen Brustlin, Inc., 2003).

- Owens Corning limited removal, 2003, *Completion Report, Limited Removal Action, Un-named Island, Cumberland, Rhode Island*, soil investigation and fiberglass removal (Owens Corning, 2004).

- McNulty properties, 2003, *Limited Investigation Report, Plat 14 Lots 2 and 4, Plat 15 Lot 1, Berkeley Commons/River Run Development, Cumberland, Rhode Island*, groundwater, surface-water and sediment investigation (EA Engineering, Science and Technology, Inc. [EA], 2003).

- Phase 1A Investigation, 2003, *Remedial Investigation/Feasibility Study Phase 1A Data Base Summary Report, Peterson/Puritan. Inc. Site – Operable Unit 2*, (Phase 1A DBSR) summary of validated soil, groundwater, surface-water, sediment and air data (Shield, 2003b).

- Phase1AExp Investigation, 2004, *Revised Database Summary Report*, summary of validated soil, groundwater, surface-water and sediment data (BBL, 2006a).

- Phase 1A and 1AExp Investigation, 2006, *Revised Initial Site Characterization Report, Peterson Puritan Superfund Site – Operable Unit 2 (OU2)* (ISCR2), summary of site characterization activities through the end of Phase 1AExp (BBL, 2006c).

- Phase 1B Investigation, 2005-2006, *Phase 1B Database Summary Report*, soil, groundwater, surface-water, sediment, and ecological investigation (BBL, 2006b).

- Nunes Parcel additional investigation, 2007, *Summary of Remedial Investigation Activities of the Nunes Parcel*, additional soil investigation and waste delineation at the Nunes Parcel (ARCADIS BBL, 2007a).

- OU1 5-Year Review, 2007, supplemental groundwater investigation of select wells in OU2 to coincide with 5-year monitoring requirement of the OU1 ROD.

- Residential well sampling by USEPA near Lenox Street well (2009).

- Unnamed Island Supplemental Site Investigation in 2009 (ARCADIS, 2010).

Summaries of the activities completed during each of these investigations are provided in Table 1-1. The data from the most recent groundwater sampling event (March 2007) have been incorporated into this RI Report, and the potential effects on the risk

assessments as a result of these data have been evaluated. Where appropriate, portions of this RI Report have incorporated text from the Phase 1A and Phase 1AExp reports, including the ISCR2 (BBL, 2006c), which was originally prepared by Shield.

2. Description of Field Investigations

2.1 Surveys

2.1.1 Base Map and Horizontal Locations

An aerial survey of the site and topographic mapping were performed in 2000 on behalf of the USEPA (EPIC PIC# 20101134S, from photography dated November 21, 2000). The topographic map provided to Shield by the USEPA served as the base for the site maps used in this RI Report. The base map contains standard topographic, physiographic, cultural, and facility features. Approximate property lines have been added to some of the maps based upon deed research and mapping performed by Cherenzia and Associates in 2001 and provided previously to the USEPA. Figure 2-1 is a map of OU2 showing the OU2 boundary, as well as well and piezometer locations. Plates originally prepared by Shield (BBL, 2006a) are included in Appendix A. All references to "Plates" in this RI Report means the plates located in Appendix A. Detailed lot and plot boundaries as of January 2005 for the OU2 parcels are shown on Plate 1.

Field locations sampled or measured in Phase 1A and Phase 1AExp were located by Shield on the base map using a Trimble GeoExplorer 3® global positioning system (GPS). Coordinates measured using the GPS were downloaded, corrected, and converted to the Rhode Island State planar coordinate system using Pathfinder® GPS software and plotted on the maps included with this RI Report.

Horizontal locations of wells, test pits, and soil borings completed in Phase 1B were collected by BBL using a high resolution Leica 1230 GPS System between October 30 and November 3, 2006. The horizontal locations, including the extent of each test pit were plotted using this GPS. The data were converted to the Rhode Island State planar coordinate system and plotted on maps included with this RI Report.

2.1.2 Vertical Surveys

The original photogrammetry for the map provided by the USEPA, performed by Eastern Topographics of Wolfeboro, New Hampshire, yielded topography tied to the North American Vertical Datum of 1988 (NAVD88). The topography was converted by the USEPA (verbal communication with Terry Stonaker at USEPA EPIC in September 2003) and the vertical datum on the map the USEPA provided to Shield, which is also the datum that has been used for all surveys in OU1, is the National Geodetic Vertical Datum of 1929 (NGVD29).

Shield retained Tilton & Associates, Inc. (Tilton) of North Attleboro, Massachusetts to perform vertical surveys and to tie selected reference points to the site datum. Tilton's vertical surveys were all performed relative to NAVD88 and converted to NGVD29 by adding 0.79 feet. Tilton has indicated that this conversion can be applied areawide across OU2.

In August 2003, Tilton surveyed the ground surface elevation and the top of the inner casing at each of the existing wells in OU2. In addition, Tilton surveyed the top of pipe at each of the piezometers and combination piezometer/staff gauges installed by Shield. Tilton also set benchmarks near each of the piezometers so they could be resurveyed more easily in the spring after flooding. In September 2003, Tilton surveyed the ground surface elevation and the top of the inner casing at each of the nine wells installed by Shield. At the same time, Tilton rechecked the elevations of selected piezometers installed in or near the Blackstone River. From September to October 2004, Tilton performed a confirmatory survey of the benchmarks, wells, and piezometers located at the south end of the site (including the Unnamed Island, the former transfer station, and the south end of the J.M. Mills Landfill) because one of the loops run the previous year had not closed within acceptable guidelines. This confirmatory survey resulted in corrections between 0.1 and 0.2 feet at selected locations. At the same time, Tilton resurveyed the piezometers that were repaired and replaced in late August 2004 and piezometers in or close to the Blackstone River that could have shifted during the course of the previous year. The elevation data generated from the surveys performed in Phase 1A and 1AExp by Tilton are summarized in Appendix C. Potentiometric data presented in Appendix B have been corrected to the 2004 survey (and all computed water-level elevation data reported herein) and are reported relative to NGVD29. A comprehensive list of well and piezometer elevations and construction information is provided in Table 2-1, and surface-water body bottom elevations for Phase 1A/1AExp sampling are given in Appendix C. Appendix B presents lists of all field samples collected during all phases of the RI.

Two culvert headwalls (HW-1 and HW-2) and a catch basin (HW-3) were included in the vertical surveys to supplement the available measuring points for surface-water elevations. Headwall locations are shown on Plate 1. HW-1, on the north end of the J.M. Mills Landfill, is the headwall on the upstream end of the culvert that carries drainage from the area of the sand and gravel pit and the northern wetland area (referred to as Wetland D, or WT-D), under the railroad track and into the north inlet off of the Blackstone River. HW-2, southeast of the J.M. Mills Landfill and the Lenox Street well, is a headwall on the downstream end of a culvert discharging to a ditch that runs parallel to the railroad on its northeast side, and drains to the southeast. HW-3 is a catch basin on

the south side of the former swimming hole at the southeast end of the wetlands (referred to as Wetland A, or WT-A) and most likely represents the outfall structure for the swimming hole. The outlet of this catch basin is silted in; it is believed to connect to the discharge point at HW-2.

BBL conducted additional vertical surveying following the Phase 1B sampling events. Ground surface elevations were collected at each of the test pit and boring locations at the Nunes Parcel between October 30 and November 3, 2006. During this period, BBL also collected surface and top of casing elevations at the new wells installed during Phase 1B. All of the vertical elevations were collected using a high resolution Leica 1230 GPS System. Elevations are reported relative to NGVD29 and are presented in tables and on figures throughout this RI Report.

2.1.3 Bathymetric Survey

During Phase 1A in August 2004, Shield performed bathymetric (depth) surveys within three surface-water bodies at the site: Pond F, off the Blackstone River just above the Pratt dam at the south end of OU2; Pond A, on the Unnamed Island; and in the back channel of the Blackstone River that runs along the southwest side of the Unnamed Island.

The bathymetric surveys were performed by using a boat to tow a digital GPS unit across the water bodies surveyed. The surveys were performed by Tilton using a Trimble Sub-meter Survey System rented from Innerspace Technology, Inc. of Carlstadt, New Jersey. The unit, which combines a depth finder with a high-accuracy GPS and data logger, was used to collect multiple depth soundings on a high-frequency grid as the boat moved across the water body. The collected depth data were tied to elevations relative to site datum by surveying in the water level on the date of the survey. The data were then processed by Tilton using a contouring software package to generate a contour map of the pond bottoms. The contour maps showing bottom elevations for Ponds A and F (relative to NGVD29) are provided in Appendix C (Figures D1-1 and D1-2). The deepest section of Pond A on the Unnamed Island was found to have an elevation of about 41 feet relative to NGVD29 (feet NGVD29) and a surface elevation of 53.9 feet NGVD29; the deepest section of Pond F was found to have an elevation of about 45 feet NGVD29 with a surface elevation of 54.1 feet NGVD29.

Two lines were run down the center of the back channel southwest of the Unnamed Island, and the resulting grid was not sufficiently dense for contouring. Bottom elevations in the back channel were found to range between 48 and 52 feet NGVD29.

Data on bottom elevations in other water bodies were compiled from various surveys performed by Tilton, as well as piezometer/staff gauge construction information. These data are summarized in Table C1 of Appendix C. The main channel of the Blackstone River at BRF-3 (a surface-water flow measuring station) on the northeast side of the Unnamed Island has a bottom elevation in its deepest section of about 51 feet, and the ponds at the toe of the J.M. Mills Landfill (Ponds B and C) have elevations of about 56 and 55 feet, respectively; bottom elevations in the wetlands range from 58 feet and less in Wetlands A, B, and C, to about 66 feet in Wetland D (all elevations relative to NGVD29).

2.1.4 Electromagnetic Induction Surveys

A variety of investigative and sampling techniques were employed during the Phase 1A and Phase 1AExp field efforts to characterize potential source areas, including those containing buried waste and surface debris, as well as overall water quality at the site. The subsurface screening surveys described in this section were intended to help define the extent of the buried waste in potential source areas and also to provide a preliminary characterization of potential hot spots to guide later characterization and sampling investigations in Phase 1A. The two investigative techniques selected for this purpose were surface geophysical surveys using electromagnetic induction (EMI) and subsurface probing surveys using an electrical conductivity/membrane interface probe (EC/MIP). The locations of the survey lines and points are shown on Plate 2. A summary of the results of the various techniques employed to help determine the extent of buried waste materials in OU2 are further described in Section 4.11.

In addition to the subsurface screening surveys, field analytical procedures were used in conjunction with sampling activities to gather additional characterization information on water quality at the site. Those results are described in Section 4.3.

During Phase 1A in August 2003, Shield contracted Weston Geophysical, Inc., of Northborough, Massachusetts to perform an EMI survey across the toe of the J.M. Mills Landfill. The survey was completed to evaluate the potential presence of buried waste at this location, and to identify potential subsurface anomalies (if any) that could be related to contamination emanating from the J.M. Mills Landfill via the groundwater pathway. Shield opted to perform this survey prior to test trenching, to assist in guiding those investigations for buried waste delineation. Three continuous EMI profile lines were traversed at the toe of the J.M. Mills Landfill. The locations of the profile lines, as well as the locations of the staked control points spaced 200 feet apart along each line, are illustrated on Plate 2.

Toward the end of the Phase 1A field activities in October 2003, Weston Geophysical, Inc, returned to perform a second EMI survey, to evaluate whether buried waste material was present beneath the northeastern perimeter of the Unnamed Island, where no test trenching had been performed initially. One continuous EMI profile line (2,900 feet) was traversed across the northern and northeastern portions of the Unnamed Island and a second 200-foot line across the southwestern portion of the Unnamed Island. Survey control points were established at 100-foot increments for each profile line, with survey stakes placed at 300-foot increments. The profile line locations, including the locations of the control points spaced at 300-foot increments, are illustrated on Plate 2.

A complete report entitled *Geophysical Investigation, Electromagnetic Induction Survey at the Peterson/Puritan OU2 Facility, Cumberland, Rhode Island*, submitted by Weston Geophysical, Inc. in August 2003, was presented in Appendix D to the DBSR2 (BBL, 2006a) and will not be represented in this RI Report. This write-up was created by Shield and was previously submitted to the USEPA in the DBSR2. A copy of this report is included in Appendix C.

2.1.5 Electrical Conductivity/Membrane Interface Probe Survey

During Phase 1A in August 2003, Shield contracted ZEBRA Environmental Corporation (Zebra) of Lynbrook, New York, to perform an EC/MIP survey to check for the presence of total VOCs in the subsurface hydraulically downgradient of the J.M. Mills Landfill. Shield believed that these data could provide useful information regarding the existence of a preferential pathway or source area for potential groundwater contamination.

Zebra advanced a total of 45 EC/MIP points into the subsurface during the survey at locations shown on Figure 2-1a. Points were advanced on two separate grids during the survey: one at 50-foot intervals and the other at 200-foot intervals. Points on the 50-foot interval grid were advanced to approximately 10 feet below ground surface (bgs), while those on the 200-foot interval grid were advanced to approximately 30 feet bgs. Soil gases were monitored continuously over the entire depth of each boring.

The results of the EC/MIP survey were outlined in detail in the *Summary Report for Direct Sensing Services* prepared by Zebra, dated September 23, 2003, which was presented in Appendix D of the DBSR2 (BBL, 2006a). A copy of this report is included in Appendix C.

2.1.6 Geophysical Survey

Under the scope of Phase 1B field activities, BBL contracted Geophysical Applications (Geophysical) of Holliston, Massachusetts to perform a geophysical survey at OU2 in an effort to better refine the shape of the bedrock valley at its deepest point beneath the Unnamed Island and at the southeastern end of the J.M. Mills Landfill. Geophysical used the following three technologies in their survey:

- seismic refraction
- microgravity profiling
- a brief seismic reflection profiling test

Seismic refraction data were acquired along two lines covering approximately 2,000 feet of traverse using an ABEM Terraloc Mark 6 seismograph with 20-foot geophone spacings. Traverse lines are illustrated in Appendix D on Figures 1 through 3. Small buried explosive charges were used as the seismic energy source. Refraction data analysis was generally performed by measuring first-arrival times with Rimrock Geophysics' ASIPIK module, followed by modeling with Rimrock Geophysics' SIPT2 delay-time interpretation software. Selected time-distance plots were reviewed and layer depths manually calculated with the crossover-distance technique as a quality assurance check.

Microgravity profiling involves using gravimeters at the ground surface to measure subsurface density contrasts between natural or man-made structures. Geophysical collected microgravity data readings at a series of points along the same two transects used during the seismic refraction survey, illustrated on Appendix D Figure 4. Microgravity data collection requires careful leveling and balancing of a beam within an extremely delicate instrument. Geophysical used a LaCoste & Romberg model G meter, with electronic-level readouts and model Aliod 100 electronic beam-nulling to perform the survey. The operator recorded raw gravity data observations in a field notebook. The operator also recorded measurements at a reference base station at approximately 1 hour intervals during the field work to measure ordinary instrument and tidal drift, for use in gravity data reduction.

Geophysical performed a brief test of the seismic reflection profiling technique to help determine whether it might be useful in delineating the suspected bedrock valley. This test consisted of a "walk away" survey, where geophones were moved out in short

distance increments from a fixed shot point. In this case, geophones were placed along seismic Line 2 at 2-foot distance increments, between Stations 22 through 164. Seismograms were recorded in groups of 24 (i.e., initially between Stations 22 through 68). The 24-channel geophone array was then moved 48 feet further from the shot point and another seismogram recorded using the initial shot point. Seismic energy during this survey was generated with a 16-pound sledge hammer hitting a strike plate lying on the ground. Seismograms were recorded using the ABEM Terraloc Mark 6 seismograph, with sampling intervals of 1 millisecond and record lengths of 1,028 milliseconds. Based on the relatively low-frequency signals and lack of confident reflections identified during this initial test, the reflection technique was judged unlikely to produce superior results than the refraction or microgravity survey methods. Consequently, detailed seismic reflection profiling was not performed along Lines 1 or 2.

Additional details about the survey are provided in an Investigation Summary Report, which Geophysical prepared titled *Geophysical Survey Peterson/Puritan OU2 Site Cumberland, Rhode Island*. A copy of this report is included in Appendix D to this RI Report.

2.2 Meteorological Investigation

Daily climatic data for Lincoln, Rhode Island, available from the National Weather Service (NWS) in Taunton, Massachusetts, are summarized in Appendix E for the period encompassing the Phase 1A and Phase 1AExp field work (August 2003 to mid-October 2004). Climatic data were not available for most of the month of September 2004 and part of October 2004 at the Lincoln station. However, comparable data were available from the NWS for several other stations in southern New England, including the Providence airport.

In Phase 1A, Shield collected data from an on-site meteorological station set up next to the field trailer on Martin Street. However, the on-site rain gauge did not provide reliable data. Daily climatic data recorded at the site in the summer/fall of 2003, compared to the NWS Lincoln station data, are provided in Appendix E. Overall, the on-site data (collected as discrete measurements) were found to be less comprehensive than the NWS station data, and the decision was made to discontinue additional on-site climatic data collection for the Phase 1AExp.

2.3 Soil Investigation

Surface and subsurface soil samples were collected from locations across the entire site during the various phases of investigation to provide soil quality characterization data. During Phase 1A and Phase 1AExp, Shield collected a total of 93 surface and 11 subsurface soil samples for chemical analysis, and a total of 28 subsurface samples for geotechnical analysis. During Phase 1B, BBL collected 21 additional surface and seven subsurface soil samples from the site to fill in data gaps identified following the completion of Phase 1A activities. During the 2006 Nunes Parcel Investigation, BBL collected three surface soil samples and nine subsurface soil samples to further define the nature and extent of site-related constituents in soil and to provide additional data for use in assessing potential risks to human and ecological health. At the USEPA's request, a supplemental investigation of soil occurred on the Unnamed Island in November 2009 to address data gaps for the risk assessment. Eleven surface soil and 23 subsurface soil samples were collected in 2009 on the Unnamed Island. Soil investigation activities are detailed in the following subsections. A list of the environmental samples collected for all media during all phases of the RI are presented in Appendix B. All soil samples from all RI phases combined are presented on Figure 2-2.

2.3.1 Test Trench Excavation and Soil Sampling

2.3.1.1 Phase 1A and 1AExp Test Pits

After reviewing the results of the waste delineation geophysical surveys, Shield excavated a total of 19 test trenches and test pits adjacent to the J.M. Mills Landfill and 34 test trenches on the Unnamed Island during Phase 1A, with the objective of characterizing the types and extent of subsurface wastes in these two potential source areas. The approach included mapping the extent of the surface debris and buried waste and sampling the environmental media directly associated with the waste. Test trenching was used both to investigate/map areas of buried waste and to collect samples for laboratory analyses. Figure 2-2a depicts a compilation of all test trenches completed during the RI and samples collected from these trenches.

Shield collected both subsurface waste soil (SO-W, defined for the purpose of this RI Report as soil in direct contact with waste materials) and grab water (defined for the purpose of this RI Report as water collected from test trenches that were intended to represent leachate conditions in lieu of seep samples that were not evident during any Phase 1A groundwater sampling event) samples for laboratory analysis during this

investigation. The majority of the excavation work was completed between August 14 and 21, 2003. Shield excavated additional trenches along the northeastern perimeter of the Unnamed Island on October 24, 2003, at the end of the Phase 1A field work to test for the presence of buried waste in that area. A summary of the test trenching activities completed by Shield during Phase 1A is presented below.

J.M. Mills Landfill

- Excavated 11 test trenches (LT-TT-01 through LT-TT-11) along the suspected edge of the J.M. Mills Landfill to establish the visual presence and lateral visual extent (if possible) of buried waste material.

- Excavated four smaller test pits (LF-TP-01 through LF-TP-04) on the northern side of the J.M. Mills Landfill to establish the presence/absence of waste only, as surface debris, buried utilities, and other constraints prevented the excavation of more extensive trenches in this area of the J.M. Mills Landfill, which limited the ability to test for the lateral extent.

- Collected four grab water samples for laboratory analysis from the following four test trenches that were installed to identify the visual limits of waste: test trench LF-TT-02 (GW-LE03-LF), test trench LF-TT-04 (GW-LE04-LF), test trench LF-TT-07 (GW-LE05-LF), and test trench LF-TT-09 (GW-LE06-LF). These samples were later determined to be non-representative of the leachate medium and unreliable because particulate matter was entrained within them.

- No soil samples were collected from trenches or test pits excavated at the J.M. Mills Landfill.

Unnamed Island

- Excavated 34 test trenches (UI-TT-01 through UI-TT-32, UI-TT-17A, and UI-TT-18A) on the Unnamed Island to help define the lateral visual extent of buried waste.

- Collected two grab water samples: one from test trench UI-TT-06 (GW-LE01-UI) and one from test trench UI-TT-10 (GW-LE02-UI). These trenches were completed to identify visual limits of waste in those areas. These samples were later determined to be non-representative of the leachate medium and unreliable because particulate matter was entrained within them.

- Collected four subsurface soil samples from the following locations: test trench UI-TT-06 (SO-W01-UI), test trench UI-TT-10 (SO-W02-UI), test trench UI-TT-03 (SO-W04-UI) at unspecified depths, and a composite from test trenches UI-TT-01 and UI-TT-02 (SO-W03-UI).

All grab water samples collected during Phase 1A test trenching and test pitting activities were analyzed for:

- VOCs, including tentatively identified compounds (+ TICs) (USEPA Method OLC03.2)
- SVOCs (+ TICs) (USEPA OLC03.2, including PAHs by gas chromatograph/mass spectrometry (GC/MS) selective ion monitoring [SIM])
- organochlorine pesticides (pesticides) (USEPA OLC03.2)
- PCBs (USEPA OLC03.2)
- Target Analyte List (TAL) metals (USEPA ILM04.1)
- total cyanide (USEPA ILM04.1)
- chloride (USEPA Method 325.2)

All soil samples collected during Phase 1A test trenching and test pitting activities were analyzed for VOCs + TICs, SVOCs + TICs (including PAHs), PCBs, pesticides, TAL metals, total cyanide, and percent moisture/solids following the USEPA Contract Laboratory Program (CLP) SOW OLM04.3 for organic parameters and ILM04.1 for inorganic parameters. A detailed write-up of the test trench and test pit excavations completed during Phases 1A and 1AExp, including sampling methodology, sample information, and related material was included as Appendix A to the DBSR2 (BBL, 2006a).

2.3.1.2 Phase 1B Test Pits

During Phase 1B field activities conducted between October 30 and November 3, 2006, BBL excavated 23 test pits on the solid waste transfer station property near the edge of the areas identified as buried waste determined during Phase 1A soil boring activities, in order to further define the lateral extent, depth, and nature of waste beneath this area of

the site. The November 2006 test pits on the Nunes Parcel are shown on Figure 2-3. Test pits were excavated to the depth of native soil, or to the water table, whichever was encountered first. Test pits were logged by a supervising BBL field geologist, and these logs are included in Appendix F. Two soil borings were installed (SO-104-NP and SO-105-NP) on November 2, 2006 in place of test pits that could not be excavated due to access of the areas by an excavator. A concrete wall adjacent to the Blackstone River along the areas planned to be excavated prohibited test pitting access.

BBL collected one surface soil sample from three of the test pit locations (SO-101-NP, SO-102-NP, and SO-107-NP) north and south of the Shield-identified waste limit areas and submitted them for laboratory analysis. The surface soil samples were collected from the 0 to 1 foot interval directly from the sidewall of the test pit.

Nine subsurface soil samples (SO-100-NP through SO-108-NP) were collected directly from the excavator bucket that was used to excavate soil from seven test pit locations and from two hand-cored soil boring locations. As suggested by the USEPA, the subsurface soil samples from the test pits were composited over the entire subsurface depth interval ranging from 2 to 10 feet bgs, depending on the maximum depth of the test pit. The subsurface soil samples were collected to further characterize the impacts of waste materials on the adjacent soils.

An attempt was made to collect the soil samples from areas where elevated photoionization detector (PID) readings or visual (staining or stressed vegetation) and/or olfactory observations suggested that soils may be affected by chemical constituents from the debris areas; however, there were no appreciable PID readings, staining, and/or olfactory observations encountered. Samples were shipped under chain of custody to Alpha Woods Hole Group in Raynham, Massachusetts for analysis. Equipment used in sample collection was field cleaned or decontaminated between locations.

In addition to the samples collected for laboratory analysis, an Innov-X, X-ray fluorescence (XRF) analyzer was used in the field to evaluate the level of metals, particularly lead, at all locations, including those adjacent to the soil area of the removal project completed by the RIDEM during the bikeway construction, and to screen most other test pit locations to assist in the selection of which test pits to sample for off-site laboratory analysis. The results of the XRF screening were used to spot the location of the test pits adjacent to the RIDEM soil removal area. During the investigation, XRF readings were taken at all test pit locations and the readings were used to select biased high metals locations within a test pit (focused on lead). However, the XRF readings

were not physically recorded on hard copy and only a limited number of locations' readings (TP-7, TP-8, TP-20, TP-21, and TP-22) were stored electronically to the device. A summary of the available export files from the XRF is included with the test pit logs in Appendix F.

One field duplicate, one field equipment rinsate blank, and sufficient aliquots of soil for laboratory matrix spike/matrix spike duplicate analyses were collected. The samples were analyzed using USEPA SW846 methods, in place of the CLP methods employed for previous investigations, for VOCs + TICs (USEPA Method 8260B), SVOCs + TICs (including PAHs, USEPA Method 8270C), PCBs (USEPA Method 8082), TAL metals (USEPA Methods 6020A and 7471A), and total cyanide (USEPA Method 9014). The six locations with only subsurface intervals were additionally analyzed for target list pesticides (USEPA Method 8081A).

2.3.2 Soil Boring and Surface and Subsurface Soil Sampling

2.3.2.1 Phases 1A and 1AExp

Shield collected a total of 93 surface soil samples and 33 subsurface soil samples from OU2 during Phases 1A and 1AExp. Phase 1A sampling took place between August 18 and September 21, 2003. The bulk of Phase 1AExp sampling occurred between September 8 and 10, 2004, with limited resampling on November 27, 2004.

Subsurface soil samples were collected from soil borings installed by hollow-stem auger and direct-push drilling methods, while surface soil samples were collected both manually and from mechanical borings. Subsurface soil samples were collected to provide chemical and geotechnical data. During Phase 1A, surface soil samples were collected to provide chemical characterization data from targeted areas, including areas of visible surface debris and waste materials (referred to as DFs), areas of surface soil (fill or reworked native soil) on top of or close to buried waste and areas of natural or natural-appearing soil remote from documented waste disposal zones. Phase 1AExp surface soil sampling was completed to fill data gaps and to collect data from additional areas of interest that were not addressed during Phase 1A, as identified by the USEPA. A summary of the soil boring and sampling activities completed by Shield during Phases 1A and 1AExp, organized by site area, is presented below.

Phase 1A Soils

- *Nunes Parcel* – Installed eight soil borings (GP-1 through GP-8) by direct-push drilling method. Collected five surface soil samples and five subsurface soil samples from these eight borings. Collected an additional three surface soil samples (SO-008-NP, SO-009-NP, and SO-017-NP) using hand-augering techniques.

- *Quinnville Well Field* – Collected five surface soil samples (SO-001-BG through SO-005-BG) initially intended to provide background characterization data (sample results later indicated that soil at the Quinnville well field are not representative of background conditions).

- *J.M. Mills Landfill* – Collected 14 surface soil samples (SO-018-LF through SO-030-LF and SO-032-LF) at the J.M. Mills Landfill toe, adjacent to the Blackstone River. No surface soil samples were collected directly from the J.M. Mills Landfill, although some were collected from soils overlying waste deposits.

- *DFs 1, 2, 3, and 4* – Collected eight surface soil samples (SO-W05-DF through SO-W12-DF) from locations close to or in direct contact with the surface debris and/or other areas of concern.

- *Unnamed Island* – Collected 10 surface soil samples (SO-006-UI, SO-007-UI, and SO-010-UI through SO-016-UI).

- *OU2 Monitoring Well Borings* – Advanced nine soil borings using the hollow-stem auger drilling method for the purpose of installing monitoring wells at various locations across OU2: one (SEA-602B) installed to an intermediate depth of approximately 60 feet bgs and eight shallow borings (SEA-601, SEA-602A, and SEA-603 through SEA-608) installed approximately 20 feet bgs. Five shallow and the intermediate depth boring were installed at locations near buried waste at the J.M Mills Landfill. Two shallow borings were installed at locations near buried waste on the Unnamed Island. One shallow well boring was installed near buried waste at the transfer station (Nunes Parcel). Unlike most of the other environmental samples collected for this project, those collected from these nine borings were intended primarily for physical characterization of subsurface materials, rather than chemical characterization. The physical characterization sampling is described in more detail in Section 2.3.3.1.

Phase 1AExp Soils

- *Quinnville Well Field* – Collected four surface soil samples (SO-044-QW, SO-045-QW, SO-075-QW, and SO-076-QW).

- *Mackland Farms Property* – Collected three surface soil samples (SO-072-MF, SO-073-MF, and SO-074-MF) on Mackland Farms property, upriver from the Quinnville well field, at locations selected by the USEPA. Samples were collected to investigate potential background concentrations of chemicals in surface soil to replace the background data from samples initially collected at the Quinnville well field in Phase 1A. The area of Mackland Farms appears to have a similar depositional environment as the Quinnville well field, but is located farther upstream and outside any potential influence from OU1 or OU2.

- *J.M. Mills Landfill* – Collected three surface soil samples from soils beyond the base of the J.M. Mills Landfill – two samples (SO-041-LF and SO-42-LF) from the vicinity of Pond B and one sample (SO-043-LF) from the vicinity of Pond C. No surface soil samples were collected directly from the J.M. Mills Landfill.

- *DFs 1, 2, and 3* – Collected four additional surface soil samples (SO-046-DF through SO-049-DF) adjacent to the Blackstone River on the south side of DFs 1 through 3.

- *Unnamed Island* – Collected 12 additional surface soil samples (SO-77-UI through SO-88-UI) from the Unnamed Island at locations selected by the USEPA.

- *Nunes Parcel* – Collected eight additional surface soil samples (SO-050-NP through SO-057-NP) from the Nunes Parcel adjacent to the Blackstone River.

- *Blackstone River Back Channel* – Collected eight surface soil samples (SO-064-BR through SO-071-BR) along the embankment of the Blackstone River back channel at locations selected by the USEPA.

- *Wetlands* – Collected six surface soil samples (SO-058-WT through SO-063 WT) around the edges of the wetlands at locations selected by the USEPA.

All soil samples collected for chemical characterization were analyzed for VOCs + TICs, SVOCs + TICs (including PAHs), PCBs, pesticides, TAL metals, total cyanide, and percent moisture/solid using USEPA CLP methods included in OLM04.3 and ILM04.1. Samples collected during Phase 1AExp were also analyzed for pH. A detailed write-up

of the soil investigation activities completed during Phases 1A and 1AExp, including sampling methodology, sample information, and related material was included as Appendix A to the DBSR2 (BBL, 2006a).

2.3.2.2 Phase 1B Soils

During Phase 1B activities between October 5 and December 8, 2005, BBL collected an additional 18 surface soil samples from selected areas of OU2. The Unnamed Island, the Nunes Parcel, the Quinnville well field, and areas adjacent to the J.M. Mills Landfill were targeted during this phase of the investigation. Details on the sampling completed at each area of the site are provided below:

- *Unnamed Island, Nunes Parcel, and Areas Adjacent to the J.M. Mills Landfill* – Collected eight surface soil samples (LOU-001, LLF-002 through LLF-004, LUI-005, LUI-006, LNP-007, and LNP-008) from these areas of the site to determine the concentrations of polychlorinated dibenzo-*p*-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) present at these areas of OU2, and whether these concentrations appear to be associated with the occurrence of other organic compounds in surface soils at OU2.

- *Quinnville Well Field* – Collected 10 surface soil samples (LQW-009 through LQW-018) across this area to obtain additional chemical characterization data for risk assessment purposes. BBL resampled five of these locations because the laboratory missed the holding time on the VOC fraction of the original sample. These resamples were collected at the same approximate locations, but were labeled with an additional "B" at the end of the sample identification.

Each sample was composited from several discrete grab volumes in close proximity, collected from the 0 to 1 foot interval using a hand auger, shovel or trowel, and then aliquoted to sample containers for shipment to Alpha Woods Hole Group for analysis of all parameters, except the dioxin/furan analyses, which were performed by Pace Analytical in Minneapolis, Minnesota. Sampling equipment was field cleaned or decontaminated between locations to avoid cross-contamination.

To obtain improved sensitivity and accuracy, it was decided that Phase 1B samples would be analyzed for chemical constituents using USEPA SW-846 methods in place of the CLP methods performed for Phases 1A and 1AExp. Samples collected from surface locations across the site were analyzed for dioxins/furans (PCDDs/PCDFs) using USEPA Method 8290. Ten soil samples were collected from the Quinnville well field and

analyzed for VOCs + TICs (USEPA Method 8260B), SVOCs + TICs (including PAHs, USEPA Method 8270C), PCBs (USEPA Method 8082), pesticides (USEPA Method 8081A), TAL metals (USEPA Methods 6020A and 7471A), total cyanide (USEPA Method 9014), and percent moisture/solid to report results on a dry-weight basis.

2.3.2.3 Supplemental Unnamed Island Investigation

A Supplemental Remedial Investigation was completed on the Unnamed Island in November 2009 to address data gap concerns that were inhibiting the completion of the human health and ecological risk assessments by the USEPA's contractors. The PRPs collected additional soil and groundwater samples in the vicinity of the two previously identified buried waste areas to supplement the existing dataset, primarily focusing on subsurface soil media. Eleven surface (0 to 1 foot depth) and 23 subsurface soils ranging in depth from 1 foot to 14 feet bgs.

The soil samples were analyzed for the same analytical parameters as the Nunes Parcel samples collected in 2006, except 19 select soil samples were additionally analyzed for PCDDs/PCDFs by USEPA Method 8290B.

2.3.3 Geotechnical Soil Sampling

2.3.3.1 Phases 1A and 1AExp Geotechnical

Shield completed both field and laboratory geotechnical testing on soil and sediment samples collected during Phases 1A and 1AExp to characterize the physical properties of the soils and sediments at the site and provide data supporting a slope stability analysis of the J.M. Mills Landfill. A summary of the geotechnical sampling completed by Shield is presented below:

- Completed standard penetration tests at 2-foot intervals in each of the nine monitoring well soil borings installed at OU2.

- Collected 26 samples for total organic carbon (TOC) and percent moisture analysis from the nine monitoring well soil borings installed at OU2.

- Collected 26 samples for grain size distribution analysis from the nine monitoring well soil borings installed at OU2.

- Collected eight samples for natural moisture content, specific gravity of solids, and compaction testing from the monitoring well soil borings installed at OU2.

- Completed 11 cone penetration tests (CPTs) at nine locations in the waste mass and in native soil on the Blackstone River bank at the toe of the J.M. Mills Landfill to provide data supporting a slope stability analysis. The slope stability analysis results are discussed in Section 4.11.1.2.

- Collected samples for grain size distribution analysis from all sediment sampling locations during Phases 1A and 1AExp (refer to Section 2.5.1 for results).

A detailed write-up of all field activities, including geotechnical testing, completed during Phase 1A and Phase 1AExp, including sampling methodology, sample information, and related material, was included as Appendix A to the DBSR2 (BBL, 2006a).

2.3.3.2 Phase 1B Geotechnical

BBL did not collect any soil geotechnical samples during Phase 1B, but collected grain size distribution samples from sediments. Details of sediment sampling are discussed in Section 2.5.

2.4 Groundwater Investigation

2.4.1 Phases 1A and 1AExp

Shield completed an extensive groundwater investigation at OU2 during Phases 1A and 1AExp, installing piezometers, staff gauges, and monitoring wells; completing several groundwater potentiometric surface surveys; groundwater sampling; and hydraulic conductivity testing. Shield completed the Phase 1A field work between August and October 2003 and Phase 1AExp field work between August and October 2004. Phase 1A and Phase 1AExp monitoring well and piezometer locations are illustrated on Plate 1 (see Appendix A). The groundwater investigation activities completed during these two initial phases are summarized below.

Phase 1A Groundwater

- Installed 19 piezometers and combination staff gauge/piezometers (PZ-01 through PZ-19) across OU2.

- Installed eight shallow (SEA-601, SEA-602A, and SEA-603 through SEA-608) monitoring wells and one intermediate-depth (SEA-602B) monitoring well across OU2. Six wells, including the shallow intermediate depth well pair, were installed within close proximity to and hydraulically downgradient of the buried waste at the J.M. Mills Landfill. Two shallow wells were installed within close proximity to and hydraulically downgradient of the buried waste encountered on the Unnamed Island. In addition, one shallow well was installed in close proximity to and hydraulically downgradient of the buried waste encountered at the transfer station (Nunes Parcel).

- Completed four potentiometric surveys at OU2 on the following dates: May 5 through 7, 2002 (preliminary survey); August 14 and 15, 2003; August 25 through 27, 2003; and September 25, 2003.

- Collected daily water-level readings from piezometer PZ-01 and from the MW-109 well cluster for the duration of field work, both located near the J.M. Mills Landfill's south gate, in order to more completely evaluate the interconnectivity between surface water and groundwater at specific areas of the site. The water-level data are presented in Tables H2-1 through H2-7 in Appendix H to the DBSR2 (BBL, 2006a).

- Collected groundwater samples from nine Phase 1A installed monitoring wells and 19 existing wells across OU2, targeting primarily wells screened in the shallow and intermediate unconsolidated zones.

- Performed single well pump-and-recovery hydraulic conductivity tests on 24 wells within OU2, including the nine Phase 1A installed wells (SEA-601 through SEA-608) and 15 existing wells chosen to represent the various formations present vertically beneath the site. All of the existing monitoring wells were redeveloped prior to testing.

Phase 1AExp Groundwater

- Completed two potentiometric surveys at OU2 on August 27 and September 20, 2004.

- Installed one additional piezometer (PZ-20) and three piezometers (PZ-04A, PZ-06A, and PZ-15A) to replace damaged piezometers, or supplement existing ones. Repaired other damaged piezometers.

- Collected daily water-level readings from piezometers PZ-01 and PZ-11 and from the MW-109 well cluster for the duration of field work in order to more fully evaluate the interconnectivity between surface water and groundwater at specific areas of the site. The water-level data are presented in Tables H2-1 through H2-7 in Appendix H to the DBSR2 (BBL, 2006a).

- Collected a weekly round of water-level readings from all wells and piezometers located on the Unnamed Island. The water-level data are presented in Tables H2-1 through H2-7 in Appendix H to the DBSR2 (BBL, 2006a).

- Collected groundwater samples from 40 monitoring wells, including most of the wells sampled during Phase 1A, and 13 additional wells specified by the USEPA, including deeper wells finished in till and bedrock.

Before starting Phase 1A field work, Shield developed the following formation code for all site monitoring wells, both existing and new, to distinguish between the various hydrostratigraphic zones present in the water-bearing formations beneath the site for use in potentiometric analyses:

- SH – The well screen is unconsolidated glaciofluvial sediments and the middle screen elevation is above 35 feet NGVD29.

- IN – The well screen is in unconsolidated glaciofluvial sediments and the middle screen elevation is between -10 and 35 feet NGVD29.

- DP – The well screen is unconsolidated glaciofluvial sediments and the middle screen elevation is below -10 feet NGVD29.

- TL – The well screen is in till just above bedrock.

- BR – The well screen is in bedrock.

Groundwater samples collected during Phases 1A and 1AExp were analyzed using USEPA CLP methods included in OLC03.2 and ILM04.1 for VOCs + TICs, SVOCs + TICs (including low-level PAHs by GC/MS-SIM using modified USEPA Method 8270C), pesticides, PCBs, TAL metals (including low level arsenic by modified USEPA Method 1632), and chloride (USEPA Method 325.2). Well completion logs for Phases 1A and 1AExp monitoring wells and piezometers installed during RI field activities are included in Appendix G. A detailed write-up of all groundwater investigation field activities

completed during Phase 1A and Phase 1AExp, including methodology, piezometer and monitoring well completion information, laboratory sample information, and related material, was included as Appendix A to the DBSR2 (BBL, 2006a).

2.4.2 Concurrent Non-Remedial Investigations

As part of a separate investigation not directly associated with the RI, EA installed four wells at locations along the northeastern boundary of the wetlands (MW-EA-1 through MW-EA-4 on Plates 1 and 4) in June 2003. These wells were installed on behalf of Berkeley Commons/River Run Development (Plat 14 Lots 2 and 4 and Plat 15 Lot 1 on Plate 1), referred to for the purpose of this RI Report as the McNulty properties. All four of these borings were drilled to bedrock and they encountered little to no groundwater above the bedrock. One well (MW-EA-1) was finished in the unconsolidated overburden just above bedrock and three (MW-EA-2 through MW-EA-4) were installed in bedrock. Two of these wells (MW-EA-1 and MW-EA-3) were sampled by Shield during Phase 1AExp. This information, among other data collected, supported the USEPA's decision for the partial deletion of the Berkeley Commons/River Run Development parcels in 2005.

2.4.3 Phase 1B Groundwater

2.4.3.1 Well Installation and Development

Monitoring wells and piezometers were installed in three areas of the site during Phase 1B: at or near the base of the J.M. Mills Landfill, the Unnamed Island, and the solid waste transfer station property (Nunes Parcel). With the approval of the USEPA, 12 new monitoring wells, three piezometers, and two stream gauges were installed. These new monitoring points were installed between October 10 and November 17, 2005. Four new monitoring wells were installed at or near the base of the J.M. Mills Landfill (GLF-700A, GLF-704, GLF-706, and GLF-706A), three on the Unnamed Island (GUI-701, GUI-702, and GUI-703), and five on the Nunes Parcel (GNP-705, GNP-705B, GNP-707, GNP-708, and GNP-708A). Three new piezometers (PZ-21, PZ-22, and PZ-23) and two new stream gauges (SG-1 and SG-2) were installed along the Blackstone River. All monitoring well locations for the three RI phases combined are presented on Figure 2-1.

Because of the challenges presented by the site, including remote well locations and difficult drilling conditions (i.e., "running sands," cobbles, and boulders), a variety of drilling techniques and rigs were used, as described in the following subsections. All of the monitoring wells were drilled and installed by the D.L. Maher Division of Boart

Longyear (North Reading, Massachusetts). Piezometers and stream gauges were installed by BBL. Soil samples were collected in accordance with the method described in the *Soil, Sediment, and Hydrogeologic Assessment Work Plan and Field Sampling Plan Addendum* (Work Plan) (BBL, 2005a), except for samples from the borings drilled on the Unnamed Island. These samples were collected using a Geoprobe®, and the sampling procedure is described in Section 2.3.2. Recovered soil samples were described in accordance the Standard Operating Procedure (SOP) contained in Attachment N of the Work Plan. Soil samples were also screened for VOCs using a MiniRae 2000 PID in accordance with the SOP contained in Attachment A of the Work Plan. Soil sample descriptions, recoveries, and associated PID readings are documented on the boring logs in Appendix H.

During drilling at selected wells, vertical profiling of groundwater quality was conducted. The profiling was performed as described in the Work Plan (BBL, 2005a), except that pumping rates and durations were increased to produce more representative groundwater samples, as described in the following subsection. Sampling logs documenting groundwater levels, sampling times, sampling intervals, and groundwater parameters are contained in Appendix I. Groundwater samples collected during the profiling were analyzed for VOCs by Alpha Woods Hole Group (Raynham, Massachusetts) using USEPA Method 8260B. Samples were picked up each day and delivered to the laboratory by its courier. Analytical results of the vertical profiling groundwater samples are summarized in Table 2-2.

Monitoring wells were constructed of 2-inch-diameter, Schedule 40 polyvinyl chloride (PVC) with 10-foot-long, 0.01-inch slot screens; 2-foot-thick bentonite seals; and #0 sized silica sand packs[1]. The remainder of the borehole annulus of each well was filled with cement/bentonite grout from the bottom up using a tremie pipe. All of the wells were completed at the surface with locking steel stick-up protectors with keyed-alike locks. Each well casing was equipped with a J-plug cap. Soil cuttings produced during the drilling; water collected during the vertical profiling and well development; and personal protective equipment were drummed, labeled, and staged on site for future disposal.

[1] The three shallow wells on the Unnamed Island were constructed of 1.5-inch-diameter PVC. Details of these installations are contained in Section 2.4.3.1.2.

2.4.3.1.1 J.M. Mills Landfill Area Groundwater

Shallow and intermediate wells GLF-706 and GLF-706A, located on the east side of the base of the J.M. Mills Landfill, were installed using a truck-mounted, short-stroke rotosonic drill rig. To help determine the depth of any landfill contamination and the screened interval of GLF-706A (the deeper well of the pair), vertical profiling was conducted every 20 feet, beginning at 30 feet and continuing to a depth of 90 feet. This was the first location where vertical profiling was conducted during the field work. The results, which were received the next day, indicated that three VOCs, all members of a class of compounds known as trihalomethanes (THMs), were present in the groundwater samples (Table 2-2). THMs are a class of chemicals that are commonly formed when chlorine or other drinking-water disinfectants react with naturally occurring organic and inorganic matter in municipal water systems (http://www.epa.gov/enviro/html/icr/dbp.html; USEPA, 2005). Given this fact and general absence of these compounds in site groundwater, as shown by previous sampling rounds, it is concluded that the source of THMs was likely the municipal water from the Town of Cumberland used during drilling, which was obtained from a fire hydrant located behind the Stop & Shop grocery store neighboring the Nunes Parcel to the southeast. This information was discussed with the USEPA and it was agreed that well GLF-706A would be screened from 55 to 65 feet. Shallow well GLF-706 was screened from 10 to 20 feet bgs. The above table summarizes installation information for all of the wells installed on this property during this investigation.

Well Installation Summary – At or Near the Base of J. M. Mills Landfill

Well I.D.	Drilling Method	Screened Interval (ft bgs/FAMSL)	
		Top	Bottom
GLF-700A	MiniSonic (ATV)	40/19.5	50/9.5
GLF-704	MiniSonic (ATV)	10/50.8	20/40.8
GLF-706	Rotosonic (truck)	10/54.3	20/44.3
GLF-706A	Rotosonic (truck)	55/9.8	65/-0.2

Notes:
ft bgs = feet below ground surface
FAMSL = feet above mean sea level (NGVD29)

For the balance of vertical profiling conducted during this project, a sample of drilling water was collected and submitted with each day's groundwater samples. As discussed in Section 4.3.2.3, these data confirmed the drilling water to be the source of the THMs. To collect more representative groundwater samples, pumping rates and durations were increased for the remaining vertical profiling samples. This action successfully reduced the fraction of drilling water contained in the samples to within acceptable levels, yielding data of sufficient quality for their intended purpose.

Due to the difficult terrain and wet conditions, the remaining two wells installed in the J.M. Mills Landfill area were drilled using an ATV MiniSonic rig. Shallow well GLF-704[2] was installed near the base of the J.M. Mills Landfill to investigate shallow groundwater conditions near Pond B. Intermediate-depth well GLF-700A was installed to pair with existing shallow well SEA-603. Vertical profiling was performed at GLF-700A to investigate elevated detections of benzene observed in well SEA-603. Profiling began at 5 feet bgs and continued every 20 feet to a depth of 65 feet bgs, resulting in collection and analysis of four water samples. Based on the profiling results, well GLF-700A was screened from 40 to 50 feet bgs to bind the lower limit of groundwater containing VOCs.

2.4.3.1.2 Unnamed Island Groundwater

A summary of the wells installed during Phase 1B on the Unnamed Island is presented in the adjacent table. Three shallow overburden wells (GUI-701, GUI-702, and GUI-703) were installed to better define shallow groundwater flow on the Unnamed Island, specifically in the area west of buried waste mapped by Shield in Phases 1A and 1AExp (BBL, 2006a). The Work Plan (BBL, 2005a) also called for an intermediate-depth well to be installed on the Unnamed Island using a rotosonic rig (GUI-704A); however, the rig could not access the Unnamed Island due to weight limitations on the Pratt Dam and because the integrity of the earthen access ramp was compromised during major flooding that occurred in the Blackstone River Valley just prior to the start of the drilling program. In consultation with the USEPA, it was decided that well GUI-704A would be installed across the Blackstone River from its proposed location on the Nunes Parcel. Accordingly, the well was renamed GNP-708A and is discussed in the following subsection.

Well Installation Summary – Unnamed Island

Well I.D.	Drilling Method	Screened Interval (ft bgs/FAMSL)	
		Top	Bottom
GUI-701	MiniSonic (ATV)	8/54.2	18/44.2
GUI-702	Rotosonic (truck)	8/56.0	18/46.0
GUI-703	Rotosonic (truck)	5/56.8	15/46.8

Notes:
ft bgs = feet below ground surface
FAMSL = feet above mean sea level (NGVD29)

The three shallow wells on the Unnamed Island were drilled with a track-mounted Geoprobe® push/percussion rig. Access to the Unnamed Island was accomplished by crossing the Pratt Dam and traversing down the remainder of the former access ramp

[2] This well was identified as GLF-708 in the Work Plan (BBL, 2005a), but was renamed for clarity during the field program.

leading to the Unnamed Island. Winch cables were used during the descent down the former ramp for added safety. A section of the existing steel fence on the Pratt Dam/bike path was removed to allow access to the Unnamed Island. The fence was replaced following completion of the Unnamed Island work. While crossing the Pratt Dam, ABS plastic mats were used to prevent damage to the bike path. The above table summarizes installation information for all of the wells installed on this property during this investigation.

Prior to installing the wells, soil borings were drilled to 20 feet bgs at each location using a Geoprobe Macro Core® system. The Macro Core® samplers consist of a 48-inch-long steel sampling barrel having an outside diameter of 2.125 inches, into which expendable PVC liners are placed. The samplers were advanced using push/percussion techniques. The borehole was then used as a pilot to advance B-casing for the installation of a 1.5-inch monitoring well. Wells GUI-701 and GUI-702 were installed west of the mapped waste on the Unnamed Island, and well GUI-703 was installed immediately west of Pond A.

2.4.3.1.3 Nunes Parcel Groundwater

A summary of the wells installed during Phase 1B on the Nunes Parcel is presented in the adjacent table. The five new wells on the Nunes Parcel were installed using a truck-mounted, short-stroke rotosonic drill rig and consisted of three shallow, one intermediate, and one deep overburden well.

Well Installation Summary – Nunes Parcel

Well I.D.	Drilling Method	Screened Interval (ft bgs/FAMSL)	
		Top	Bottom
GNP-705	Rotosonic (truck)	10/63.7	20/53.7
GNP-705B	Rotosonic (truck)	117/-43.4	127/-53.4
GNP-707	Rotosonic (truck)	25.4/49.6	35.4/39.6
GNP-708	Rotosonic (truck)	10.8/57.7	20.8/47.7
GNP-708A	Rotosonic (truck)	63.7/4.6	73.7/-5.4

Notes:
ft bgs = feet below ground surface
FAMSL = Feet above mean sea level (NGVD29)

The number and locations of monitoring wells on the Nunes Parcel varied slightly from those shown in the Work Plan (BBL, 2005a). The primary reasons for the differences are that the center (deepest part) of the bedrock valley was found by the geophysical investigation (Section 3.2.2.3) to be further north-northeastward than expected and that the intermediate depth well that could not be installed on the Unnamed Island was moved to this property. As described in Section 3.2.2.3, the geophysical survey found that the center of the bedrock valley was located near the northeastern edge of the property; therefore, with the USEPA's concurrence, the location for the GNP-705 well cluster was moved northeastward from its proposed location. The deep well of this cluster, GNP-705B, is screened at 127 feet deep immediately above bedrock. Vertical profiling was conducted while drilling GNP-705B, beginning at 30 feet bgs, and

continuing every 20 feet to a depth of 130 feet bgs for a total of five groundwater samples. In addition to standard sonic drilling at GNP-705B, a 7⅝-inch "override" casing"[3] was also installed to a depth of 22 feet bgs to isolate impacted soils observed between 15 and 20 feet bgs.

Because the bedrock was found to be shallower than expected at the GNP-705 cluster, BBL recommended, and the USEPA concurred, that the planned intermediate-depth well at this cluster (GNP-705A) was not needed. The GNP-705 cluster, therefore, consists of the deep well previously discussed (GNP-705B) paired with a new shallow well (GNP-705). The above table summarizes installation information for all of the wells installed on this property during this investigation. The third well installed at the property was shallow well GNP-707. This well was installed as described in the Work Plan (BBL, 2005a); however, it was actually located about 100 feet west of its planned location because the planned location fell in a roadway near a building. This location change was verbally approved by the USEPA. Monitoring well GNP-707 was installed at the northwest end of the buried waste mapped by Shield (BBL, 2006a) to evaluate shallow groundwater conditions in the vicinity.

The final two wells installed on the property (GNP-708 and 708A) form a shallow and intermediate-depth pair. Intermediate well GNP-708A was originally planned to be installed on the Unnamed Island adjacent to an existing shallow well. As described above, this well was moved to the Nunes Parcel due to access limitations on the Unnamed Island. The location of this well pair was selected after discussion with and approval by the USEPA. To help understand shallow groundwater quality and assess vertical hydraulic gradients, a shallow well (GNP-708) was also installed at this location. This well was not originally proposed in the Work Plan (BBL, 2005a).

Vertical profiling was conducted at GNP-708A, beginning at 40 feet bgs and continuing every 20 feet to a depth of 80 feet bgs for a total of three water samples. Analytical results are summarized in Table 2-2. Intermediate well GNP-708A was ultimately installed to a depth of 74 feet bgs.

[3]An override casing is typically installed to relieve sidewall friction during deep drilling.

2.4.3.2 Hydraulic Conductivity Testing

As discussed in the Work Plan (BBL, 2005a), a specific-capacity test was conducted at the deep overburden well (GNP-705B) on the Nunes Parcel to estimate the horizontal hydraulic conductivity (K_h) of unconsolidated material screened by the well. The specific-capacity test was conducted in accordance with the SOP contained in Attachment K of the Work Plan. Hydraulic conductivity data are discussed in Section 3.3.2.2.

2.4.3.3 Water-Level Surveys

To better understand the relationship between shallow groundwater and the Blackstone River, three new piezometers (PZ-21, PZ-22, and PZ-23) and two new stream gauge locations (SG-1 and SG-2) were installed by BBL on September 6 and 7, 2005. Piezometers were installed manually using sledge and slide hammers. Piezometers were constructed of 2-inch inside diameter (ID) 2.5-foot well points (of which, 1.6 feet was a stainless steel screen), attached to 1.25-inch ID steel pipe. The piezometers were installed directly in the Blackstone River, such that the screened interval (top of screen) of the well point was a minimum of 4 feet below the Blackstone River bottom. The 1.25-inch ID steel riser pipe was extended above the top-of-bank for easier access. Piezometers were placed next to neighboring large trees extending from the Blackstone River bank to provide protection from flotsam during flooding. After driving the piezometers to depth, a bentonite seal was placed in the annular space near the sediment surface to prevent short-circuiting between groundwater and Blackstone River water. Teflon® tape was also used at each pipe joint to prevent leakage. Threaded steel caps were placed at the top of each piezometer. The table above summarizes installation information for all of the piezometers installed along the Blackstone River.

Piezometer Installation Summary

Well I.D.	Installation Method	Screened Interval (ft bss/FAMSL)	
		Top	Bottom
PZ-21	Manual - (sledge hammer)	4.0/50.0	5.6/48.9
PZ-22	Manual - (sledge & slide hammer)	4.6/49.8	6.2/48.2
PZ-23	Manual - (sledge hammer)	4.0/49.2	5.6/47.6

Notes:
ft bss = feet below sediment surface.
FAMSL = Feet above mean sea level (NGVD29)



Two stream gauge locations were also identified/marked and surveyed on either side of the Pratt Dam by BBL on September 7, 2005. One downstream (SG-1) located on the bottom rail of the bike path bridge and one upstream (SG-2) located on the

west stone wall prior to the dam. Locations of the piezometers and stream gauges are shown on Figure 3-2.

Prior to conducting the groundwater sampling event, a full round of fluid levels were collected on November 28 and 29, 2005. Fluid levels were collected in accordance with the SOP contained in Attachment L of the Work Plan (BBL, 2005a). The round included all existing and recently installed wells, piezometers, and staff gauges in OU2, except the following eight locations:

- PZ-04 (believed to have been destroyed)
- PZ-04A (believed to have been destroyed)
- PZ-05 (believed to have been destroyed)
- PZ-08 (destroyed)
- PZ-13 (unable to locate).
- MW-EA-4 (unable to locate)
- PZ-09 (submerged)
- PZ-06A (inaccessible due to Blackstone River level)

A total of 83 locations were gauged during the fluid-level measurement round. The collected data are summarized in Table 3-2. The Work Plan (BBL, 2005a) called for collecting two rounds of groundwater elevations following installation of the wells, piezometers, and Blackstone River gauges; one during a seasonally wet period and another during a seasonally dry period. Because the well installation program was not completed until late November 2005, only one round of fluid-level measurements was completed in 2005 (seasonally wet period).

A supplemental groundwater investigation was completed in March 2007 as part of the OU1 5-Year ROD Review, which included a relatively comprehensive round of water elevations from all wells at both OU1 and OU2. The combined potentiometric surface map for both operable units is presented in Appendix J. This potentiometric surface map is discussed further in Section 3.3.2.2.

2.4.3.4 Groundwater Sampling

The Phase 1B groundwater sampling event was conducted between November 28 and December 9, 2005 and on January 10, 2006[4]. Wells sampled during the event are summarized in the following table:

Existing Monitoring Wells		New 2005 Monitoring Wells	
MW-106A	SEA-602A	GLF-700A	GUI-703
MW-106B	SEA-605	GLF-704	GNP-705
MW-106C	SEA-606	GLF-706	GNP-705B
MW-108AA	SEA-608	GLF-706A	GNP-707
MW-A2	MW-502	GUI-701	GNP-708
MW-C1	MW-112AA	GUI-702	GNP-708A
MW-C2	MW-112A		
MW-EA-1	MW-112B		
SEA-603	MW-112C		

Although originally scheduled during this event, monitoring well MW-A1 was not sampled due to an obstruction in the well. Following discussions with the USEPA, it was decided to sample well MW-502 as a replacement for MW-A1. Additionally, the MW-112 well cluster (MW-112AA, MW-112A, MW-112B, and MW-112C) was also added to the sampling event following discussions with the USEPA based on this well's proximity to the bedrock valley determined during the seismographic geophysical survey and to the Lenox Street water supply well.

Samples were collected using the Region I Low-Flow Methodology, Revision 2 (USEPA, 1996) contained in Attachment M of the Work Plan (BBL, 2005a). Samples were analyzed for Target Compound List (TCL) VOCs + TICs, TCL SVOCs + TICs (including low-level PAHs and 1,4-dioxane by modified Method 8270C GC/MS-SIM), pesticides, PCBs, TAL metals (including low-level arsenic by ICP-MS Method 6020), and total cyanide using USEPA SW-846 methods.

All monitoring wells were sampled using bladder pumps, except wells MW-112C and MW-502. At MW-112C, the sampling crew was unable to lower the 0.75-inch-diameter bladder pump to the screen midpoint due to its light weight and friction between the

[4] High water conditions precluded access to the Unnamed Island during the sampling event; therefore, BBL remobilized to the site in January 2006 to sample wells on the Unnamed Island.

supply/discharge lines and the well casing[5]. Instead, a peristaltic pump equipped with Teflon®-lined tubing was used to sample the well. The Teflon®-lined tubing was lowered to the screen midpoint and connected at the surface to a short length of Tygon® silicone tubing that was run through the pump head. The discharge end of the Tygon® tubing was attached to another short length of Teflon®-lined tubing, which in turn, was connected to a flow-through cell. The well was purged until field parameters stabilized in accordance with the Work Plan (BBL, 2005a). At that point, the Teflon®-lined tubing was disconnected from the flow-through cell and all but the VOC samples were collected. The VOC sample was collected by lowering a disposable bailer to the screen midpoint, after the Teflon®-lined tubing was removed from the well.

The method used to sample well MW-502 was similar to that used to sample MW-112C, because the dedicated bladder pump installed at MW-502 was found to be inoperable. The top of the well casing was fitted with a PVC cap equipped with barb fittings and tubing used to sample with the dedicated bladder pump. This cap could not be removed from the well casing; therefore, a peristaltic pump was used to sample the well by inserting Teflon®-lined tubing through an access port in the cap (used for water-level measurement). The tubing was lowered to a depth of 53 feet below the top of the well casing and the sampling apparatus was assembled identically to the setup described above for well MW-112C. The well was purged until field parameters stabilized in accordance with the Work Plan (BBL, 2005a) and then sampled in a similar fashion to well MW-112C (above), except for the VOC sample. Because the diameter of the access port was less than that of the bailer, the VOC sample jars were filled directly from the peristaltic pump discharge line, ahead of the flow-through cell.

Due to high water conditions, the access road to the Unnamed Island was submerged; therefore, wells SEA-608, GUI-702, and GUI-703 were not sampled until about a month after the rest of the wells, on January 10, 2006.

All groundwater samples were sent to Alpha Woods Hole Group of Raynham, Massachusetts for laboratory analysis. Samples were picked up at the end of each day by a courier provided by the laboratory. Groundwater sampling logs summarizing the field parameters and other sampling data are contained in Appendix I.

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[5] A review of a previous sampling log for MW-112C (BBL, 2006a) revealed a similar problem during a previous sampling event.

At the request of the USEPA, 15 select monitoring wells from OU2 were sampled as part of the 5-Year OU1 ROD Review in March 2007. Wells GLF-704, GLF-706, GNP-705, GNP-705B, GNP-708, GNP-708A, GUI-703, MW-108C, MW-109A, MW-109C, MW-110B, MW-110C, MW-112C, MW-C2, and SEA-602A were sampled and analyzed for VOCs and TAL metals (except for well MW-110B and MW-110C, which were analyzed for VOCs and arsenic only). Most of these wells were selected based on the fact that they had only been sampled once prior during the RI. These wells were sampled following the same quality assurance/quality control procedures and documentation as the other Phase 1B groundwater samples.

2.4.4 2009 Unnamed Island Supplemental Investigation Groundwater Sampling

ARCADIS collected companion groundwater data to the USEPA-requested soil additional data collection efforts on the Unnamed Island in 2009 to permit an evaluation of groundwater direct leachate potential from waste encountered there. At four of the subsurface soil boring locations where waste was observed, the soil borings were advanced a minimum of 5 feet below the water table and a temporary piezometer was installed. Location of the piezometer installations were determined in the field based on field observations, while attempting to create a spatial distribution of temporary piezometer sample points.

The piezometers were constructed of 1-inch-diameter Schedule 40 PVC, including a 5-foot-long 0.010 inch slotted pre-packed screen. A hydrated bentonite seal was installed above the sand pack. The temporary piezometers were sampled using a peristaltic pump following standard low-flow protocol.

All groundwater samples were analyzed for the standard project parameter list of VOCs, SVOCs, PAHs, PCBs, pesticides, total metals, and cyanide in accordance with the *Quality Assurance Project Plan Addendum* (QAPP Addendum) (BBL, 2005b). Because of concern with collecting samples from undeveloped wells that could exhibit considerable turbidity, a separate aliquot of the groundwater samples were field-filtered and additionally analyzed for dissolved metals. This allowed for a comparison between dissolved and total metals concentrations, to assess the impact of particulates in the temporary well sample.

Upon completion of sampling, the temporary piezometers were removed and the borings abandoned by backfilling the temporary boreholes with bentonite to the surface while pulling the casing.

2.4.5 Private Well Sampling

As described earlier in this RI Report, the USEPA discovered the presence of three private water supply wells just outside of OU2 near the former Lenox Street well. The USEPA analyzed samples from the three water supplies late in 2009 for possible drinking water contaminants. The results of the sampling activities indicated that the quality of the well water from each property for the parameters tested were within the USEPA Drinking Water Regulations and Health Advisory parameters that are considered to be protective of public health. Based upon the sampling results, it was determined that the well water may be used for all domestic purposes; it was also recommended, however, that the residents using private drinking water wells monitor their water periodically to confirm protectiveness. The private well sample results and associated USEPA correspondence to the residences are presented in Appendix BB.

2.5 Sediment Investigation

Sediment samples were collected from various areas of interest across OU2 and upstream on the Blackstone River during all three phases of the investigation to provide characterization data for this medium. Shield collected 80 sediment samples during Phases 1A and 1AExp, and BBL collected an additional 21 samples during Phase 1B. Sediment sample locations for all three RI phases are illustrated on Figure 2-4. A list of all sediment samples collected during the RI is presented in Appendix B.

2.5.1 Phases 1A and 1AExp Sediment

Shield collected 34 sediment samples throughout OU2 between August 28 and September 10, 2003 during Phase 1A and an additional 46 samples between August 30 and September 7, 2004 during Phase 1AExp. Shield also collected surface-water samples from all sediment sample locations where sufficient standing water was present. Surface-water sampling is discussed in Section 2.6. Sediment sample locations for only Phases 1A and 1AExp are illustrated on Plate 6. The activities completed during these two initial phases of investigation are summarized below.

Phase 1A Sediment

- *Blackstone River Main Channel* – Collected 10 sediment samples (SE-022-BR and SE-026-BR through SE-034-BR).

- *Blackstone River Back Channel* – Collected three sediment samples (SE-023-BR through SE-025-BR) from the back channel of the Blackstone River on the southwest side of the Unnamed Island.

- *Wetlands* – Collected 10 sediment samples (SE-009-WT through SE-018-WT) within or upstream of the wetland area: one sample from Wetland A, three from Wetland B, five from Wetland C, and one from Wetland D.

- *Blackstone River Inlets* – Collected one sediment sample from the Nunes Inlet (SE-021-NP).

- *Pond F* – Collected one sediment sample (SE-008-BR) from Pond F.

- *Unnamed Island Ponds* – Collected seven sediment samples from ponds on the Unnamed Island: four from Pond A (SE-002-UI, SE-003-UI, SE-005-UI, and SE-006-UI), one from Pond E (SE-001-UI), one from Pond D (SE-007-UI), and one (SE-004-UI) from a small ephemeral area of pooled water near the former excavator equipment.

- *Ponds Adjacent to the J.M. Mills Landfill* – Collected two sediment samples from ponds located adjacent to the J.M. Mills Landfill: one from Pond B (SE-019-LF) and one from Pond C (SE-020-LF).

Phase 1AExp Sediment

- *Blackstone River Main Channel* – Collected seven additional sediment samples (SE-041-BR through SE-044-BR and SE-046-BR through SE-048-BR) at locations specified by the USEPA. Also collected two samples from the north bank of the Blackstone River between Mackland Farms and the Martin Street bridge (SE-045-BR and SE-049-BR) and two immediately upstream of the Ashton Dam (SE-050-BR and SE-054-BR) to supplement available information on background concentrations in sediment upstream of OU2.

- *Blackstone River Back Channel* – Collected seven additional sediment samples (SE-064-BR through SE-068-BR, SE-071-BR, and SE-072-BR) from the back channel of the Blackstone River on the southwest side of the Unnamed Island at locations specified by the USEPA.

- *Wetlands* – Collected 10 additional samples (SE-052-WT, SE-053-WT, SE-055-WT, and SE-057-WT through SE-063-WT): one sample from Wetland A, four from Wetland B, three from Wetland C, and two from Wetland D.

- *Blackstone River Inlets* – Collected one sediment sample from the Nunes Inlet (SE-069-NP) and one from the North Inlet (SE-051-DF).

- *Pond F* – Collected three sediment samples (SE-081-BR through SE-083-BR).

- *Unnamed Island Ponds* – Collected an additional 10 sediment samples: six from Pond A (SE-079-UI, SE-080-UI, and SE-084-UI through SE-087-UI), two from Pond D (SE-075-UI and SE-076-UI), one from Pond E (SE-078-UI), and one (SE-077-UI) from a small pool of water in a low-lying depression west of Pond A (North Pool, also known as Pond P).

- *J.M. Mills Landfill Ponds* – Collected three sediment samples from ponds located adjacent to the J.M. Mills Landfill: two from Pond B (SE-070-LF and SE-073-LF) and one from Pond C (SE-074-LF).

Sediment samples collected during Phases 1A and 1AExp were analyzed using USEPA CLP methods included in OLM04.3 and ILM04.1 for VOCs + TICs, SVOCs + TICs (including low-level PAHs by a modified USEPA Method 8270C GC/MS-SIM), pesticides, PCBs, TAL metals, total cyanide, and percent moisture/solid. Additional parameters included total combustible organics (TCO), pH, and grain size distribution. Most sediment samples were also analyzed for TOC by the USEPA Region II Lloyd Kahn method. A detailed write-up of all sediment investigation field activities completed during Phase 1A and Phase 1AExp, including sampling methodology, laboratory sample information, and related material, was included as Appendix A to the DBSR2 (BBL, 2006a).

2.5.2 Phase 1B Sediment

During Phase 1B, BBL performed field work supporting a Sediment Quality Triad (SQT) study of aquatic habitats at OU2 to provide additional data supporting the Baseline Ecological Risk Assessment (BERA). The investigation consisted of three primary tasks, which were completed by BBL during June 2005.

The tasks included sediment sampling and chemical constituent analysis, benthic community sampling, and laboratory toxicity testing in support of the BERA. In addition,

a sediment probing study was conducted to better define the characteristics of the Blackstone River bottom to better identify the areas in which chemical constituents may be accumulating and to provide an indication of the type of ecological habitat present. The sediment probing was completed with the intent that sediment sample locations from the Work Plan (BBL, 2005a) could be adjusted, if necessary.

Sediment probing and sampling activities are discussed in the following subsections. Benthic community sampling is discussed in Section 2.8.2.

2.5.2.1 Sediment Probing

Phase 1B sediment investigation activities began with sediment probing, which was completed to:

- better define the characteristics of the Blackstone River bottom
- identify deposition areas where chemical constituents may reside
- provide a broader indication of the various riverine ecological habitats

BBL completed sediment probing along 42 transects (PBR-01 through PBR-042) across the Blackstone River, spaced approximately 250 feet apart and extending from the upstream end of the Quinnville well field to the Pratt Dam along both the main and back channels. Transect locations are illustrated on Figure 2-5. Probing was completed in accordance with the SOP included in the USEPA-approved Work Plan (BBL, 2005a). Field personnel recorded sediment depths at each location and other visual observations, such as depositional areas where fine-grained sediments might accumulate, for use in characterizing the riverbed of the Blackstone River at the site. Sediment probing results were also used to adjust proposed sediment sampling locations, as necessary, to target the higher sediment depositional areas. A log of the observations recorded by field personnel during sediment probing is provided as Table 2-3.

2.5.2.2 Sediment Sampling

After completing sediment probing activities, BBL collected sediment samples for chemical constituent analysis. Locations were selected to represent the range of metals concentrations detected in sediments during previous sampling rounds. Field personnel collected sediment samples from 14 locations within OU2: six samples from the main

channel of the Blackstone River, one sample from the back channel of the Blackstone River, three samples from ponds on the Unnamed Island, one sample from Pond F, and three samples from the wetland areas. BBL also collected seven sediment samples upstream from OU2 to provide data representing reference conditions in the Blackstone River and pond habitats: two samples downstream from the Ashton Dam, three samples upstream from the Ashton Dam, and two samples from ponds located upstream from the Ashton Dam with physical conditions similar to those at OU2.

Combined Phases 1A/1AExp/1B sediment sampling locations within OU2 and upstream for background are illustrated on Figure 2-4. Proposed sample locations listed in the Work Plan (BBL, 2005a) were adjusted, as necessary, based on sediment probing results, to target depositional areas.

BBL field personnel collected the majority of sediment samples using Lexan® core sampling tubes following procedures outlined in the sediment sampling SOP included in the Work Plan (BBL, 2005a). At each location, surface sediment was collected as several discrete samples with the Lexan® tubes in close proximity, which were then thoroughly homogenized in a stainless steel mixing bowl and placed into appropriate sample containers, except for sediment samples scheduled for VOC and acid volatile sulfide-simultaneously extracted metals (AVS-SEM) analyses. VOC aliquots were collected with care and placed directly into sample containers (without prior homogenization) to minimize disturbance. Both low- and medium-level VOC aliquots were collected for analysis, with a 1:1 ratio of sediment to preservative consistent with USEPA Method 5035. AVS-SEM samples were collected using a singular discrete Lexan® core tube, which was cut and capped on both ends, with the overlying water left in place to minimize headspace. This specialized treatment was required to minimize the time that these samples were exposed to atmospheric air, as AVS-SEM samples are oxygen sensitive. All samples, except those scheduled for grain size distribution analysis, were stored on wet ice in a cooler in preparation for shipment to the Alpha Woods Hole Group in Raynham, Massachusetts. Sampling equipment was decontaminated between sample locations in accordance with procedures listed in the Work Plan.

AVS-SEM samples were collected from the top 0 to 2-centimeter interval of the sediment layer in an attempt to target only the oxic zone and minimize oxygenation and disturbance. All other samples were collected from the top 0 to 6-inch interval of sediment layer, which represents the most active portion of the bioreactive layer. BBL field personnel also collected samples for benthic community assessment and laboratory

toxicity tests concurrently from the same sample locations, as discussed in Section 2.8.2.

All sediment samples collected during Phase 1B were analyzed for bulk sediment chemistry, grain size, percent moisture/solid, TOC, and AVS-SEM. Bulk sediment chemistry analyses were performed using USEPA SW-846 methods and included TAL metals, VOCs + TICs, SVOCs + TICs (including low-level PAHs by GC/MS-SIM), pesticides, and PCBs.

All sediment sampling activities, including sample collection, packaging and shipping, and equipment decontamination were completed in accordance with the procedures and SOPs included in the USEPA-approved Work Plan (BBL, 2005a). Laboratory processing and analytical procedures that address changes and additions to the analytical procedures used during Phase 1B sediment sampling are included in the QAPP Addendum (BBL, 2005b).

Following the procedures provided in the Work Plan (BBL, 2005a), a portion of each sediment sample was analyzed for select metals (i.e., arsenic, cadmium, chromium, copper, lead, and nickel) on a quick turnaround to determine whether the range of metals concentrations were representative of concentrations previously identified at the site. If samples did not appear to be representative of previously detected concentration ranges, additional sampling may have been recommended to better characterize the concentrations of metals in the specified area or to collect more representative samples for additional toxicity testing. No adjustments or resampling were required following initial screening of sediment metals results. The quick turnaround metals results were within expected concentration ranges and representative sediment samples were selected from this group for benthic analysis.

2.6 Surface-Water Investigation

Most of the RI for surface-water media was completed during Phases 1A and 1AExp. A total of 80 surface-water samples were collected during combined Phases 1A and 1AExp, while only six surface-water samples were collected during Phase 1B. Surface-water sample locations for all three RI phases are illustrated on Figure 2-6. A list of all surface-water samples collected during the RI is presented in Appendix B.

2.6.1 Phases 1A and 1AExp Surface Water

2.6.1.1 Surface-Water Flow Survey

As part of Phases 1A and 1AExp field activities, Shield investigated surface-water flow in the Blackstone River and several smaller creeks and drainage ditch features discharging to the Blackstone River within OU2. Surface-water flow investigation activities were completed between August 2003 and September 2003, and during September 2004, during Phases 1A and 1AExp, respectively. Shield completed the following activities during the investigation:

- Compiled flow data (e.g., mean monthly flow, high flow) for the Blackstone River from the USGS' Blackstone River stream gauge located in nearby Woonsocket, Rhode Island, and created graphs showing the fluctuation of the Blackstone River flow rate during the course of Phases 1A and 1AExp field work.

- Completed two surface-water flow surveys at four transects within the reach of the Blackstone River flowing through OU2 during Phases 1A and 1AExp on August 15, 2003 and September 26 and 27, 2003, respectively. Computed volumetric flow rate and average flow velocities of the Blackstone River at each transect.

- Measured flow velocities within the Blackstone River back channel as well.

- Completed surface-water flow surveys, computing average flow velocities and volumetric flow rates at several smaller creeks, culverts and other small surface-water discharges to the Blackstone River with OU2 during both Phases 1A and 1AExp. Phase 1A measurements, collected on September 26, 2003, represent low-flow conditions, while Phase 1AExp measurements, made on September 29, 2004, after a period of heavy rainfall, represent higher flow conditions. The following locations were included in these surveys:

  - large concrete culvert known as the "Panda Culvert" located at the top of a steep bank leading down to Wetland B (SWF-01)

  - Monastery Brook immediately upstream from where it discharges to Wetland C (SWF-02)

  - an unnamed brook discharging to Wetland C approximately 200 feet west of Monastery Brook, at PZ-13 (SWF-03)

- drainage between Wetland A and Wetland B (SWF-04)

- culvert discharging to North Inlet (SWF-05 – downstream end of culvert, HW-01 – upstream end of culvert)

- drainage channel northeast of and parallel to railroad tracks (HW-02 and HW-03) near the Lenox Street well

2.6.1.2 Surface-Water Quality Sampling

Shield collected 34 surface-water quality samples throughout OU2 between August 28 and September 10, 2003 during Phase 1A and an additional 46 samples between August 30 and September 7, 2004 during Phase 1AExp. Shield also collected sediment quality samples from all surface-water locations where sediment was present, as discussed in Section 2.5.1. Only Phases 1A and 1AExp surface-water sample locations are illustrated on Plate 6. The activities completed during these two initial phases of investigation are summarized below.

Phase 1A Surface-Water Quality

- *Blackstone River Main Channel* – Collected 10 surface-water quality samples (SW-022-BR, SW-026-BR through SW-034-BR).

- *Blackstone River Back Channel* – Collected three surface-water quality samples (SW-023-BR through SW-025-BR) from the back channel of the Blackstone River on the southwest side of the Unnamed Island.

- *Wetlands* – Collected nine surface-water quality samples (SW-009-WT through SW-017-WT) within or upstream of the Wetland areas: one sample from Wetland A, three from Wetland B, four from Wetland C, and one from Wetland D.

- *Blackstone River Inlets* – Collected one surface-water quality sample from the Nunes Inlet (SW-021-NP).

- *Pond F* – Collected one surface-water quality sample (SW-008-BR).

- *Unnamed Island Ponds* – Collected six surface-water quality samples from ponds on the Unnamed Island: four from Pond A (SW-002-UI, SW-003-UI, SW-005-UI, and SW-006-UI), one from Pond E (SW-001-UI), and one from Pond D (SW-007-UI).

- *Ponds Adjacent to the J.M. Mills Landfill* – Collected two surface-water quality samples from ponds located adjacent to the J.M. Mills Landfill: one from Pond B (SW-019-LF) and one from Pond C (SW-020-LF).

Phase 1AExp Surface-Water Quality

- *Blackstone River Main Channel* – Collected seven additional surface-water quality samples (SW-041-BR through SW-044-BR and SW-046-BR through SW-048-BR) at locations specified by the USEPA.

- *Blackstone River Back Channel* – Collected seven additional surface-water quality samples (SW-064-BR through SW-068-BR, SW-071-BR, and SW-072-BR) from the back channel of the Blackstone River on the southwest side of the Unnamed Island at locations specified by the USEPA.

- *Wetlands* – Collected eight additional samples (SWE-052-WT, SW-053-WT, and SW-057-WT through SW-062-WT): one sample from Wetland A, four from Wetland B, two from Wetland C, and one from Wetland D.

- *Blackstone River Inlets* – Collected one surface-water quality sample from the Nunes Inlet (SW-069-NP) and one from the North Inlet (SW-051-DF).

- *Pond F* – Collected three surface-water quality samples (SW-081-BR through SW-083-BR).

- *Unnamed Island Ponds* – Collected an additional 11 surface-water quality samples: seven from Pond A (SW-056-UI, SW-079-UI, SW-080-UI, and SW-084-UI through SW-087-UI), two from Pond D (SW-075-UI and SW-076-UI), one from Pond E (SW-078-UI), and one (SW-077-UI) from small pool of water in a low-lying depression northwest of Pond A (North Pool, also known as Pond P).

- *Ponds Adjacent to the J.M. Mills Landfill* – Collected one surface-water quality sample from Pond C located near the J.M. Mills Landfill (SW-074-LF).

Surface-water samples collected during Phases 1A and 1AExp were analyzed using USEPA CLP methods included in OLC03.2 for VOCs + TICs, SVOCs + TICs (including PAH compounds by modified USEPA Method 8270C GC/MS-SIM), pesticides, and PCBs, and USEPA CLP methods included in ILM04.1 for TAL metals (including low level arsenic by modified USEPA Method 1632), total cyanide, and chloride (USEPA Method

325.2). Samples collected during Phase 1A were analyzed for TOC (USEPA Method 415.1) as well. Additionally, several samples collected during both phases were also analyzed for some or all of the following water quality parameters: ammonia, nitrate, nitrite, orthophosphate, sulfate, hardness, biological oxygen demand (BOD), and fecal coliform.

A detailed write-up of all surface-water investigation field activities completed during Phase 1A and Phase 1AExp, including sampling methodology, laboratory sample information, and related material, was included as Appendix A to the DBSR2 (BBL, 2006a). Associated flow data are included as Tables H3-1 and H3-2 in Appendix H of Phase 1A DBSR (Shield, 2003b). This write-up was created by Shield and was previously submitted to the USEPA and will not be presented in this RI Report.

2.6.2 Phase 1B Surface-Water Quality

During April 2005, BBL collected a total of six surface-water samples (SW-1 ash, SW-2 ash, SW-3 Pratt, SW-3 Pratt Cumberland, SW-4 Pratt, and SW-4 Pratt Lincoln) from four locations within the Blackstone River following a large rainfall/runoff event to provide data on the chemical concentrations present in the Blackstone River water during high-flow conditions. Sampling was conducted in coordination with the USGS, using their D-95 isokinetic, depth-integrating, Teflon®-coated sampling equipment and bridge boom. Sample locations for combined Phases 1A/1AExp/1B are shown on Figure 2-6.

These surface-water samples were collected from locations approximately 700 feet downstream of the Ashton Dam on the footbridge to Mackland Farms (upstream from OU2) and on the bike path bridge at the Pratt Dam, and were analyzed for one or more of the following parameters: PAHs by modified USEPA Method 8270C GC/MS-SIM, pesticides (USEPA Method 8081A), PCBs (USEPA Method 8082), total and filtered (dissolved) TAL metals (USEPA Methods 6020A and low-level mercury by modified 7470A), hardness (calculation), total dissolved solids (TDS) (USEPA Method 160.1), and total suspended solids (TSS) (USEPA Method 160.2).

Samples were composited from 10 discrete vertical intervals at each location. A total of 100 milliliters of sample were collected at each vertical interval and added to each extractable organic analysis amber bottle (i.e., pesticide, PAH, and PCB). Another 200 milliliters were collected at each vertical interval and added to a Teflon® churn splitter from the Teflon®-coated, acid-rinsed bottles designated for TAL metals. All samples were sent to Alpha Woods Hole Group for analysis.

Prior to collecting metals samples at locations SW-3 and SW-4, the sampler was damaged, exposing a brass fitting. In order to avoid metals cross-contamination, the metals and hardness samples from these two locations were collected manually as grab samples SW-3 Pratt Cumberland and SW-4 Pratt Lincoln. These samples also allowed a determination of differences in water quality from the left and right banks of the Blackstone River.

In addition to high-flow surface-water sampling, BBL installed three staff gauges in the Blackstone River (PZ-21, PZ-22, and PZ-23) to provide better information regarding groundwater/surface-water interaction.

2.7 J.M. Mills Landfill Air Investigation

During Phase 1A, Shield collected air samples from three of the five vents located at the top of the J.M. Mills Landfill to evaluate the quality of air emissions from the J.M. Mills Landfill: one sample (AR-001-LF) from Vent #1, one sample (AR-003-LF) from Vent #2, and one sample (AR-002-LF) from Vent #5. Shield collected the samples on October 7, 2003 using canisters. All three samples were analyzed for VOCs by USEPA Method TO-15, fixed gases by American Society for Testing and Materials (ASTM) D1946 and for hydrogen sulfide by USEPA-16. Sample locations are illustrated on Plate 5. A detailed write-up of air sampling activities completed during Phase 1A, including sampling methodology, laboratory sample information, and related material, was included as Appendix A to the DBSR2 (BBL, 2006a). This write-up was created by Shield and was previously submitted to the USEPA and will not be represented in this RI Report. Results of the air sample investigation are presented in Section 4.8.

2.8 Ecological Investigation

During Phase 1B, BBL investigated the general ecology of OU2 by performing a fish media data collection, a benthic community investigation, and a habitat assessment study. The fish data collection effort consisted of two tasks: a fish community survey and fish tissue sampling. The benthic community investigation involved documenting the abundance and relative diversity of benthic invertebrate species present within and upstream from OU2 and determining whether these organisms are a food source of other ecological receptors. The habitat assessment activities involved habitat delineation, cover type mapping, and wildlife surveys, including identification of any threatened/endangered species or critical habitats present at OU2. The field activities completed to support these three investigations are discussed in the following subsections.

2.8.1 Fish Data Investigation

During September 2005, BBL personnel completed a fish community survey and collected samples of target fish species from several locations along the Blackstone River and nearby ponds. The investigation was completed to provide data describing the relative abundance of fish species within the Blackstone River and pond habitats both within OU2 and at background locations and provide chemical data for use in the BERA. Details on the fish investigation activities are provided in the following subsections.

2.8.1.1 Fish Community Survey

As the first step in the investigation, BBL personnel completed a fish community survey for the portion of the Blackstone River within and upstream of OU2 to characterize the relative abundance of fish species. BBL collected and catalogued samples from a total of 21 fish species within the following six locations, illustrated on Figure 2-7:

- BR-1 – Reach of Blackstone River beginning about 7,000 feet upstream to approximately 4,000 feet upstream from the Ashton Dam, used to represent reference conditions for downstream areas

- BR-2 – Reach of Blackstone River immediately downstream from Ashton Dam and extends for approximately 3,000 feet, used to represent reference conditions for downstream areas

- BR-3 – Reach of Blackstone River within OU2 (includes main and back channels) down to the Pratt Dam

- P-1 – Pond A on Unnamed Island

- P-2 – Pond F

- P-6 – Pond located approximately 2.5 miles north of OU2, used to represent reference conditions for ponds within OU2

Some of these reaches defined above were adjusted slightly, as discussed and agreed to with the USEPA based on lack of availability of certain fish species in some of the original reaches, particularly in reach BR-1. At the request of the National Oceanic and Atmospheric Administration (NOAA), BBL included observations of the American eel and American eel habitat during the survey. A list of the individual fish species included in the

abundance survey and population characteristics of the samples collected for each reach cataloged are presented in Tables 2-4 and 2-5, respectively. A discussion of the results of the fish community survey is presented in Section 4.10.5.

BBL used electrofishing to stun and collect fish community samples under a fish-collecting permit issued by the RIDEM prior to the start of field activities. A fisheries technician visited OU2 at the start of the community survey to evaluate site conditions and select the most appropriate sample collection method or methods. Electrofishing was completed in accordance with SOPs outlined in the Work Plan (BBL, 2005a). The community survey was completed in accordance with the *Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers* (RBP) (Barbour et al., 1999).

In general, aquatic habitats were surveyed for fish using standardized sampling times and distances. Within each sampling area, a minimum of one complete pass was completed with the electrofishing unit following transects along the shoreline(s). Stunned fish were held in a live well for the fish survey. BBL personnel recorded the length and weight of each fish in a field logbook. In instances where large numbers of fish were collected from a particular location, a representative subset of as many as 25 individuals of each fish species were selected randomly and measured and weighed. BBL personnel also recorded notes regarding the presence of lesions, deformities, tumors, eroded fins, or other visually identifiable abnormalities observed on any of the fish in the sample. After finishing the community survey at each location, BBL retained several samples of target species for subsequent tissue analyses and released the remaining fish unharmed to the Blackstone River.

2.8.1.2 Fish Tissue Sampling

After completing the community survey, BBL retained specimens of target species from each of the six survey locations (BR-1, BR-2, BR-3, P-1, P-2, and P-6) for laboratory analysis. The fish sampling effort included the collection of tissue samples for chemical analyses. Three types of fish tissue samples were collected: fish tissue fillets of edible-size fish to evaluate potential human consumption coupled with fish carcass samples (the offal and carcass remaining after the fillet was removed) for these same edible-size fish (carcass results were mathematically combined with the fillet data for use in ecological risk assessment) and whole-body fish tissue samples for forage-size fish to evaluate potential wildlife consumption. Collectively, these data were used to estimate potential exposure for human and ecological receptors via fish ingestion in the baseline risk assessments. A list of the species collected for analysis at each sample location is provided in Table 2-6.

Fish species targeted during fish sampling included:

- Predatory species – largemouth bass, bluegill, and pumpkinseed (latter two are both predatory and foraging species)
- Benthic or bottom-feeding species – white sucker
- Forage species – common shiner and golden shiner

These species were identified based on species occurrence information from the RIDEM Division of Fish and Wildlife and on information obtained from the USEPA regarding expectations of possible target species.

Discussions with RIDEM Fish and Wildlife personnel suggested that this reach of the Blackstone River was stocked with brown trout, rainbow trout, and brook trout (personal communication with Christine Dudley, RIDEM, June 22, 2005) prior to the fish tissue sampling. No trout species were reported, as observed in the species abundance survey, and no trout species were retained for tissue analysis.

BBL personnel collected fish samples in accordance with the fish sampling SOP and other sample handling procedures described in the Work Plan (BBL 2005a). Predatory and benthic species were collected as edible-size samples from fish large enough for human consumption and meeting the minimum size requirements for Rhode Island. BBL personnel recorded the length and weight of each fish in a field logbook and noted the presence of any visually identifiable abnormalities. Fish samples were also photographed for documentation purposes. At the USEPA's request, fish tissue species and reaches were represented by seven or eight samples, rather than the five originally planned.

Once collected, specimens retained for analysis were placed in sealed plastic bags, labeled, and placed on wet ice in a cooler for shipment to the laboratory by overnight delivery. Fish analysis was completed at the Alpha Woods Hole Group in Raynham, Massachusetts. At the laboratory, predatory and benthic fish samples were prepared as individual skin-on or skin-off fillets (depending on the species and typical human consumption practices) and remaining carcass. Otoliths were removed from each edible-size fish prior to further processing and kept in storage for potential use in fish aging studies. Forage fish were analyzed as whole-body composite samples of approximately five to 20 individuals per sample, as needed, to meet laboratory volume requirements and depending on the size of the fish. Samples were analyzed using USEPA SW-846

Methods for TAL metals (Methods 6020A and 7471A), SVOCs (including low-level PAHs in fillet samples by modified Method 8270C GC/MS-SIM), organochlorine pesticides (Method 8081A), PCB homolog groups (Method 680), and percent lipids. A list of fish tissue samples collected and parameters analyzed is presented in Appendix B. Results of fish tissue analyses are presented in Section 4.7.

2.8.2 Benthic Investigation

During June 2005, BBL personnel completed an investigation of the benthic community within the Blackstone River and ponds both within OU2 and at upstream and off-site locations. The benthic community investigation was performed concurrently with the sediment sampling effort, and both sets of samples were collected at the same time and from some of the same locations. During the investigation, BBL collected a total of 16 samples to characterize the benthic populations: five from within the reach of the Blackstone River flowing through OU2, five from locations within the Blackstone River upstream from OU2, four from ponds within OU2, and two from ponds along the Blackstone River upstream from OU2. These samples provided data for the weight-of-evidence (WOE) approach as part of the SQT and were incorporated into the BERA to evaluate potential risks to benthic organisms. Benthic sample locations are illustrated on Figure 2-5. A list of all benthic samples and associated quality control samples collected during Phase 1B is presented in Appendix B under the sediment sampling list.

Benthic sampling was completed in accordance with the benthic sampling SOP included in the Work Plan (BBL, 2005a). Equipment used in sample collection was field-cleaned or decontaminated according to SOPs included in the Work Plan. BBL personnel measured and recorded water depth, velocity, and water quality (i.e., temperature, dissolved oxygen [DO], pH, and specific conductance) parameters at each sample location. The surface-water quality results from the benthic sample locations are summarized in Table 2-7.

Samples were then sieved using site water from the sample location to remove finer sediments and to isolate benthic organisms and placed in a labeled jar and preserved with an alcohol solution (i.e., 70% or greater concentration). BBL personnel recorded general descriptions of each benthic sample, including observations of benthic abundance and diversity, if discernable, and a qualitative characterization of substrate composition. Benthic community samples were also photographed for documentation purposes. Once collected, benthic samples were placed in a cooler to await shipment to the laboratory.

Samples were sent to Normandeau Associates, Inc. (Normandeau) in Bedford, New Hampshire and EnviroSystems Inc. in Hampton, New Hampshire for species abundance and toxicity testing, respectively. During species abundance testing, benthic organisms were counted and identified to the lowest practical taxonomic level in samples containing fewer than 100 organisms. In samples containing more than 100 benthic organisms, the laboratory selected approximately 100 at random for classification. Benthic counts were reported by the laboratory on a per-sample basis (i.e., estimate of the total number of organisms per grab sample based on the results of subsampling). The laboratory also reported other benthic metrics calculated to aid in the evaluation of benthic community composition and structure in the BERA, including:

- total organisms
- total taxa (i.e., number of unique genera or species)
- Shannon diversity index
- biomass (i.e., wet-weight basis)
- percent dominant taxa
- percent tolerant organisms and/or percent Chironomidae; Ephemeroptera, Plecoptera, Trichoptera Index (i.e., number of mayflies, stoneflies and caddisflies)
- tolerance index (e.g., New York State Department of Environmental Conservation, 2002; USEPA, 1999)
- trophic feeding guild/habit relationship information (Merritt and Cummins, 1996; Thorp and Covich, 1991)

A summary table of the Normandeau benthic community species abundance is presented in Table 2-8. A complete presentation of the Normandeau findings, including the additional benthic metrics, is presented in Appendix K. Interpretation of these findings, in relation to the BERA, is also discussed in Section 7.

Toxicity testing samples were held by the laboratory until the results from the initial, rapid turnaround analysis of select metals indicated that the metals concentrations detected in collocated sediment samples were representative of the ranges of concentrations expected at the site. Samples were analyzed for toxicity using a *Hyalella azteca* 28-day

survival and growth test and a *Chironomus tentans* 21-day survival and growth test. Toxicity samples were refrigerated until analysis. The samples were analyzed with both reference and site samples in a single batch. Toxicity results were compared to background and laboratory control results.

A summary table of the EnviroSystems, Inc. benthic toxicity testing results is presented in Table 2-9. A complete presentation of the EnviroSystems, Inc. findings, including the statistical analysis of the comparison of background and laboratory control results is presented in Appendix L. Interpretation of these findings, in relation to the BERA, is discussed in Section 7.

Results of the benthic community survey and toxicity testing are discussed in Section 4.10.5.

2.8.3 Habitat Assessment Investigation

During site visits in April and July 2005, BBL personnel completed a habitat assessment investigation at OU2. The investigation involved identifying and delineating the various types of habitats present across the site and documenting wildlife usage of these habitats for use in the development of the BERA to determine potential exposure pathways and receptors. Areas of human land use were also assessed to support the pathway analysis in the Human Health Risk Assessment (HHRA). The investigation consisted of three components:

- habitat delineation and cover type mapping
- threatened/endangered species and critical habitats survey
- wildlife and vegetative surveys

The field activities associated with these three habitat assessment investigation components are discussed in the following subsections.

2.8.3.1 Habitat Delineation and Cover Type Mapping

BBL personnel visited the site to survey the various types of aquatic and terrestrial habitats and ecosystems present at OU2 and map their extent. During the survey, field personnel recorded their observations in a logbook and sketched approximate habitat boundaries directly onto a base map showing an aerial photo overlay of the site. Field

personnel also took photographs to document their observations. All work was completed in accordance with the habitat delineation and characterization SOP included in the Work Plan (BBL, 2005a) and the RBP (Barbour et al., 1999) for the assessment of freshwater ecosystems.

At the conclusion of the field work, BBL digitized the field sketch maps into geographic information system format. These digitized maps were then compared to the field-verified boundaries and the aerial photographs to identify and correct any inconsistencies and to verify that habitat boundaries visible from site aerial photographs were recorded. A map illustrating the distribution of the major habitat types (e.g., the Blackstone River, wetlands), as well as with subhabitat features (e.g., unique vegetative communities), is provided on Figure 2-8. Results of this component of the habitat assessment investigation are presented in Section 4.10.4.

2.8.3.2 Threatened/Endangered Species and Critical Habitats Survey

Prior to conducting the wildlife survey, BBL contacted the USFWS and the Rhode Island Natural Heritage Program to inquire about the potential occurrence of threatened/endangered species or critical habitats near OU2. Per a request by the NOAA and to provide additional data for the National Marine Fisheries Service to evaluate whether to consider Endangered Species Act protection for the American eel, particular attention was paid to the possible presence of the American eel or American eel habitat during the BBL-completed wildlife survey.

In recent years, additional information has become available regarding the occurrence of rare species in the Blackstone River near or within the site. The draft OU2 RI Report (ARCADIS BBL, 2007b) noted occurrence of two “concern” species in the study area: the great blue heron (*Ardea herodias*) and the American brook lamprey (Lampetra appendix).

A census of the Rhode Island odonates (i.e., dragon flies and damselflies) sponsored by the Rhode Island Natural History Survey has greatly expanded knowledge of these species in Rhode Island. Survey records indicate two rare dragonflies occur in the Blackstone River within or near the site study area. The arrow clubtail dragonfly (Stylurus spiniceps) is reported from the Massachusetts state line to a few hundred yards below the Ashton Dam (Brown, 2007). It may occur further downstream to the OU2 study area and beyond. The arrow clubtail is listed as a “concern” species under the Rhode Island State Endangered Species Act. The spine crowned clubtail (Gomphus abbreviatus) is reported from the Blackstone River downstream from the Ashton Dam. This rare species

is currently not listed in Rhode Island but is listed as endangered in Massachusetts. The occurrence of the arrow clubtail was noted upstream of the site (Second Five Year Review Report, 2007).

Only the three most widespread species of mollusk (Eliptio complanata, Pyganodon cataracta, Alasmidonta undulata) are known to occur in the Blackstone River Basin (Raithel and Hartenstin, 2006). Although suitable habitat is present, they concluded that the mussel fauna in the Blackstone River Basin was decimated by past industrial development, and that recovery of mussels has been hindered by the inability of mussels to re-colonize those river stretches still isolated by dams. Shells of E. complanata and P. cataracta were noted on the OU2 Unnamed Island during a June 2007 site visit (Penko, USACE personal observation) and again shells were abundantly noted during a May 2008 site inspection at the northern tip of the Unnamed Island where the river divides (Newton, USEPA personal observation)

Results of the threatened/endangered species and critical habitats survey are discussed in Section 4.10.4.

2.8.3.3 Wildlife and Vegetative Surveys

During July 11 through 13, 2005, BBL completed a survey to document wildlife usage and vegetation present within OU2, as well as an RBP Habitat Assessment. These surveys were performed by a qualified wildlife biologist, in accordance with the SOP for this activity included in the Work Plan (BBL, 2005a).

Five locations were identified for observation for the wildlife survey. Each location was visited for a period of 30 minutes on three separate occasions during the survey week, including at least one evening and one morning event, to coincide with the periods when wildlife are most active. During each period, observations of wildlife, including direct visual confirmation and auditory calls, and observations regarding the presence of scat, tracks, nests, and den sites were recorded on field data sheets or in the field logbook. Wildlife observations by habitat are summarized in Table 2-10.

In addition to conducting the field investigation, the wildlife biologist consulted online sources, such as the websites maintained by the RIDEM, the USFWS, and local bird clubs, as well as the National Wetlands Inventory, the Rhode Island Natural Heritage Program, the Audubon Society, and other agencies/groups that regularly census wildlife in the area. Results of the wildlife survey are presented in Section 4.10.4.

Based on the categorical habitat cover mapping designations, a vegetation survey was completed at the same time as the wildlife survey in OU2. Observations of the presence of trees, shrubs, vines, herbs, grasses, and sedges were recorded in field logbooks for each of the observation locations. Vegetation observations by habitat are presented in Table 2-11. Results of the vegetation survey are discussed in Section 4.10.4.

During this same survey event, a stream habitat survey was conducted using the USEPA's *Rapid Bioassessment Protocols for Streams and Wadeable Rivers: Periphyton Benthic Macroinvertebrates, and Fish, Second Edition* (Barbour et al., 1999) along eleven 100-meter-long reaches of the Blackstone River to determine a semi-quantitative evaluation of the Blackstone River's habitat quality to support the BERA. Ten habitat parameters, including sediment deposition, substrate characterization, flow status, channel sinuosity, bank stability, and vegetative protection were quantitatively assessed and ranked on a scale of 0 to 20, where 0 is the worst and 20 is the best, for a total possible score of 200. The survey points were taken from both banks upstream, adjacent to and downstream of OU2 in the Blackstone River, with observation locations using each sediment toxicity triad location as a center point. Results of the stream habitat survey using the RBP is presented in Table 2-12. The findings of this survey are discussed in Section 4.10.4.

2.8.4 Vernal Pool Investigation

Following discussions between BBL and the USEPA on whether the seasonal small ponded areas in OU2 (especially those on the Unnamed Island) were vernal pools, an investigation of these ponded areas was conducted by a qualified BBL biologist in April 2005. Results of this vernal pool investigation are presented in Section 4.10.3.

3. Physical Characteristics of the Study Area

This section presents information on the physical setting of the site, based on investigations at the site and supplemented, where necessary, with literature information for the area.

3.1 Surface Features and Land Use

3.1.1 Surface Topography

The topography in the area of the site is characterized by rolling hills that have been incised by the valley of the Blackstone River, which flows northwest to southeast. Features formed by pre-glacial stream erosion have been modified by glacial and post-glacial erosion. As a result, the hilltops are rounded and the Blackstone River Valley has been deepened and filled with glaciofluvial sediments.

Historical maps and aerial photographs (Appendix M) show that, from at least 1870 to 1951, the valley area currently occupied by the J.M. Mills Landfill, as well as the wetlands area northeast of the railroad was flooded to an elevation of approximately 64 feet NGVD29 in a reservoir referred to as New Pond. By 1956, the area of the New Pond was shown as drained, although the wetlands retained standing water behind the railroad levee. After draining of the New Pond, the Blackstone River channel flowed almost through the middle of the valley. However, by 1970, the Blackstone River channel just downstream of the Quinnville well field area had been moved from the center of the valley to the southwest side, and the J.M. Mills landfill occupied the area between the new channel and the railroad tracks. To the south of the landfill, the river channel in 1970 was in approximately the same location as it is now; however, a new channel had also been created along the southwest side of the valley between the landfill and the Pratt Dam, resulting in the formation of the Unnamed Island.

Overall, the ground surface along the Blackstone River floodplain slopes gently downstream (to the southeast), at a gradient of approximately 10 feet per mile along the full length of the Blackstone River. Along the 1 mile length of OU2, the Blackstone River drops approximately 3 feet, from a base-flow elevation of approximately 56.5 feet at the upstream boundary to approximately 53.5 feet NGVD29 just above Pratt Dam. The floodplain is contained by valley walls that rise relatively steeply (especially on the southwest side of the valley) to the surrounding hills, which reach elevations of 250 feet NGVD29.

The Blackstone Canal, built in the early 19th century, runs parallel to the Blackstone River along the southwestern valley edge. This section of the Blackstone Canal originates upstream of the site at Ashton Dam, and it currently rejoins the Blackstone River just downstream of OU2 at Lonsdale. Historically, the Blackstone Canal carried water out of the Blackstone River Valley and into the Moshassuck watershed via Scott Pond south of Lonsdale. The Blackstone Canal is clay-lined and has a water-level elevation of approximately 73 feet NGVD29 (16 to 20 feet higher than the Blackstone River in OU2).

The J.M. Mills Landfill is on the northern bank of the Blackstone River. It slopes up steeply from the floodplain level to a maximum elevation of approximately 145 feet NGVD29 (approximately 85 feet above the base topographic elevation). The J.M. Mills Landfill's slope is steepest on the northeast (railroad) side and it is somewhat shallower on the southwest side facing the Blackstone River.

3.1.2 Surface-Water Bodies and Wetlands

OU2 is located entirely within the Blackstone River drainage basin. The Blackstone River is the main surface-water body at the site. The 46-mile-long Blackstone River flows to the southeast from Worcester, Massachusetts through Woonsocket, Rhode Island (at the state border) to the Seekonk River south of Central Falls and Pawtucket, Rhode Island, and from there into Providence Harbor at the head of Narragansett Bay.

Several ponds are also located on site and are shown on Figure 1-3. Ponds A, B, C, F, and I are flooded during periods of high water. However, they are not hydraulically connected to the Blackstone River under normal flow conditions and retain water during base-flow conditions. The ponds are located throughout OU2 along the Blackstone River. Other ponds and pools where waste and water are captured after flooding or precipitation are identified on Figure 1-3, and these dry to varying degrees depending on the season and water-table level. These include several ponds (E, D, and P) on the Unnamed Island. The hydraulic connection between the Blackstone River, groundwater, and the ponds on the Unnamed Island appears to vary seasonally and with Blackstone River water levels.

Additionally, there is an area of wetlands, designated A through D, located to the north of the Blackstone River between the railroad tracks and the uplands. Based on groundwater elevations measured in piezometers adjacent to the wetlands, they are in hydraulic connection with the groundwater system (see discussion in Section 3.3). Surface water also flows into the wetlands from uplands to the north and east. The wetlands are depicted on Plate 5 (Appendix A).

3.1.3 Land Use and Zoning

OU2 is located primarily in the Town of Cumberland, with a small segment lying within the town boundaries of Lincoln. Both towns are in the eastern side of Providence County, which spans the northernmost section of the state of Rhode Island. The entire Blackstone River Valley, including Cumberland, Lincoln, and six other communities, lies within the area designated in statewide land use planning documents as substrate growth area No. 1 (SGA-1). The population of SGA-1 was approximately 228,000. The three most urbanized communities within SGA-1 (Central Falls, Pawtucket, and Woonsocket) decreased in population from 1985 to 1995. However, SGA-1 as a whole, including Cumberland and Lincoln, gained, and is expected to continue gaining, population through 2020.

The Towns of Cumberland and Lincoln were both classified as suburban with a population density of 500 to 2,499 persons per square mile (Rhode Island Department of Administration, Statewide Planning Program, 2000). Rhode Island conducted major land use/land cover surveys in 1961, 1970, 1988, and 1995. The results of these studies show that land development in the state increased at a rate nine times that of the population and is primarily residential in nature (residential development was growing faster than the population due to the decreasing household size; a trend seen since the mid-1950s). Development of residential land increased by more than 20% between 1970 and 1995, while industrial land use increased by only 1.2% during this same period.

The area surrounding OU2 consists of a mix of commercial, industrial, residential, and recreational uses. Land use planning for the area is delineated in the *Cultural Heritage and Land Management Plan for the Blackstone River Valley National Heritage Corridor* (Corridor Management Plan). The Corridor Management Plan was prepared by the Blackstone River Valley National Heritage Corridor Commission, which was created by Congress in 1986 and was incorporated in its entirety into the *State Guide Plan Overview* (as Element 131). The Corridor Management Plan contains numerous objectives for preservation and management of the corridor. Key provisions potentially affecting remedial activities at the site include:

- preservation of green space within the corridor
- prevention of filling of wetlands adjacent to the Blackstone River or its tributaries
- restoration of disturbed or degraded sites, such as landfills, gravel pits, and abandoned lots

The Corridor Management Plan also contains detailed recommendations and guidelines for development of property along the Blackstone River, as well as in nearby town centers.

3.2 Geology

3.2.1 Regional Geology

As mapped by Hermes and others (1994), bedrock in the region consists of late Proterozoic or older (Precambrian) metamorphic rocks of the Blackstone Group. These rocks range in type from quartzite and schists derived from sedimentary rocks to greenstone, amphibolites, and serpentinite derived from volcanic rocks. Fernald (1983) studied the Blackstone Group in some detail, including the road-cut exposures along Highway I-295 in the Blackstone River Valley, approximately 1.5 miles north of the site. Fernald found that the rocks comprising these exposures consisted of 67% quartzite, 9% micaceous quartzite, and 24% phyllite. Fernald described the quartzite beds as homogeneous, massive, and interbedded with phyllite (in some cases, green colored) and micaceous quartzite.

Structurally, the Blackstone River Valley follows the axis of a northwest-trending overturned antiform. This structure is truncated between Lonsdale and Valley Falls by a north-trending normal fault system marking the border of the Narragansett Basin, a rift valley of Triassic to Jurassic age. Schistosity dips moderately at 40 degrees to 60 degrees to the northeast.

Regionally, the bedrock is overlain by a thin mantle of till, which is primarily described locally as poorly sorted sand, silt, gravel, cobbles, and boulders, ranging from very dense sandy silt to comparatively loose silty sand (C-EE, 1990). In the river valleys, thick sand and gravel deposits overlie the till. The surficial river valley deposits were mapped by Chute (1949) as floodplain alluvium, river terrace alluvium, and kame terraces (along the valley walls). The deeper sand deposits within the OU2 study area have been generally characterized by Shield (2004a) as undifferentiated glaciofluvial deposits.

3.2.2 Study Area Geology

3.2.2.1 Unconsolidated Deposits

The unconsolidated materials in the OU2 study area have been defined by soil borings completed at 41 locations over the last several years by BBL and other consultants

(Figure 3-1). Six cross-sections were constructed by Shield (2004a) to represent the geology of the unconsolidated deposits at the OU2 site. Figure 3-1 is the cross-section locator map for those cross-sections, some of which have been augmented through soil borings and monitoring wells installed by BBL. Updated cross-sections A-A', F-F', and D-D' are presented as Figures 3-2 through 3-4. In addition, Shield's cross-sections are presented in Appendix N.

The cross-sections generally verify the regional geology as described above, although the till (Shield Unit TL) appears to be more limited in areal extent to the base of the bedrock valley. Till was absent in a number of borings located along the bedrock valley walls. The actual thickness of the buried till is not well defined. Many of the deep borings in the valley were drilled to refusal, which may indicate that either the top of the till (i.e., a boulder within the till) or bedrock was encountered. The till is generally classified as an SW soil in the Unified Soil Classification System (USCS).

The undifferentiated glaciofluvial deposits overlying the till are extensive throughout the study area, as demonstrated by the cross-sections. These deposits range from poorly- to well-graded sands and gravels (USCS classifications of SM, SW, GM, and GW), based upon 26 samples for grain size distribution analysis from nine monitoring well soil borings installed at OU2 by Shield. These coarse-grained deposits are found everywhere in the bedrock valley, with the exception of cross-section D-D' (Figure 3-4), where a relatively thick (15-foot) lens of laminated silt and clay is indicated by the boring log for MW-109.

The glaciofluvial deposits are overlain by alluvial deposits in approximately the upper 20 feet, which generally exhibit similar physical properties. The alluvial deposits contain a greater percentage of organic matter and thin silt (ML) layers. This interlayering of silt and organic layers is expected in a meandering river environment.

Significant reworking and mixing of natural surficial deposits has occurred in the recent past. This reworking/mixing has been caused by draining of the pond and scouring of the Blackstone River bottom by subsequent spring floods, by filling and sand and gravel extraction and by the regrading of the Blackstone River Valley in the area of the J.M. Mills Landfill and Unnamed Island. Wetlands have become established in some of the formerly flooded and/or excavated areas, trapping organic, and fine sediments in a thin deposit over the coarser glaciofluvial deposits. In the area of the former New Pond and wetlands, where a man-made lake flooded the Blackstone River floodplain, a thin layer of finer sediments (primarily silt) can be expected from sediment settling behind the dam.

3.2.2.2 Blackstone River Sediments

Shield (2004a) characterized the physical nature of sediments in the Blackstone River, Ponds A through F, the Blackstone River inlet near the transfer station (referred to as Nunes Inlet), and the wetland areas. Samples of sediments from these areas were analyzed for grain size. The following table summarizes Shield's findings.

Physical Nature of Blackstone River Sediments

Location	# of Samples	Sediment Description
Blackstone River	13	Fine to coarse sand with varying amounts of gravel.[1]
Pond A	5	Near shore: coarse sand, some gravel, little to no fines. Middle of pond: silt.
Pond B	1	Silt and silty clay.
Pond C	1	Sand and silt.
Pond D	1	Sand, some silt.
Pond E	1	Sand, some silt.
Pond F	1	Variably sandy and silty.
Nunes inlet	1	Sand and silt.
Wetlands	10	Ranged from silty clay to sand and gravel, with varying amounts of organic matter.

[1]One sample, collected behind Ashton Dam, contained a considerable fraction of silt (44% by weight).

3.2.2.3 Bedrock

Bedrock beneath the site is mapped as quartzite (north of the Blackstone River) and as epidote-and-biotite schist (south of the Blackstone River) (Hermes, 1994). In 1987, CDM installed well borings and cored into bedrock at the site, two (MW-106 and MW-107) were logged as "green schist" and five (MW-108, MW-109, MW-110, MW-111, and MW-112) were logged as "orthoquartzite." These observations were fairly consistent with the studies done by Hermes (1994) and Fernald (1983).

Aerial photographs and field investigations of fracture patterns in the study area during the sitewide RI yielded inconsistent results (C-EE, 1990). However, both studies appeared to indicate that the dominant fracture directions trend north-northeast, with a more minor component to the northwest.

The configuration of the bedrock surface beneath the valley was mapped in the Sitewide RI Report (C-EE, 1990) based on bedrock elevations in the literature, test boring logs, and seismic refraction survey results. Shield (2004a) revised that map using bedrock surface. The revised map is included in Appendix N.

During Phase 1B, BBL performed a geophysical survey and drilling to further refine the definition of the bedrock surface. Boring GNP-705B was located at the north end of the Nunes Parcel and extended to the bedrock surface. This information, in conjunction with the geophysical survey, was used to reconstruct cross-section F-F' (Figure 3-3) and the bedrock elevation contour map (Figure 3-5). These figures indicate that there is no evidence of a deeper bedrock trough (elevations below -100 NGVD) to the south running parallel to the Blackstone River, as indicated in the Shield map. The more recent data indicates that bedrock elevations there are much shallower (between -50 and -75 NGVD) and that there is a closed depression in the bedrock surface north of boring GNP-705B (see Figure 3-5). However, this reinterpretation of the bedrock surface has no appreciable effect on the groundwater flow or the overall geologic model of the site.

3.3 Groundwater Hydrology

3.3.1 Regional Groundwater Hydrology

The hydrogeology of the region is dominated by the Blackstone River, which is the major groundwater discharge zone in the region. Groundwater in the Blackstone River Valley is derived chiefly from precipitation that falls on and infiltrates into the uplands and the Blackstone River Valley floor, some of it in the form of snowmelt. Another source of groundwater is the infiltration of Blackstone River water during flood stages or behind dams. This groundwater is expected to discharge back to the Blackstone River following floods or shortly below dams. Groundwater is stored in the glacial unconsolidated material that blankets the uplands (till) and fills the bedrock valley (till and glaciofluvial sediments) and also in the bedrock. Groundwater generally moves from the till upland toward the Blackstone River.

Like the Blackstone River Valley, river valleys in the region represent localized zones of abundant water resources in a terrain that is dominated by relatively low-permeability crystalline bedrock mantled by till of low- to moderate-permeability. The USGS has recently performed numerical groundwater flow modeling of the Lincoln and Cumberland well fields, located approximately 4 miles upriver from the site (Friesz, 2004). These well fields draw water from the glaciofluvial deposits above bedrock. The modeling showed that the size of the areas contributing recharge to the well fields increased as pumping rates at the well fields were increased, and that induced infiltration from the Blackstone River accounts for a significant portion of the water pumped by the well fields. No groundwater pumping is occurring in OU2; therefore, groundwater is expected to discharge to the Blackstone River under base-flow conditions.

3.3.2 Site Groundwater Hydrology

Site hydrogeology has been studied for more than 20 years through a series of investigations. The discussion of the site groundwater hydrology builds on these investigations and the following additional tasks that were completed as part of this RI Report:

- Installation of four additional intermediate and deep monitoring wells to help define groundwater flow deeper in the valley aquifer.
- Water-level measurements from all site monitoring wells, piezometers, and surface-water monitoring points on April 27, 2005 and November 27 and 28, 2005.
- Water-level measurements from site piezometers and selected monitoring wells on October 4, 2005.
- A specific-capacity test on monitoring well GNP-705B.

The purpose of this section is to summarize the groundwater hydrology on site based on the findings of the RI plus previous investigations and present conclusions of the implications of the groundwater flow conditions to contaminant migration.

3.3.2.1 Hydrostratigraphic Units

Based on the available information, four hydrostratigraphic units are identified at the site: Upper Glaciofluvial Unit, Lower Glaciofluvial Unit, Till, and Bedrock. Shield (BBL, 2006a) developed a "formation code" that was used to describe the zones and identify the zones in which individual site monitoring wells were screened. These hydrostratigraphic units and the Shield formation codes are presented below:

- *Upper Glaciofluvial – SH:* Wells screened in glaciofluvial sediments; the screen midpoint elevation is above 35 feet NGVD29.
- *Upper Glaciofluvial – IN:* Wells screened in glaciofluvial sediments; the screen midpoint elevation is between -10 and 35 feet NGVD29.
- *Lower Glaciofluvial – DP:* Wells screened in glaciofluvial sediments; the screen midpoint elevation is below -10 feet NGVD29.

- *Till – TL*: Wells screened in till just above bedrock.

- *Bedrock – BR:* Wells screened in bedrock.

The hydraulic conductivity values reported for these units as determined by a variety of testing methods are presented in Table 3-1. The cone penetrometer readings are nearly an order of magnitude less than the other hydraulic conductivity testing methods. We do not believe these readings are as reliable as the other measurements for a variety of reasons. First, because the soil is being pushed and not actually removed via auger or coring, the soils are naturally being compressed against the side of the probe. Second, the readings are not being measured in a developed well and for that reason may not be representative of actual aquifer conditions. For these reasons, the cone penetrometer readings are likely to underestimate the hydraulic conductivity of the formation. Given the consistency of the hydraulic conductivity values using the other methods, the cone penetrometer readings will not be considered further.

As indicated in Table 3-1, the hydraulic conductivity of the Upper Glaciofluvial Unit is, in general, an order of magnitude greater than the Lower Glaciofluvial Unit and the underlying Till Unit. This difference in hydraulic conductivity has significant implications for contaminant migration, as based on the higher hydraulic conductivity of the Upper Glaciofluvial Unit, contaminants are more likely to be confined to the upper 30 feet of the aquifer rather than migrate deeper in the aquifer. Hydraulic gradients also support the finding of contaminants being limited to the shallow aquifer.

3.3.2.2 Groundwater Movement

Comprehensive synoptic rounds of water-level data were collected on six occasions, as follows:

- August 2003, September 2003, and September 2004 by Shield

- April 2005 and November 2005 by BBL

- March 2007 by ARCADIS BBL

Figure 3-6 presents groundwater contours based upon the November 2005 water-level data, which is representative of the three rounds measured by BBL and ARCADIS BBL. Figures presenting groundwater contours from the three rounds of water levels measured by Shield are included in Appendix N of this RI Report. Appendix J presents

the combined OU1 and OU2 potentiometric surface map that was prepared based on water levels measured in March 2007 (by ENSR) as a part of the OU1 5-Year Review.

Groundwater Elevations and Depth to Water

Depths to water and groundwater elevations for the above-referenced synoptic water-level measurement events are presented in Table 3-2. The depth to water across the site varies depending on the proximity of the measuring point to the Blackstone River and the season that the measurement was taken. The greatest depths to water are at edges of the valley wall, as represented by monitoring wells MW-EA-1 and MW-107A (north and south valley walls, respectively). Groundwater depths there vary from about 20 feet bgs to 28 bgs for MW-EA-1 to 16 to 20 feet bgs for MW-107A. Groundwater depths rapidly decrease approaching the Blackstone River to 0 feet bgs. Water levels measured in piezometers and monitoring wells installed along the Blackstone River actually show water levels above the ground surface (Table 3-2), indicating that there is an upward vertical gradient and that the groundwater is discharging to the Blackstone River. This is discussed in more detail below.

Horizontal Movement

The groundwater flow patterns, as represented on Figure 3-6 and the Shield groundwater contour maps (Appendix N), consistently demonstrate that groundwater generally moves horizontally toward the Blackstone River. The following bullets summarize important information from the water-table maps prepared:

- Where the Blackstone River floodplain is broad (i.e., the Quinnville well field and the J.M. Mills Landfill), horizontal hydraulic gradients are slight (approximately 0.005 foot per foot). Horizontal hydraulic gradient calculations are presented in Appendix O.

- Water in the Blackstone Canal is perched above the regional water table because of the historic lining of the Blackstone Canal and, therefore, has no appreciable effect upon groundwater movement.

- The groundwater elevation data suggest that mounding beneath the J.M. Mills Landfill is minimal or non-existent. All of the groundwater contour maps consistently show groundwater flow to the south and west from the Wetland B and C areas toward the J.M. Mills Landfill and the Blackstone River. If mounding were occurring, groundwater would be expected to flow toward the wetland from the J.M. Mills Landfill, at least at certain times of the year. Based upon the groundwater elevation

data (Table 3-2), piezometer PZ-12, which is on the north (wetland) side of the railroad tracks (Figure 3-1) exhibits a consistently higher head than piezometer PZ-19, which is on the south (J.M. Mills Landfill) side of the railroad tracks. While the MW-108 well cluster does exhibit a slight downward vertical groundwater gradient, this is not related to mounding of groundwater beneath the J.M. Mills Landfill, as discussed below. Furthermore, the slight amount of groundwater head build up beneath the J.M. Mills Landfill is unlikely to have any significant effect on contaminant migration because the high hydraulic conductivity of the Glaciofluvial Unit beneath the J.M. Mills Landfill (see discussion below on Hydraulic Conductivity and Groundwater Flow Rate), coupled with the expected anisotropy that would favor lateral movement of groundwater, would tend to mitigate downward movement of affected groundwater.

- Groundwater generally discharges to the wetlands north of the J.M. Mills Landfill from the valley wall along the northern edges of the wetlands. Based upon historically measured groundwater levels, the base of the wetlands are periodically in hydraulic connection with the groundwater table. During higher water conditions, water from Wetland C flows to Wetland B and finally to Wetland A. Surface water from Wetland B flows into Wetland A during medium and high water conditions through the berm that separates the two wetlands. During lower water conditions, these wetlands appear to act independently with no visible surface flow from one to the other. In Wetland A, the surface water is captured by a 10-foot by 10-foot concrete basin before traveling southeast adjacent to the railroad tracks before discharging into the Blackstone River south of Route 122 across Mendon Road. The basin is approximately 2 feet above grade and located near the southern end of Wetland A, in proximity to the Lennox Street well.

- During base-flow (non-storm event) conditions, groundwater is not mounded appreciably beneath the Unnamed Island. As a result, groundwater generally moves eastward across the Unnamed Island, with some Blackstone River water recharging Unnamed Island groundwater along the “upriver” (western) portion of the Unnamed Island and Unnamed Island groundwater discharging back to the Blackstone River along the Unnamed Island’s eastern flank.

- During and for brief periods following significant storm events, the Blackstone River near the Unnamed Island acts as a losing reach and likely loses water to the Unnamed Island as bank storage. This statement is based on Shield’s most recent water-level measurement round (September 20, 2004, Appendix N), which was collected 2 days after a 2.3-inch rainfall event, and represents a fairly

comprehensive dataset collected soon after a sizable rainfall. This condition is not surprising and is expected to be temporary. Blackstone River levels typically drop more quickly than groundwater levels; therefore, within several days of the rainfall event, groundwater flow directions on the Unnamed Island are expected to reverse (i.e., bank storage discharges to the Blackstone River in the eastern portion of the Unnamed Island). This is confirmed by Figure 3-6 and the Shield groundwater flow maps (Appendix N).

- The reach of Blackstone River that separates the Unnamed Island from the solid waste transfer station property appears to perennially lose water to that property (Figure 3-6, and see Shield groundwater flow maps, Appendix N). The groundwater beneath the transfer station property likely discharges back into the Blackstone River below Pratt Dam.

- Three residential wells were sampled in November 2009 by the USEPA. These wells are located on Wildwood and Dixon Streets, north of the Nunes Parcel and east of Wetland A. Groundwater flow in the area was determined to be generally from these properties towards the Blackstone River.

- Based on existing vertical hydraulic gradient information (discussed below), down-valley movement of deeper groundwater is possible, although insignificant with respect to contaminant migration. As described in the remainder of this section, there is no significant downward migration to the deeper aquifer. Groundwater flow is largely constrained to the shallow (SH) unit, which subsequently discharges to the Blackstone River. This is confirmed by the flow net profiles presented as Figures 3-7 and 3-8 and by the vertical gradients calculated from well pairs at the site (Table 3-3). Groundwater flow near the Blackstone River exhibits an upward vertical gradient, further inhibiting the downward migration of groundwater into the deeper aquifer. Additionally, hydraulic conductivities in the SH unit average one to two orders of magnitude higher than hydraulic conductivities in the deeper unconsolidated (DP) unit. Correspondingly, the groundwater flow rate in the DP unit is one to two orders of magnitude slower than in the SH unit, inhibiting the downward migration of groundwater.

Hydraulic Conductivity and Groundwater Flow Rate

The glaciofluvial aquifer, particularly the SH unit, exhibits high hydraulic conductivity. Table 3-1 summarizes the hydraulic conductivities of the hydrostratigraphic units, and the individual well hydraulic conductivity tests performed by Shield (2004b) are

presented in Appendix P. The individual specific-capacity tests also indicate that there is a high degree of spatial variability in hydraulic conductivity, particularly in the SH unit, which is not unusual for glaciofluvial deposits. Based upon Shield's calculations, hydraulic conductivity values vary by three to four orders of magnitude (8 to 4,500 feet per day). The SH unit beneath the J.M. Mills Landfill exhibits the highest hydraulic conductivities over the entire study area. Shield calculated hydraulic conductivities for monitoring wells SEA-601, SEA-602A, SEA-603, SEA-605, MW-108AA, and P-8, which are located adjacent to the J.M. Mills Landfill and are screened in the SH unit, ranged from approximately 10^{-1} to 10^{0} centimeters per second (cm/sec) or 600 to 4,500 feet per day. In general, shallow monitoring wells located within the main channel of the Blackstone River exhibited higher hydraulic conductivities than those closer to the valley walls, such as MW-109AA, MW-110A, and MW-111A, which are one to two orders of magnitude less.

ARCADIS BBL has recalculated the Shield hydraulic conductivities using the raw data generated by Shield but a different methodology (Appendix P), resulting in a mean hydraulic conductivity of the SH unit wells adjacent to the J.M. Mills Landfill of approximately 0.031 cm/sec or 88 feet per day. We believe that this estimate is more realistic than the Shield estimate. However, given the variability in the aquifer materials, the actual hydraulic conductivity may be higher. A comparison of the Shield and ARCADIS BBL hydraulic conductivities for the same monitoring wells is provided in Appendix O.

Groundwater flow rates in the SH unit have been calculated for the J.M. Mills Landfill area, which is the major upland contaminant source. Shallow groundwater flows roughly northeast to southwest across the J.M. Mills Landfill and discharges to the Blackstone River. Using the hydraulic gradient (i) calculated based upon the November 2005 data (0.0049 feet per foot) and the range of hydraulic conductivities (k) (as calculated by ARCADIS BBL) presented in Appendix P for the shallow wells located in the vicinity of the J.M. Mills Landfill and an effective porosity (n_e) of 0.20 (Todd, 1967), the average estimated groundwater flow velocity ($v = ki/n_e$) is approximately 2 feet per day or 750 feet per year. As discussed above, because of the variability in the aquifer materials and the documented range of hydraulic conductivities for this hydrostratigraphic unit, the groundwater flow velocity in some locations is likely to be even higher.

Because hydraulic conductivities in the aquifer generally decrease with depth, corresponding groundwater flow rates also decrease with depth, likely by one to two orders of magnitude.

Vertical Movement

To examine the vertical component of groundwater movement, groundwater elevation data for clustered wells (wells screened at different depths at the same location) were used. The direction and strength of vertical gradients can be calculated at such locations. These gradients are summarized in Table 3-3, which includes data from Shield (BBL, 2006a). Vertical groundwater flow was also examined by constructing flow nets, which are presented on Figures 3-7 and 3-8.

At the site, the available data suggest that, in general, away from the Blackstone River, the vertical component of groundwater movement is downward. This is demonstrated by well clusters MW-107 and MW-108 (Table 3-3). As discussed earlier, the slight downward gradient observed at the MW-108 cluster is not a result of a mounding condition at the J.M. Mills Landfill. Furthermore, this gradient could also be the result of the higher hydraulic conductivity of the SH unit compared to the deeper units (IN and DP). A loss in hydraulic head is commonly observed as groundwater migrates from zones of higher to lower hydraulic conductivity. Near the Blackstone River, at least in the SH unit, the vertical gradients are upward. This is demonstrated by well clusters GLF-706, MW-106, MW-109, MW-112, MW-B1/B2, and MW-C1/C2 (Figure 3-6). The PZ elevation data also show a strong upward groundwater flow component adjacent to the Blackstone River. The groundwater elevation data (Table 3-2) indicate that most of the PZs exhibit water levels higher than the ground surface. These conditions help to limit contaminant migration as discussed in the next section.

Upward gradients over time near the Blackstone River are also demonstrated by hydrographs constructed by Shield based upon water levels measured in 2004 (presented in Appendix N) and hydrographs constructed by BBL from data from 2003 (presented in Appendix N).

Near Pratt Dam, there is likely a measurable downward component of movement, as groundwater locally moves around and beneath the Pratt Dam before discharging back into the Blackstone River below the Pratt Dam. Data for the deeper units are limited and an evaluation cannot be made at this time.

3.3.2.3 Implications for Groundwater Contaminant Migration

Based on measured hydraulic conductivities and horizontal gradients, groundwater beneath the site is migrating at a relatively rapid rate, particularly in the SH unit. Furthermore, the Blackstone River is a major discharge zone across the site, except just

upstream of the Pratt Dam. Therefore, contaminant migration, if present, is expected to be controlled hydraulically and chemically. First, groundwater flow rates, particularly beneath the primary source, the J.M. Mills Landfill, are rapid and thus provide considerable dilution/attenuation capacity for contaminants migrating from beneath the J.M. Mills Landfill. Second, the rapid horizontal flow rates within the SH unit act to inhibit downward migration into the deeper parts of the valley aquifer. Finally, groundwater migrating from these contaminant sources is most likely to discharge to the Blackstone River. Additional information regarding groundwater contaminant migration is presented in Section 4.

3.4 Surface-Water Hydrology

3.4.1 Blackstone River

The 46-mile-long Blackstone River flows to the southeast from Worcester, Massachusetts through Woonsocket, Rhode Island (at the state border) to the Seekonk River south of Central Falls and Pawtucket, Rhode Island, and from there into Providence Harbor at the head of Narragansett Bay. It drains an area of 454 square miles, including 105 square miles in Rhode Island and the balance in Massachusetts. The Blackstone River drops 438 feet from its headwaters to sea level, corresponding to an average gradient of approximately 10 feet per mile. The gradient flattens as the Blackstone River flows closer to the ocean, and the Blackstone River becomes tidal downstream of the site in Pawtucket at the Main Street Dam.

The annual mean stream flow for the Blackstone River at Woonsocket (USGS Gauging Station 01112500) ranged from 334 to 1,322 cubic feet per second (cfs) between 1930 and 2001, and averaged 778 cfs, equivalent to 6 million cubic feet per day, or 330,000 gallons per minute. Peak stream flow typically has exceeded 10,000 cfs at least once per decade. High-flow water quality sampling was conducted at both the Pratt Dam and the upstream Ashton Dam by the Group in cooperation with the USGS and the USEPA. The USGS preliminary estimate of flow during the chemical sampling on April 4, 2005 was approximately 6,500 to 7,100 cfs. Final flow rates will be published with the USGS Rhode Island Annual Report.

C-EE (1990) reported the 7-day, 10-year low-flow (7Q10) at Woonsocket as 101 cfs. The RIDEM considers the 7Q10 at Woonsocket to be 102.25 cfs based upon flow data through Water Year 1993, according to *7Q10 Statistics for Rhode Island Gauging Stations*, a table currently included in permit application packages under the Rhode Island Pollutant Discharge Elimination System.

3.4.2 Drainage Patterns

The course of the Blackstone River in OU2, between Martin Street and Pratt Dam, has been substantially modified over the last two centuries. The Blackstone Canal was built early in the 19th century, and it exchanged water with the Blackstone River, carrying some of its flow into a different watershed. The first dam in the area of Pratt Dam may have been constructed contemporaneously with the Blackstone Canal, and the Blackstone River and wetlands were flooded in the New Pond area for at least 80 years by end of the 19th century and through the first half of the 20th century. The New Pond was drained in the 1950s. Subsequent filling in the area of the J.M. Mills Landfill, as well as excavation and filling activities at the transfer station and Unnamed Island led to additional alterations to the flow channel.

Surface-water elevation measurements were collected in August and September 2003 and in September and October 2004 by Shield and again in 2006 by BBL. The following is based on the evaluation of August and September 2003 data (Shield, 2004a).

Based upon measurements made during the near-base-flow conditions in August and September 2003, the Blackstone River channel width in OU2 varies from approximately 60 to 125 feet, and the depth of the water varies from approximately 1 foot to more than 6 feet, with 2 to 4 feet being typical under base-flow conditions. The narrowest, deepest segment (approximately 60 feet wide and 6 feet deep) runs along the southwest shore of the J.M. Mills Landfill, between the J.M. Mills Landfill and the bank of the Blackstone Canal. In the main channel along the Unnamed Island and upstream of Pratt Dam, the Blackstone River is somewhat wider and shallower (approximately 60 to 90 feet wide and 4 feet deep). Upstream of the J.M. Mills Landfill is a shallow section (less than 1 foot deep) with a steeper gradient in the vicinity the small island near MW-106 and the outfall at the culvert headwall (HW-01). Above that, from the small island upstream to the shallows just below Martin Street, the Blackstone River has a typical section approximately 125 feet wide and 2 to 4 feet deep.

Surface water in OU2 ultimately drains to the Blackstone River. Surface-water runoff from the west-southwest valley wall, including a stream flowing from the area of Dexter Rock Road, is carried into the Blackstone Canal and from there drains to the Blackstone River downstream of Pratt Dam. On the northeast bank of the Blackstone River, surface-water runoff originating west of the railroad tracks (near the J.M. Mills Landfill, Nunes Parcel transfer station, and Unnamed Island) drains directly or via ditches into the Blackstone River within OU2.

The sand and gravel pit (currently the Fleet Construction Co. property) northeast of the railroad tracks, located between the wetlands and Martin Street, appears to intersect the water table on its northeastern flank, at an elevation of 86 to 88 feet NGVD29. Seeps emerging from this flank and surface-water runoff into the pit are drained via a ditch running southwest across the pit bottom and combine with the far northwest section of the wetlands (WT-D). From there, the slightly turbid surface water drains under the railroad via a culvert near the MW-106 well cluster (the upstream headwall on this culvert is referred to as HW-01 and the discharge as the HW-01 outfall). This water eventually discharges to the Blackstone River at the North Inlet shown on Plate 1. This inlet is a former intake trench that historically fed water via a pump and pipeline to the former Mackland sand gravel operation (McNulty Property).

The southern section of wetlands drains to a ditch running to the southeast, parallel to the railroad tracks on their northeastern side, when there is sufficient water for surface-water overflow. A culvert or drain pipe emerges at a headwall (HW-02) into this ditch, just southeast of the Lenox Street well. The origin of this pipe is not known, but it is assumed to lie within the former swimming pond at the southeastern end of the wetlands (WT-A). This ditch continues parallel to the tracks and flows under Mendon Road, and it then crosses under the railroad tracks, draining into what appears to be a remnant of the former large canal that ran to the eastern Lonsdale Mill. These culverts appear on Plate 5.

Surface water flows into the site wetlands from uplands to the north and east. The principal drainage into the wetlands is Monastery Brook, which originates in high wetlands at an elevation of approximately 210 feet NGVD29, approximately 7,000 feet north of the New Pond wetlands near a former Cistercian monastery (now the Cumberland Public Library). Monastery Brook drains an area that is primarily residential and wooded, picks up storm drainage near Mendon Road, and flows into the northeastern section of the main wetlands (WT-C). An unnamed intermittent stream flows into the same wetlands section, approximately 250 feet to the west, near the location of combination staff gauge/piezometer PZ-13. This stream originates in a quarried area approximately 600 feet due north of its discharge point in the wetlands, and it drains a combination residential and commercial watershed. A third inflow to the wetlands, referred to for the purpose of this RI Report as the Panda Culvert (RCP), discharges to the northern side of the southeastern section of the main wetlands (WT-B). This inflow is fed from a small intermittent stream that originates a couple hundred feet northeast of Mendon Road, and it also picks up storm drainage from the parking lot of the Panda Garden Restaurant. It may also receive additional flow from the storm drain

system along Mendon Road and from Marshall Avenue. A 12-inch PVC pipe also flows into Wetland B on the Panda property in the vicinity of the Panda RCP.

Reportedly, other storm drainage from Mendon Road flows into the wetlands between the Panda Culvert and Monastery Brook, but no hard pipes were located during the reconnaissance performed by Shield in May 2002 or during the Phase 1A activities. Some of the gullies draining surface-water runoff from the McNulty properties into the wetlands were in the process of being filled and regraded as part of the residential construction in progress on those properties during the summer and fall of 2003.

There is no apparent surface drainage connection under base-flow conditions between the northeastern section of the main wetlands (WT-C) and the small far-northeastern section (WT-D) that drains to the Blackstone River north of the J.M. Mills Landfill, although the area is heavily vegetated and could not be completely inspected. Aerial photographs show a former siltation pond for the sand and gravel operations on the northern portion of the McNulty properties when active extraction activities were occurring in the 1960s or 1970s. Most of the flow entering the wetlands apparently drains out by downward seepage into the groundwater flow system or as surface flow (during precipitation events) from Wetland C through Wetland B and then Wetland A, which eventually drains into the southeast flowing ditch to the culvert headwall HW-02 (northwest of the Lenox Street Municipal Well). The surface water that drains from this culvert flows along the ditch north of the railroad track and discharges into the Blackstone River below the Pratt Dam (in the vicinity of the Ann and Hope Mill).

3.4.3 Hydraulic Connection between J.M. Mills Landfill and Wetland Areas

Based on the OU2 site topography, surface-water runoff from the J.M. Mills Landfill is not a potential source of impact to the wetland areas. The landfill and the wetlands are separated by the P&W railroad tracks, which create a topographic barrier between the two areas under normal conditions. Furthermore, because the construction of the railroad preceded the landfill by over 100 years, it is unlikely that landfill runoff ever flowed directly into the wetlands, although this is not known with any certainty.

The wetlands are primarily fed by surface-water drainage from upland streams to the north and east. However, during flood events on the Blackstone River, river water overtops the railroad tracks north of the landfill and enters the wetlands. Until recently, there were no culverts or drainage connections between the wetlands and the landfill site, and none were known to have existed historically. However, in November 2006, a drain line was observed to have been recently installed (flow direction – north to south)

beneath the P&W railroad tracks near the Lenox Street well. The presumed purpose for the drain is to allow ponded floodwater on the north side of the tracks to drain to that level and prevent failure of the railroad embankment; during a severe flood in October 2005, the rail bed was severely eroded both north and south of the J.M. Mills Landfill. In the absence of floodwaters that would flow out of the wetlands through this drain, the only discharge points in the wetlands are at the southern end of Wetland A and the northern end of Wetland D, as discussed in the previous subsection.

The chemical evidence supports this model for surface-water transport. Sediment samples collected from the wetlands exhibit impacts similar to those found in the river sediments upstream of OU2 (see Section 4.5). Impacts to the sediment in the wetland are well distributed suggesting sediment-laden water has historically migrated during river flooding and backed up into and across the wetlands. It is likely that impacts from the J.M. Mills Landfill on concentrations of PAHs or PCBs in the wetland soils or sediments are minimal.

3.4.4 Surface-Water Classification and Use

The Blackstone River in the area of the site is classified by the RIDEM under the federal CWA as Class B/B1 (i.e., suitable for primary and secondary contact recreation and fish and wildlife habitat, recognizing the potential for impacts due to approved wastewater discharges and combined sewer overflows). It is listed on the State of Rhode Island, 2010 303(d) List, List of Impaired Waters, Final, July 2011. As required under that section, a study to determine the total maximum daily loads from point and nonpoint sources is currently underway. The table below summarizes identified impairments to the segment of Blackstone River near which the site is located.

Blackstone River

Waterbody ID No: RI0001003R-01A, Waterbody Size: 18.1M, Waterbody Classification: B1 Blackstone River from the MA-RI border to the CSO outfall located at River and Samoset Streets in Central Falls. Woonsocket, North Smithfield, Cumberland, Lincoln and Central Falls.

Use Description	Use Attainment Status	Cause/Impairment
Fish and Wildlife habitat	Not Supporting	Benthic-Macroinvertebrate Bioassessments Cadmium Eurasian Water Milfoil, Myriophyllum spicatum Lead

Use Description	Use Attainment Status	Cause/Impairment
		Non-Native Aquatic Plants Oxygen, Dissolved Phosphorus (Total)
Fish Consumption	Not Supporting	Mercury in Fish Tissue PCB in Fish Tissue
Primary Contact Recreation	Not Supporting	Enterococcus Fecal Coliform
Secondary Contact Recreation	Not Supporting	Enterococcus Fecal Coliform

3.5 Wetlands and Floodplains

In the Flood Insurance Rate Maps compiled by the Federal Emergency Management Agency (most recent March 2, 2009), the 100-year floodplain for OU2 extends from the Blackstone Canal north to Wetlands A through D and essentially encompasses the entire area of OU2. Most of the J.M. Mills Landfill surface is above the 100-year floodplain. Parts of the Blackstone Canal lie between the 100-year and 500-year flood zones.

In OU2, the Blackstone River floodplain has a width of 1,000 to 2,000 feet and an elevation of approximately 60 feet NGVD29. A subdued alluvial terrace is present at an elevation of approximately 70 feet NGVD29 in OU1 and is absent in most of the OU2 area. The OU2 wetlands north of the J.M. Mills Landfill, which has a bottom elevation of 57 to 60 feet NGVD29, abut a sharp escarpment to the northeast that rises to an elevation of approximately 90 feet. Sand and gravel extraction, as well as bedrock removal, has occurred in the sand and gravel pit northwest of the wetlands and on the McNulty properties. The wetlands area is shown on historical maps to be flooded as early as 1870. The area most likely represents a meander of the Blackstone River that was cut off by construction of the railroad levee in the middle of the 19th century.

At periods of high river stage, the Unnamed Island and other low-lying areas of the site are flooded with water from the Blackstone River. As the water level recedes, water continues to flow through the large Ponds A and F before dropping to the point where it has formed ponds with no surface connection to the Blackstone River. Pond N may be connected to the small stream on the northern portion of the site during periods of higher water. Ponds C and B appear to be man-made excavations along the toe of the J.M. Mills Landfill that are flooded with river water at high stages and become disconnected

from the Blackstone River at lower water levels. Similarly, the upstream end of Pond I (Nunes Inlet) near the Nunes Parcel has been observed to become isolated from the Blackstone River during periods of low flow but the downstream end remains connected to the flow in the Blackstone River when this occurs.

3.6 Climate and Meteorology

New England has a continental climate and westerly winds dominate. Its climate is modified on its coastal margins by the influence of cold marine currents on the eastern shore and warm currents on the southern shore. According to the Sitewide RI Report (C-EE, 1990), the prevailing wind direction in Rhode Island is from the south-southwest from April through September and from the north-northwest between October and March.

Climate data for Providence were obtained online from the NOAA National Climatic Data Center for the 30-year period from 1971 through 2000. The temperature in Providence varies from a mean daily minimum of 19.1 degrees Fahrenheit (ºF) in January to a mean daily maximum of 82.1°F in July. The mean annual precipitation in Providence was 45.53 inches, with the mean monthly precipitation varying from 3.18 inches in July to 4.43 inches in November. The mean annual precipitation in Woonsocket, Rhode Island, which is approximately 7 miles northwest of the site, was 47.85 inches. Annual pan evaporation is estimated to be approximately 35 inches a year, and the annual lake evaporation is approximately 27 inches a year (U.S. Department of Commerce, 1968).

4. Nature and Extent of Contamination

Investigations were focused on identifying the nature and extent of wastes and chemical constituents with the purpose of developing a SCM, conducting a risk assessment, and ultimately identifying and evaluating remedial alternatives. Investigations were developed and implemented with the understanding that the presumptive remedy for the J.M. Mills Landfill would be containment via a cap, which provides adequate and long-term protection against wastes that were historically disposed there. Sampling and analysis objectives were focused on identifying migration pathways from the J.M. Mills Landfill and characterizing the areas of the site that would not necessarily be included under this presumptive remedy.

Groundwater, soil, surface-water, sediment, grab water, and vent air samples have been collected from the site to define the nature and extent of chemical constituents. In general, the samples were analyzed using USEPA CLP methods (Phases 1A and 1AExp) and SW-846 methods (Phase 1B), as specified in the various Work Plans and addenda (Shield, 2003a, 2004b; BBL, 2005a, 2005b 2005c, 2006d; and ARCADIS, 2009a), and the QAPP Addendum (BBL, 2005b; ARCADIS 2009b) version approved at the time of sampling. Most environmental samples were analyzed for TCL VOCs + TICs, SVOCs + TICs (excluding PAHs), PAHs (reported as a separate parameter group analyzed as same SVOC method for some media and low-level modified method for other media), pesticides, PCBs (Aroclors or homologs), TAL metals (including low-level arsenic and low-level mercury for some media), total cyanide, and miscellaneous compounds (i.e., percent moisture/solid, chloride, TOC, and pH). Select surface soil samples in Phase 1B and select surface and subsurface soils in the 2009 Unnamed Island Supplemental Investigation were analyzed for PCDDs and PCDFs (dioxins/furans) by USEPA Method 8290A. Groundwater samples from the 2009 Unnamed Island Supplemental Investigation were additionally field-filtered and analyzed for dissolved metals and cyanide using the same SW-846 methods as the previous sampling events. Vent air samples collected from the J.M. Mills Landfill vents were analyzed for VOCs, hydrogen sulfide, and selected fixed gases (oxygen, nitrogen, carbon dioxide, carbon monoxide, methane, ethane, and ethene).

4.1 Data Reporting and Data Quality Objectives

Samples collected in Phase 1A/1AExp were analyzed by Mitkem and Brooks Rand using USEPA CLP and other modified USEPA methods in accordance with the Phase 1A DBSR (Shield, 2003b). Results from 2003 (Phase 1A) were validated by Shield and results from 2004 (Phase 1AExp) were validated by NEH. Data validation memoranda

were provided on CD-ROM in Appendices I and J for 2003 and 2004 data, respectively, of the DBSR2 (BBL, 2006a). Laboratory data reports for the 2003 and 2004 data were provided on CD-ROM in Appendices K and L, respectively, of the DBSR2 (BBL, 2006a).

To confirm data comparability between datasets, NEH also performed a review of the 2003 data validation performed by Shield and completed a data usability assessment for both sets of data. Where more than one value was reported for a given sample and analyte (i.e., in the case of dilutions, reanalysis, or different methods), NEH selected a single result as the most appropriate for use in further site assessment. NEH also corrected some of the data validation qualifiers applied during the initial 2003 validation. NEH corrections were provided to BBL for incorporation into the project database and pertinent portions of this review were presented to the USEPA in the DBSR2 (BBL, 2006a).

Phase 1B samples collected for chemical analysis during 2005 through early 2006, November 2006 (Nunes Parcel), March 2007 (Additional Groundwater Sampling for OU1 5-Year Review), and 2009 Unnamed Island Supplemental Sampling were analyzed by Alpha Woods Hole Group and Pace Analytical Services, Inc., using USEPA-approved methods in accordance with the QAPP Addendum (BBL, 2005b or ARCADIS, 2009b). Results from all of these samples were validated by NEH following the USEPA Region 1 Functional Guidelines (USEPA, 1996). Data validation memoranda for the 2005 and early 2006 data were provided on CD-ROM in Appendix F and laboratory data reports in Appendix G of the Phase 1B DBSR (BBL, 2006b). The data validation memorandum prepared by NEH for the November 2006 Nunes additional soil sampling, March 2007 OU1 Review groundwater sampling, and November 2009 Unnamed Island Supplemental sampling are included in Appendix Z. The laboratory data reports for these three most recent sampling activities that were not presented in the Phase 1B DBSR are included in Appendix AA.

The analytical results (with data validation flags) for the data collected are summarized in the tables and figures included in this RI Report. Results for soil and sediment samples are reported on a dry weight basis. Fish tissue results are reported on a wet weight basis.

In the following sections, a parameter is counted as detected if it is detected in at least one sample of a field duplicate pair and is counted as exceeding its screening criteria if the average of the paired results from field duplicates exceeds the criteria.

Data quality objectives (DQOs) for this project were presented in the various Quality Assurance Project Plans (QAPPs) and QAPP Addenda. As part of the data validation process, the DQOs established in the QAPP were assessed in terms of precision, accuracy, representativeness, sensitivity, comparability, and completeness through the evaluation of field and laboratory quality assurance/quality control measures employed, analytical methods utilized, including consideration for sufficiently low analytical reporting levels and usability of the data following data validation. Most of these six standard measures of DQO performance are evaluated as an integral part of the validation process and reporting.

The one standard measure that is more importantly evaluated after the validation process is completed is for completeness. Completeness can be measured on a basis considering whether all planned samples have been collected and on a percentage basis of which portion of data collected were considered usable for reporting in this RI Report.

The work plans were developed so that the exact scope of work could be modified in the field based on conditions encountered. All field modifications to work scopes were approved by the USEPA prior to completion. In general, all scopes met or exceeded the original planned numbers of samples or locations presented in the various work plan documents throughout the RI. Calculating a percentage of completeness for planned sampling would be difficult given changes that occurred in the field, but overall would be expected to be approximately 100%.

The usability basis percentage of completeness is much easier to quantify. The percent completeness of the entire RI dataset, based on number of rejected data points during the data validation process as compared to the total overall number of data points in the analytical database (nearly 130,000 individual parameter results), is less than 0.9%, meeting DQO for completeness.

4.2 Project Action Limits

Project action limits (PALs) referenced in analytical data tables are a compilation of conservative risk-based screening criteria used solely as an initial indicator of whether a COPEC detected in an environmental medium sample at the site should be considered for further evaluation during the course of the multiple phases of the RI and in the risk assessments. At the USEPA's request, the PALs were compiled from a number of sources in the latest version of the project QAPP (updated 2009 prior to Unnamed Island Supplemental Investigation for soil and groundwater), including a variety of USEPA

regional and state screening criteria and toxicological benchmarks from various literature sources. The selection process of the various available screening criteria involved selecting the lowest of available human health and ecological criteria from these numerous sources, irrespective of their individual basis for protection of human health and the environment. In the following sections, we will compare the samples collected during the RI to the lowest of these screening values to assist in the developing of remedial options to manage future risk at the site in the upcoming FS.

In most cases, the lowest ecological screening criteria or benchmark became the individual PALs for many of the environmental media in the QAPP development process. These PALs often represent concentrations for no observed effects levels for sensitive ecological receptors and only in a specific setting and type of exposure. As such, they are often up to orders of magnitude lower than other available screening criteria that are considered acceptable, and therefore, are extremely conservative to use for risk-based screening for all COPECs. Because of the conservative nature of the PALs, they are not considered representative of the true estimates of human and ecological risks that are presented in Sections 6 and 7, respectively, and are merely used as a first level or initial screening tool. In this section, discussions of analytical environmental media results include statements, such as “compared to screening criteria,” which are typically the PALs. While many such comparisons in this section may indicate exceedances of the “screening criteria,” Sections 6 and 7 demonstrate that this is not necessarily reflective of the true estimated risks at this site. To further demonstrate the conservatism in the PALs use as a screening tool, RIDEM Direct Contact Criteria for Residential and Commercial/Industrial land uses (Remediation Regulations, 2004) have been included on soil concentration figures discussed in this section for comparative purposes, as these also represent applicable or relevant and appropriate state regulatory standards.

4.3 Groundwater

This section describes the nature and extent of impacts to groundwater at the site using the analytical results from samples collected by Shield, ARCADIS BBL, and ARCADIS during sampling events conducted in 2003, 2004, 2005, 2007, and 2009. The datasets represent the comprehensive and comparable groundwater chemical data for the site. This discussion is focused on those constituents found at concentrations greater than the screening criteria mandated in the QAPP and compared to other risk-based criteria. These data were validated according to USEPA Region 1 Functional Guidelines (USEPA, 1996), as described in the DBSR2 (BBL, 2006a) and Phase 1B DBSR (BBL, 2006b).

4.3.1 Summary of Groundwater Investigations

As discussed in Section 2.4, 28 monitoring wells were sampled during the 2003 sampling event, 40 wells were sampled during the 2004 event, 30 wells were sampled during the 2005 event, 15 wells were sampled in the 2007 event, and four wells were sampled in the 2009 event. Table 4-1 lists the wells sampled during each event. Sampling locations are shown on Figure 2-1. The samples were collected using USEPA Region 1 low-flow sampling methods as directed by the approved QAPP Addendum (BBL, 2005a).

Groundwater samples were analyzed for TCL/TAL plus chloride (Phases IA and 1AExp only for chloride). Purge water from the wells was monitored during sampling for temperature, conductivity, pH, DO, oxidation-reduction potential (ORP), and turbidity as part of the low-flow sampling procedure. The groundwater analytical results and purge-water data from Phases 1A and 1AExp are presented in Tables 4-2 through 4-9, as specified below:

- Table 4-2 – Groundwater Results for VOCs (micrograms per liter [µg/L])
- Table 4-3 – Groundwater Results for VOC TICs (µg/L)
- Table 4-4 – Groundwater Results for PAHs (µg/L)
- Table 4-5 – Groundwater Results for Non-PAH SVOCs (µg/L)
- Table 4-6 – Groundwater Results for SVOC TICs (µg/L)
- Table 4-7 – Groundwater Results for PCBs and Pesticides (µg/L)
- Table 4-8 – Groundwater Results for Inorganics

To show the areal distribution of these data across the study area, groundwater data for constituents determined to be potential risk drivers in the HHRA and BERA (see Sections 6 and 7, respectively) are presented on Figures 4-1 through 4-3. The final determination of which COPECs are risk drivers for the site are discussed in the HHRA and the BERA. The figures present the highest concentrations of VOC, SVOC, and metals compounds observed during all groundwater sampling events. Additionally, the most recent concentrations are shown next to any concentrations exceeding current PALs.

Based upon the groundwater flow directions interpreted from Figure 3-6 and the historical groundwater flow maps prepared by Shield (Appendix N), background groundwater quality in OU2 (that is, groundwater quality that is unaffected by the known contaminant sources) is represented by monitoring wells MW-EA-1 through MW-EA-4 and the MW-110 well cluster.

Historical groundwater analytical results collected prior to 2003 were summarized in Tables 7 and 8 of the Phase 1A DBSR (Shield, 2003a). Whereas some contaminants decreased in concentration between the 1980s and the recent past, it is equally significant that others are now detected at essentially the same or higher concentrations. Although the data are not directly comparable due to differences in sampling and analytical procedures, they indicate an overall decreasing trend, based primarily on VOC and metals data taken from monitoring wells located near the J.M. Mills Landfill (MW-108AA/A, MW-109AA/A, MW-B1/B2, MW-C1/C2, and P-8).

4.3.2 Summary of Groundwater Sampling Results

Groundwater impacts related to the site appear to be modest and well defined. The Phase 1B additional groundwater investigation in 2005, and further validated in early 2007, served to complete the delineation of potential constituents of interest in the aquifer.

While a limited number of VOCs have been detected, the VOCs detected in groundwater most frequently or above the USEPA mandated screening criteria consist of benzene, chlorobenzene, chloroform, and 1,4-dichlorobenzene. Benzene has been historically present at SEA-603 above the federal maximum contaminant level (MCL). The majority of other VOC PAL exceedances are marginally above their corresponding PALs. Groundwater affected by these compounds is shallow and, based on predominant shallow groundwater flow directions, likely discharges to the Blackstone River. Furthermore, over the time period of this RI, benzene concentrations in well SEA-603 have declined, as follows:

- October 2003 – 1,100 micrograms per liter (µg/L)
- October 2004 – 730/620 µg/L (duplicate samples)
- November 2005 – 140 µg/L

These data suggest that the VOC impacts to groundwater adjacent to the J.M. Mills Landfill are attenuating over time.

The distribution of SVOCs was primarily PAHs detected in samples collected from shallow wells. Although at low concentrations relative to their corresponding PALs, PAH exceedances above PALs decreased in number during the second and third rounds of sampling. The VOCs and PAHs identified above are subject to various natural attenuation processes, including biodegradation; therefore, plumes of groundwater containing these compounds are not expected to extend great distances from their sources. Furthermore, PAHs have been detected in some monitoring wells identified as hydraulically upgradient from buried waste areas. Thus, the presence of PAHs may not be completely attributable to OU2 source areas. A further discussion of the distribution of these constituents with consideration of the SCM is presented in Section 8.

Several inorganics (most frequently detected were arsenic, iron, and manganese) exceeded relative screening criteria. Upgradient or background groundwater contains detections of some of the same inorganics above screening criteria, indicating that inorganics are ubiquitous to the region and may not be completely attributable to OU2 sources. The dissolved metals concentrations in the 2009 Unnamed Island groundwater samples were generally much lower in concentration than the corresponding total metals concentrations, suggesting groundwater metals detections could also potentially be affected by entrained particulate and acidification in the samples collected. Exceedances of arsenic and lead in the total metals samples were all less than their corresponding MCL or Health Advisory Limits in the dissolved metals results. In addition, reducing conditions that occur in groundwater beneath and near-buried waste tend to solubilize inorganics; therefore, elevated inorganics at the site are not unexpected. While no direct correlation was shown between groundwater containing inorganics and buried waste, such contamination, if present, is expected to remain relatively shallow and also migrate toward and discharge into the Blackstone River. As the distance from the buried waste increases, reducing conditions in groundwater can be expected to dissipate. Under such conditions, many inorganics would precipitate. Furthermore, as groundwater discharges to the highly oxygenated Blackstone River water, precipitation reactions are also likely.

Persistent downward hydraulic gradients at the MW-108 well cluster, located away from the Blackstone River along the northern edge of the J.M. Mills Landfill, suggest that downward movement of groundwater may occur in this area. Water quality data from this cluster, however, are not indicative of a deeper plume of affected groundwater. Furthermore, as discussed in Section 3.3.2.2, the apparent downward gradients observed in this well cluster may be a function of the lower hydraulic conductivity in the

lower hydrostratigraphic units. The high hydraulic conductivity and groundwater flow rate exhibited by the SH unit will tend to confine any contaminants released from buried waste areas to shallow depths in the aquifer. Based on the lack of elevated concentrations of site-related constituents observed in deeper wells, installed as part of the 2005 groundwater sampling event, there is no evidence of a downward migration of constituents in groundwater below the upper portion of the aquifer. Therefore, vertical delineation of constituents detected in the shallow aquifer is deemed complete. In addition, widespread occurrences of substances that are likely to be mobile in groundwater under aerobic conditions are not likely.

In summary, impacts to groundwater have been demonstrated in four of the monitoring wells located at the site. These monitoring wells are immediately downgradient of the west side of the J.M Mills Landfill (i.e., SEA-602a, SEA-603, GLF-704, and MW-C2) and monitoring well GLF-706a, located immediately downgradient at the south end of the J.M. Mills Landfill. Impacted groundwater was also detected on the Unnamed Island and the north end of the Nunes Parcel but at lower concentrations than the aforementioned wells. The impacts are largely limited to VOCs, mainly benzene (maximum detection of 19 µg/L in Nunes Parcel well GNP-705) and chlorinated benzenes (maximum chlorobenzene detection of 28 µg/L in Unnamed Island well SEA-608, which is below the current PAL of 91 µg/L). While sampling data have shown that PAHs are found on the site, it is possible that some of the PAHs may be attributed to off-site sources. PAHs are ubiquitous in sediments and surface soils observed at sampling locations at some distance from the J.M. Mills Landfill (see discussions in the following sections). Finally, the concentration of inorganics in groundwater is generally low and their presence may be partly attributable to off-site and/or upgradient sources or dissolution of natural materials by leachate-impacted groundwater.

Additional details concerning the fate and transport of site-related constituents can be found in Section 8. Specific observations made during each of the individual groundwater sampling events are provided in the following subsections.

4.3.2.1 2003 Sampling Event

The following is a summary of the results of the 2003 sampling event:

- Concentrations of 1,4-dichlorobenzene, benzene, and chlorobenzene were observed at one or more shallow wells adjacent to the J.M. Mills Landfill (MW-B2, MW-C2, P-8, SEA-603, SEA-604, and SEA-605), at the Unnamed Island (SEA-608),

and/or at the former transfer station (SEA-606). However, of these detections, only benzene in SEA-603 and SEA-608 exceeded PALs.

- Individual PAHs (most notably acenaphthene and fluorene) were the only SVOCs observed in groundwater; however, they were not detected at 24 of the 28 wells sampled.

- PCBs were not detected above screening criteria in any of the wells sampled.

- Pesticides, with the exception of atrazine at 3.4 µg/L at SEA-608, were not detected above screening criteria.

- For metals, the most frequently observed species were arsenic, iron, and manganese.

- The analytical results for the TCL/TAL parameters were compared in the eight well pairs/clusters where the shallow and the deeper interval wells were sampled during the 2003 event: five adjacent to the J.M. Mills Landfill (MW-108AA/A, MW-109AA/A, MW-B2/B1, MW-C2/C1, and SEA-602A/B) and three located in the area of Wetland A, the Lenox Street well, and the transfer station (MW-110A/B, MW-111AA/A, and MW-112AA/A). None of the results for either of these paired shallow or deep wells exceeded the screening criteria for SVOCs, pesticides, or PCBs. Elevated concentrations of VOCs and PAHs occurred in shallow wells (i.e., 1,4-dichlorobenzene and chlorobenzene in MW-B2, 1,4-dichlorobenzene in MW-C2, and various PAHs in MW-109AA and MW-110A), while some metals were observed in both shallow and deep wells. However, it should be noted that near the J.M. Mills Landfill where concentrations of inorganics in groundwater were more elevated, the higher concentrations in a well pair tended to be in the shallower well. The elevated concentrations of PAHs in well MW-110A, which is hydraulically upgradient from the OU2 site, suggest that the presence of these constituents in groundwater cannot be solely attributed to the potential contaminant sources (i.e., waste deposits) on site.

- Samples were collected by EA (2003) from four upgradient wells on the McNulty properties. MW-EA-1 is screened in unconsolidated material just above bedrock, and MW-EA-2, MW-EA-3, and MW-EA-4 are screened in bedrock. The samples were analyzed for VOCs and metals only. VOCs were detected in only one sample and no VOCs were detected above screening criteria. Methyl tert-butyl ether (MTBE) and toluene were detected at concentrations of 0.79 µg/L and 0.52 µg/L, respectively, in the sample collected from MW-EA-3. Of the 17 metals analyzed in

these samples, aluminum was detected above 50 µg/L in samples from MW-EA-1 and MW-EA-3, and manganese was detected above the 50 µg/L screening criterion in each of the four wells, except MW-EA-1. Iron in MW-EA-3 was the only other metal detected (at 369 µg/L). Aluminum and manganese in groundwater can be at least partially attributable to entrained particles in the water removed from the monitoring well. Arsenic was not analyzed by the low-reporting level method, and concentrations were below reportable levels in each of the four samples. The elevated concentrations of metals in these upgradient wells indicate that background groundwater quality in this vicinity may be naturally high with respect to some metals concentrations.

4.3.2.2 2004 Sampling Event

The 2004 event (see Table 4-1) included all the monitoring wells sampled during the 2003 sampling event (except MW-108AA), plus the following more recently installed monitoring wells: MW-106C, MW-108B, MW-108C, MW-109B, MW-109C, MW-110C, MW-111B, MW-111C, MW-112AA and MW-112C, and also MW-EA-1 and MW-EA-3. For those wells that were sampled during both events, the results for the 2003 and 2004 sampling events were compared and found to be similar. Notable differences include the following:

- Chloroform was detected in the sample from well MW-110B at a concentration of 3.9 µg/L, which is greater than the screening criterion.

- No PAHs were detected above screening criteria from well MW-110A. During the previous sampling event, multiple PAHs exceeded their respective criteria in this well.

- In general, several PAHs, including anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and pyrene, were not observed at elevated levels in the 2004 sampling event that were previously detected.

- In contrast to the 2003 sampling event, multiple inorganics were detected in the sample collected from well GZ-4-1. Elevated sample turbidity, often an artifact of sampling, can result in elevated inorganics in a sample. While the detected turbidity of this sample was relatively low (1.68 nephelometric turbidity units [NTU]), the elevated concentration of aluminum in this sample (13,200 µg/L) suggests that the elevated inorganics may be due, in all or part, from solids entrained in the sample (i.e., the sample may not have been representative of actual inorganic

concentrations dissolved in the groundwater). Aluminum is one of the most abundant elements in the earth's outer crust; however, at near-neutral pH, the solubility of aluminum is low, and it rarely occurs in solution in groundwater at concentrations greater than a few tenths or hundredths of a milligram per liter (mg/L) (Hem, 1989). Because the pH of the sample from GZ-4-1 (6.6 Standard Unit [SU]) was near neutral (7 SU), its detected concentration is well above its solubility limit, suggesting that solids entrained in the sample are responsible for the elevated concentration. Two other samples collected during this round had elevated aluminum (and other inorganics) from wells MW-B1 (7,280 µg/L) and MW-111B (2,770 µg/L). These wells also showed elevated turbidity.

- Wells that were not sampled during the 2003 sampling event, but were sampled during the 2004 event, were generally deeper overburden or bedrock wells, except for MW-106B, MW-112AA, and MW-EA-1. Based on a review of Tables 4-2 and 4-9, only sporadic detections of VOCs and inorganics above screening criteria were observed. The only VOCs detected in these wells were low concentrations of chlorinated hydrocarbons in bedrock wells MW-106C and MW-108C. Given the understanding of groundwater movement at the site and the fact that chlorinated VOCs were not detected at notable levels in the shallower wells in these clusters, the chlorinated VOCs in these deeper wells are likely to be from an upgradient source. SVOCs were not observed above their relative screening criteria.

- Many inorganics occur naturally in the environment. The results from upgradient wells MW-EA-1 and MW-EA-3 demonstrate that low concentrations of metals, most notably arsenic, iron, and manganese occur above screening criteria in groundwater unaffected by the site (i.e., background levels). Thallium also was detected above screening criteria; however, these data were flagged as potential false positives due to known interferences of the analytical method as documented during data validation. As noted previously, the elevated aluminum (and manganese) concentration and high turbidity (65 NTU) found at MW-111B suggests that elevated inorganics in that sample may be due to entrainment of particulates during sampling.

4.3.2.3 2005 Sampling Event

Following the specifications contained in the USEPA-approved Work Plan (BBL, 2005a), vertical profiling was used during the installation of the deeper monitoring wells in 2005, to establish the appropriate screen depths. This vertical profiling included groundwater analyses of VOCs at various drilling depths at the following four locations:

- GLF-706A, located hydraulically downgradient of the J.M. Mills Landfill (southern end)

- GNP-705B, located within the area that contains buried waste material on the Nunes Parcel

- GNP-708A, located hydraulically downgradient of the buried waste material on the Nunes Parcel

- GLF-700-A, located hydraulically downgradient of the J.M. Mills Landfill (western end)

During vertical profiling of the first hole, a groundwater sample analysis identified three THMs present that were not routinely observed in previous groundwater samples at the site. Based on this observation, the drilling water supply, which was taken from a fire hydrant behind the Stop & Shop grocery store nearby, was suspected and later identified as a source of the THM compounds present. A water supply sample analysis was added to the daily submission of vertical profiling groundwater samples to confirm proper monitoring of potential effects caused by this water supply. Results of the vertical profiling and water supply samples are presented in Table 2-2.

Other than the detections of THMs, which were attributable to the use of the city water supply, the only COPEC detections were in the top 10 feet at location GLF-700A (for acetone, 2-butanone, chlorobenzene, and 1,4-dichlorobenzene) and at 25 to 30 feet at GLF-700A (for chlorobenzene). No COPEC was detected above a concentration of 19 µg/L. The vertical profiling data confirm the results of the hydraulic investigation (Section 3.3) that the groundwater quality impacts, which have been shown to be limited in areal extent, are also limited to the upper portion of the aquifer and decrease with depth.

Immediately following the vertical profiling and installation of the above-referenced wells, samples were collected from 30 wells in 2005, as summarized in Table 4-1, including the 12 new wells added during Phase 1B. Sample results are summarized in Tables 4-2 through 4-9. Results for the 2005 sampling event were similar to the previous sampling events.

Six VOCs were detected at concentrations greater than their respective PALs. In many cases, the concentrations were marginally above the PAL and below drinking water standards. Moreover, the areal distribution of detections was limited primarily to downgradient or sidegradient of the western end of the J.M. Mills Landfill. 1,4-

Dichlorobenzene was detected at GLF-704, GLF-706, MW-C2, SEA-602A, SEA-603, and SEA-605; the Nunes Parcel (GNP-705 and GNP-708); and the Unnamed Island (SEA-608). The maximum concentration of 1,4-dichlorobenzene detected was in sample GLF-706 at 6.3 µg/L. Concentrations greater than the PALs for benzene or chlorobenzene were limited to monitoring wells GLF-706, SEA-603, GNP-705, and SEA-608 (benzene only). The maximum benzene concentration was detected in sample SEA-603 at 140 µg/L, and for chlorobenzene in GLF-706 at 93 µg/L. During installation of boring GNP-705, the maximum observed PID reading was 1,430 parts per million at the 18 to 18.5 feet bgs depth interval. Gasoline-like odors were described from approximately 17 to 20 feet bgs. PAL exceedances for vinyl chloride were detected at three wells, GNP-708, MW-C2, and SEA-606, with a maximum detected concentration of 1.2 µg/L. Concentrations greater than the PAL for chloroform were limited to monitoring wells GLF-706A and GNP-705B with a maximum detected concentration of 2.6 µg/L.

Non-PAH SVOCs were detected at concentrations below PALs at 26 out of 30 wells. 1,4-Dioxane was detected in GLF-704, MW-C2, SEA-602A, and SEA-603 (at wells adjacent to the J.M. Mills Landfill), with a maximum concentration observed at GLF-704 of 55 µg/L. Low levels of bis(2-ethylhexyl)phthalate were observed in MW-112C and GNP-705 (both Nunes Parcel wells). The maximum bis(2-ethylhexyl)phthalate concentration was detected in MW-112C at 50 µg/L.

Concentrations of PAHs were observed in wells downgradient or sidegradient of the J.M. Mills Landfill (GLF-706 GNP-705, and SEA-603). Four of the 17 PAHs were detected in GLF-706 (maximum concentration detected was 1.5 µg/L for naphthalene), five of the 17 PAHs were detected at GNP-705 (maximum concentration detected was 14 µg/L for naphthalene), and five of the 17 PAHs were detected in sample SEA-603 (maximum concentration detected was 1.9 µg/L for 2-methylnaphthalene).

PCB concentrations were greater than the PALs at only one well (GNP-705, for Aroclor-1254). No other exceedances above PALs were observed in the 2005 or in the prior sampling events. Pesticides were not observed at concentrations greater than PALs in any of the 2005 groundwater samples. Therefore, neither PCBs nor pesticides are considered an issue of concern in groundwater.

The concentrations of inorganics were consistent with prior events, with the most frequently detected metals being arsenic, iron, and manganese. Arsenic concentrations greater than the PALs were limited to four monitoring wells downgradient and to the west of the J.M. Mills Landfill, with a maximum concentration of 110 µg/L in GLF-704. The

maximum concentration of iron detected in the 2005 groundwater samples was 77,000 µg/L in sample GNP-705. Manganese concentrations were generally above 50 µg/L, except for MW-502, MW-A2, MW-EA-1, MW-106A, MW-106B, and MW-106C. The maximum detected manganese concentration was in sample GNP-708A at 3,300 µg/L.

4.3.2.4 2007 Sampling Event

At the request of the USEPA, additional groundwater sampling of 15 monitoring wells (GLF-704, GLF-706, GNP-705, GNP-705B, GNP-708, GNP-708A, GUI-703, MW-108C, MW-109A, MB-109C, MW-110B, MW-110C, MW-112C, MW-C2, and SEA-602A) was performed in March 2007 in conjunction with the 5-Year Review of OU1 of the site.

In general, the results for the 2007 sampling event were similar to the previous sampling events, with the following observations noted:

- Concentrations of the following VOCs were detected above their respective PALs. 1,4-Dichlorobenzene was observed in monitoring wells GLF-706 and GNP-705 at concentrations of 5 µg/L and 8.2 µg/L, respectively. Benzene was detected at a concentration of 21 µg/L in monitoring well GNP-705. Similar to the previous sampling events, VOC detections were primarily limited to downgradient or sidegradient of the western end of the J.M. Mills Landfill.

- Similar to prior sampling events, arsenic, iron, and manganese were the most frequently detected metals that exceeded their respective PALs. Arsenic was observed at a maximum concentration of 190 µg/L in GLF-704, iron at a maximum of 70,000 µg/L in sample GNP-705, and manganese at a maximum concentration of 4,000 µg/L in sample GNP-708A. Aluminum, cadmium, and cobalt were detected at concentrations above PALs in at least one of the samples collected during the 2007 groundwater sampling, but these detections are not likely to have an impact on the risk assessments (Sections 6 and 7).

- Figures 4-1 and 4-3 depict the highest ever detected concentrations of benzene and arsenic, respectively, in groundwater. The general distribution of these two constituents in groundwater is relatively stable over time as summarized in Tables 4-2 and 4-8). The impacts are limited in magnitude and in areal extent primarily to the J.M. Mills Landfill.

4.3.2.5 2009 Unnamed Island Sampling Event

Groundwater samples were collected from four temporary wells on the Unnamed Island in 2009 in conjunction with the additional soil investigation. In general, the results for the 2009 sampling event were similar to the previous sampling events for the Unnamed Island, with the following observations noted:

- Some of the same VOCs detected in wells on the Unnamed Island, including benzene, chlorobenzene, and 1,4-dichlorobenzene, were detected in 2009 Unnamed Island groundwater samples. However, only the benzene concentration in the groundwater sample from well GW-201-UI exceeded its PAL.

- Several PAHs were detected in all four 2009 Unnamed Island groundwater samples, with a small number exceeding PALs. However, no one individual PAH concentration in these samples was greater than 1 µg/L.

- Aroclor-1254 was the only PCB detected above its PAL in well GW-224A-UI.

- Aluminum, arsenic, iron, lead, and manganese were detected above their respective PALs in three or four 2009 Unnamed Island groundwater samples. However, the corresponding dissolved metals concentrations for these metals were all lower, indicating some metals detections were likely associated with entrained particulate in the samples, even though low-flow sampling techniques were employed. In particular, the dissolved arsenic and lead concentrations were all below their MCLs and USEPA Health Advisory Limits.

4.4 Soil

This section presents an interpretation of soil data collected in field investigations at OU2. Soil data discussions are segregated by “surface” (0 to 1 feet bgs) and “subsurface” (greater than 1 foot bgs) designations and combine all phases of OU2 investigations completed since 2003. Subsurface soil samples were collected during well installations and from test pits and trenches on the J.M. Mills Landfill, Unnamed Island, and Nunes Parcel and from soil borings during the 2009 Unnamed Island Supplemental Investigation. The remaining soil samples collected at OU2 were surface soil samples.

Soil data are discussed by geographic subarea, including Mackland Farm (a floodplain location upstream of OU2), areas adjacent to the J.M. Mills Landfill, Unnamed Island, Nunes Parcel, DFs, Quinnville well field, wetlands, and the floodplain south of the

Blackstone River (also considered a background area unaffected by the J.M. Mills Landfill). Figure 2-2 presents soil sampling locations for the RI for all locations, including the 2006 Nunes Parcel and the 2009 Unnamed Island Supplemental Investigation. Tables 4-11 through 4-19 present the soil analytical data summaries segregated by geographic subarea for all soil sampling. Soil data are discussed by the seven classes of constituents analyzed: VOCs + TICs, PAHs, non-PAH SVOCs + TICs, PCBs, pesticides, dioxins/furans, metals, and total cyanide. Additionally, there are soil data available for a number of conventional and physical property parameters (i.e., percent TCOs, percent moisture/solid, TOC, and pH).

4.4.1 Summary of Soil Sampling Data

Generally, soils exhibited detections of one or more constituents from each of the chemical classes or fractions that were analyzed. However, the soil data do not indicate widespread impacts from the known OU2 source areas to the soil. Rather, the data suggest that surface soil has been impacted by flooding on the Blackstone River, which has redistributed constituents from upstream of OU2 across the low-lying areas within OU2. The distribution of most COPECs suggests a random placement of impacted material, as opposed to releases from the known contaminant sources within OU2, including the J.M. Mills Landfill. No “hot-spot” concentrations of the detected COPECs were typically observed. Furthermore, in many cases, soil concentrations at locations upstream of OU2 are similar to those within OU2.

VOCs and pesticides were detected generally throughout the site but typically at low concentrations, except at a few isolated locations. No soil VOC PAL exceedances were observed. Dieldrin was detected in nearly every sample it was measured for, including most of the Quinnville well field floodplain samples and the Mackland Farms background locations, with some of the highest concentrations detected in these upgradient or sidegradient from the landfill locations. Dieldrin was an often used insecticide used throughout the United States and in many New England states. Dieldrin is an insecticide widely used from 1950 through 1974 to control insects on cotton, corn, and citrus crops, to control mosquitoes, as a wood preservative, and for termite control. Therefore, its presence is not associated with earlier textile mill operations in the Blackstone Valley, but is likely the result of deposition in the 1950s and later when areas of OU2 were under water, which was prior to the start of landfilling operations. Alpha- and gamma-chlordane were detected in one sample from a DF as the only other pesticide exceeding its PAL.

PAHs and PCBs were detected in most samples at similar moderate concentrations in upstream and background locations as the on-site and downgradient locations.

Figures 4-4 through 4-9 illustrate the distribution of some of the COPECs most frequently exceeding their PALs, as discussed above, for surface and subsurface soil. To demonstrate the conservatism of the use of PALs for screening the RIDEM Residential and Commercial/Industrial Direct Contact Criteria (RIDEM, 2004) are additionally presented on the soil figures for comparative purposes. The following subsections highlight some of the key observations made upon review of the data.

4.4.2 Mackland Farm

Soil samples were taken from the Mackland Farm property as potentially representative of background conditions. The Mackland Farm property is located upstream of and outside of potential influences from both OU1 and OU2. Soil sample results from upstream of the site (i.e., Mackland Farm) are summarized in Tables 4-11 through 4-19.

Despite its position upstream from OU2, Mackland Farms is not an ideal location for background sampling. There is evidence of coal gasification activities at the property, and filling is known to have occurred. Just prior to the collection of those soil samples in the fall of 2004, Owens Corning had developed a Limited Removal Action Work Plan for the removal of fiberglass-containing waste at Mackland Farms. This waste, which had been identified through previous surface and subsurface investigations, was located near and within the footprint of a former tenement building foundation that is located just south of a building known as the Kelly House. At the time of sample collection for the OU2 RI/FS, the location of the fiberglass-containing waste was known and was avoided for the soil sampling activities. The actual excavation of the wastes was done in the summer of 2005, and Owens Corning completed its Limited Removal Action on April 4, 2006.

Toluene was the only VOC detected in the surface soil samples collected at the Mackland Farm property. Toluene was detected in one of three samples at a concentration below the screening level. No other VOCs analyzed were detected in Mackland Farm surface soil samples.

PAHs were detected in all of the Mackland Farm surface soil samples collected. Total PAH concentrations ranged from 14,221 to 100,200 micrograms per kilogram (µg/kg). Eight PAHs [benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(a)anthracene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and

pyrene] were detected at elevated concentrations in at least one of the three samples collected.

Other non-PAH SVOCs were detected in Mackland Farm surface soil samples. Four SVOCs (carbazole, dibenzofuran, 1,1'-biphenyl, and benzaldehyde), often associated with the presence of PAH compounds, were detected at least once in Mackland Farm surface soil samples; however, the concentrations were below their respective screening criteria in all of the samples. No other SVOCs analyzed were detected in Mackland Farm soil samples. Finally, PCBs were not detected in Mackland Farm surface soil samples.

Pesticides were detected in Mackland Farm surface soil samples. Six pesticides (4,4'-dichlorodiphenyldichloroethane [4,4'-DDD], 4,4'-dichlorodiphenyldichloroethylene [4,4'-DDE], 4,4'-dichlorodiphenyltrichloroethane [4,4'-DDT], dieldrin, endrin aldehyde, and methoxychlor) were detected in at least one Mackland Farm surface soil sample. 4,4'-DDT and endrin aldehyde were only detected in SO-072-MF. Dieldrin was the only pesticide detected above its respective screening criteria, and it was detected in all three samples collected.

Metals were detected in all of the Mackland Farm surface soil samples. The majority of metals analyzed were detected at least once in Mackland Farm surface soil samples, the exceptions being antimony, calcium, cobalt, nickel, potassium, selenium, sodium, and thallium.

Three surface soil samples (SO-072-MF, SO-073-MF, and SO-074-MF) were analyzed for pH. The detected pH for the samples was 4.6 SU, 4.6 SU, and 4.5 SU, respectively, indicative of a slightly acidic soil condition.

4.4.3 J.M. Mills Landfill

Surface and subsurface soil samples were collected adjacent to the J.M. Mills Landfill. Subsurface soil samples were collected during the installation of monitoring wells and were analyzed for TCO and TOC, and surface samples were analyzed for the standard chemical classes discussed above, as well as for dioxin/furans on preselected samples collected in 2005.

4.4.3.1 Surface Soil Samples

Surface soil samples were collected from 17 locations adjacent to the J.M. Mills Landfill as shown on Figure 2-2. Sampling was deliberately biased based on the presumptive

remedy of capping the landfill. As such, samples were collected at the toe of the landfill, near future potential migration or exposure pathways. Two additional samples (SO-W05-DF and SO-W06-DF) were collected from the surface at Debris Field No. 4 (DF-4) located on the southeastern side of the J.M. Mills Landfill.

Three VOCs (acetone, 2,-butanone, and toluene) were detected at least once in surface soil samples taken adjacent to the J.M. Mills Landfill, but in concentrations below PALs. The remaining VOCs analyzed for were not detected in soil samples taken adjacent to the J.M. Mills Landfill. VOCs were not detected in the two soil samples collected from within DF-4.

PAHs were detected in all surface soil samples taken adjacent to the J.M. Mills Landfill. The concentration of total PAHs ranged from 2,270 (location SO-018-LF) to 64,240 µg/kg (location SO-020-LF). Five to seven PAH compounds [benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(a)anthracene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] were commonly detected. PAH results were generally similar in DF-4 sample SO-W05-DF with a total PAH concentration of 10,000 µg/kg and five of the seven PAH compounds being detected. The PAH results from SO-W06-DF were lower than other landfill samples with a total PAH concentration of 1,740 µg/kg and only one [benzo(a)pyrene] PAH was detected above PALs.

Other SVOCs were detected in surface soil samples taken adjacent to the J.M. Mills Landfill, but at concentrations below their respective PALs. Ten SVOCs [1,1'-biphenyl, benzaldehyde, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, carbazole, dibenzofuran, di-n-butyl phthalate, di-n-octyl phthalate, dimethyl phthalate, and 4-chloroaniline] were detected at least once in surface soil samples taken adjacent to the J.M. Mills Landfill. The compound 4-nitroaniline was detected in sample SO-W06-DF from DF-4 at an estimated concentration of 53 µg/kg.

PCBs were detected in 16 of 17 surface soil samples taken adjacent to the J.M. Mills Landfill. The concentration of total PCBs ranged from not detected (location SO-032-LF) to 1,100 µg/kg (location SO-022-LF). In eight of the 17 samples, either Aroclor-1254 or Aroclor-1260 was detected at a concentration above their respective PALs but below the RIDEM Direct Exposure Criteria of 10,000 µg/kg. All Aroclor soil data were subjected to further consideration in both the HHRA and BERA, as discussed in Sections 6 and 7, respectively. Additionally, samples from DF-4 had higher detections of PCBs. SO-W06-DF exhibited Aroclor-1254 at 2,500 µg/kg and SO-W05-DF exhibited Aroclor-1248 at 6,200 µg/kg. However, the duplicate sample collected from the SO-W06-DF area had a

significantly lower concentration of Aroclor-1254 (240 µg/kg). These data suggest potential field variability (sample heterogeneity) and possibly matrix-related analytical issues.

Pesticides were detected in all surface samples taken adjacent to the J.M. Mills Landfill. Dieldrin was the only pesticide exhibiting concentrations above PALs, ranging from 4.8 µg/kg (location SO-019-LF) to 38 µg/kg (location SO-021-LF). Dieldrin was not detected in the two samples within DF-4. Other pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, endosulfan sulfate, endrin aldehyde, and gamma-chlordane) were detected at least once but well below PALs. Alpha-benzene hexachloride (α-BHC) was detected in the field duplicate from DF-4 (SO-W06-DF).

Each of the metals analyzed was detected at a concentration greater than the PALs in at least one surface soil sample taken adjacent to the J.M. Mills Landfill, with the exception of antimony, cobalt, selenium, and sodium. Results for the two DF-4 samples were similar in metals detected as to the samples taken adjacent to the J.M. Mills Landfill, except antimony and selenium were detected in SO-W06-DF and cobalt and selenium were detected in SO-W05-DF; however, all detections were below their respective PALs.

Dioxins/furan analysis was conducted on four surface samples (LOU-001, LLF-002, LLF-003, and LLF-004) located adjacent to the J.M. Mills Landfill. The results are presented in Table 4-18. Dioxin/furan congeners were detected in all four samples. However, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin total toxicity equivalent quotients (Total TEQs) for the samples ranged from 9.8 to 51.7 nanograms per kilogram (ng/kg), which all exceed the conservative screening level of 4.5 ng/kg.

Three surface soil samples SO-041-LF, SO-042-LF, and SO-043-LF were analyzed for pH. The detected pH for the samples was 4.7 SU, 5.2 SU, and 5.6 SU, respectively. These data are similar to the Mackland Farm data that suggest slightly acidic soil conditions.

4.4.3.2 Subsurface Soil Samples

Seventeen subsurface soil samples were collected from five locations (SEA-601, SEA-602B, SEA-603, SEA-604, and SEA-605) presented on Figure 2-2. Samples were collected over a 2-foot interval and at depths ranging from 4 to 32 feet bgs. All samples analyzed exhibited concentrations of TOC and TCO above reportable limits. All samples contained 1% or less TCO. All samples contained TOC, which ranged from 350

milligrams per kilogram (mg/kg) (SSO-SPT5-20-LF) to 4,100 mg/kg (SSO-SPT3-15-LF) of TOC. Analytical results are presented in Table 4-19.

4.4.4 Unnamed Island

Surface and subsurface soil samples were collected at the Unnamed Island in all phases of the RI, including the Supplemental Investigation in 2009. Subsurface soil samples collected during the installation of monitoring wells were analyzed for percent TCO and TOC. Surface samples and subsurface samples collected from test trenches and borings completed during the 2009 Supplemental Investigation were analyzed for standard chemical classes discussed above.

4.4.4.1 Surface Soil Results

Surface soils were collected from 33 locations on the Unnamed Island. VOC constituents were detected at low levels below applicable PALs in surface soil samples collected.

PAHs were detected in all of the Unnamed Island surface soil samples. Eight PAHs were detected at concentrations greater than screening criteria in one or more of the samples collected, although within the same range as samples collected upstream of OU2. Total PAH concentrations ranged from 885 µg/kg to 72,800 µg/kg. Other non-PAH SVOCs detected in one or more of the Unnamed Island surface soil samples included bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-octyl phthalate, 1,1'-biphenyl, benzaldehyde, carbazole, dibenzofuran, di-n-butyl phthalate, phenol, acetophenone, n-nitrosodiphenylamine, 4-methylphenol, diethylphthalate, and nitrobenzene, although at different frequencies of detection. Only bis(2-ethylhexyl)phthalate in samples SO-086-UI (260,000 J µg/kg) and SO-209-UI (60,700 µg/kg) were detected at concentrations above the PAL.

PCBs were detected in 27 of 29 Unnamed Island surface soil samples analyzed for PCBs. Total PCB concentrations ranged from not detected (SO-079-UI and SO-088-LF) to 2,800 µg/kg (SO-217-UI) but below the RIDEM Direct Exposure Criteria of 10,000 µg/kg.

Pesticides were detected in all of the Unnamed Island surface soil samples. Twelve pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, dieldrin, endosulfan sulfate, endrin aldehyde, gamma-chlordane, endrin ketone, endosulfan II, methoxychlor, and heptachlor epoxide) were detected at least once in Unnamed Island surface soil samples. In 24 of 30 samples analyzed for pesticide, dieldrin was detected and had

concentrations ranging from not detected (locations SO-079-IU, SO-086-UI, and SO-088-UI) to 810 µg/kg (location SO-010-UI). The remaining pesticides analyzed were not detected at concentrations greater than screening criteria.

Metals were detected in all of the Unnamed Island surface soil samples. Each of the metals analyzed for was detected in at least one sample. Screening criteria were not exceeded for potassium, sodium, and thallium in this subarea.

Dioxins/furans analysis was conducted on 10 surface samples on the Unnamed Island. The results are presented in Table 4-18. Dioxin/furan congeners were detected in all samples. However, Total TEQ concentrations for the samples ranged from 8.74 ng/kg and 67.1 ng/kg, with all TEQs above the 4.5 ng/kg screening criteria.

Twelve surface soil samples (SO-077-UI through SO-088-UI) were analyzed for pH. The detected pHs for the samples ranged from 4 to 6.7 SU, indicative of slightly acidic to neutral soil pH conditions.

It is noteworthy that the Unnamed Island was completely flooded on several occasions during the RI. This same flooding likely occurred many times during the past 50 years. As a result, upstream particulates comprised of metals and organics would be transported downstream and deposited in the surface soils. This type of particulate transport would most likely contribute concentrations of constituents that have higher soil absorption properties, such as metals, PAHs, and PCBs. However, from what is known of the history of the landfill, wastes containing metals and certain other materials were buried on the Unnamed Island in the early years of landfill operation and could also be contributing to the detection of these same constituents in affected media. It should be noted that of the Unnamed Island surface soil samples, only samples associated with the waste in the vicinity of Ponds A, D, and E had lead concentrations above 1,000 mg/kg. Of the remaining 25 samples, only five had lead concentrations above 150 mg/kg (151 to 342 mg/kg). At least for lead, the soil concentrations from samples specifically associated with the wastes are well above those from upstream sources.

4.4.4.2 Subsurface Soil Results

Four samples and a duplicate were collected from test pits and trenches on the Unnamed Island and analyzed for the standard full parameter list in Phase 1A. Additionally, six subsurface soil samples were collected from locations SEA-607 and SEA-608 and analyzed for TCO and TOC in Phase 1A. Twenty-one subsurface soil samples were sampled in November 2009 as part of the Supplemental Investigation on

the Unnamed Island and were analyzed for the standard full parameter list. One additional soil sample and 10 of the 22 subsurface soil samples were also analyzed for PCDDs/PCDFs.

Low concentrations of several VOCs, including 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, acetone, benzene, 2-butanone, carbon tetrachloride, chlorobenzene, cyclohexane, methyl cyclohexane, ethylbenzene, isopropylbenzene, tetrachloroethene, toluene, and xylene, were detected in one or more subsurface soil samples, although all were below their respective screening criteria.

PAHs were detected in all of the samples collected. Total PAHs ranged from 95.6 µg/kg to 194,000 µg/kg. Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)anthracene, chrysene dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were the most frequently detected above PALs. Fluoranthene, naphthalene, and pyrene in one sample each were the only detected concentrations above their respective screening criteria.

Several other SVOCs were detected in subsurface soil samples, although only bis(2-ethylhexyl)phthalate was detected, and in four samples (UI-TT-03, SO-201-UI [4-6'], SO-206-UI [2-3'], and SO-224A-UI [1-5')) greater than the screening criterion.

PCBs were detected at relatively low concentrations in all subsurface samples, and 10 of 23 subsurface samples exhibited concentrations of Aroclor-1254 or Aroclor-1260 above the screening criterion of 110 µg/kg and 220 µg/kg, respectively. All other PCBs were either not detected or detected at concentrations below the screening criteria.

Relatively low levels of pesticides were detected in 19 of the 23 subsurface samples collected. Dieldrin was detected at concentrations ranging from 0.879 J to 426 J µg/kg. All other pesticides were either not detected or detected at concentrations below screening criteria.

Low concentrations of metals were widely distributed in all of the subsurface soil samples collected and most were greater than the screening criteria. Barium, calcium, cyanide, magnesium, potassium, sodium, and thallium were all observed at concentrations below their respective screening criteria.

The four 2003 subsurface soil samples had detected concentrations of TCO and TOC. TOC ranged from 710 mg/kg (SSO-SPT6-10-UI) to 4,500 mg/kg (SSO-SPT6-5-UI). TCO was detected at 0.4% or less for all samples, except SSO-SPT7-10-UI at 3.1% TCO.

4.4.5 Nunes Parcel (Former Transfer Station)

Surface and subsurface soil samples were collected from the Nunes Parcel in 2003, 2004, 2005, and 2006. Figures 4-5, 4-4, and 4-6 illustrate the distribution of PCB Aroclor-1254, benzo(a)pyrene, and lead, respectively, from the Nunes Parcel for comparison to previous sitewide data. These samples are discussed below.

4.4.5.1 Surface Soil Samples

Surface soil samples were collected from 19 locations and from SO-058-WT (designated WT = wetland, although actually within the boundaries of the Nunes Parcel). VOCs were detected in Nunes Parcel surface soil samples. Nine VOCs (2-hexanone, methylene chloride, 2-butanone, trichlorofluoromethane, PCE, acetone, total xylenes, methyl acetate, and toluene) were detected at least once in surface soil samples but at concentrations below screening criteria. The remaining VOCs analyzed for were not detected in Nunes Parcel surface soil samples.

PAHs were detected in each of the Nunes Parcel surface soil samples. Seven PAHs were detected above screening criteria in one or more of the samples. Total PAH concentrations ranged from 940 µg/kg (location SO-101-NP) to 83,620 µg/kg (location SO-105-NP). All other PAHs were either not detected or were detected at concentrations below screening criteria.

Other non-PAH SVOCs were detected in Nunes Parcel surface soil samples. Ten SVOCs [1,1'-biphenyl, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, carbazole, dibenzofuran, di-n-butyl phthalate, di-n-octyl phthalate, benzaldehyde, 4-chloroaniline, and isophorone] were detected at least once in Nunes Parcel surface soil samples but below screening criteria. The remaining SVOCs analyzed were not detected.

PCBs were detected in most of the Nunes Parcel surface soil samples. Aroclor-1254 and Aroclor-1260 were the only Aroclors detected in surface soil samples. Total PCB concentrations ranged from not detected (locations GP-1 and GP-2) to 550 µg/kg (location SO-055-NP) and were greater than screening criteria in a number of samples.

Pesticides were detected in most Nunes Parcel surface soil samples. Dieldrin concentrations were greater than the screening criterion in each sample with the maximum concentration of 310 µg/kg (location SO-052-NP). Nine pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, dieldrin, endrin ketone, gamma-chlordane,

endosulfan sulfate, and endosulfan II) were detected at least once in surface soil samples. The remaining pesticides analyzed were not detected.

Metals were detected in all of the Nunes Parcel surface soil samples. Each of the metals analyzed for in surface soil samples were detected in at least one sample at concentrations greater than screening criteria, except for antimony, calcium, cobalt, cyanide, magnesium, nickel, potassium, silver, sodium, and thallium. Even though several metals had one or more PAL exceedances in the Nunes Parcel 2006 soil sample results, most metals had very similar concentrations among the 2006 samples collected, except lead and zinc. Samples SO-107-NP (0-1') and SO-108-NP (3-8') both had lead reported at 1,200 mg/kg. All other lead results were 410 mg/kg or less in the 2006 Nunes Parcel samples. Zinc had three samples [SO-102-NP (2-8.5') – 600 mg/kg, SO-105-NP (2-3.4') – 680 mg/kg, and SO-108 (3-8') – 660 mg/kg] that were higher than the remaining 2006 Nunes Parcel samples with all other zinc concentrations 280 mg/kg or less.

Nine surface soil samples were analyzed for pH. The detected pH values for the samples ranged from 5.4 to 6.1 SU, similar to other areas within OU2.

4.4.5.2 Subsurface Soil Samples

Subsurface soil samples were collected from 14 locations on the Nunes Parcel. VOCs were detected in all solid waste transfer station subsurface soil samples. Sixteen VOCs (1,1-DCE, 1,4-dichlorobenzene, 2-butanone, acetone, benzene, carbon disulfide, chlorobenzene, cis-1,2-dichloroethene [cis-1,2-DCE], cyclohexane, methyl cyclohexane, dichlorodifluoromethane, ethylbenzene, isopropylbenzene, methyl acetate, toluene, and xylene) were detected at least once in subsurface soil samples but at concentrations below screening criteria. The remaining VOCs analyzed were not detected. The concentration of VOCs generally increased from surface to subsurface soil samples.

PAHs were detected in all Nunes Parcel subsurface soil samples, except SO-100-NP, SO-101-NPO, SO-103-NP, and SO-107-NP. Total PAH concentrations ranged from 89 µg/kg (location SO-106-NP) to 185,400 µg/kg (location SO-105-NP). The concentration of PAHs generally increased from surface to subsurface at locations GP-3 and GP-4, and decreased from surface to subsurface at locations GP-5, GP-1, and GP-2.

Several other non-PAH SVOCs were detected in Nunes Parcel subsurface soil samples. Ten SVOCs [1,1'-biphenyl, 2,4-dimethylphenol, 4-methylphenol, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, carbazole, dibenzofuran, di-n-butyl

phthalate, di-n-octyl phthalate, and n-nitrosodiphenylamine] were detected at least once in subsurface soil samples, but at concentrations below screening criteria, with the exception of di-n-octyl phthalate, which was reported as an estimated value in sample SO-034-NP. The remaining SVOCs analyzed were not detected. The maximum concentrations of detected analytes were typically detected in subsurface samples.

PCBs were detected in all but four Nunes Parcel subsurface soil samples analyzed. Aroclor-1248, Aroclor-1254, and Aroclor-1260 were each detected in at least one subsurface soil sample. However, Aroclor-1254 was the only PCB detected at concentrations greater than the screening criterion. Total PCB concentrations ranged from not detected (locations GP-1 and GP-5) to 1,000 µg/kg (location GP-2).

Pesticides were detected in all but two Nunes Parcel subsurface soil samples analyzed. Eight pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, dieldrin, endosulfan sulfate, endrin, and endrin aldehyde) were detected at least once in subsurface soil samples. Alpha-chlordane, 4,4'-DDT, endosulfan sulfate, endrin, and endrin aldehyde were each detected in only one subsurface soil sample. Concentrations of dieldrin exhibited the greatest range, from not detected (locations SO-033-NP, SO-034-NP, SO-035-NP, SO-037-NP, and SO-103-NP) to 250 µg/kg (location SO-100-NP). The remaining pesticides analyzed were not detected.

Metals were detected in all of the Nunes Parcel subsurface soil samples. Each of the metals analyzed for in subsurface soil samples were detected at least once. The maximum concentrations of metals in the subsurface soil samples were arsenic (10.9 mg/kg), cadmium (6 mg/kg), chromium (209 J mg/kg), copper (644 mg/kg), lead (13,000 mg/kg), mercury (0.31 J mg/kg), nickel (122 mg/kg), and zinc (2,470 J mg/kg). The samples from SO-033-NP (1-5) and SO-102-NP (2-8.5) exhibited the highest concentrations of lead and mercury, respectively. Sample SO-035-NP (5-9) also had elevated concentrations of copper, iron, lead, and zinc. All metals were detected in at least one sample at concentrations greater than screening criteria, except for antimony, calcium, cobalt, magnesium, potassium, and sodium, and were generally similar to the surface soil samples.

Additionally, six subsurface soil samples were analyzed for TCO within the Nunes Parcel. Samples were collected in 2-foot increments at depth intervals from 1 to 9 feet bgs. The percent TCO of the samples ranged from 2.1% (SO-W16-NP) to 15% (SO-W13-NP).

4.4.6 Debris Fields 1 through 3

Surface soil samples were collected from 10 locations in DFs 1 through 3 on the northern portion of the site as shown on Figure 2-2.

No VOCs were detected at concentrations greater than screening criteria in surface soil samples in DFs 1 through 3. VOCs were detected in samples from six locations. Five VOCs (acetone, toluene, 2-butanone, 1,1-DCE, and carbon disulfide) were detected at least once in DF surface soil samples. The remaining VOCs analyzed were not detected.

Concentrations of PAHs were greater than the screening criteria in all of the DF surface soil samples. At least one of six PAHs [benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(a)anthracene, chrysene, and dibenz(a,h)anthracene] was detected at concentrations greater than screening criteria in all of the samples collected. All other PAHs were detected at concentrations below screening criteria.

Other non-PAH SVOCs were detected in 10 of the DF surface soil samples at concentrations less than applicable screening criteria. Ten SVOCs [4-chloroaniline, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, carbazole, dibenzofuran, di-n-butyl phthalate, di-n-octyl phthalate, 4-nitroaniline, benzaldehyde, and 1,1'-biphenyl] were detected in at least one of the DF surface soil samples. The remaining SVOCs analyzed for were not detected in DF surface soil samples.

Aroclor-1254 and Aroclor-1260 were detected in samples from five locations. At SO-046-DF, Aroclor-1260 was detected at an estimated concentration of 350 μg/kg, and at SO-047-DB, Aroclor-1254 was detected at an estimated concentration of 240 μg/kg. The other three samples with detections of Aroclor-1254 and Aroclor-1260 were below the screening criteria. No other PCBs were detected in the DF surface soil samples.

Pesticides were detected in all DF surface soil samples. Dieldrin concentrations were greater than the screening criterion of 0.032 µg/kg in nine of 11 samples. Additionally, alpha-chlordane was detected above the screening criterion in one sample (SO-W11-DFb). Eleven other pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, dieldrin, endrin aldehyde, gamma-chlordane, heptachlor epoxide, endosulfan sulfate, endosulfan I, and endrin ketone) were detected in at least one of the DF surface soil samples below screening criteria and all other pesticides were not detected.

Concentrations of most metals and/or cyanide were greater than screening criteria, with the exception of cobalt, silver, and barium in DF surface soil samples. All other metals

were detected above the screening criteria in at least one of the DF surface soil samples.

Five surface soil samples (SO-046-DF through SO-049-DF and SO-FD-12) were analyzed for pH. The pHs of these samples ranged between 4.6 and 6.0 SU, similar to previous results.

4.4.7 Quinnville Well Field

Samples were collected from nine locations on the Quinnville well field in Phase 1A. Samples were originally collected for the purposes of establishing background concentrations. However, initial results from the Phase 1A investigation indicated that the contaminants thought to be regionally present in the floodplain area soils were also detected at the Quinnville well field, and in the USEPA's opinion, were not representative of background conditions. Based on the regional distribution of many of the contaminants found throughout OU2, floodplain soils and the fact that the Quinnville well field soils are well separated from the J.M. Mills Landfill, it is not likely that the J.M. Mills Landfill could have affected Quinnville well field soil quality. Ten additional Quinnville well field surface soil samples were collected to delineate the extent of impacts in Phase 1B.

VOCs were detected in 13 of the 19 Quinnville well field surface soil samples. Acetone and 2-butanone were the only VOCs detected and concentrations of both constituents were less than screening criteria. The remaining VOCs analyzed were not detected.

PAHs were detected in all Quinnville well field surface soil samples. At least one of seven PAHs [benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(a)anthracene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] was detected at concentrations above screening criteria in all samples except LQW-017.

Other non-PAH SVOCs were detected in all but two of the Quinnville well field surface soil samples. Nine SVOCs [1,1-biphenyl, benzaldehyde, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, caprolactam, carbazole, dibenzofuran, di-n-octyl phthalate, and acetophenone] were detected in at least one Quinnville well field surface soil sample, but below screening criteria. The remaining SVOCs analyzed were not detected in any Quinnville well field surface soil samples.

PCBs were detected at relatively low concentrations in 16 of 19 Quinnville well field surface soil samples. Total PCB concentrations ranged from non-detect (LQW-015,

LQW-017, and LQW-018) to 1,600 µg/kg (LQW-010). Aroclor-1260 was the only PCB detected in surface soil samples and was detected at concentrations greater than the screening criterion at six Quinnville well field surface soil locations (LQW-009, LQW-010, LQW-011, LQW-012, LQW-013, and LQW-014).

Nine pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, dieldrin, endosulfan I, alpha-chlordane, endosulfan sulfate, endrin aldehyde, and gamma-chlordane) were detected in Quinnville well field surface soil samples at least once, but, with the exception of one, all concentrations were less than screening criteria. Dieldrin was the only pesticide detected above its screening criterion at concentrations ranging from 9.2 µg/kg (SO-045-QW) to 640 µg/kg (LQW-013). The remaining pesticides analyzed were not detected.

Metals were detected in all Quinnville well field surface samples collected. All metals analyzed for in the Quinnville well field samples were detected at concentrations greater than screening criteria in at least one sample, with the exception of antimony, barium, cobalt, nickel, and sodium, which were either not detected or detected at concentrations less than screening criteria. This detection pattern for metals is similar to what was observed at the other areas within OU2.

Five surface soil samples (SO-044-QW, SO-045-QW, SO-075-QW, SO-076-QW, and SO-FD-13) were analyzed for pH. The pHs of these samples ranged from 5.0 to 6.3 SU, which is closer to neutral (pH of 7 SU) than most of the other areas.

It is noteworthy that portions of the Quinnville well field, specifically the lower riparian areas, were submerged by New Pond prior to its draining, as shown on air photos from 1941 and 1951 and on old topographic maps. More recently, parts of the well field were flooded on several occasions during the RI. As a result, long-term deposition of fine-grained particulates has likely occurred at Quinnville, and the metals and organics that are bound to those particulates have become part of the deposited surface soils of this floodplain complex. This type of repetitive transport and deposition mechanism would most likely contribute and redistribute concentrations of upriver legacy constituents, such as metals, PAHs, and PCBs, with the higher soil adsorptive properties, to the Quinnville floodplain. Conversely, sediment sampling during the RI revealed a lack and/or low concentrations of these contaminants in the riverbed immediately upstream of the Quinnville area, most likely as a result of non-deposition or riverbed scouring in the main channel. This likely depositional history at Quinnville, combined with the lack of any characteristics of a landfill or discrete sources of contamination at the well field leads to the conclusion that contaminants at Quinnville are a result of riverine processes and, to a large degree, are not significantly site related.

4.4.8 Wetlands A through D

Surface soil samples were collected from five locations around the wetlands north of the J.M. Mills Landfill and railroad tracks. Note that sample SO-058-WT was designated as a wetland soil sample location, although it was actually taken on the Blackstone River bank on the edge of the transfer station on the southern side of the railroad embankment. Sample SO-058-WT is discussed with the other Nunes Parcel soil samples.

Toluene was detected in three of the wetland surface soil samples at trace levels (maximum concentration of 1 J µg/kg) significantly below the screening criterion of 52,000 µg/kg. No other VOCs were detected in wetland area surface soil samples.

PAHs were detected in each of the wetland surface soil samples. The concentration of total PAHs ranged from 222 µg/kg (SO-060-WT) to 1,080 µg/kg (SO-063-WT). The only PAH detected at concentrations above screening criterion was benzo(a)pyrene, which was detected in four samples (SO-061-WT, SO-092-WT, SO-FD-21, and SO-063-WT).

The non-PAH SVOCs bis(2-ethylhexyl)phthalate and di-n-butyl phthalate were detected in wetland surface soil samples, but at concentrations below screening criteria. No other SVOCs were detected in any of the wetland surface soil samples collected.

PCBs and pesticides were not detected in any of the wetland surface soil samples collected.

Metals were detected in all of the wetland surface soil samples. Metals were detected above screening criteria in at least one sample for all constituents analyzed, except antimony, barium, cobalt, nickel, selenium, silver, and sodium, which were either not detected or detected at concentrations less than screening criteria. These metals detections are similar to what was observed at the other areas.

Five surface soil samples (SO-059-WT through SO-063-WT) were analyzed for pH. The pHs of these samples ranged from 5.3 to 6.1 SU, similar to the Quinnville well field samples.

4.4.9 Blackstone River Southern Bank

VOCs were detected in four of eight Blackstone River southern bank surface soil samples. Two VOCs (methyl acetate and toluene) were detected once in each of these

surface soil samples, but at concentrations less than screening criteria. The remaining VOCs analyzed were not detected in Blackstone River southern bank surface soil samples.

PAHs were detected in all Blackstone River southern bank surface soil samples. Total PAH concentrations ranged from 12,670 (SO-071-BR) to 27,228 µg/kg (SO-064-BR). All PAHs analyzed were detected in at least one of the samples, and seven constituents [benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(a)anthracene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] were detected at concentrations greater than screening criteria in one or more samples. This is similar to what was observed in other areas within OU2.

Non-PAH SVOCs were detected in all Blackstone River southern bank surface soil samples, but concentrations in all samples were below screening criteria. Nine SVOCs [acetophenone, benzaldehyde, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, carbazole, dibenzofuran, di-n-butyl phthalate, 4-chloroaniline, and diethyl phthalate] were detected at least once. The remaining SVOCs analyzed were not detected in Blackstone River southern bank surface soil samples.

PCBs were detected in all of the Blackstone River southern bank surface soil samples. Total PCB concentrations ranged from 170 µg/kg (SO-070-BR) to 550 µg/kg (SO-071-BR). Aroclor-1260 was detected at concentrations greater than the screening criterion in all samples except SO-070-BR. No other PCBs were detected in the Blackstone River southern bank surface soil samples.

Pesticides were detected in all Blackstone River southern bank surface soil samples, but for the most part at concentrations below screening criteria. Seven pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, gamma-chlordane, endosulfan II, and endrin aldehyde) were detected in at least one surface soil sample. Dieldrin was detected at concentrations greater than the screening criterion in all of the Blackstone River southern bank surface soil samples. This is similar to what was observed in the Quinnville well field samples. All other pesticides were not detected in the Blackstone River southern bank surface soil samples.

Metals were detected in all Blackstone River southern bank surface soil samples. Concentrations of all metals in at least one sample were greater than criteria, except antimony, barium, cobalt, nickel, selenium, silver, and sodium, which were either not detected or were detected at concentrations below screening criteria. This is similar to what was observed in other areas of OU2.

Eight southern bank surface soil samples (SO-064-BR through SO-071-BR) were analyzed for pH. The pHs of these samples ranged from 4.6 to 6.3 SU, similar to the Quinnville well field and Wetlands A through D.

It is noteworthy that the Blackstone River southern banks were flooded on numerous occasions during the RI. This same flooding likely occurred many times during the past 200 years. As a result, upstream particulates would likely be transported downstream and deposited in the surface soils along the riverbanks. This type of transport would most likely contribute concentrations of constituents, such as metals, PAHs, and PCBs, with the higher soil adsorptive properties.

4.5 Sediment

Sediment samples were collected from 88 locations within the OU2 boundary and from 15 locations upstream from the site, as shown on Figure 2-4. Sediment samples collected during the sampling events were all from the 0 to 1 foot depth interval. Samples were analyzed for VOCs and SVOCs, including TICs and low concentration PAHs using SIM, pesticides, PCBs, metals, physical parameters, and sediment grain size. The results are included in Tables 4-21 through 4-29 and are discussed below. The areal distribution of sediment concentrations is presented on Figures 4-10 through 4-30.

4.5.1 Summary of Sediment Sample Results

The distribution of COPECs and their respective concentrations in sediment samples across the OU2 site is similar to what was observed for surface soils. COPECs are widespread within OU2 and are present at concentrations similar to what was observed upstream of OU2. This pattern again suggests that any impacts to sediment are not related to releases from the known source areas within OU2. Metals, PAHs, PCBs, and pesticides were commonly detected in the sediment within and upstream of OU2.

Contaminants potentially related to the J.M. Mills Landfill, the largest known contaminant source within OU2, are primarily characterized by VOCs found in the groundwater downgradient of the J.M. Mills Landfill. The only VOCs found in sediment samples were acetone, 2-butanine, and carbon disulfide, none of which characterizes the groundwater VOCs at the site. There are no PCBs and only minor concentrations of PAHs in the groundwater downgradient of the J.M. Mills Landfill. While some metals are present in groundwater downgradient of the J.M. Mills Landfill, metals are ubiquitous across the study area, suggesting that a regional source may have contributed metals to the sediment. The PCBs and PAHs observed in surface soil samples along the river at the

J.M. Mills Landfill and at least a portion of the contamination may have been transported there from upstream, as these contaminants are detected along the Blackstone River within and upstream of OU2. The distribution of contaminants is related to the locations of deposition and scour in the Blackstone River, rather than the location of a source area.

4.5.2 Upstream of Site

Fifteen sediment samples (SE-022-BR, SE-033-BR, SE-034-BR, SE-044-BR, SE-045-BR, SE-049-BR, SE-050-BR, SE-054-BR, T05BL-001, T05BL-002, T05BL-003, T05BL-004, T05BL-005, T05BL-006, and T05BL-007) were collected from upstream in the Blackstone River to provide background sediment information. Analytical results from upstream sediment samples are summarized in Tables 4-21 through 4-29.

VOCs were detected intermittently but at concentrations below screening criteria during the Phase 1A investigation. Because these concentrations were relatively low and the detections somewhat sporadic with no apparent pattern, no upstream source of a specific VOC was identified. Some Phase 1B samples exhibited VOC concentrations greater than screening criteria. Seven samples exhibited detections of carbon disulfide and acetone above screening criteria. The maximum concentration of carbon disulfide was 13 µg/kg in upstream sediment samples compared to the screening criterion of 0.85 µg/kg. Similarly, acetone had a maximum detected concentration of 150 µg/kg compared to a screening criterion of 8.7 µg/kg.

PAHs were detected in all of the upstream samples with most individual PAH concentrations exceeding screening criteria. Total PAHs in upstream samples ranged from 110 µg/kg (SE-022-BR) to 25,900 µg/kg (T05BL-001). The distribution of PAHs in upstream samples is somewhat sporadic and the concentrations appear to be similar in ranges to sediment samples from other areas of the site, suggesting that the PAH detections in sediment at the entire site do not appear to be associated with a particular source nor with a position relative to upstream or downstream river flow. The detected concentrations of PAHs are relatively low and may be associated with scour or depositional areas rather than proximity to a source area.

Some non-PAH SVOCs were detected at concentrations less than screening criteria in the upstream samples. Phenol was detected above the screening criterion of 57 µg/kg in multiple samples. The maximum concentration of phenol was 180 µg/kg in T05BL-003. Additionally, 2-methylphenol was detected above its screening criterion in T05BL-004. No other compounds were detected above screening criteria.

Aroclor-1260 and/or Aroclor-1254 were detected in 14 of the 15 upstream samples at concentrations ranging from 12 µg/kg (Aroclor-1260, SE-022-BR) to 1,400 µg/kg (Aroclor-1254, T05BL-003).

Dieldrin, 4,4´-DDD and 4,4´-DDE were frequently detected in the upstream samples. Dieldrin concentrations ranged from 1 µg/kg (SE-022-BR) to 17 µg/kg (T05BL-001) compared to a screening criterion of 1.9 µg/kg. 4,4'-DDD and 4,4'-DDE also had concentrations detected above the screening criteria. Alpha- and gamma-chlordane and endrin aldehyde were detected intermittently and at relatively low concentrations and generally below the reporting limits.

Metals were detected in all of the upstream sediment samples at varying concentrations. Some of the maximum detected concentrations for metals exceeded screening criteria. Two of the sample locations, T05BL-003 and T05BL-006, contained higher metals concentrations than the other upstream sediment samples and were greater than screening criteria for aluminum, copper, iron, mercury, lead, nickel, and zinc in T05BL-003, and cadmium in T05BL-006. Some of the other upstream sediment sample locations also contained concentrations that were greater than screening criteria for aluminum, cadmium, copper, mercury, lead, nickel, and zinc. Additional concentrations greater than the screening criteria include arsenic in T05BL-005 and chromium in T05BL-004.

SE-022-BR, SE-033-BR, SE-034-BR, SE-044-BR, SE-045-BR, SE-049-BR, SE-050-BR, and SE-054-BR were sampled for TCO, TOC, and pH. The highest TCO was detected in SE-022-BR at 2.3%. The highest TOC was detected in SE-050-BR at 5,500 mg/kg. The pH of the samples ranged from 6.4 to 7.3 SU.

T05BL-001, T05BL-002, T05BL-005, T05BL-006, and T05BL-007 consisted mostly of sand with other constituents of clay, silt, and TOC. T05BL-003 and T05BL-004 consisted mostly of silt with lesser proportions of clay and sand.

4.5.3 Sampling Adjacent to the J.M. Mills Landfill

Five locations were sampled from the ponds at the toe of the J.M. Mills Landfill. All of these areas are inundated by Blackstone River flooding. The locations included three samples from Pond B (SE-019-LF, SE-070-LF, and SE-073-LF) and two from Pond C at the toe of the J.M. Mills Landfill (SE-020-LF and SE-074-LF). Pond B was dry during the 2003, 2004, and 2005 sampling events, and Pond C was dry during the 2004 and 2005 sampling events.

In sediment samples collected from Pond B at the toe of the J.M. Mills Landfill, VOCs were detected in two of three samples collected. Acetone was the only compound detected at a concentration greater than its screening criterion and was detected in only one sample (SE-19-LF). All other VOCs were either not detected or detected at concentrations less than screening criteria.

All PAHs were detected in at least one sample collected. Most of the individual COPECs were observed at concentrations greater than screening criteria, except for 2-methlynaphalene and naphthalene. Total PAH concentrations ranged from 10,000 µg/kg to 19,000 µg/kg.

Some SVOCs were detected in Pond B sediments, but all were observed at concentrations less than screening criteria.

Aroclor-1260 concentrations ranged from 100 µg/kg to 180 µg/kg in the samples collected. All sample concentrations were greater than screening criteria. No other PCBs were detected in the samples.

Dieldrin, 4,4´-DDD, 4,4´-DDE, and alpha- and gamma-chlordane were detected at concentrations greater than screening in one or more samples collected. All other pesticides were either not detected or were detected at concentrations less than criteria.

Metals were detected in all of the Pond B sediment samples, many at concentrations above screening criteria.

Two sediment samples were collected from Pond C on the eastern toe of the J.M. Mills Landfill. VOCs were only detected in one of the two samples collected (SE-020-LF). A total of 12 VOCs were detected but only two constituents (acetone and carbon disulfide) were detected at concentrations greater than the screening criteria. All other VOCs were either not detected or were detected at concentrations less than the screening criteria.

PAHs were detected in both sediment samples collected. Total PAH concentrations were 16,500 µg/kg (SE-020-LF) and 22,000 µg/kg (SE-074-LF). All PAHs were detected in at least one of the two samples, and all PAHs were detected at concentrations above screening criteria, except for 2-methylnapthalene and naphthalene.

Aroclor-1254 was detected in SE-020-LF at a concentration of 230 µg/kg and both Aroclor-1254 and Aroclor-1260 were detected in sample SE-074-LF at a total PCB

concentration of 860 µg/kg. Concentrations of these two PCBs were above screening criteria. All other PCBs were not detected in the samples.

Dieldrin, 4,4´-DDD, 4,4´-DDE, alpha-chlordane, and endrin aldehyde were detected at concentrations slightly greater than screening criteria in at least one of the two Pond B samples.

Metals concentrations in sediments from Pond C were similar to those from Pond B and are slightly higher than those collected from upstream. Many of the metals detected were at concentrations greater than screening criteria.

SE-019-LF, SF-020-LF, SF-070-LF, SF-073-LF, and SF-074-LF were sampled for TCO, TOC, and pH. The highest TCO was detected in SE-019-LF at 7.5%. TOC was not detected in any of the samples. The pH of samples collected ranged from 5.3 SU (SE-073-LF) to 5.7 SU (SE-070-LF).

4.5.4 Unnamed Island

Sediment samples were collected from 20 locations on the Unnamed Island. These locations include 12 in Pond A (SE-002-UI, SE-003-UI, SE-005-UI, SE-006-UI, SE-079-UI, SE-080-UI, SE-084-UI through SE-087-UI, T05PA-001, and T05PA-003), four locations in Pond D (SE-007-UI, SE-075-UI, SE-076-UI, and T05PD-002), two in Pond E (SE-001-UI and SE-078-UI), and one in Pond P (SE-077-UI). Sample SE-004-UI was collected of what appeared to be sediment from an area designated as Pond X, although no standing water and no surface-water samples were collected.

4.5.4.1 Pond A

In the 12 samples collected from Pond A, acetone (380 J µg/kg), 2-butanone (750 J µg/kg), and carbon disulfide (5.11 µg/kg) were the only VOCs detected consistently at concentrations greater than screening criteria. Most other VOCs were not detected or were detected at concentrations less than screening criteria.

Most of the 17 PAHs were detected in each sample with most individual PAH concentrations greater than criteria, except for sample SE-086-UI, where no PAHs were detected. Total PAHs in the samples, other than SE-086-UI, ranged from 4,000 µg/kg (SE-003-UI) to 30,000 µg/kg (SE-080-UI).

Aroclor-1254 and Aroclor-1260 were detected in eight of the 12 samples at concentrations that ranged from 50 µg/kg to 650 µg/kg. All concentrations of these PCBs were above screening criteria. All other PCBs were not detected in the samples.

SVOCs were detected at concentrations mostly less than screening criteria. Bis(2-ethylhexyl)phthalate (8,700 µg/kg, SE-005-UI) and benzaldehyde (1,200 µg/kg, SE-079-UI) were the only compounds detected at concentrations greater than screening criteria in Pond A samples collected during Phase 1A. T05PA-003 was the only sample exhibiting an SVOC concentration greater than a screening criterion (phenol) in Phase 1B samples. The concentrations of phenol were similar to the detected concentration in the upstream samples.

Several pesticides were detected intermittently in low concentrations in one or more of the Pond A samples. 4,4-DDD, 4,4-DDE, alpha-chlordane, delta-BHC, and gamma-chlordane were detected above the screening criteria in one or more samples collected. All other pesticides were not detected or were detected at concentrations below the screening criteria.

Metals were detected in each of the 12 Pond A samples with SE-079-UI exhibiting the highest concentrations for most of the metals. Most of the metals concentrations were greater than the screening criteria.

4.5.4.2 Pond D

Four sediment samples were analyzed from Pond D (SE-007-UI, SE-075-UI, SE-076-UI, and T05PD-002). Acetone, carbon disulfide, and 2-butanone were detected in the samples collected. Acetone and carbon disulfide were detected above screening criteria in more than one sample. No other VOCs were detected in the samples.

All PAHs were detected at concentrations above the screening criteria in at least one of the samples collected. Total PAHs ranged from 10,000 µg/kg to 22,000 µg/kg.

Aroclor-1260 was the only PCB detected. Aroclor-1260 concentrations ranged from 98 µg/kg to 250 µg/kg, all of which are greater than the screening criterion. No other PCBs were detected in the samples.

The following non-PAH SVOCs were detected in the samples: dibenzofuran, carbazole, benzaldehyde, bis(2-ethylhexyl)phthalate, and 2-methylphenol, but all at concentrations less than the screening criteria. No other SVOCs were detected in the samples.

Pesticides were detected in all of the samples collected. 4,4´-DDD, 4,4´-DDE, endosulfan sulfate, and gamma-chlordane were detected at concentrations greater than screening criteria in at least one of the sample collected. All other pesticides were either not detected or detected at concentrations less than screening criteria.

Most metals concentrations were detected at concentrations greater than the screening criteria.

4.5.4.3 Pond E

Two samples were collected from Pond E. No VOCs were observed at concentrations greater than the screening criteria in either of the samples collected.

PAHs were detected in both samples collected. Total PAHs detected were 17,000 µg/kg (SE-0012-UI) and 20,000 µg/kg (SE-078-UI). All PAHs analyzed were detected in one of the samples and concentrations were all greater than the screening criteria in at least one of the samples, with the exception of 2-methylnaphthalene and naphthalene.

Nine non-PAH SVOCs were detected in the one of the two samples; however, they were all detected at concentrations less than the screening criteria.

PCBs were detected in both samples collected. The concentrations of Aroclor-1254 in SE-001-UI and the concentration of Aroclor-1260 in SE-078-UI were greater than their respective screening criteria. No other PCBs were detected in the samples.

Pesticides were detected in both samples collected. Six pesticides (4,4-DDD, 4,4-DDE, alpha-chlordane, dieldrin, endrin aldehyde, and gamma-chlordane) were detected at concentrations greater than the screening criteria in at least one of the samples. All other pesticides were either not detected or were detected at concentrations less than the screening criteria.

Metal concentrations in Pond E were similar to some of the higher concentrations that were found elsewhere on the Unnamed Island. Maximum detected concentrations of chromium (354 mg/kg), copper (653 mg/kg), lead (1,760 mg/kg), and zinc (1,460 mg/kg) were some of the higher concentrations identified onsite. Most metals were detected in concentrations greater than the screening criteria in one of the two samples.

4.5.4.4 Dry Ponds

Sediment samples from the dry ponds (SE-004-UI and SE-077-UI) were also consistent with other samples on the Unnamed Island. VOCs observed were typically low concentration compounds identified in other areas of the site and were generally found at concentrations below the sample-specific reporting limit. Total PAHs were about 5,000 µg/kg with many detections greater than the screening criteria, and PCBs in SE-004-UI were detected at 100 µg/kg, above PALs but below the RIDEM Direct Exposure Criteria of 10,000 µg/kg. Other non-PAH SVOCs and pesticides were typical of compounds identified in other areas of the site.

4.5.4.5 TCO, TOC, pH, and Grain Size Samples

SE-001-UI through SE-007-UI, SE-075-UI through SE-080-UI, and SE-084-UI through SE-087-UI were sampled for TCO, TOC, and pH. The highest TCO was detected in SE-001-UI at 12%. The highest TOC was detected in SE-084-UI at 15,000 mg/kg. The pH of samples was slightly acidic.

T05PA-001 and T05PA-002 consisted mainly of sand (above 60%) with some silt and clay. T05PA-003 consisted mainly of silt (above 60%) with some sand and clay.

4.5.5 Nunes Parcel

Three locations near the solid waste transfer station (SE-021-NP, SE-069-NP, and T05BR-005) were sampled. VOC concentrations were detected in all of the samples. Two compounds (acetone and carbon disulfide) were detected at concentrations greater than the screening criteria in at least one of the samples. All other VOCs were either not detected or were detected at concentrations less than the screening criteria.

PAHs were detected in all of the samples collected, and most were detected at concentrations greater than the screening criteria. Concentrations of total PAHs ranged from 15,000 µg/kg to 41,100 µg/kg.

Aroclor-1260 was detected at a concentration of 200 J µg/kg in sample SE-021-NP (above the screening criteria) and at a concentration of 22 J µg/kg in sample SW-069-NP (below the screening criterion). Additionally, concentrations of Aroclor-1254 and Aroclor-1260 in TO5BR-005 were greater than the screening criteria. No pesticides were detected in the samples.

Metal concentrations were similar to those found in sediments elsewhere onsite. Maximum detected concentrations of metals included arsenic (13 mg/kg), cadmium (30 mg/kg), chromium (257 mg/kg), copper (355 mg/kg), lead (300 mg/kg), mercury (0.7 mg/kg), nickel (70 mg/kg), zinc (666 mg/kg), and cyanide (2 mg/kg). Most metals were detected in one of the samples and were typically greater than the screening criteria.

SE-021-NP and SE-069-NP were sampled for TCO and pH. The highest TCO was detected in SE-021-NP at 7.9%. The pH of the samples was generally near neutral, with the lowest pH found in sample SE-069-NP (6.4 SU). TO5BR-005 consisted of silt (75%) with remaining constituents of sand, clay, and TCO.

4.5.6 Wetland

Sediment samples were collected from 23 locations at the wetlands. These locations included two locations from Wetland A (SE-009-WT and SE-058-WT), eight locations from Wetland B (SE-010-WT, SE-011-WT, SE-013-WT, SE-053-WT, SE-057-WT, SE-060-WT, SE-061-WT, and T05WB-001), nine locations from Wetland C (SE-012-WT, SE-014-WT, SE-015-WT, SE-017-WT, SE-018-WT, SE-059-WT, SE-062-WT, SE-063-WT, and T05WB-002), and four locations from Wetland D (SE-016-WT, SE-052-WT, SE-055-WT, and T05WB-003).

4.5.6.1 Wetland A

Acetone was the only VOC detected in the samples collected from Wetland A and was observed at a concentration greater than the screening criterion. No other VOCs were detected.

Most PAHs were detected in Wetland A sediment samples. Total PAH concentrations ranged from 264 µg/kg to 896 µg/kg. Benzo(a)pyrene was the only PAH detected at a concentration greater than its screening criterion and was only detected in SE-058-WT.

SVOCs and PCBs were not detected in the Wetland A sediment samples.

The pesticides 4,4'-DDD, 4,4'-DDE, alpha-chlordane, and gamma-chlordane were detected in Wetland A sediment samples. All compounds were detected at concentrations less than the screening criteria.

Most metals were detected in the Wetland A sediment samples. Only two metals (iron and nickel) were detected at concentrations greater than the screening criteria. All other

metals were either not detected or were detected at concentrations less than the screening criteria.

4.5.6.2 Wetland B

A number of VOCs, including 2-butanone, PCE, toluene, and acetone, were detected in Wetland B sediment samples. With the exception of acetone (330 J µg/kg, SE-060-WT), VOCs were detected at concentrations less than the screening criteria.

All PAHs were detected in at least one of the samples collected. Total PAH concentrations ranged from 857 µg/kg to 34,800 µg/kg, and most PAHs were detected at concentrations greater than the screening criteria.

Non-PAH SVOCs were detected in one or more of the Wetland B sediment samples. All detections were at concentrations less than the screening criteria.

Two PCBs (Aroclor-1254 and Aroclor-1260) were detected in Wetland B samples. Total PCB concentrations ranged from 12 µg/kg to 80 µg/kg. A number of the samples exhibited concentrations greater than screening criteria.

Pesticides were not detected in Wetland B sediment samples.

Most metals were detected in at least one of the Wetland B sediment samples. Many of the metals detected were at concentrations greater than their screening criteria in one or more samples collected.

4.5.6.3 Wetland C

Nine sediment samples were collected from Wetland C. Acetone was the only VOC detected at a concentration greater than the screening criteria in some of the samples at a maximum concentration of 360 J µg/kg (SE-062-WT).

Most PAHs were detected in sediment samples collected from Wetland C. Total PAH concentrations ranged from 964 µg/kg to 16,000 µg/kg. Many of the PAHs were detected at concentrations greater than the screening criteria in one or more samples.

Phenol was the only non-PAH SVOC detected at a concentration greater than the screening criterion, with a maximum concentration of 1,600 µg/kg in T05WB-002. All

other SVOCs were either not detected or were detected at concentrations less than screening criteria.

Total detected PCB concentrations ranged from 13 µg/kg to 360 J µg/kg. Aroclor-1260 was detected in seven of the sediment samples from Wetland C, excluding SE-014-WT and SE-015-WT. Most of concentrations were less than the screening criteria.

A number of pesticides were detected at low concentrations. In some of the samples, 4,4'-DDD and 4,4'-DDE concentrations were greater than the screening criteria. Pesticides were not detected in sample SE-017-WT.

Most metals were detected in at least one of the Wetland C sediment samples. Many of the metals detected were at concentrations greater than the screening criteria in one or more samples collected.

4.5.6.4 Wetland D

Acetone and toluene were the only VOCs detected in Wetland D samples, but at concentrations less than the screening criteria. No other VOCs were detected in the samples.

Most PAHs were detected in one or more Wetland D samples. Total PAH concentrations ranged from 120 µg/kg to 1,200 µg/kg. Only one compound [benzo(a)pyrene] was detected at a concentration greater than its screening criterion.

Non-PAH SVOCs were not detected in Wetland D sediment samples.

Only one PCB (Aroclor-1260) was detected in one sample (SE-055-WT) at a concentration below the screening criterion.

The pesticides beta-BHC, 4,4'-DDE, 4,4'-DDT, and alpha-chlordane were detected in Wetland D sediment samples. All concentrations were less than the screening criteria.

Most metals were detected in at least one of the Wetland D sediment samples. Many of the metals detected were at concentrations greater than the screening criteria in one or more of the samples collected.

4.5.6.5 TCO, TOC, pH, and Grain Size Samples

SE-009-WT through SE-018-WT, SE-052-WT, SE-053-WT, SE-055-WT, and SE-057-WT through SE-063-WT were sampled for TCO, TOC, and pH. The highest TCO detected was in SE-010-WT at 14%. The highest TOC concentration detected was 3,800 mg/kg in SE-058-WT. Most samples taken were slightly acidic. Samples T05WB-002 and T05WB-003 consisted mainly of silt (more than 50%) with clay and sand at lesser proportions. T05WB-001 consisted mainly of sand (80%) with some silt and clay.

4.5.7 Blackstone River

Twenty-nine locations (SE-023-BR through SE-032-BR, SE-041-BR through SE-043-BR, SE-046-BR through SE-048-BR, SE-064-BR through SE-068-BR, SE-071-BR, SE-072-BR, T05BR-001 through T05BR-004, T05BR-006, and T05BR-007) were sampled on the Blackstone River and five locations were sampled in Pond F (SE-008-BR, SE-081-BR, SE-082-BR, SE-083-BR, and T05BR-004). Pond F floods and is a part of the Blackstone River during high water conditions. It holds water and appears to be more of a standing pond during lower water conditions. Three sets of field duplicates were collected: SE-FD-02 at downstream location SE-026-BR, SE-FD-11 at location SE-046-BR, and SE-FD-03 at location SE-029-BR in the main channel near the J.M. Mills Landfill. An additional sample, SE-051-DF, was taken from Pond N, an inlet off the Blackstone River.

4.5.7.1 Blackstone River Sediments

VOCs typical of the OU2 site and surrounding area were detected at concentrations less than the screening criteria. Acetone and carbon disulfide were detected above the screening criteria in a number of Blackstone River sediment samples. Acetone and carbon disulfide had maximum concentrations in T05BR-003 at 180 J µg/kg and 3.2 J µg/kg, compared to screening criteria of 8.7 µg/kg and 0.8 µg/kg, respectively. PCE (11 µg/kg), TCE (3 J µg/kg), and cis-1,2-DCE (6 J µg/kg) were detected in sample SE-032-BR, west of the J.M. Mills Landfill, with all concentrations less than the screening criteria.

Of the 29 sediment samples collected from the Blackstone River within OU2, 17 samples had concentrations of total PAHs generally consistent with upstream locations (less than 9,000 µg/kg). The 12 samples with total PAH concentrations greater than 10,000 µg/kg are somewhat randomly distributed, most likely in relationship to the Blackstone River flow and depositional areas rather than as a direct geographical relationship to a potential source area. The highest total PAH concentration sample was SE-027-BR

(44,800 µg/kg) located generally east of the Unnamed Island and at the northwestern tip of the small land area near the Nunes Parcel. Other relatively elevated concentrations were detected for samples SE-025-BR (30,000 µg/kg) and SE-071-BR (17,000 µg/kg) on the western side of the Unnamed Island where the water is slow or stagnant during low-flow conditions. Sample SE-026-BR (24,000 µg/kg) was a composite sample taken across a transect located near grab sample SE-042-BR (700 µg/kg), indicating highly variable conditions within small geographical areas. Other locations with PAH concentrations above the upstream samples were SE-031-BR (15,000 µg/kg), SE-047-BR (27,000 µg/kg) on the western side of the base of the J.M. Mills Landfill, and sample SE-023-BR (11,000 µg/kg) immediately upstream from Pond F and the Pratt Dam. T05BR-001, located just downstream from SE-026-BR, had similar detected concentrations to SE-026-BR. T05BR-003 exhibited concentrations lower than SE-027-BR, but still had a higher total PAH concentration of 27,400 µg/kg. T05BR-005, downstream of T05BR-003, had a concentration of 11,500 µg/kg. T05BR-006 exhibited a concentration of 18,400 µg/kg. Most PAHs were detected in one or more samples above the screening criteria.

Non-PAH SVOC concentrations were typically less than the screening criteria and detected somewhat intermittently in the samples, with the exception of phenol, which was above the screening criteria in two samples with a maximum concentration of 160 µg/kg. Two other compounds (dibenzofuran and 2-methylphenol) were detected at concentrations greater than the screening criteria. Dibenzofuran was detected in only one sample, while 2-methylphenol was detected in a few samples, but also was detected in the associated equipment blank.

PCB concentrations in the Blackstone River samples do not appear to correlate with the relative PAH concentrations. Aroclor-1254 and Aroclor-1260 were detected in samples at concentrations greater than the screening criteria. Aroclor-1242 and Aroclor-1248 were detected in one and two samples each, respectively, greater than the screening criteria. SE-030-BR contained Aroclor-1242 at a concentration of 250 µg/kg. T05BR-002 and T05BR-004 contained Aroclor-1248 at 130 µg/kg and 66 J µg/kg, respectively. For the majority of the Blackstone River sediment samples, PCB concentrations were generally low, ranging from non-detect to less than 100 µg/kg.

Several pesticides, typical of the site and surrounding area, were detected at concentrations greater than the screening criteria. These were primarily dieldrin, endrin aldehyde, 4,4'-DDD, and 4,4'-DDE. Most other pesticides detected were at concentrations below the screening criteria.

Arsenic was detected at concentrations that ranged from 34 to 92 µg/kg in samples SE-029-BR through SE-031-BR and SE-041-BR along the southern side of the base of the J.M. Mills Landfill. Other detected metal concentrations in Blackstone River sediment samples were generally consistent with those found in other portions of the site. Most metals were detected in one or more samples and many were detected at concentrations greater than the screening criteria.

4.5.7.2 Pond F Sediment Samples

VOCs detected in the five samples from Pond F included 2-butanone, acetone, methylene chloride, and carbon disulfide. VOCs detected were below the screening criteria in most cases, except for acetone.

Most PAHs were detected in one or more of the samples at concentrations greater than the screening criteria. Total PAHs in the samples ranged from 8,000 to 21,000 µg/kg and were generally consistent with samples from other areas of the site.

Non-PAH SVOCs were detected in one or more of the Pond F sediment samples. Bis(2-ethylhexyl)phthalate and phenol were detected at concentrations of 28,000 µg/kg (SE-081-BR) and 66 µg/kg (T05PF-004), respectively, which are greater than the screening criteria. All other SVOCs were either not detected or were detected at concentrations less than the screening criteria.

Aroclor-1260 was detected in all of the samples collected. Aroclor-1260 concentrations ranged from 35 µg/kg to 260 µg/kg. All samples collected were above the applicable screening criterion for Aroclor-1260. All other PCBs were either not detected or were detected at concentrations less than the screening criteria.

Pesticides were detected in all of the Pond F samples collected. 4,4-DDD, 4,4-DDT, 4,4-DDE, dieldrin, alpha-chlordane, and gamma-chlordane were all detected at concentrations greater than the screening criteria in one or more sample collected. All other pesticides were either not detected or detected at concentrations less than the screening criteria.

Metals concentrations were consistent with those found in other areas of the site with slightly elevated levels of chromium (149 mg/kg), copper (234 mg/kg), and mercury (0.61 mg/kg) detected in sample SE-081-BR. Most metals were detected in at least one of the Pond F sediment samples. Many of the metals detected were at concentrations greater than the screening criteria in one or more samples collected.

4.5.7.3 Pond N

Sample SE-051-DF was collected from Pond N, an inlet off the Blackstone River. VOCs 2-butanone and acetone were detected at concentrations of 10 J µg/kg and 87 J µg/kg, respectively. Only acetone was detected above the applicable screening criteria. All PAHs were detected in the sample, which had a total PAH concentration of 11,000 µg/kg. All PAHs, except 2-methylnapthalene and naphthalene, were detected at concentrations greater than the screening criteria. Non-PAH SVOCs were also detected in the sample but at concentrations less than the screening criteria. Aroclor-1260 was the only PCB detected and was detected at a concentration of 550 µg/kg, greater than its screening criterion.

Five pesticides (4,4-DDD, 4,4-DDE, alpha-chlordane, dieldrin, and gamma-chlordane) were detected at concentrations greater than the screening criteria. All other pesticides were either not detected or were detected at concentrations below the screening criteria in the sample. Most metals were detected in the sediment sample. Many of the metals detected were at concentrations greater than the screening criteria.

4.5.7.4 TCO, TOC, pH, and Grain Size Samples

SE-008-BR, SE-023-BR through SE-032-BR, SE-041-BR through SE-043-BR, SE-046-BR through SE-048-BR, SE-064-BR through SE-068-BR, SE-071-BR, SE-072-BR, SE-081-BR through SE-083-BR, and SE-051-DF were sampled for TCO, TOC, and pH. The highest TCO was detected in SE-024-BR at 8.2%. The highest TOC was 29,000 mg/kg in SE-065-BR. The pH values were near neutral, with the lowest pH exhibited at SE-065-BR and SE-068-BR (6.4 SU). Most of the samples consisted of sand; however, one sample, SE-051-DF, consisted of mainly silt with other constituents of sand and clay.

4.6 Surface Water

This section presents a summary of the surface-water data collected in the 2003 through 2005 field investigations. Surface-water data are discussed by geographic area, which are slightly different than the areas used to discuss groundwater and soil data, including upstream of OU2 and the Blackstone River, ponds, and wetlands within OU2.

Figure 2-6 presents surface-water sample locations. Note that the same location designations (with the prefix “SE”) were used for collocated surface-water and sediment samples. Accordingly, the locations with the “SE” designation are shown on Figure 2-6. Individual samples were designated as “SW” for surface water and “SE” for sediment in

the sample identifications. Both the location "SE" and the sample identifications ("SW" for surface water) are included in the tables. In some instances, more than one surface-water (SW) sample was collected from the same (SE) station location or the surface-water samples were given a different number than the corresponding sediment sample. If appropriate, these are included in the discussion below. The location identifiers given in the tables are in agreement with those on Figure 2-6.

Surface-water data are also discussed by types of constituents: VOCs + TICs, PAHs, non-PAH SVOCs + TICs, PCBs, pesticides, total and filtered (dissolved) metals (only select samples were additionally measured for filtered metals), and TOC. Select samples also had analyses for ammonia, chloride, nitrate, nitrite, orthophosphate, sulfate, hardness, TSS, TDS, BOD, and fecal coliform. Field parameters included DO, temperature, pH, specific conductance, ORP/Eh, and turbidity. Surface-water results are presented by fraction in Tables 4-30 through 4-37.

4.6.1 Summary of Surface-Water Sample Results

Generally, surface-water data contains a few detections of VOCs, SVOCs, PAHs, PCBs, pesticides, and metals. The surface-water data do not suggest ongoing widespread potential impacts are occurring from OU2 to the adjacent surface water. Limited detections of constituents indicate potential migration of COPECs from OU2 to the surface water. However, these limited detections may also be the result of influence from outside OU2, such as naturally occurring metals or constituents migrating into OU2 from upstream and offsite areas.

4.6.2 Upstream of Site

Six surface-water samples (SW-022-BR, SW-033-BR, SW-034-BR, SW-044-BR, SW-1 ash, and SW-2 ash) were collected from upstream of OU2. No VOCs were detected at concentrations greater than the screening criteria.

PAHs were consistently detected in all of the samples collected during the Phase 1A investigation, with some detections above the screening criteria. During the Phase 1B investigation, SW-1 ash was a high flow sample collected for the USEPA by the USGS in April 2005 off a bridge below the Ashton Dam and well above OU2. The flow was estimated to be approximately 7,000 cfs during sample collection. It contained eight constituents at concentrations above the screening criteria. Additionally, SW-2 ash, a filtered sample at the same location had only one compound [benzo(a)pyrene] that was detected at a concentration above the screening criteria.

Other SVOCs and PCBs were not detected in upstream surface-water samples.

Pesticides were detected in samples collected during the Phase 1A sampling event, but not at concentrations greater than the screening criteria. Phase 1B sample SW-1 ash exhibited a concentration of 4,4'-DDE greater than the screening criteria. All other pesticides were not detected or were detected below the screening criteria in the Phase 1B sampling.

Metals were detected in at least one upstream Phase 1A surface-water sample. Aluminum, barium, cadmium, copper, lead, manganese, mercury, and zinc were detected above the screening criteria in more than one sample. Lead and manganese concentrations were greater than the screening criteria in the single upstream filtered sample (SW-033-BR).

The dissolved metals and cyanides were detected at slightly lower concentrations than the unfiltered metal and cyanides. Mercury decreased from a concentration that was greater than the screening criterion to less than the reporting limit. Phase 1B surface-water samples (SW-1 ash and SW-2 ash) exhibited detections of seven compounds (aluminum, barium, cadmium, copper, lead, manganese, and mercury) greater than the screening criteria in unfiltered samples. Filtered Phase 1B samples exhibited concentrations of five compounds (barium, cadmium, copper, lead, and manganese) greater than the screening criteria. Other metals were detected in both filtered and non-filtered samples at concentrations less than the screening criteria.

Field parameters were monitored upstream of the site for surface water in the following samples: SE-022-BR, SE-033-BR, SE-034-BR, and SE-044-BR. TOC was measured in one of the samples from upstream (SE-034-BR) at 10 mg/L. BOD was also detected in SE-034-BR at a concentration of 8 mg/L. DO levels were detected in all four samples at levels ranging from 3.8 mg/L (SE-034-BR) to 10.3 mg/L (SE-044-BR). Hardness was only analyzed in one of these surface-water samples (SE-033-BR) at 47 mg/L. The pH values ranged from 7.36 SU (SE-022-BR) to 7.84 SU (SE-033-BR).

4.6.3 Blackstone River

Samples were collected from 16 locations in the main channel of the Blackstone River within OU2. An additional 10 locations were sampled in the backwater on the southern side of the Unnamed Island.

USGS river flow data from two stream gauges was reviewed for the months during which surface-water samples were collected. Station No. 01112500 is located in Woonsocket, Rhode Island, approximately 7.9 river miles upstream of the northwestern OU2 boundary. Station No. 01113895 is located in Pawtucket, Rhode Island, approximately 3.2 river miles downstream of the southeastern OU2 boundary. Mean monthly flow rates were available for review at the USGS website (USGS, 2012). The table below summarizes the mean flow rate for the months during which sampling occurred, as well as field turbidity and results of TSS analysis.

Date	Station No. 01112500 Mean Flow (cfs)	Station No. 01113895 Mean Flow (cfs)	Turbidity Range (NTU)	TSS Range (mg/L)
Aug-03	437.5	--	0.36 - 5.68	N/A
Sep-03	311.3	--		
Aug-04	267.3	308.1	1.7 - 9.75	N/A
Sep-04	473	500.5		
Apr-05	2067	2157	N/A	10 - 13

-- = Data not recorded at Station No. 01113895 until October 2003.
N/A = not analyzed

No VOCs were detected at concentrations greater than the screening criteria in samples collected from the Blackstone River. Acetone, benzene, bromodichloromethane, bromoform, chloromethane, and MTBE were detected at concentrations less than the screening criteria, at least once in six surface-water samples. Chloromethane was the only compound detected in more than one sample, but was detected at concentrations less than the screening criterion. The remaining VOCs analyzed were not detected in the surface-water samples.

During the Phase 1A investigation, benzo(b)fluoranthene was detected at a concentration greater than the screening criterion of 0.014 µg/L in sample SW-046-BR in the main channel (0.12 µg/L) and SW-068-BR in the backwater (0.14 µg/L). Additionally, during the Phase 1B investigation, chrysene concentrations in sample SW-4 Pratt Lincoln were greater than the screening criterion. No other SVOCs were detected at concentrations greater than the screening criteria.

PCBs were not detected in surface-water samples from the Blackstone River within OU2.

During the Phase 1A investigation, four surface-water samples had detectable concentrations of pesticides. All pesticide concentrations were less than the screening criteria. The Phase 1B samples exhibited concentrations of pesticides in both the SW-3-Pratt Cumberland and SW-4 Pratt Lincoln samples. Both were high-flow flood water samples collected by the USGS in April 2005. The Pratt Cumberland samples collected at the large culvert barrels near the Nunes Parcel were identified with "SW-3" terminology, while the Pratt Lincoln sample was collected further west along the Bike Path (former rail bridge) crossing the Blackstone River. 4,4'-DDE and 4,4'-DDT were both detected above the screening criteria in SW-4 Pratt Lincoln. All other pesticides were either not detected or were detected at concentrations less than the screening criteria.

Metals were detected routinely in Blackstone River surface-water samples from within OU2, except for antimony, beryllium, silver, and thallium. Concentrations of aluminum, arsenic, barium, cadmium, copper, iron, lead, manganese, mercury, selenium, and zinc exceeded screening criteria in at least one sample. Cadmium, lead, and manganese were frequently detected above the screening criteria, and barium, copper, lead, and manganese were frequently greater than the screening criteria in the filtered samples. Barium was detected above the screening criterion in six samples (SW-064-BR through SW-067-BR, SW-3 Pratt, and SW-4 Pratt) collected from the backwater area. Arsenic was detected above the screening criteria in only one sample (SW-032-BR) from the northernmost point onsite, and mercury in four (SW-043-BR, SW-047-BR, SW-3 Pratt, and SW-4 Pratt) samples.

Dissolved metals and cyanides were detected at slightly lower concentrations than the total metals and cyanides.

DO, pH, specific conductivity, turbidity, ORP, and temperature (field parameters) were monitored in surface water in the OU2/Blackstone River mainstream samples: SE-026-BR through SE-032-BR, SE-041-BR, SE-043-BR, and SE-046-BR through SE-048-BR. DO levels were detected in all of the samples ranging from 7.83 mg/L in SE-032-BR to 17.2 mg/L in SE-043-BR. The pH in all of the samples was neutral/slightly basic ranging from 7.13 SU (SE-041-BR) to 7.99 SU (SE-046-BR).

Additional water quality parameters were laboratory analyzed in these same surface-water samples. TOC was detected in three samples at concentrations of 13 mg/L (SE-027-BR), 7 mg/L (SE-031-BR), and 14 mg/L (SE-032-BR). BOD was only detected in sample SE-030-BR at a concentration of 22 mg/L. Hardness was analyzed in one of these surface-water samples (SE-030-BR) at 48 mg/L.

Field parameters were monitored in the Blackstone River backwater samples: SE-023-BR through SE-025-BR, SE-064-BR through SE-068-BR, and SE-071-BR through SE-072-BR. DO and pH were the only parameters that had detections. DO was measured in every sample ranging from 6.01 mg/L (SE-028-BR) to 9.63 mg/L (SE-030-BR). The pH ranged from slightly acidic to slightly basic from 6.65 SU (SE-028-BR) to 7.88 SU (SE-048-BR).

4.6.4 Ponds

Surface-water samples were collected from eight ponds in OU2 (Ponds A, C, D, E, F, I, N, and P). Ponds A, D, E, and P are located on the Unnamed Island. The water level in each of the ponds appears to drop significantly based on the season and precipitation. Pond P tends to be dry much of the year. Pond C is located at the toe of the J.M. Mills Landfill. Pond F is located along the Blackstone River at the southern (downstream) edge of OU2. It is flooded and is a part of the Blackstone River flow during high water conditions. Water also flows through Pond A during high water conditions. Pond I (Nunes Inlet) is an inlet from the Blackstone River next to the Nunes Parcel, and Pond N is located in a DF at the western (upstream) edge of OU2 (SW-051-DF) and may be connected to the small stream in this area. Figure 2-6 presents surface-water sampling locations.

4.6.4.1 Pond A

A total of 10 surface-water samples were collected from Pond A on the Unnamed Island. No VOCs were detected at concentration greater than the screening criteria. Chloromethane was detected in two surface-water samples from Pond A at an estimated concentration less than its screening criterion. The remaining VOCs analyzed for were not detected in Pond A surface-water samples.

Three Pond A surface-water samples contained detected concentrations of PAHs. Benzo(a)pyrene was detected above the screening criterion in two samples (SW-86-UI and SW-87-UI) and benzo(a)anthracene and chrysene were detected above their screening criteria in the sample from SW-005-UI. The highest total PAH concentration was detected at 0.9 µg/L in SW-005-UI.

Bis(2-ethylhexyl)phthalate was the only other SVOC detected in surface-water samples from Pond A and was detected in two surface-water samples at estimated concentrations 1.3 J µg/L and 1.9 J µg/L. The higher concentration (1.9 J µg/L) in the sample from SW-003-UI slightly exceeded the screening criterion of 1.8 µg/L.

Pesticides and PCBs were not detected in surface-water samples from Pond A.

Iron and manganese were detected at concentrations greater than the screening criteria. Where detected, lead (lead was frequently non-detect at a reporting limit greater than the screening criteria) concentrations in Pond A surface-water samples often exceeded the screening criterion. Lead and manganese concentrations also were greater than screening criterion in filtered samples. Other metals that were detected at concentrations greater than the screening criteria in one or two samples included aluminum, cadmium, and zinc. All other metals were detected at concentrations less than the screening criteria.

Field parameters were monitored in the surface-water samples collected from Pond A. Turbidity of these samples ranged from 5.37 NTU to 23.6 NTU. pH of these samples ranged from 6.81 SU to 9.04 SU. DO concentrations ranged from 6,470 µg/L to 13,200 µg/L.

Additional water quality parameters were laboratory analyzed in these samples. TOC was analyzed in four samples and detected at concentrations ranging from 6.6 mg/L to 9.2 mg/L. BOD was only analyzed in sample SE-002-UI and was detected at a concentration of 7 mg/L. Hardness was only analyzed in sample SE-002-UI and was detected at a concentration of 30 mg/L.

4.6.4.2 Pond C

Two samples were collected from Pond C (SW-020-LF in 2003 and SW-074-LF in 2004). Sample SW-074-LF was collected following a rain event at the same location and several days after collection of collocated sediment sample SE-074-LF because Pond C was dry when the sediment sample was initially collected.

Sample SW-020-LF had 11 detected PAHs, seven of which were greater than the screening criteria and a total PAH concentration of 3 µg/L. No other PAHs or other SVOCs were detected in Pond C surface-water samples. Sample SW-020-LF had a detected concentration of Aroclor-1260 at 0.3 J µg/L, above the screening criterion of 0.014 µg/L. Compounds 4,4'-DDD and 4,4'-DDE were also detected at a concentration greater than the screening criteria in this sample.

Six metals (aluminum, barium, iron, lead, manganese, and zinc) were detected at concentrations greater than the screening criteria in the sample collected from SW-074-LF. Most of the metals concentrations in the sample SW-020-LF were greater than the

screening criteria. The only metals that were not detected above the screening criteria in SW-020-LF were those that were not detected (antimony, mercury, selenium, and thallium).

Sample SW-020-LF had a relatively high turbidity reading (65.5 NTU). The metals, PAHs, and PCBs have a high particle affinity and tend to be associated with particles rather than be in the dissolved phase. The detection of these chemicals in Pond C sample SW-020-LF may be an artifact of suspended particles in the sample and may not represent true dissolved-phase constituents in the surface-water sample. Note that the sediment samples collected from the same locations in Pond C were not appreciably different from each other in metals or pesticide concentrations; however, the sediment sample SE-074-LF had a higher PCB concentration (Aroclor-1254 and Aroclor-1260 at a total concentration of 860 µg/kg) than sample SE-020-LF (Aroclor-1254 at 230 µg/kg).

4.6.4.3 Pond D

Two surface-water samples were collected from Pond D at locations SE-007-UI and SE-075-UI. Toluene was the only VOC detected at a concentration of 0.6 µg/L, below the screening criterion of 9.8 µg/L.

Each of the two surface-water samples from Pond D exhibited detectable concentrations of PAHs. Sample SW-075-UI was reported with six PAHs at concentrations greater than screening criteria and a total concentration of 1.68 µg/L.

No other SVOCs or PCBs were detected in surface-water samples from Pond D.

The pesticide gamma-chlordane was detected in one surface-water sample from Pond D but less than its screening criterion.

Each of the metals analyzed were detected in Pond D surface-water samples, except antimony, cobalt, mercury, selenium, silver, and thallium. Many of the metals detected were at concentrations greater than the screening criteria.

4.6.4.4 Pond E

The VOC toluene was detected at a concentration less than its screening criterion in one surface-water sample from Pond E. The remaining VOCs analyzed for were not detected in Pond E surface-water samples.

Three PAHs (fluoranthene, phenanthrene, and pyrene) were detected in surface-water samples from Pond E at concentrations less than their screening criterion.

N-nitrosodiphenylamine was detected below its screening criterion in one surface-water sample from Pond E. The remaining SVOCs were not detected in Pond E surface-water samples.

PCBs were not detected in surface-water samples from Pond E.

Pesticides were detected in one surface-water sample from Pond E. Two pesticides, 4,4'-DDD and gamma-chlordane, were detected above the screening criteria in this surface-water sample.

Aluminum, arsenic, barium, cadmium, calcium, chromium, iron, lead, manganese, sodium, vanadium, and zinc were detected in Pond E surface-water samples. Many of the detected concentrations are greater than the screening criteria.

4.6.4.5 Pond F

VOCs, PCBs, and pesticides were not detected in surface-water samples from Pond F.

PAHs were detected in three surface-water samples from Pond F. Single detections of benzo(a)pyrene, benzo(b)fluoranthene, and chrysene were detected in these samples at concentrations greater than the screening criteria.

Aluminum, arsenic, barium, calcium, chromium, iron, lead, manganese, nickel, silver, sodium, vanadium, and zinc were detected in Pond F surface-water samples. Barium and chromium were detected in a number of Pond F surface-water samples at concentrations below the upstream detection limits. Barium and chromium were not detected in the upstream samples. Many of the metals detected were at concentrations greater than the screening criteria.

4.6.4.6 Pond I

Pond I, also known as the Nunes Inlet, is located inside the narrow strip of land in the Blackstone River off the Nunes Parcel. Pond I is connected to the Blackstone River at higher water levels and is more of a pond when the water level is lower. Two surface-water samples and one duplicate were collected from this location (SW-021-WT [from location SE-021-NP] and SW-069-NP and SW-FD-12 [from location SE-069-NP(dup)]).

Chloromethane, benzene, and chlorobenzene were detected in one sample at concentrations less than the screening criteria. The remaining VOCs analyzed for were not detected in Pond I surface-water samples.

PAHs were detected in each of the three surface-water samples from Pond I. Five PAHs in the sample SW-021-WT were detected greater than the screening criteria for a total concentration of 1.39 µg/L. Other SVOCs were not detected in Pond I surface-water samples.

One surface-water sample (SW-021-WT) from Pond I contained detected concentrations of PCBs (Aroclor-1260 at 0.12 J µg/L) above the screening criterion of 0.014 µg/L. This sample had relatively high turbidity readings (60.3 NTU). PCBs have a high particle affinity and tend to be associated with suspended particulates rather than in the dissolved phase. The detection of PCBs in Pond I surface water likely is an artifact of suspended particles in the sample and is not likely a true dissolved-phase PCB in the surface-water sample.

Dieldrin, 4,4'-DDD, endrin ketone, and alpha-BHC were detected in surface-water samples from Pond I at concentrations below their respective screening criteria. No other pesticides were detected in the samples.

Each of the metals analyzed for were detected in Pond I surface-water samples, except antimony, beryllium, copper, mercury, selenium, silver, and thallium. Many of the metals detected were at concentrations greater than the preliminary screening criteria.

4.6.4.7 Pond N

A single sample was collected from (SE-051-DF) Pond N near the small stream on the northern end of the site. VOCs and PCBs were not detected in surface-water samples from Pond N.

PAHs were detected in the surface-water sample from Pond N. Nine PAHs were detected in this sample, but at concentrations less than the screening criteria.

4,4'-DDD and alpha-chlordane were detected below screening criteria in the Pond N sample.

Each of the metals analyzed for were detected in Pond N surface-water samples, except antimony, barium, beryllium, cobalt, copper, mercury, nickel, silver, and thallium. Many of the detected metals were at concentrations greater than the screening criteria.

4.6.4.8 Pond P

A single sample was collected from Pond P (SE-077-UI) on the Unnamed Island. VOCs, SVOCs, PAHs, and PCBs were not detected in this surface-water sample from Pond P. Five pesticides (4,4'-DDT, alpha-chlordane, gamma-BHC, gamma-chlordane, and heptachlor epoxide) were detected at concentrations less than the screening criteria in this sample.

Aluminum, arsenic, calcium, iron, manganese, potassium, silver, and sodium were detected in Pond P surface-water samples. Iron, manganese, and silver were detected at concentrations greater than the screening criteria.

4.6.5 Wetlands

Surface-water samples were collected from four wetland areas (A, B, C, and D). These wetlands are located to the north of the J.M. Mills Landfill. Figure 2-6 presents surface-water sample locations using the same location identifiers “SE” as the collocated sediment sample locations. Individual samples are designated with the matrix identifier “SW” for surface water and “SE” for sediment in the data tables.

4.6.5.1 Wetland A

VOCs, SVOCs, PAHs, PCBs, and pesticides were not detected in Wetland A surface-water samples.

Aluminum, arsenic, calcium, iron, lead, magnesium, manganese, potassium, sodium, and vanadium were detected in Wetland A surface-water samples. Detected concentrations of vanadium were lower than the upstream non-detect reporting limits. Iron, lead, and manganese were the only constituents detected at concentrations above the screening criteria.

4.6.5.2 Wetland B

Chloromethane was detected in one surface-water sample below the screening criterion. All other VOCs analyzed for were not detected in Wetland B surface-water samples.

PAHs were detected in one surface-water sample from Wetland B. All PAHs were detected at concentrations less than the screening criteria, except chrysene. No other PAHs were detected in the samples.

Bis(2-ethylhexyl)phthalate was detected in one surface-water sample from Wetland B. The concentration of bis(2-ethylhexyl)phthalate was below the screening criterion. The remaining SVOCs were not detected in Wetland B surface-water samples.

PCBs were not detected any of the surface-water samples collected.

Pesticides were detected in two surface-water samples from Wetland B. One beta-BHC and one endosulfan sulfate concentration were detected at concentrations less than the screening criteria in each sample. All other pesticides were not detected in the samples collected.

All metals analyzed were detected in surface-water samples, except antimony, beryllium, cadmium, copper, mercury, nickel, selenium, silver, and thallium. Cobalt, magnesium, vanadium, barium, and chromium were detected in a number of Wetland B surface-water samples at concentrations below the upstream non-detect reporting limits. Aluminum, cadmium, cobalt, cyanide, iron, lead, manganese, and zinc were detected at concentrations greater than the screening criteria in unfiltered samples. Concentrations in filtered samples typically were less than the screening criteria.

4.6.5.3 Wetland C

Surface-water samples were collected from six locations from Wetland C as shown on Figure 2-6. (Note: no surface-water samples were collected from SE-063-WT or SE-017-WT.)

Samples had detected concentrations of chloromethane at concentrations below the screening criterion. The remaining VOCs analyzed for were not detected in Wetland C surface-water samples.

Four PAHs were detected in one surface-water sample (SE-014-WT) from Wetland C. The total PAH concentration was 0.64 µg/L and only chrysene was detected at a concentration (0.11 µg/L) above its screening criterion.

SVOCs and PCBs were not detected in surface-water samples from Wetland C.

One pesticide (beta-BHC) was detected in two surface-water samples from Wetland C at concentrations less than its screening criterion.

Each of the metals analyzed for were detected in Wetland C surface-water samples, except antimony, barium, beryllium, copper, mercury, nickel, selenium, silver, and thallium. Aluminum, cadmium, cobalt, cyanide, iron, lead, manganese, and zinc were detected at concentrations greater than the screening criterion in unfiltered samples. Concentrations in filtered samples typically were less than the screening criteria.

4.6.5.4 Wetland D

Chloromethane was detected in one surface-water sample at a concentration less than its screening criterion. The remaining VOCs analyzed for were not detected in Wetland D surface-water samples.

Anthracene was detected in one surface-water sample at a concentration less than its screening criterion. Other SVOCs, PCBs, and pesticides were not detected in surface-water samples from Wetland D.

Each of the metals analyzed for were detected in Wetland D surface-water samples, except antimony, barium, beryllium, copper, mercury, nickel, selenium, thallium, and zinc. Cobalt, vanadium, and chromium were detected in a number of Wetland D surface-water samples at concentrations below the upstream reporting limits; chromium was not detected in the upstream samples. Aluminum, arsenic, manganese, and silver were detected at concentrations above the screening criteria in unfiltered samples.

4.7 Fish Tissue

This section presents an overview of fish tissue data collected in field investigations conducted at the site and the surrounding area. Fish tissue data are discussed in terms of being of relevance to the evaluation of the HHRA (ingestion pathway), which is represented by the analytical results from the fillet of the fish, and of relevance to evaluation of ecological risk (in terms of risk to prey species through dietary exposure), which is represented by the analytical results from the composite whole body and calculated whole body fish tissues. Calculated whole body analysis is the mathematical combination of the result obtained for the carcass (offal left over after removal of the edible fillet) of the fish plus the result of the fillet analysis for the same fish sample. Composite whole body fish samples represent results obtained from analysis of a large number of whole small fish.

Fish tissue samples were collected from six distinct areas: Blackstone River Area 1 (beginning approximately 1.25 miles upstream of the Ashton Dam and extending for approximately 0.5 miles downstream), Blackstone River Area 2 (beginning at the Ashton Dam and extending approximately 0.65 miles downstream), Blackstone River Area 3 (located within the boundaries of OU2), Pond A (P-1) (located on the Unnamed Island), Pond F (P-2) (located at the southwestern extent of OU2), and P-6 (located approximately 1.6 miles northwest of the Ashton Dam, not on or near the Blackstone River). Fish tissue data are also discussed by five classes of constituents: PAHs, SVOCs other than PAHs, PCBs, pesticides, and metals. These data are presented in Tables 4-38 through 4-49. Additionally, the tissue samples are further broken down and discussed by the species of fish analyzed. Fish species collected for analysis included Bluegill, Pumpkinseed, White Sucker, Common Shiner, and Largemouth Bass. No species of trout were observed during the investigation.

4.7.1 Blackstone River Area 1

Twenty-four fish tissue samples were generated from the fish collected in the Blackstone River Area 1 (BR-1) and analyzed for PAHs, SVOCs other than PAHs, PCB homologs, pesticides, metals, and percent lipids. The calculated whole body samples were generated through a mathematical addition of the fillet and carcass results for the same fish. Fillet, carcass, and calculated whole body samples represent individual fish or composites of several fish, as needed, to generate sufficient tissue for chemical analysis. These generated fillet and carcass samples (and calculated whole body results) for eight white suckers, five blue gills, and three pumpkin seeds. Eight additional samples were generated through whole body composites of the common shiner. Calculated whole body (combination of carcass and fillet result), fillet, and composite whole body sample results are presented in Tables 4-39, 4-41, 4-43, and 4-45. Carcass results are presented in Tables 4-46 through 4-49.

4.7.1.1 Calculated Whole Body Analysis

PAHs were detected in seven of the calculated whole body samples. Four of the largemouth bass and three of the pumpkin seed species had PAH detections. Acenaphthene, benzo(a)pyrene, dibenz(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, and/or phenanthrene were detected below the ecological screening criteria in one or more samples. Phenanthrene was consistently detected in the pumpkin seed species at concentrations below the ecological screening criterion. All other PAHs were not detected, and no PAHs were detected in the blue gill samples.

Di-n-butyl phthalate was detected above the ecological screening criterion in BR1-FI-125 and BR1-FI-126 (blue gill) at concentrations of 2,700 µg/kg and 2,800 µg/kg, respectively. Benzaldehyde was detected at concentrations below the ecological screening criterion in all of the samples except BR1-FI-115 (white sucker), and bis(2-ethylhexyl)phthalate was detected below the screening criteria in all the samples except BR1-FI-121 (blue gill). Higher concentrations that remained below the screening criteria of benzaldehyde were consistently detected in the blue gill samples.

PCBs were detected in all of the calculated whole body samples (white sucker, blue gill, and pumpkin seed species). All analyzed PCBs were detected, excluding monochlorobiphenyls. Dichlorobiphenyl was only detected in BR1-FI-128. Total PCBs ranged from 340 µg/kg (BR1-FI-120) to 2,900 µg/kg (BR1-FI-114), which is above the ecological screening criterion for total homologs.

Pesticides were detected in all of the calculated whole body samples collected. 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were detected above the ecological screening criterion in all samples collected, except for 4,4'-DDT, which was detected at a concentration below the screening criterion in BR1-FI-118. All other pesticides were not detected above the ecologic screening criterion in the samples.

Metals were detected in all of the calculated whole body samples collected. Five constituents (aluminum, chromium, mercury, selenium, and zinc) were consistently detected above the ecological screening criterion. Two samples, BR1-FI-124 and BR1-FI-128, had detections of aluminum at a concentration below the screening criteria. All other metals were detected at concentrations below their applicable ecological screening criterion. Antimony, beryllium, silver, and thallium were not detected.

4.7.1.2 Composite Whole Body Analysis

PAHs were not detected in any of the composite whole body samples.

A single SVOC (benzaldehyde) was detected in all composite whole body samples. Benzaldehyde was detected below the ecological screening criterion with an estimated concentration range of 1,300 µg/kg (BR1-FI-136) to 3,700 µg/kg (BR1-FI-131).

PCBs were detected in all of the composite whole body samples. All analyzed PCBs were detected, except monochlorobiphenyls, dichlorobiphenyls, and decachlorobiphenyl. Total PCBs ranged from 1,100 µg/kg (BR1-FI-194) to 1,700 µg/kg (BR1-FI-131), which is above the ecological screening criterion.

Pesticides were detected in all of the composite whole body samples collected. Alpha-chlordane, dieldrin, endosulfan I, endosulfan sulfate, gamma-BHC, gamma-chlordane, and methoxychlor were detected in samples below the ecological screening criterion. 4,4'-DDD and 4,4'-DDE were detected at concentrations greater than the ecological screening criterion in all the samples. All other pesticides were not detected.

Metals were detected in all of the composite whole body samples collected. Five constituents (aluminum, chromium, mercury, selenium, and zinc) were detected above the ecological screening criterion in one or more samples. All other metals were detected at concentrations below their applicable ecological screening criterion. Antimony, beryllium, silver, and thallium were not detected.

4.7.1.3 Fillet Analysis

PAHs were detected in eight of the 16 fillet samples. White sucker fish samples and pumpkin seed samples contained phenanthrene, fluoranthene, and acenaphthene at levels below their respective screening criteria. One white sucker fish sample (BR1-Fl-113) contained naphthalene below the ecological screening criterion. Benzo(a)pyrene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were detected in one white sucker fish sample (BR1-Fl-114) at concentrations of 8.6 µg/kg, 9.8 µg/kg, and 8.6 µg/kg, respectively. These concentrations are above their respective screening criteria. No other PAHs were detected in the fillet samples. Total PAHs ranged from non-detect to 45.1 µg/kg. In addition, no PAHs were detected in any of the blue gill samples collected.

SVOCs were detected in 15 of 16 fillet samples. White sucker, blue gill, and pumpkin seed samples contained at least one of three constituents (benzaldehyde, bis(2-ethylhexyl)phthalate, or isophorone) at levels below their respective screening criteria. No other SVOCs were detected in the fillet samples collected.

PCBs were detected in all fillet samples. All analyzed PCBs were detected in all species of fish, except for monochlorobiphenyls and dichlorobiphenyls. Total PCBs in the samples ranged from 70 µg/kg (BR1-FI-126) to 1,300 µg/kg (BR1-FI-114). All of the samples contained total PCBs above the human consumption screening criterion.

Pesticides were detected in all fillet samples. Seven constituents (4,4'-DDD, 4,4'-DDT, alpha-chlordane, endosulfan I, endosulfan sulfate, gamma-BHC, and gamma-chlordane) were detected in all species of fish at levels below their screening criteria. Three constituents (4,4'-DDE, dieldrin, and heptachlor epoxide) were detected in all species of

fish at levels above their screening criteria. All other pesticides were not detected in the samples collected.

Metals were detected in all of the samples. All metals, excluding aluminum, antimony, barium, beryllium, silver, and thallium, were detected in at least one of the samples. Arsenic, chromium, and mercury were detected above their respective screening criteria in all species of fish. All other compounds were detected at levels below their screening criteria, except selenium, which was detected above the human consumption screening criterion in one sample (BR1-FI-115).

4.7.2 Blackstone River Area 2

Sixteen fillet and carcass samples were collected and analyzed for PAHs, SVOCs other than PAHs, PCBs, pesticides, and metals. The calculated whole body samples were comprised of the 16 fillet and carcass samples. Eight different composite samples were collected and analyzed for the parameters discussed above. Fillet, carcass, and calculated whole body samples were comprised of eight white suckers and largemouth bass species, while composite whole body samples were comprised of common shiners. Carcass results are presented in Tables 4-46 through 4-49. Calculated whole body (combination of carcass and fillet result), fillet, and composite sample results are presented in Tables 4-39, 4-41, 4-43, and 4-45.

4.7.2.1 Calculated Whole Body Analysis

PAHs were detected in six of the 16 calculated whole body samples. Two of the largemouth bass and four of the white suckers had PAH detects. All of the PAHs were detected except for dibenz(a,h)anthracene and fluoranthene. Acenaphthene was the most commonly detected constituent with concentrations ranging from 200 µg/kg (BR2-FI-73) to 230 µg/kg (BR2-FI-85). All PAHs detected in the samples were at concentrations below the ecological screening criteria.

Benzaldehyde was detected in all calculated whole body samples below the screening criteria with estimated concentrations ranging from 370 µg/kg (BR2-FI-85) to 3,600 µg/kg (BR2-FI-79). Higher concentrations were detected in the largemouth bass samples with estimated concentrations ranging from 1,200 µg/kg (BR2-FI-77) to 3,600 µg/kg (BR2-FI-79). Bis(2-ethylhexyl)phthalate and isophorone were also detected below the ecological screening criteria in the samples. All other SVOCs were not detected in the samples collected.

PCBs were detected in all of the calculated whole body samples. All analyzed PCBs were detected, excluding monochlorobiphenyls and dichlorobiphenyls. Total PCBs ranged from 1,500 µg/kg (BR2-FI-76) to an estimated concentration of 4,400 µg/kg (BR2-FI-85). All samples had detections of total PCBs above the ecological screening criterion.

Pesticides were detected in all of the calculated whole body samples collected. 4,4'-DDD and 4,4'-DDE were detected above the ecological screening criteria. Three samples, BR2-FI-76, BR2-FI-82, and BR2-FI-84, had detected concentrations of 4,4'-DDT below the ecological screening criterion. All other pesticides were either not detected or detected at concentrations below the applicable ecological screening criteria.

Metals were detected in all of the calculated whole body samples collected. Aluminum, chromium, mercury, and selenium were detected above their ecological screening criteria in most samples. Zinc was also detected above the ecological screening criterion in four samples (BR2-FI-81, BR2-FI-82, BR2-FI-86, and BR2-FI-88). All other metals were detected at concentrations below their applicable ecological screening criteria. Antimony, beryllium, silver, and thallium were not detected.

4.7.2.2 Composite Whole Body Analysis

PAHs were not detected in any of the composite whole body samples.

Benzaldehyde was detected in seven of eight composite whole body samples below the ecological screening criterion at a concentration range of 1,100 (BR2-FI-94) to 2,900 µg/kg (BR2-FI-93). No other SVOCs were detected in the samples collected.

PCBs were detected in all of the composite whole body samples. All analyzed PCBs were detected in at least one of the samples, excluding monochlorobiphenyls and dichlorobiphenyls. Total PCBs ranged from 1,400 µg/kg (BR2-FI-92) to 1,900 µg/kg (BR2-FI-90), which are above the ecological screening criterion.

Pesticides were detected in all of the collected composite whole body samples. Alpha-chlordane, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, gamma-BHC, gamma-chlordane, and methoxychlor were detected in at least one of the samples at levels below their ecological screening criteria. 4,4'-DDD and 4,4'-DDE were detected at concentrations greater than the ecological screening criteria in all collected samples. All other pesticides were not detected.

Metals were detected in all of the composite whole body samples. Aluminum, mercury, selenium, and zinc were detected above the ecological screening criteria. Chromium was detected above the ecological screening criterion in two samples, BR2-FI-89 and BR2-FI-95. All other metals were detected at concentrations below their applicable ecological screening criteria. Antimony, beryllium, silver, and thallium were not detected.

4.7.2.3 Fillet Analysis

PAHs were detected in six of the 16 fillet samples. Two largemouth bass samples (BR2-FI-73 and BR2-FI-74) contained dibenz(a,h)anthracene at levels above the human consumption screening criterion. Additionally, these samples had other PAHs detected below applicable screening criteria and total PAHs concentrations of 28.5 µg/kg and 63.7 µg/kg, respectively. All other largemouth bass samples had no detections of PAHs.

Two white sucker samples had detections of either acenaphthene or acenaphthalene at levels below the applicable screening criteria. One white sucker sample (BR2-FI-84) had detections of all PAHs, except fluoranthene and dibenz(a,h)anthracene, and contained concentrations of benzo(a)anthracene, benzo(b)fluoranthene, and benzo(a)pyrene above the applicable ecological screening criteria. BR2-FI-86 (white sucker) had detections of acenaphthene, benzo(k)fluoranthene, and chrysene below screening criteria, and a detection of benzo(b)fluoranthene above the screening criterion. Total PAHs for the four white sucker samples ranged from 9.3 µg/kg to 377 µg/kg.

SVOCs were detected in 10 of 16 fillet samples. White sucker and largemouth bass samples contained at least one of two constituents [bis(2-ethylhexyl)phthalate and/or isophorone] at levels below their respective screening criteria. One largemouth bass sample BR2-FI-74 contained hexachlorobenzene at a concentration above the applicable human consumption screening criterion. Two white sucker samples (BR2-FI-81 and BR2-FI-84) contained bis(2-ethylhexyl)phthalate at a concentration above the human consumption screening criterion. No other SVOCs were detected in the collected fillet samples.

PCBs were detected in all the fillet samples. All largemouth bass samples had detections below the applicable screening criteria for all analyzed PCBs, except for monochlorobiphenyls, dichlorobiphenyls, and decachlorobiphenyl, which were not detected. Only one largemouth bass sample (BR2-FI-73) had a detection of trichlorobiphenyls. White sucker samples had detections for all PCBs analyzed except for monochlorobiphenyls, dichlorobiphenyls, and trichlorobiphenyls. Total PCBs in largemouth bass ranged from 260 µg/kg (BR2-FI-76) to 570 µg/kg (BR2-FI-75), and

white sucker samples ranged from 680 µg/kg (BR2-FI-81) and 2,000 (BR2-FI-82). All samples collected had total PCB concentrations above the total homolog human consumption screening criterion.

Pesticides were detected in all fillet samples. 4,4'-DDD, 4,4'-DDT, alpha-chlordane, endosulfan I, endosulfan sulfate, gamma-BHC, and gamma-chlordane were detected in all species of fish at levels below their screening criteria. 4,4'-DDE, dieldrin, and heptachlor epoxide were detected in all species of fish at levels above their screening criteria. Additionally, BR2-FI-77 had a detection of heptachlor above the screening criteria; BR2-FI-81, BR2-FI-82, and BR2-FI-83 had detections of 4,4'-DDD above the screening criterion; and BR2-FI-82 and BR2-FI-84 had detections of alpha-chlordane above the screening criterion. All other pesticides were not detected in the samples collected.

Metals were detected in all of the samples. In largemouth bass, all metals, except aluminum, antimony, barium, beryllium, cadmium, lead, silver, thallium, and vanadium, were detected in at least one of the samples collected. In white suckers, all metals, except aluminum, antimony, barium, lead, silver, thallium, and vanadium, were detected in at least one of the collected samples. Lead was detected below the screening criterion in only one white sucker sample. Arsenic, chromium, and mercury were detected above their respective screening criteria in all species of sampled fish. All other metals were detected below the human consumption screening criteria, except one sample (BR2-FI-76) contained selenium at an estimated concentration above the screening criterion.

4.7.3 Blackstone River Area 3

Sixteen fillet and carcass samples were collected and analyzed for PAHs, SVOCs other than PAHs, PCBs, pesticides, and metals. The calculated whole body samples were composed of the 16 fillet and carcass samples. Eight different composite samples were collected and analyzed for the parameters discussed above. Fillet, carcass, and calculated whole body samples were composed of eight white suckers and eight largemouth bass species, while composite whole body samples were composed of common shiners. Carcass results are presented in Tables 4-46 through 4-49. Calculated whole body (combination of carcass and fillet result), fillet, and composite sample results are presented in Tables 4-39, 4-41, 4-43, and 4-45.

4.7.3.1 Calculated Whole Body Analysis

PAHs were detected in five of the 16 calculated whole body samples. Three of the largemouth bass and two of the white suckers had PAH detections. All PAHs were detected in at least one sample except for 2-methylnaphthalene, acenaphthylene, and benzo(g,h,i)perylene. The detected concentrations were below the ecological screening criteria for all detected PAHs.

Benzaldehyde was detected in all the calculated whole body samples. Benzaldehyde was detected below the ecological screening criterion with estimated concentrations ranging from 450 µg/kg (BR3-FI-9) to 5,800 µg/kg (BR3-FI-13). Isophorone was also detected below the ecological screening criterion in two of the samples. All other SVOCs were not detected in the samples collected.

PCBs were detected in all of the calculated whole body samples. All analyzed PCBs were detected except for monochlorobiphenyls and dichlorobiphenyls. Total PCBs ranged from 1,200 µg/kg (BR3-FI-2) to 3,500 µg/kg (BR3-FI-7). All samples contained total PCB concentrations above the ecologic screening criterion.

Pesticides were detected in all of the calculated whole body samples collected. 4,4'-DDD and 4,4'-DDE were detected above the ecological screening criteria in most samples. 4,4'-DDT was detected above the ecological screening criterion in BR3-FI-1, BR3-FI-2, BR3-FI-10, and BR3-FI-16, with concentrations ranging from 3.1 µg/kg (BR3-FI-10) to 22 µg/kg (BR3-FI-2). Dieldrin was also detected above the ecological screening criterion in BR3-FI-16. All other pesticides were not detected or were detected at concentrations below the applicable ecological screening criteria.

Metals were detected in all of the calculated whole body samples collected. Chromium, mercury, selenium, and zinc were consistently detected above the ecological screening criteria. Aluminum was also detected above the ecological screening criterion in samples BR3-FI-10 through BR3-FI-13 and BR3-FI-15. BR3-FI-10 had detections above the ecological screening criteria for aluminum, chromium, and mercury, and BR3-F1-16 had detections above the ecological screening criteria for mercury and zinc. Aluminum was only detected above the ecological screening criterion in the white sucker species samples. All other metals were detected at concentrations below their applicable ecological screening criteria. Antimony, beryllium, silver, and thallium were not detected.

4.7.3.2 Composite Whole Body Analysis

PAHs were not detected in any of the composite whole body samples.

SVOCs were detected in all eight whole body composite samples. Benzaldehyde was detected at levels below the ecological screening criterion in all of the samples. 4-Chloro-3-methylphenol, 4-nitrophenol, and bis(2-ethylhexyl)phthalate were detected at concentrations below the applicable ecological screening criteria in sample BR3-FI-17. No other SVOCs were detected in the samples.

PCBs were detected in all of the composite whole body samples. All analyzed PCBs were detected in the samples, except for monochlorobiphenyls, dichlorobiphenyls, and decachlorobiphenyl. Total PCBs ranged from 740 µg/kg (BR3-FI-23) to 1,600 µg/kg (BR2-FI-19 and BR2-FI-22). All samples collected contained total PCB concentrations above the ecological screening criterion.

Pesticides were detected in all of the composite whole body samples. Alpha-chlordane, dieldrin, endosulfan I, endosulfan sulfate, gamma-BHC, and gamma-chlordane were detected in at least one of the samples with all detected concentrations below their respective ecological screening criteria. 4,4'-DDD and 4,4'-DDE were detected at concentrations greater than the ecological screening criteria in all the samples. All other pesticides were not detected in the samples collected.

Metals were detected in all of the composite whole body samples. Aluminum, chromium, mercury, selenium, and zinc were detected above the ecological screening criteria. All other metals were detected at concentrations below their applicable ecological screening criterion. Antimony, beryllium, silver, and thallium were not detected.

4.7.3.3 Fillet Analysis

PAHs were detected in five of the 16 fillet samples. Two largemouth bass samples (BR3-FI-1 and BR2-FI-2) contained benzo(a)pyrene, benzo(a)anthracene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene at levels above their screening criteria. BR3-FI-1 also contained benzo(b)fluoranthene above the ecological screening criterion, and BR3-FI-3 contained dibenz(a,h)anthracene above the ecological screening criterion. Samples BR3-FI-1, BR2-FI-2, and BR3-FI-3 contained total PAH concentrations of 149 µg/kg, 91.3 µg/kg, and 8.4 µg/kg, respectively. All other largemouth bass samples had no detections of PAHs. Two white sucker samples had detections of either acenaphthene and naphthalene or fluoranthene and pyrene at levels

below applicable ecological screening criteria. All other white sucker samples had no detections of PAHs.

SVOCs were detected in two of 16 fillet samples. Two largemouth bass samples (BR3-FI-2 and BR3-FI-5) contained concentrations of isophorone below the ecological screening criterion. All other samples had no detections of SVOCs.

PCBs were detected in all fillet samples. All largemouth bass samples had detections for all analyzed PCBs, except for monochlorobiphenyls, dichlorobiphenyls, and decachlorobiphenyls. White sucker samples had detections for all PCBs analyzed, except for monochlorobiphenyls and dichlorobiphenyls. Total PCBs in largemouth bass and white sucker samples ranged from 250 µg/kg (BR3-FI-2) to 510 µg/kg (BR3-FI-6) and from 590 µg/kg (BR3-FI-15) to 1,100 µg/kg (BR3-FI-12 and BR3-FI-13), respectively. All samples exhibited total PCB concentrations above the human consumption screening criterion.

Pesticides were detected in all fillet samples. In largemouth bass samples, 4,4'-DDD, 4,4'-DDT, alpha-chlordane, endosulfan I, endosulfan II, endosulfan sulfate, gamma-BHC, and gamma-chlordane were detected at levels below their ecological screening criteria. 4,4'-DDE and dieldrin were detected at levels above their ecological screening criteria. In white sucker fish, 4,4'-DDD, 4,4'-DDT, alpha-chlordane, endosulfan sulfate, and gamma-chlordane were detected at levels below their ecological screening criteria. 4,4'-DDE, dieldrin, and heptachlor epoxide were detected at levels above their ecological screening criteria. Additionally, in three samples (BR3-FI-10, BR3-FI-13, and BR3-FI-16), 4,4'-DDD, alpha-chlordane, and/or 4,4'-DDT were detected at levels above their respective ecological screening criteria. All other pesticides were not detected.

Metals were detected in all of the samples. In largemouth bass, all metals, except antimony, barium, beryllium, cadmium, lead, silver, and thallium, were detected in at least one of the samples. In white suckers, all metals, except antimony, beryllium, lead, silver, thallium, and vanadium, were detected in at least one of the samples. Arsenic, chromium, and mercury were detected above their respective ecological screening criteria in all species of fish sampled. All other detected compounds were detected at levels below the human consumption screening criteria.

4.7.4 Pond A (P-1)

Sixteen fillet and carcass samples were collected and analyzed for PAHs, SVOCs other than PAHs, PCBs, pesticides, and metals. The calculated whole body samples were

composed of the 16 fillet and carcass samples. Eight composite samples were collected and analyzed for the parameters discussed above. Fillet, carcass, and calculated whole body samples were composed of eight white suckers and eight largemouth bass species, while composite whole body samples were composed of blue gills. Carcass results are presented in Tables 4-46 through 4-49. Calculated whole body (combination of carcass and fillet result), fillet, and composite sample results are presented in Tables 4-39, 4-41, 4-43, and 4-45.

4.7.4.1 Calculated Whole Body Analysis

PAHs were detected in nine of the 16 calculated whole body samples. Two of the largemouth bass and seven of the white suckers had PAH detects. Benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and phenanthrene were detected in both of the largemouth bass samples. Phenanthrene was detected in all seven of the white suckers with detection concentrations ranging from 190 µg/kg (P1-FI-38) to 230 µg/kg (P1-FI-36). Acenaphthene and fluorene were also detected in P1-FI-39. All detected concentrations were below the ecological screening criteria.

Benzaldehyde was detected in all the calculated whole body samples, except in sample P1-FI-39. Benzaldehyde was detected below the ecologic screening criterion with estimated concentrations ranging from 2,400 µg/kg (P1-FI-34) to 20,000 µg/kg (P1-FI-31). Isophorone was also detected at levels below the ecologic screening criterion in all of the largemouth bass samples and in one white sucker sample (P1-FI-33).

PCBs were detected in all of the calculated whole body samples. All analyzed PCBs were detected in all samples, excluding monochlorobiphenyls, dichlorobiphenyls, and trichlorobiphenyls. P1-FI-25, P1-FI-26, P1-FI-27, and P1-FI-29 had detections for trichlorobiphenyls. Total PCBs ranged from 600 µg/kg (P1-FI-38 and 34) to 1,700 µg/kg (P1-FI-36). All samples collected had total PCB concentrations above the ecologic screening criterion.

Pesticides were detected in all of the collected calculated whole body samples. 4,4'-DDD and 4,4'-DDE were detected above the ecological screening criteria. 4,4'-DDT, alpha chlordane, dieldrin, endosulfan I, endosulfan sulfate, and gamma chlordane were also detected in the samples, but were below the ecological screening criteria. All other pesticides were not detected in the samples collected.

Metals were detected in all of the calculated whole body samples. Aluminum, chromium, mercury, selenium, and zinc were detected above the ecological screening criteria. Aluminum was mainly detected above the ecologic screening criterion in the white sucker species, but was detected in one largemouth bass (P1-FI-32). Arsenic was detected above the ecologic screening criterion in one sample, P1-FI-33. P1-FI-30 only had detections above the ecologic screening criteria for chromium and mercury. All other metals were detected at concentrations below their applicable ecological screening criteria. Antimony, beryllium, silver, and thallium were not detected.

4.7.4.2 Composite Whole Body Analysis

PAHs were not detected in any of the composite whole body samples.

Benzaldehyde was detected in all composite whole body samples. Benzaldehyde was detected below the ecologic screening criterion at a concentration range of 4,800 µg/kg (P1-FI-46) to 8,500 µg/kg (P1-FI-44). All other SVOCs were not detected in the samples collected.

PCBs were detected in all of the composite whole body samples. All analyzed PCBs were detected in the samples, except for monochlorobiphenyls, dichlorobiphenyls, and decachlorobiphenyls. Total PCBs ranged from 320 µg/kg (P1-FI-43) to 420 µg/kg (P1-FI-41), which is above the ecological screening criterion.

Pesticides were detected in all of the composite whole body samples. Alpha-chlordane, dieldrin, endosulfan II, endosulfan sulfate, and gamma-chlordane were detected in at least one of the samples with all concentrations below their respective ecological screening criteria. 4,4'-DDD and 4,4'-DDE were detected at concentrations greater than the ecological screening criterion in all samples. All other pesticides were not detected in the samples collected.

Metals were detected in all of the composite whole body samples. Aluminum, mercury, and zinc were detected above the ecological screening criteria. Chromium was detected above the ecologic screening criterion in three samples (P1-FI-41, P1-FI-42, and P1-FI-46). All other metals were detected at concentrations below their applicable ecological screening criteria. Antimony, beryllium, silver, and thallium were not detected.

4.7.4.3 Fillet Analysis

PAHs were detected in nine of the 16 fillet samples. Two largemouth bass samples (P1-FI-25 and P1-FI-26) contained dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene at levels above their screening criteria. P1-FI-25 also contained benzo(a)pyrene, benzo(a)anthracene, and benzo(b)fluoranthene concentrations above their applicable screening criteria. All other largemouth bass samples had no detections for PAHs. All white sucker samples had detections of phenanthrene below the screening criterion, except P1-FI-34, which had no detections. P1-FI-39 also had detections of acenaphthene and fluorene below the screening criterion. Total PAHs for white suckers ranged from 10 µg/kg (P1-FI-33) to 15 µg/kg (P1-FI-36).

SVOCs were detected in nine of 16 fillet samples. All largemouth bass samples had detections of isophorone at concentrations below the ecological screening criterion. One largemouth bass sample (P1-FI-25) had detections of 4-nitrophenol and 4-chloro-3-methylphenol at concentrations below the screening criteria. All other SVOCs were not detected in the largemouth bass samples. One white sucker sample (P1-FI-33) had a detection of isophorone at a concentration below the ecological screening criterion. All other white sucker samples had no detections of SVOCs.

PCBs were detected in all fillet samples. All largemouth bass samples had detections of all analyzed PCBs, except for monochlorobiphenyls and dichlorobiphenyls. White sucker samples had detections of all analyzed PCBs, except for monochlorobiphenyls, dichlorobiphenyls, and trichlorobiphenyls. Total PCBs in largemouth bass samples ranged from 180 µg/kg (P1-FI-30) to 740 µg/kg (P1-FI-25) and white sucker samples ranged from 280 µg/kg (P1-FI-38) and 2,000 µg/kg (P1-FI-39), respectively. All samples collected contained total PCB concentrations above the human consumption screening criterion.

Pesticides were detected in all fillet samples. In largemouth bass, 4,4'-DDD, alpha-chlordane, endosulfan sulfate, and gamma-chlordane were detected at levels below their screening criteria. 4,4'-DDE and dieldrin were detected at levels above their ecological screening criteria. In white sucker samples, 4,4'-DDD, alpha-chlordane, endosulfan I, endosulfan sulfate, and gamma-chlordane were detected at levels below their screening criteria. 4,4'-DDE and dieldrin were detected at levels above their ecological screening criteria. Additionally, one sample (P1-FI-39) had detections of 4,4'-DDD, alpha-chlordane, gamma-chlordane, and heptachlor above the screening criteria. All other pesticides were not detected in fillet samples.

Metals were detected in all of the samples. In largemouth bass, all metals, except antimony, barium, beryllium, cadmium, lead, silver, and thallium, were detected in at least one sample. In white suckers, all metals, except antimony, beryllium, silver, and thallium, were detected in at least one sample. Chromium and mercury were detected above their respective screening criteria in largemouth bass and white sucker fish. Arsenic was detected above the screening criterion in white sucker fish. White sucker sample P1-FI-36 had a detection of iron above the screening criterion, and white sucker sample P1-FI-39 had detections of cadmium, iron, and manganese above their respective screening criteria. All other metals were detected at concentrations below the human consumption screening criteria.

4.7.5 Pond F (P-2)

Sixteen fillet and carcass samples were collected and analyzed for PAHs, SVOCs other than PAHs, PCBs, pesticides, and metals. The calculated whole body samples were composed of the 16 fillet and carcass samples. Eight composite samples were collected and analyzed for the parameters discussed above. Fillet, carcass, and calculated whole body samples were composed of eight white suckers, seven blue gill, and one pumpkin seed species, while composite whole body samples were composed of gold shiners. Carcass results are presented in Tables 4-46 through 4-49. Calculated whole body (combination of carcass and fillet result), fillet, and composite sample results are presented in Tables 4-39, 4-41, 4-43, and 4-45.

4.7.5.1 Calculated Whole Body Analysis

PAHs were detected in all of the calculated whole body samples. 2-Methylnaphthalene was detected in all of the blue gill species at concentrations ranging from 190 µg/kg (P2-FI-49) to 270 µg/kg (P2-FI-53). Acenaphthene and phenanthrene were also detected in the blue gill samples. The pumpkin seed species (P2-FI-56) contained 2-methylnaphthalene at a concentration of 220 µg/kg. The white sucker samples contained a variety of PAHs, including 2-methylnaphthalene, benzo(g,h,i)perylene, fluorene, naphthalene, and phenanthrene. Naphthalene was detected in seven of the white sucker samples with concentrations ranging from 190 µg/kg (P2-FI-63) to 210 µg/kg (P2-FI-57). All PAHs were detected at concentrations below the ecologic screening criteria.

Benzaldehyde was detected in all calculated whole body samples below the screening criteria with concentrations ranging from 2,600 µg/kg (P2-FI-63) to 43,000 µg/kg (P2-FI-53). No other SVOCs were detected in the samples collected.

PCBs were detected in all of the calculated whole body samples. All analyzed PCBs were detected, except for monochlorobiphenyls and dichlorobiphenyls. P2-FI-50, P2-FI-56, and P2-FI-58 did not have detections of decachlorobiphenyls. Additionally, trichlorobiphenyl was not detected in P2-FI-52. Total PCBs ranged from 580 µg/kg (P2-FI-50) to 2,000 µg/kg (P2-FI-59). All samples collected contained total PCB concentrations above the ecologic screening criterion.

Pesticides were detected in all of the calculated whole body samples. 4,4'-DDD and 4,4'-DDE were detected above the ecological screening criteria. Alpha-chlordane, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, and gamma-chlordane were also detected at levels below their screening criteria in the samples. All other pesticides were not detected in the samples.

Metals were detected in all of the calculated whole body samples. Aluminum, chromium, mercury, selenium, and zinc were detected above the ecological screening criteria. P2-FI-49 through P2-FI-55 and P2-FI-60 did not contain aluminum above the ecological screening criterion. Only mercury was detected above the ecological screening criterion in P2-FI-64. All other metals were detected at concentrations below the applicable ecological screening criterion. Antimony, beryllium, silver, and thallium were not detected.

4.7.5.2 Composite Whole Body Analysis

PAHs were not detected in any of the composite whole body samples.

Benzaldehyde was detected in all composite whole body samples below the ecological screening criterion at a concentration range of 1,600 µg/kg (P2-FI-70) to 2,900 µg/kg (P2-FI-71). All other SVOCs were not detected in the samples.

PCBs were detected in all of the composite whole body samples. All analyzed PCBs were detected in at least one sample, except for monochlorobiphenyls, dichlorobiphenyls, and decachlorobiphenyls. Total PCBs ranged from 460 µg/kg (P2-FI-71) to 800 µg/kg (P2-FI-68), which are all above the ecological screening criterion.

Pesticides were detected in all of the composite whole body samples. Alpha-chlordane, dieldrin, endosulfan I, endosulfan sulfate, and gamma-chlordane were detected in all the samples at levels below the ecological screening criteria. 4,4'-DDD and 4,4'-DDE were detected at concentrations above the ecological screening criteria in all samples. All other pesticides were not detected.

Metals were detected in all of the composite whole body samples. Aluminum, mercury, selenium, and zinc were detected above the ecological screening criteria. Chromium was detected above the ecological screening criterion in three samples (P1-FI-41, P1-FI-42, and P1-FI-46). All other metals were detected at concentrations below their applicable ecological screening criteria. Antimony, beryllium, silver, and thallium were not detected.

4.7.5.3 Fillet Analysis

PAHs were detected in all of the fillet samples. In the blue gill samples, 2-methylnaphthalene was detected at concentrations below the screening criterion in all samples. Blue gill samples P2-FI-50 and P2-FI-51 had detections of phenanthrene below the screening criterion, and P2-FI-55 had a detection of acenaphthene below the screening criterion. No other PAHs were detected in the blue gill samples. The sole pumpkin seed fish sample only had detections of 2-methylnaphthalene and phenanthrene that were below the screening criterion. All white sucker samples had detections below the applicable screening criterion of at least one of the following compounds: 2-methylnaphthalene, benzo(g,h,i)perylene, fluorene, naphthalene, and phenanthrene. Total PAHs for all samples ranged from 9.4 µg/kg (P2-FI-49) to 54.6 µg/kg (P2-FI-60). All other PAHs were not detected in the samples.

SVOCs were detected in five of 16 fillet samples. All blue gill and pumpkin seed samples did not have detections of SVOCs. Five white sucker samples had detections of benzaldehyde at estimated concentrations ranging from 270 µg/kg (P2-FI-57) to 490 µg/kg (P2-FI-58), which are below the screening criterion. All other SVOCs were not detected in collected samples.

PCBs were detected in all fillet samples. All blue gill samples had detections of all analyzed PCBs, except for monochlorobiphenyls, dichlorobiphenyls, and decachlorobiphenyls. The pumpkin seed sample had detections of all analyzed PCBs, except for monochlorobiphenyls, dichlorobiphenyls, trichlorobiphenyls, and decachlorobiphenyls. White sucker samples had detections of all analyzed PCBs, except for monochlorobiphenyls and dichlorobiphenyls. Total PCBs in blue gill and pumpkin seed samples ranged from 90 µg/kg (P2-FI-52) to 280 µg/kg (P2-FI-49). Total PCBs in white sucker samples ranged from 410 µg/kg (P2-FI-58) to 1,200 µg/kg (P2-FI-61). All samples collected contained total PCB concentrations above the human consumption screening criterion.

Pesticides were detected in all fillet samples. In blue gill samples, 4,4'-DDD, alpha-chlordane, and endosulfan sulfate were detected at levels below their screening criteria. 4,4'-DDE and dieldrin were detected at levels above their screening criteria. In the sole pumpkin seed sample, endosulfan sulfate was detected at concentrations below the screening criterion. 4,4'-DDE and dieldrin were detected at levels above their screening criteria. In the white sucker samples, 4,4'-DDD, endosulfan sulfate, and gamma-chlordane were detected at levels below their screening criteria. 4,4'-DDE, alpha-chlordane, and dieldrin were detected at levels above their screening criteria. Additionally, 4,4'-DDD was detected above the screening criterion in three samples (P2-FI-59, P2-FI-61, and P2-FI-64). Aldrin was also detected at an estimated concentration above the screening criterion in P2-FI-63. All other pesticides were not detected in the samples.

Metals were detected in all of the samples. In the blue gill samples, all metals were detected at levels below the applicable screening criteria, except antimony, beryllium, lead, silver, and thallium, which were not detected. Arsenic, chromium, mercury, and nickel were detected above their applicable screening criteria. In the pumpkin seed sample, all metals were detected at levels below the applicable ecological screening criteria, except antimony, barium, beryllium, silver, and thallium, which were not detected. Arsenic, mercury, and chromium were detected at levels above their screening criteria. In the white suckers, all metals were detected in at least one of the collected samples at a concentration below the applicable screening criterion, except antimony, barium, beryllium, lead, silver, and thallium, which were not detected. Arsenic, chromium, and mercury were commonly detected above the applicable screening criterion in the collected white sucker samples.

4.7.6 P-6 Area

Eight fillet and carcass samples were collected and analyzed for PAHs, SVOCs other than PAHs, PCBs, pesticides, and metals. The calculated whole body samples were composed of the eight fillet and carcass samples. Eight composite samples were collected and analyzed for the parameters mentioned above. Fillet, carcass, and calculated whole body samples were composed of largemouth bass species, while composite samples were composed of blue gill species. Carcass results are presented in Tables 4-46 through 4-49. Calculated whole body (combination of carcass and fillet result), fillet, and composite sample results are presented in Tables 4-39, 4-41, 4-43, and 4-45.

4.7.6.1 Calculated Whole Body Analysis

PAHs were detected in three of the calculated whole body samples. P6-FI-97 had detected concentrations for all of the PAHs. P6-FI-98 had detected concentrations for all of the PAHs, excluding fluoranthene. P6-FI-104 had a detected concentration for acenaphthylene. All PAHs were detected at concentrations below the ecologic screening criteria.

Benzaldehyde was detected in all the calculated whole body samples (largemouth bass) below the ecological screening criterion with concentrations ranging from 1,700 µg/kg (P6-FI-100) to 6,400 µg/kg (P6-FI-99). Hexachlorobenzene was also detected below the ecological screening criterion in two samples. All other SVOCs were not detected in the samples.

PCBs were detected in all of the calculated whole body samples. All analyzed PCBs were detected, excluding monochlorobiphenyls, dichlorobiphenyls, trichlorobiphenyls, and decachlorobiphenyls. Nonachlorobiphenyl was only detected in one sample, P6-FI-104. Total PCBs ranged from 85 µg/kg (P6-FI-100) to 140 µg/kg (P6-FI-102). All samples collected, except P6-FI-100 and P6-FI-101, contained total PCB concentrations above the ecologic screening criterion.

Pesticides were detected in all of the calculated whole body samples. 4,4'-DDE was detected above the ecological screening criterion for all of the samples. 4,4'-DDD was detected above the screening criteria for all of the samples, excluding P6-FI-97 and P6-FI-100. 4,4'-DDT, alpha chlordane, endosulfan II, endosulfan sulfate, endrin aldehyde, and gamma chlordane were also detected in the samples below their respective ecological screening criteria. All other pesticides were not detected in the samples.

Metals were detected in all of the calculated whole body samples. Mercury was above the ecological screening criterion for all of the samples. Zinc was detected above the ecological screening criterion in P6-FI-97 and P6-FI-100, P6-FI-101, and P6-FI-103. All other metals were either not detected or were detected at levels below the ecologic screening criteria in the samples.

4.7.6.2 Composite Whole Body Analysis

PAHs were not detected in any of the composite whole body samples.

Benzaldehyde was detected in all the composite whole body samples below the ecological screening criterion at a concentration range of 5,800 µg/kg (P6-FI-108) to 15,000 µg/kg (P6-FI-110). All other SVOCs were not detected in the samples.

PCBs were detected in all of the composite whole body samples. All analyzed PCBs were detected in at least one of the samples, except for monochlorobiphenyls dichlorobiphenyls, trichlorobiphenyls, nonachlorobiphenyls, and decachlorobiphenyl. Total PCBs ranged from 56 µg/kg (P6-FI-110) to 120 µg/kg (P6-FI-105). Only P6-FI-105 contained a total PCB concentration above the ecological screening criterion.

Pesticides were detected in all of the composite whole body samples. Alpha chlordane and endosulfan II were detected in the samples at levels below the ecological screening criterion. 4,4'-DDD and 4,4'-DDE were detected at concentrations above the ecological screening criterion in all samples collected. All other pesticides were not detected.

Metals were detected in all of the composite whole body samples. Aluminum, chromium, mercury, and zinc were detected above their ecological screening criteria. All other metals were detected at concentrations below their applicable ecological screening criteria. Antimony, beryllium, cadmium, silver, and thallium were not detected.

4.7.6.3 Fillet Analysis

PAHs were detected in three of the eight fillet samples. One sample (P6-FI-104) had a detection of acenaphthylene at a concentration below the screening criterion. Two samples (P6-FI-97 and P6-FI-98) had detections of all analyzed PAHs. Benzo(a)pyrene, benzo(b)fluoranthene, benzo(a)anthracene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were all detected at levels above the human consumption screening criterion. Total PAHs in the samples ranged from 4.8 µg/kg (P6-FI-104) to 150 µg/kg (P6-FI-97).

SVOCs were detected in four of eight fillet samples. Benzaldehyde was detected in these four samples with concentrations below the screening criterion. Two samples (P6-FI-97 and P6-FI-98) had detections of hexachlorobenzene at levels above the human consumption screening criteria at 7.4 µg/kg and 5.4 µg/kg, respectively. All other SVOCs were not detected in collected samples.

PCBs were detected in all fillet samples. Pentachlorobiphenyls, hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls were detected in all of the samples at concentrations below the applicable screening criteria. Tetrachlorobiphenyls were detected in one sample (P6-FI-104) at a level below the screening criteria. Total PCBs

for the samples ranged between 19 µg/kg (P6-FI-100) and 110 µg/kg (P6-FI-104). P6-FI-104 was the only fillet sample that contained total PCB concentrations above the human consumption screening criterion.

Pesticides were detected in all fillet samples. 4,4'-DDD, endosulfan sulfate and endrin aldehyde were detected at levels below the human consumption ecological screening criteria. 4,4'-DDE was detected at levels above the screening criteria in all samples. All other pesticides were not detected above applicable screening criteria.

Metals were detected in all fillet samples. Calcium, copper, iron, manganese, nickel, potassium, selenium, sodium, and zinc were detected at concentrations below their applicable ecological screening criteria. Chromium and mercury were detected at concentrations above their screening criteria. All other metals were not detected in the samples.

4.8 Air Data

This section presents air data from OU2. Air sample locations are illustrated on Plate 5. Note that the samples represent sampling of J.M. Mills Landfill vents and are not representative of ambient samples at the site, sampled as requested by the USEPA.

The mass of refuse in the J.M. Mills Landfill represents over 95% of the waste present in OU2. Measurements of relative temperature made in the CPT borings also indicate that active decomposition is still occurring in the waste mass. Field screening measurements made at the J.M. Mills Landfill vents during Phase 1A showed that the J.M. Mills Landfill waste mass is still an active source of air emissions.

Three samples and a field duplicate were collected from the J.M. Mills Landfill vents during Phase 1A and analyzed for VOCs, hydrogen sulfide, and selected fixed gases (oxygen, nitrogen, carbon dioxide, carbon monoxide, methane, ethane, and ethene). The results are presented in Table 4-50.

Hydrogen sulfide was not detected above a quantitation limit of 0.082 to 0.12 parts per million by volume (ppmv) nor were carbon monoxide, ethane, or ethene at quantitation limits below 10 ppmv. The samples from Vents #1 and #2 had close to normal concentrations of oxygen and nitrogen (22% to 24% and 76% to 78%, respectively) and low levels (less than 1,000 ppmv) of carbon dioxide and methane. The sample from Vent #5 had less than 0.5% oxygen, 1.4% nitrogen, 59% methane, and 38% carbon dioxide.

Of the VOCs analyzed, 28 were detected and 14 had exceedances over the screening criteria. The maximum concentrations of VOCs were in the sample collected from Vent #5. Compounds that exceeded 0.1 ppmv in that sample were 1,4-dichlorobenzene, benzene, chlorobenzene, ethylbenzene, and total xylenes. Only three compounds exceeded the screening criteria in all three samples: 1,4-dichlorobenzene, benzene, and TCE. Only benzene at Vent #5 (0.54 ppmv) exceeded the National Institute for Occupational Safety and Health permissible exposure level of 0.1 ppmv. However, this concentration of benzene was below the Occupational Safety and Health Administration permissible exposure level of 1 ppmv. Methane exceeded its lower explosion limit of 5.3%.

4.9 Leachate Data

This section presents on overview of data for grab water samples collected in field investigations conducted at the site. These samples were originally intended to be collected to represent leachate from seeps where groundwater would express itself at the surface. However, these seeps were not observed at the time of sampling and grab water samples were instead collected from groundwater accumulating in open trenches during test pit investigation activities. It was later agreed to by the USEPA that these samples do not accurately represent seep leachate conditions because they were not collected with methods prescribed by the USEPA. These data are presented herein for completeness purposes. Even though the grab water sample results had been compared to groundwater screening criteria, these data will not be used in the risk assessments.

Grab water samples were collected at two different locations: adjacent to the J.M. Mills Landfill (LF-TT-02, LF-TT-04, LF-TT-07, and LF-TT-09) and the Unnamed Island (UI-TT-06 and UI-TT-10). All of the samples were analyzed for VOCs, PAHs, SVOCs, PCBs, pesticides, metals, and chloride. Results are summarized in Tables 4-51 through 4-58.

As discussed in the HHRA, groundwater samples taken at the USEPA-defined locations were used as a representative “surrogate” for leachate medial.

4.9.1 Adjacent to the J.M. Mills Landfill

VOCs were detected intermittently below the screening criteria, except for 1,4-dichlorobenzene, benzene, and chlorobenzene, which were detected above the screening criteria. 1,4-Dichlorobenzene was detected above the screening criterion in three of the four samples with concentrations ranging from 1.1 µg/L (LF-TT-09) to 7.3

µg/L (LF-TT-02) compared to a screening criterion of 0.5 µg/L. Benzene and chlorobenzene were also detected above the screening criterion in LF-TT-02 at concentrations of 15 µg/L and 26 µg/L compared to screening criteria of 3.5 µg/L and 26 µg/L, respectively. Benzene and chlorobenzene were detected below the screening criteria in the three other grab water samples.

PAHs were detected above the screening criteria in all of the samples taken adjacent to the J.M. Mills Landfill. LF-TT-02 had concentrations above the screening criteria for all 17 PAHs. Total PAHs ranged from 2.39 µg/L (LF-TT-04) to 101 µg/L (LF-TT-02).

Low concentrations of 4-methylphenol, dibenzofuran, diethylphthalate, di-n-butyl phthalate, n-nitrosodiphenylamine, and phenol were present in the samples. 4-Methylphenol and pentachlorophenol were detected in LF-TT-09 above the screening criteria at concentrations of 110 µg/L and 2.3 µg/L compared to screening criteria of 18 µg/L and 0.56 µg/L, respectively. Bis(2-ethylhexyl)phthalate was detected above the screening criteria in three of the four samples (LF-TT-02, LF-TT-07, and LF-TT-09) at concentrations ranging from 6.7 µg/L (LF-TT-09) to 130 µg/L (LF-TT-02) compared to a screening criterion of 4.8 µg/L.

PCBs were detected above the screening criteria in two samples (LF-TT-02 and LF-TT-04). Aroclor-1254 was detected at an estimated concentration of 2.2 µg/L compared to the screening criterion of 0.34 µg/L in LF-TT-02. Aroclor-1260 was detected at an estimated concentration of 0.45 µg/L compared to a screening criterion of 0.34 µg/L

Pesticides were detected intermittently in the four samples taken adjacent to the J.M. Mills Landfill area. 4,4'-DDD and alpha-chlordane were detected below the screening criteria; however, dieldrin was detected slightly above the screening criterion in LF-TT-04 at a concentration of 0.068 µg/L compared to a screening criterion of 0.042 µg/L.

Metals were detected in each of the samples adjacent to the J.M. Mills Landfill at varying concentrations. All of the metals were detected above their respective screening criteria, except for cobalt, which was detected lower than the screening criterion.

Chloride was detected in all of the samples taken adjacent to the J.M. Mills Landfill. Concentrations ranged from 39 mg/L (LF-TT-09) to 89 mg/L (LF-TT-04).

4.9.2 Unnamed Island

VOCs were detected intermittently in the two samples collected on the Unnamed Island. 1,4-Dichlorobenzene was detected above the screening criterion of 0.5 µg/L at concentrations of 5.8 µg/L (UI-TT-06) and 2.0 µg/L (UI-TT-10).

PAHs were detected above the screening criteria in all of the samples. UI-TT-06 had one PAH, dibenz(a,h)anthracene, that was detected below the screening criterion. UI-TT-10 had concentrations above the screening criteria for all of the metals, excluding 2-methylnaphthalene, acenaphthene, fluorene, and naphthalene. Total PAHs for UI-TT-06 and UI-TT-10 were detected at estimated concentrations of 68 µg/L and 68.8 µg/L, respectively.

SVOCs were detected in the two samples with only two SVOCs detected above the screening criteria. Atrazine was detected at an estimated concentration of 8 µg/L (UI-TT-10) compared to a screening criterion of 3 µg/L. Bis(2-ethylhexyl)phthalate was detected at a concentration of 58 µg/L (UI-TT-06) compared to a screening criterion of 4.8 µg/L.

Aroclor-1254 was the only PCB detected in the samples from the Unnamed Island. UI-TT-10 had a concentration of 14 µg/L compared to the screening criterion of 0.34 µg/L. Pesticides were detected intermittently with one exceedance above the screening criteria in UI-TT-06. Alpha-BHC was detected slightly above the screening criterion of 0.011 µg/L at an estimated concentration of 0.014 µg/L.

All metals, excluding antimony and selenium, were detected in the sample from the Unnamed Island. All metals were detected above the screening criteria in UI-TT-10. UI-TT-06 had detected concentrations above the screening criteria for all metals, except for beryllium, cobalt, and silver, which were detected below the screening criteria.

Chloride was detected in both of the samples taken from the Unnamed Island. UI-TT-06 had a detected concentration of 50 mg/L, and UI-TT-10 had a detected concentration of 51 mg/L.

4.10 Biomonitoring Results

In addition to the sediment and resident fish sampling results, which were discussed in Sections 4.5 and 4.7, respectively, a number of other ecological habitat and receptor evaluations were completed in support of the ecological risk assessment. These evaluations included:

- sediment probing of the Blackstone River
- a wetlands classification and evaluation
- a field survey and assessment of the vernal pools on the Unnamed Island and other areas of OU2
- wildlife and vegetation habitat surveys
- benthic community surveys (including species abundance, water quality assessment, survival, and growth evaluations of water quality; and rapid bioassessment protocol habitat assessment testing)
- fish community surveys (both species abundance and population characteristics)

The results of each of these evaluations are discussed below. A habitat characterization summary of the distinct land use areas (Blackstone River, riparian, wetlands, ponds, adjacent to the J.M. Mills Landfill, and human use) identified as part of the cover type mapping is presented in Appendix Q. This information supports the summary habitat characterization discussion below in preparation for the BERA.

4.10.1 Sediment Probing

This section presents an overview of the sediment probing data collected in field investigations conducted at the site. Sediment probing was completed to evaluate the sediment characteristics throughout the main and secondary channels of the Blackstone River. Results are discussed by the class of the constituents: rock, silt, sand, and gravel. The results are further broken down by the coarseness of the material. The transects of the sediment probing locations, spread approximately every 200 feet in the Blackstone River throughout OU2, are presented on Figure 2-5, and the results for the sediment probe samples generally collected at evenly spaced intervals across the transects are summarized in Table 2-3.

Forty-one sediment probing locations (PBR-01 through PBR-32 and PBR-34 through PBR-42) were tested for sediment physical characteristics in the Blackstone River. The Blackstone River enters the site near the Quinnville well field and Pond N. Natural flow of the river creates a small depositional island at the entry point of the Blackstone River into the site area. Sediment characterization samples taken in this area were split into the main channel and secondary channel. The Blackstone River splits again at the

southeast tip of the J.M. Mills Landfill. The main flow of the Blackstone River goes north around the Unnamed Island (PBR-19 through PBR-32). Backwater flows along the south side of the Unnamed Island (PBR-34 through PBR-42). At high water conditions, the Blackstone River flows through the backwater area and reconnects with the main channel just upstream of the Pratt Dam.

Sediment probing transects PBR-01, PBR-02, and PBR-03 were sampled in two different categories, the main channel and the secondary channel. The secondary channel consisted mainly of fine or coarse sand over rock. Water depth was no more than 2.1 feet in the secondary channel, and sediment probed depths ranged from 0.1 to 2.0 feet. The main channel consisted mainly of gravel over rock with varying consistencies. Water depth was measured at up to 3.9 feet, and sediment probed depths ranged from 0.0 to 1.5 feet.

PBR-04 through PBR-18 sediment probing transect samples were taken on the Blackstone River before it splits around the Unnamed Island. Most samples were consistent with fine sand over gravel along the banks of the Blackstone River and gravel or medium sand at the sample depths beyond the banks. Water depths in this stretch reached up to a maximum of 10.2 feet, with most being 2 to 7 feet water depths; median water depth was 3.2 feet in this stretch. Most sediment probed depths were less than 1 foot in depth until refusal.

Sediment probing locations at the main flow of the Blackstone River around the Unnamed Island (PBR-19 through PBR-32) consisted mainly of gravel with little or trace medium to coarse sand. Water depths of up to 7.1 feet were observed and sediment probed depths ranged from 0.0 to 6.5 feet, with the majority of depths less than 1 foot. Sediment sample characteristics at the southern end of the Unnamed Island, near the dam, changed in consistency. Probe samples consisted of rock, gravel, and little sand over rock in the middle of the channel. Fine sand over gravel or rock was present along the banks of the Blackstone River. The backwater sediment probing locations (PBR-34 through PBR-42) consisted of rock, gravel, and fine or coarse sand. Water depths ranged from 0.0 to 5.0 feet, and sediment probed depths ranged from 0.0 to 5.0 feet with a median of 0.5 feet in this stretch. There was no pattern or consistency of the makeup of the probe samples in this area most likely due to the lack of movement of the water. Silt and fine sand were present along the banks of the Blackstone River through this area.

4.10.2 Wetlands

Several wetlands areas were identified throughout the site. A discussion of the surface-water flow regimes into and out of the Wetlands area north of the railroad tracks and their relationships to the J.M. Mills Landfill and former transfer station areas is presented in Section 3.4. The wetlands in this northern OU2 area are identified as Wetlands A, B, C, and D from east to west.

The first wetland area consisted of forested, emergent, scrub-shrub, and aquatic bed classes. Eight acres of land consisted of forested land, mainly wooded swamps. Eighteen acres of the site was emergent wetlands consisting of marshes and wet meadows and dominated by herbaceous or non-woody vegetation. Five acres of the land consisted of scrub-shrub wetlands, which were dominated by woody species less than 20 feet tall. The last portion of the site was 2.0 acres and consisted of aquatic bed wetlands, which contained plants that grow on or below the ground surface for most of the growing season.

The Blackstone River and Canal also held wetlands. Wetlands in this area were categorized as unconsolidated and bottom/shore, where vegetation was absent over the majority of the area. The bottom consisted mainly of mud, sand, cobble, gravel, or organic material. Pond F on the Unnamed Island was also classified as unconsolidated and bottom/shore. Eight acres in this area were classified as wetlands.

4.10.3 Vernal Pools

A field survey performed in April 2005 identified four vernal pools on the Unnamed Island in the Blackstone River, and one additional vernal pool on the Blackstone River floodplain near the J.M. Mills Landfill. Appendix R contains a memorandum presenting results of the vernal pool survey. A summary of these observations are presented below.

On the Unnamed Island, three vernal pools were similar in size, approximately 30 feet in diameter. The remaining pool, rectangular in shape and approximately 40 feet in length and 15 feet wide, appeared to be the remnants of a man-made excavation. Green frogs (*Rana clamitans melanota*), tadpoles (unidentified species), mosquito larva, midges, and daphnia were observed in the water in each of the four depressions. Fish were not observed in the depressions.

Several other low-lying areas on the Unnamed Island showed signs of hydrology, but were completely dry at the time of the survey. Isolated pools also exist in the wash

channel that links the Blackstone River to the large pond in the middle on the Unnamed Island (Pond A). Although these pools are temporarily isolated in the channel during base-flow conditions, the hydrologic connection during higher flow events to both the Blackstone River and Pond A preclude them from classification as vernal pool habitats. Wildlife observations in these pools were limited to mosquito larvae.

Another vernal pool habitat was identified in the small forested area of the Blackstone River floodplain between the J.M. Mills Landfill and the Hope Global facility. The vernal pool appeared to form in a discharge pond associated with an abandoned stormwater outfall. This pool was approximately 50 feet in length and 25 feet in width. Wildlife observations included tadpoles (unidentified species), green frogs, and tubiflex worms.

Wildlife observations from the vernal pools include amphibians, furbearing mammals, and a variety of birds. Amphibians observed included eastern painted turtle (*Chrysemys picta picata*) and green frog (*Rana clamitans melanota*). Mammalian observations included opossum (*Didelphis marcupialis*), river otter (*Lutra Canadensis*), woodchuck (*Marmota monax*), mink (*Mustela vison*), whitetail deer (*Odocoileus virginianus*), muskrat (*Ondatra zibethica*), raccoon (*Procyon lotor*), gray squirrel (*Sciurus carolinensis*), and cottontail (*Sylvilagus floridanus*). Twenty-five different species of birds were also identified in the vernal pool areas.

4.10.4 Wildlife and Vegetation Habitat

The diversity of the wetland, upland, and moving water habitats throughout the study area provide good to excellent foraging, resting, and reproductive habitat for a variety of wildlife and vegetation species. The Blackstone River and adjacent forested floodplain provide an ecological corridor useful to both aquatic and terrestrial wildlife. The abundance of mature trees provide perching, nesting, and foraging habitat for avian wildlife, while the well-developed understory provides cover and foraging habitat for many ground-dwelling mammals and smaller avian species.

Wildlife and vegetation were observed in the following areas: J.M. Mills Landfill, disturbed/developed areas, wetlands, ponds, riparian areas, and the Quinnville well field. Wildlife was also observed in the Blackstone River. A summary of the July 2005 wildlife habitat survey is presented in Table 2-10.

Given the physical, chemical, and biological characteristics of the Blackstone River and the Blackstone Canal, a variety of aquatic organisms are expected to be present in this riverine system. With an average annual flow of 729 cfs and a 7Q10 low flow of 101 cfs

(Woonsocket, Rhode Island USGS gauging station), stagnation and associated DO deficits are not expected to occur within the river proper. As discussed in Section 4.10.3, vernal pools were observed on the Unnamed Island in the Blackstone River. During the spring and fall, the Blackstone River rises and saturates the soils of the Unnamed Island. As the Blackstone River recedes, these depressions retain water; water levels are increased or maintained by precipitation throughout the spring. Once the Blackstone River recedes, water in these pools becomes stagnant and, ultimately, the pools dry out by early summer. DO deficiency and stagnation typically occur under these conditions.

Investigations of algal growth were conducted in the Blackstone River by the United USGS in 2001, upriver of the site at Woonsocket (ISCR2; BBL, 2006c). Species identified include flagellated algae, diatoms, green algae, and blue-green algae. Algae are mobile organisms transported in the water column; as such, the same algal species are also likely to be present in the Blackstone River in the vicinity of the site. The algae identified in the Blackstone River at Woonsocket were listed in Table 3-5 of the ISCR2.

Specific data on benthic and macroinvertebrates in the Blackstone River were collected approximately 5 miles upstream of the site in 1991 during the dry weather assessment phase of the Blackstone River Initiative (USEPA, 1991). The following species were found at the site: amphipods, clams, crayfish, and numerous insect species (i.e., midges, beetles, caddisflies, mayflies, stoneflies, and damselflies). Dragonflies (*Odonata Anisoptera*) have also been collected just upstream of the site (above Martin Street) and, as a whole, the odonate fauna in the Blackstone River system have been described as diverse and rich (Brown, 2004).

In BBL's more recent wildlife survey conducted in July 2005, 38 species of birds were observed throughout the site. Nine of the species were frequently observed, appearing in high numbers in a variety of habitats. These nine species were observed in at least four of the observation locations: chimney swift (*Chaetura pelgica*), common grackle (*Quiscalus quiscula*), Canadian geese (*Branta Canadensis*), gray catbird (*Dumetella carolinensis*), great blue heron (*Ardea herodias*), American robin (*Turdus migratorius*), song sparrow (*Melospiza melodia*), rough-winged swallow (*Stelgidopteryx semipennis*), and tree swallow (*Tachycineta bicolor*). The J.M. Mills Landfill area, with its well developed understory and moderate tree canopy, had the greatest avian species diversity with 22 avian species observed.

Eight mammalian species were observed among the habitats present onsite in July 2005. White-tailed deer (*Odocoileus virginianus*), observed in five different habitats, was the most widely distributed mammalian species. The disturbed/developed and riparian

areas contained the greatest diversity of species, including cat (*Felis domestica*), dog (*Canis domestica*), rat (*Rattus norvegicus*), deer, cottontail (*Sylvilagus floridanus*), and raccoon (*Procyon lotor*). Seven species of reptiles were identified in the Wetlands, ponds, riparian areas, and the Quinnville well field area. Painted turtle (*Chrysemys picta*) and fowler's toad (*Bufo woodhousei fowleri*) appeared in two of the four locations.

A summary of the vegetation habitat survey conducted in July 2005 is presented in Table 2-11. Twenty-four species of trees were identified in the observation locations, with trees being most prominent in the J.M. Mills Landfill and riparian areas. The box elder (*Acer negundo*) and the slippery elm (*Ulmus rubra*) were the common species, observed in all six observation locations. Sixteen species of shrubs were identified in the observation locations with silky dogwood (*Cornus amomum*) present in all observed locations. Eleven species of vines and 78 species of herbs were identified. Seventeen species of grasses/sedges were identified in the observation locations. Soft rush (*Juncus effuses*) was identified in every location. Common reed (*Phragmites australis*) and woolgrass (*Scirpus cyperinus*) were identified in five of the six observed locations.

The 2005 stream habitat survey was conducted using *Rapid Bioassessment Protocols for Streams and Wadeable Rivers* (Barbour et. al., 1999) over eleven 100-meter-long reaches of the Blackstone River. Ten key qualitative habitat parameters were assessed and ranked on a scale of 0 to 20, where 0 is the worst and 20 is the best, for a total possible score of 200. Table 2-12 presents the full list of parameters evaluated at each observation location and the scoring results for each qualitative parameter. The highest score of the 11 locations observed was 135 at location T05BR-002, the lowest score was 98 at location T05BL-AM, and the average score was 109.

The Rhode Island Division of Fish and Wildlife also completed a fish survey (by electroshocking) in the Blackstone River in the vicinity of the site in 2001 (ISCR2; BBL, 2006c). The species collected and identified were listed in Table 3-7 of the ISCR2 and consisted of sport, commercial, and forage species. Surveys were also conducted at Woonsocket, approximately 8 miles upstream of the site. The site survey had all of the species identified at Woonsocket, plus five additional species: golden shiner (*Notemigonus crysoleucas*), American brook lamprey (*Lampetra appendix*), chain pickerel (*Esox niger*), northern pike (*Esox lucius*), and smallmouth bass (*Micropterus dolomieu*).

There are no rare plants, animals, or ecologically significant natural communities in the study area according to the Rhode Island Natural Heritage Program (ENSR, 2004). However, the American brook lamprey collected in the Blackstone River is listed as

State Interest. Additionally, the Arrow Clubtain dragonfly (*Stylurus spiniceps*), a member of the family Gomphidae, was also collected in the Blackstone River upstream of the site, and it has been proposed for listing as a Special Concern (Brown, 2004). NOAA and National Marine Fisheries Service are currently collecting data on the American eel (*Anguilla rostrata*) as part of a study to evaluate the need for federal protection status. The American eel was observed in all reaches of the Blackstone River evaluated during the July 2005 habitat survey.

4.10.5 Benthic Community and Fish Survey

Investigations for benthic species abundance were conducted in the Blackstone River and area ponds (P-1, P-2, and P-6). These benthic community observation locations are shown on Figure 2-7 and are summarized in Normandeau's report included in Appendix K. Forty-four invertebrate species were identified in both the Blackstone River and site ponds; 32 species were identified in the Blackstone River and 25 species in the ponds (see Table 2-8). The most observations occurred for *Limnodrilus hoffmeisteri* and *Limnodrilus sp*. (both types of aquatic worms in the Tubificida order) and *Chironomus sp*. (aquatic larvae in the Diptera order) in both the Blackstone River and in the nearby ponds. The benthic community survey indicators of total organism counts and biomass (in milligrams wet weight of organisms counted within the sample) for the Blackstone River were quite similar between the site and background observation locations. However, the site ponds indicator for total organisms and biomass was generally lower than the background pond observations for samples from Pond P-6.

Water quality data recorded at the time of benthic community sample collection can be found in Table 2-7. Water quality parameters were generally consistent in all measured benthic community observation locations. Water temperature generally ranged from 18 to 24 degrees Celsius, with one exception (T05BR-005). DO was generally consistent between site and background locations for the Blackstone River and pond locations, and pH was neutral (ranged from 6.4 to 7.6 SU) in all observation locations.

Chironomos dilutus and *Hyalella azteca* were used to evaluate the toxicity of contaminants associated with whole sediments through observation of survival rate and growth data in the Blackstone River and area ponds as compared to a laboratory control sample and background samples, as specified by the appropriate ASTM standard (see Table 2-9). The survival rate for *Chironomos dilutus* was above the laboratory control rate of 83.75% in all sediment samples collected from the Blackstone River, with the exception of sample T05BR-006. However, two of the background sediment samples were also below the laboratory control rate for survival. The average growth of

Blackstone River sediment samples, 1.70 milligrams per larvae (mg/larvae), was slightly below the control of 1.79 mg/larvae. Similarly, the average growth of background sediment samples (1.58) was even less than the average for the Blackstone River. The survival rate in the site ponds sediment samples ranged from 71.25% to 86.25%, with three of the four samples below the laboratory control rate. The average growth in the site ponds sediment samples for *Chironomos dilutus* was also below the growth of the control in three of four samples, ranging from 1.47 to 1.81 mg/larvae.

The survival rate of *Hyalella azteca* within the Blackstone River sediment samples was approximately the same as the control of 91.25%, with the exception of sample T05BR-006, which was significantly below the control with a survival rate of just 2.5%. The average growth was 0.472 milligrams per amphiod (mg/amphipod) in the Blackstone River sediment samples, relatively lower than the control of 0.597 mg/amphipod. However, the average growth in the background sediment samples (0.365) was also below the control rate. Survival rates and growth in the site ponds sediment samples for *Hyalella azteca* were substantially lower than the controls, with none of the four samples above the laboratory controls. The survival rates and growth in the background pond sediment samples were generally higher than the site pond samples, but were all also below laboratory control rates.

Envirosystems Inc. prepared the sediment toxicity testing report *Toxicological Evaluation of Sediment Samples, Blackstone River Sediment Evaluation* (2005) (see Appendix L). This report statistically evaluated the 2005 toxicity testing results for the river and ponds comparing results of site sediment locations to background (reference) sediment locations. This report concluded that while the ”series of assays documented varying levels of response between the project reference and test sites…,” generally the data indicate that “the organisms were healthy and not stressed by handling.”

A fish community survey was conducted at three locations in the Blackstone River and at pond locations P-1, P-2, and P-6 on 3 days. The results are presented in Table 2-4 and 2-5 for species abundance and population characteristics summaries, respectively. A total of 21 fish species were identified over all locations. Nineteen fish species were identified in the Blackstone River. The most prevalent species in the Blackstone River were the American eel (*Anguila rostrata*), carp (*Cyprinus carpio*), common shiner (*Notropis cornutus*), largemouth bass (*Micropterus salmoides*), pumpkin seed (*Lepomis gibbosus*), and the white sucker (*Catostomos commersoni*). Thirteen species were identified in the ponds. The dominant species in the ponds were the bluegill (*Lepomis macrochirus*), largemouth bass (*Micropterus salmoides*), and the yellow perch (*Perca flavescens*). Length and weight measurements were taken of collected fish. In the event

that more that 25 fish species were collected from a particular location, only 25 random fish were measured. This information is presented in Table 2-5. A subset of fish were collected for chemical analysis, the lengths and weights of these fish are presented in Table 2-6. The fish tissue chemical analysis results are presented in Section 4.7.

4.11 Physical Characterization of Potential Source Areas

The physical characterization of potential source areas was initially performed by Shield and reported in the ISCR (Shield, 2004a). Now that the nature and extent of site-related impacts is more completely defined and additional surface and subsurface delineation of waste materials has been completed (i.e., Nunes Parcel), the extent and volume of waste has been updated. The extent of potential source areas (i.e., locations and extent of surface debris and buried waste) has not substantially changed following the ISCR.

Two types of source areas were identified in OU2 prior to the Phase 1A investigation: the mass of waste accumulated at the J.M. Mills Landfill and at the Nunes Parcel and broad areas where bulky debris was deposited at the surface (DFs). Based on the findings of the Phase 1A and 1B investigations, the following separate source areas are distinguished within OU2: the J.M. Mills Landfill, the Unnamed Island (buried waste and mounded waste), the Nunes Parcel (buried waste), DFs 1 through 3 between the northwestern end of the J.M. Mills Landfill and Martin Street, and DF-4 on the southeastern flank of the J.M. Mills Landfill. Each of these source areas is described below. The descriptions include preliminary estimates of waste volume, based upon the dimensions mapped using the results of the EMI survey (Section 2.1.4), the EC/MIP survey (Section 2.1.5), and the test trenching (Section 2.3.1) during Phase 1A and 1B field work. The waste volume estimates are provided to support the review of remedial alternatives for each of the source areas. They are not intended or represented as accurate for the purposes of design or construction. A large portion of the following discussions, including waste volume estimates, remain unchanged from their original presentation in the ISCR (Shield, 2004a), as no new or varying information has been obtained for most areas.

4.11.1 J.M. Mills Landfill

This section presents preliminary estimates of the extent and volume of waste, and of slope stability in the J.M. Mills Landfill.

4.11.1.1 Extent and Volume of Waste

The J.M. Mills Landfill extends from the southeast to the northwest between the Blackstone River and the railroad tracks (as shown on Figure 1-2), from close to the MW-109 well cluster at the south gate of the fenced area to approximately 250 feet southeast of the HW-01 outfall near the MW-106 well cluster. The area within this tract occupied by waste is approximately 30 acres.

The main mass of refuse in the J.M. Mills Landfill occupies a trapezoid-shaped area that is approximately 2,300 feet long on its long (railroad) side, 1,000 feet long on its short (Blackstone River) side, 600 feet wide (transverse to the Blackstone River), and approximately 23 acres in size. The J.M. Mills Landfill in this area rises to an elevation of approximately 145 feet NGVD29. Based on the test trenching results from Phase 1A and on estimates of the original Blackstone River channel depth and the likely depth of excavation below the water table, the estimated average elevation of the bottom of the waste is 49 feet NGVD29. The estimated volume of the main mass of refuse at the J.M. Mills Landfill is 53.2 million cubic feet (mcf), or 2.0 million cubic yards (mcy) inside the 70-foot NGVD29 contour line.

The test trenching activities conducted during Phase 1A show that additional buried waste is present beneath the floodplain of the Blackstone River, at the toe of the J.M. Mills Landfill, and in a strip extending from the northern edge of the main mass of refuse almost to MW-106 (Plate 4). This additional area (outside the 70-foot contour line) is estimated to represent another 7.5 acres and to contain buried waste with an average thickness of 14 feet. The estimated volume of waste in this additional area is 4.6 mcf, or approximately 0.2 mcy, bringing the estimate for total waste at the J.M. Mills Landfill to 57.8 mcf, or 2.2 mcy.

Waste encountered during the test trenching activities at the toe of the J.M. Mills Landfill adjacent to the Blackstone River had approximately 0 to 2 feet of soil cover and was found to extend to or below the groundwater surface in each trench. Wastes typically found in the test trenches included plastic, brick, wood, hose, and tires.

4.11.1.2 Slope Stability

An analysis of the stability of the waste mound at the J.M. Mills Landfill was performed by Shield Engineering, Inc. (SEI), based upon the topography of the J.M. Mills Landfill and the results of the CPTs. The slope stability report prepared by SEI was provided in Appendix F of the DBSR2 (BBL, 2006b).

The results of the analysis, using conservative estimates of input parameters, indicate that the overall (global) J.M. Mills Landfill slopes were stable at the time of the assessment in December 2003 (based upon an average computed factor of safety of 1.1), but they may not meet the recommended slope stability design criterion for similar facilities (i.e., factor of safety of 1.2 to 1.3 or higher). Furthermore, due to the high degree of variability of the waste materials and their associated properties, the actual factor of safety at any given location is likely different from the average value, and it could be closer to a failure condition (factor of safety less than 1.0). As organic materials in the fill degrade, they weaken, and the overall factor of safety for the fill material is expected to decrease with time. Massive (or deep) failure surfaces are most likely to occur along the interface between the waste material and the native materials, and the localized (or shallow) failures are likely to occur along or close to the surface of the waste mound.

4.11.2 Unnamed Island

Waste was encountered in two general areas on the Unnamed Island: in the area surrounding Pond E (between Pond D and the southern portion of Pond A) and in an elongated area on the west side of the Unnamed Island, parallel to the back channel of the Blackstone River (between that channel and west of Ponds A and D, in the vicinity of the former excavator, which was removed from the Unnamed Island in 2003). Both areas are shown on Figure 2-2a. The rest of the Unnamed Island was extensively investigated using the EMI survey (Figure 2-2a) and extensive test trenching around the Unnamed Island, and there does not appear to be any significant additional areas of waste beneath the ground surface, although small amounts of surface debris and mounded waste are also present.

The Pond E area corresponds to a former three-sided bermed area that is clearly visible in aerial photographs taken around 1970 (Appendix M). Historical activities in this area of the Unnamed Island are unclear from available photographs and documents. Construction/demolition debris that included mainly brick and metal piping was encountered in elongated mounds adjacent to Pond A and surrounding Pond E. Additionally, a large number of tires, both buried and on the surface, were found within and in the vicinity of Pond E. The mounded debris did not extend below the original ground surface or the current groundwater table, just a few feet bgs. A small area of buried waste that included household appliances, brick, wire, car parts, and a 200- to 300-gallon steel tank was found on the southern side of Pond A (in the vicinity of the construction/demolition debris mounds). This waste extended to just above the current water table.

The volume of waste in the smaller area south of Pond A is difficult to estimate due to the variable shape (both horizontally and vertically), the overlapping nature of the waste masses encountered, and the difficulty in excavating through the layers of tires buried around and under Pond E. A preliminary estimate of the volume of waste, based on an area of 48,000 square feet and an average thickness of 4.8 feet, is 230,400 cubic feet (8,500 cubic yards [cy]) in an area approximately 1.1-acre in size. Within this area south of Pond A, it is estimated that a smaller area (approximately 15,000 square feet) is underlain by tires at least three layers thick. Assuming 1,700 tires per layer and a thickness of 8 inches per tire, this represents approximately 5,000 tires, or a volume of approximately 30,000 cubic feet (1,100 cy) or one-eighth of the total volume for this area shown above.

A second and larger area of waste disposal was encountered near the former excavator (removed by the RIDEM in September 2003) on the southwestern side of the Unnamed Island between Pond D and the back channel of the Blackstone River. The waste in this area was mainly industrial in nature and it included large quantities of industrial and garden-type hose, different types of plastics, wire, glass, wood, tires, and some medical waste. The approximate lateral extent of the waste is shown on Figure 2-2a, and it represents an area of approximately 100,000 square feet (2.3 acres). The waste materials were buried under 1 to 2 feet of soil and extended to depths of 6 to 16 feet bgs (to depths below the water table), depending on the location and surface features. Assuming an estimated average thickness of 8.3 feet, the estimated waste volume in this area is 835,000 cubic feet (31,000 cy). Thus, the total estimated waste volume for the Unnamed Island is approximately 40,000 cy.

Waste described in the report prepared by BBL (2004) for Owens Corning came from the northwestern portion of this area. This volume is not included in the 40,000 cy estimate for the Unnamed Island presented above.

4.11.3 Nunes Parcel

The investigation of the Nunes Parcel area initially involved the use of Geoprobe® borings for mapping subsurface materials in Phase 1A. The scope of the Phase 1A investigation in this area was limited for several reasons:

- The property was not known to contain extensive buried wastes at the time of the RI/FS Work Plan preparation. In historical photographs, the area is first shown as flooded, drained, and then filled, and quickly covered afterwards with extensive

surface debris. Apparently, waste materials were emplaced during the initial filling of the property.

- At the time of the RI/FS Work Plan preparation, the property was covered in bulky wastes and was in active use as a solid waste transfer station.

- Prior to the implementation of the Phase 1A field work, ownership of the property was transferred, and most of the bulky wastes were removed (ISCR2; BBL, 2006c). The intended future use of the property is reportedly also for solid waste transfer purposes, but the status of permitting and other regulatory issues pertaining to the property was not clear.

- During the Phase 1A investigation performed by Shield, access to a portion of the property was controlled by Enpro, the contractor for Owens Corning.

Eight Geoprobe® borings were drilled on the property during the Phase 1A investigation, the first five for exploratory and sampling purposes and the last three for exploratory purposes only. Based on the results of this exploration, an area of buried waste has been mapped (Plate 3) that is approximately 162,000 square feet (3.7 acres) in size. In this area, buried waste was found to be approximately 6 feet thick and overlain by approximately 5 feet of cover soil. The waste encountered in the borings consisted of wood, fiberglass, hose, and layered rubber.

The extent of waste was projected based on relatively limited data from the eight Geoprobe® borings and well SEA-606 installation completed in Phase 1A at the transfer station, and the volume of buried waste was estimated at 972,000 cubic feet (36,000 cy); the same volume or more was estimated as present as cover soil (Shield, 2004a). The extent of the horizontal waste limits following the Phase 1A investigation is shown as an orange dashed line on Figure 2-3.

BBL completed additional studies following the Phase 1A investigation on the Nunes Parcel in 2006 as part of the Phase 1B work. Test pits were excavated on October 31, 2006 through November 3, 2006. As shown on Figure 2-3, 23 test pits (TP-1 through TP-23) were completed along the perimeter of the current projected boundary of the waste area on the Nunes Parcel and spaced throughout the northern area of the Nunes Parcel. In several locations where waste deposits were encountered, step out test pits were completed beyond the original specified locations, as necessary, for additional delineation purposes. The activities focused on identifying the lateral extent and depth of waste, in addition to attempting to characterize the type of waste encountered. The test

pits were excavated to depths ranging from 4 feet bgs to 16 feet bgs in an attempt to excavate until the visually identifiable waste/debris material extent could be determined and native soil or the water table was encountered, to the extent possible. Groundwater was encountered between 4 feet bgs and 18 feet bgs throughout the site.

During the test pit excavations, BBL personnel recorded information, such as soil description, depth and thickness of cover material, depth and thickness of the lithologic units, the description of the impacted soils, if present, PID readings, and other relevant observations, as appropriate, on individual test pit log sheets. The test pit logs from the Nunes Parcel investigation are presented in Appendix F. Photographs were taken during the test pit excavation to document field observations. Selected photographs representative of the test pitting activities were shown in Attachment C of the Nunes Parcel report (ARCADIS BBL, 2007a).

Based on the observations during the test pit activities, the thickness of the cover material ranged between 1.5 feet and 10 feet thick at TP-20 and TP-19, respectively. In general, the debris material was observed to range between 4 to 6 feet thick; however, debris was observed at least 13.5 feet thick at TP-13.

Debris was encountered at several test pit locations (TP-7, TP-13, TP-19, and TP-20) to the west and northwest of Shield's projected waste burial area following Phase 1A. These observations indicate that the debris burial area appears to extend to approximately the Blackstone River's bank near the central portion of the Nunes Parcel and up into the northwestern portion of the property, approximately 200 to 250 feet west of the building. The revised extent of buried waste following the Phase 1B investigation is shown as a blue dashed line on Figure 2-3. The wastes encountered in the 2006 test pits were typically municipal refuse types of waste (e.g., cans, fabric, plastic) and were well mixed with soil. The use of limited numbers of Geoprobe® borings compared to considerably more test pits and the significant amount of soil mixed in with the wastes observed on the Nunes Parcel are likely reasons for the difference in the original projection of waste extent compared to the current projection.

As a component of the construction of the Blackstone River Bikeway in 2004, the RIDEM completed a removal action at the southeast corner of the Nunes Parcel near the Pratt Dam (Vanasse Hangen Brustlin, Inc., 2004). The extent of the RIDEM soil removals in 2004 are shown on Figure 2-3 as black lines. The RIDEM determined that levels of lead, arsenic, dieldrin, total petroleum hydrocarbons, and several SVOCs exceeded the relevant RIDEM criteria in soil and waste material, and approximately 11,600 tons of soil were removed and appropriately disposed at permitted offsite locations. The areas were

then backfilled with clean fill and portions asphalted to complete the bikeway section. The excavated area is also shown on Figure 2-3. The RIDEM excavated volume overlaps the original projected extent of waste in the southeastern portion of the Nunes Parcel. The current waste extent in that area (red dashed outline) has been revised to reflect the soil and waste already removed.

The revised extent of waste projected based on the more robust dataset obtained in Phase 1B at the transfer station is shown on Figure 2-3. Based on an assumed average depth of waste of 6 feet and a surface area of approximately 250,000 square feet (5.7 acres), a volume of buried waste was estimated at 1,500,000 cubic feet (56,000 cy). The volume of cover soil would be difficult to estimate because of the variability in cover thickness, but could be up to the same volume.

BBL also completed a reconnaissance of the Nunes Parcel on October 30 and 31, 2006, in an effort to better understand the surface debris and the extent to which unknown materials are located within temporary structures associated with Nunes Parcel activities, bins, drums, truck components, aboveground tanks, and tractor trailers located on the surface. As stated above, the ISCR2 (BBL, 2006c) reported that a large portion of the bulky wastes were removed prior to the implementation of the Phase 1A field work as part of an ownership transfer. The reconnaissance on October 30 and 31, 2006 showed some surface debris related to past operations in several locations on the Nunes Parcel surface.

Where feasible, BBL attempted to quantify the various types of materials encountered on the surface, including those suspected of containing asbestos-related material or containerized potentially hazardous liquid materials, such as fuel tanks.

To assist in the inventory process, the Nunes Parcel was divided into several zones using transects going east to west approximately 150 feet apart. All inventoried items and materials observed during the site reconnaissance are summarized in Table 4-59 and are identified according to the area in which it was located, to the extent practicable. Figure 4-61 shows the approximate locations of the majority of the most substantial debris encountered on the ground surface. Photographic documentation was included in Attachment A to the *Summary of Remedial Investigation Activities at the Nunes Parcel* (ARCADIS BBL, 2007a).

Based on the review of the inventory, ARCADIS BBL determined (ARCADIS BBL, 2007a) that additional evaluation and sampling of individual waste containers and drums was not warranted to characterize the materials present at the site. The site

reconnaissance phase focused on inventory activities only. The volume of the surface debris is difficult to quantify due to the small widespread piles of this debris across the Nunes Parcel.

4.11.4 Debris Fields 1 through 3

DFs 1 through 3 extend from the northwestern end of the J.M. Mills Landfill just beyond the north inlet area near HW-01, parallel to the tracks, to approximately 1,900 feet to the northwest in the direction of Martin Street. The northwesternmost area (extending approximately 200 to 750 feet southeast of Martin Street) of DFs 1 through 3 consists primarily of mounded waste, including broken concrete pieces, asphalt, and soil. Observations and historical information provided by the USEPA suggest that this material is demolition debris, which appear to have been transported and disposed at the site from a past gas station renovation (such as, but not limited to, indications of broken block concrete, metal sign pole, and bollards). The mounds are approximately 8 feet high and they cover an area of approximately 600 feet by 50 feet, or 30,000 square feet. An estimate of the volume of waste involved can be obtained by multiplying the area of the DF by the average height of the mounded debris (approximately 4 feet). This method yields a preliminary estimate for the volume of waste of 120,000 cubic feet (4,000 cy).

The remaining southeastern extent of DFs 1 through 3 extends approximately 50 feet wide from approximately 750 to 2,100 feet south of Martin Street and consists primarily of very large slabs of concrete and railroad ties. This area is approximately 67,500 square feet in size outside the fenced area of the J.M. Mills Landfill. Within this area, smaller areas of concern were identified for sampling, including a stockpile of railroad ties and two areas containing drums. An additional area of surface debris (approximately 1,000 feet long by 150 feet wide, or 150,000 square feet in surface size) extends inside the fenced area of the J.M. Mills Landfill, overlapping the buried waste. Both areas are approximately 50% covered with debris, and the average height of the surface waste is approximately 4 feet. The preliminary estimate of waste volume in this southern area, therefore, is 435,000 cubic feet (16,100 cy), bringing the total waste volume estimate for DFs 1 through 3 to 555,000 cubic feet (21,000 cy) in a 5.6-acre area (Shield, 2004a). Much of this estimated 21,000 cy volume appears to be made up of very large slabs of concrete brought in by a rail-mounted crane, possibly from the dismantling of major public roadways.

4.11.5 Debris Field 4

Debris types present in DF-4 include large steel storage tanks, metal machinery, machine parts, and 55-gallon drums. The size of the DF is approximately 45,000 square feet (1 acre), and the percent coverage with surface debris is low. The volume of waste in this area is insignificant in relationship to the buried/mounded waste at the J.M. Mills Landfill.

4.11.6 Summary

The following table provides a summary of the areas and waste volumes (estimated) for each of the source areas.

Summary of Source Areas

Source Area	Size	Waste Volume
Landfill	30 acres	2,200,000 cy
Unnamed Island, Pond E Area	1.1 acres	8,500 cy, including 5,000 tires
Unnamed Island, Exc. Area	2.3 acres	31,000 cy
Nunes Parcel	5.7 acres	56,000 cy buried plus soil cover; surface debris unable to quantify
DFs 1 through 3	5.6 acres	21,000 cy, including large inert debris
DF-4	1 acre	Insignificant

It is concluded that the source areas in OU2 contain approximately 2.32 mcy of waste, including 2.2 mcy in the J.M. Mills Landfill and 0.12 mcy outside the J.M. Mills Landfill, in buried cells, mounds, and surface DFs. Much of the surface debris is inert concrete and scrap metal. The buried waste was observed by Shield (2004a) during test trenching activities and contained large amounts of rubber and related materials (in sheets and as hoses), some other industrial waste and scrap metal mixed with household waste, small amounts of medical waste, tires, fiberglass, and wood.

5. Applicable or Relevant and Appropriate Requirements

Section 121 (d) of CERCLA requires that Superfund remedial actions at least attain ARARs, both federal and state, unless they are waived under CERCLA 121(d)(4). ARARs are classified as follows:

- *Chemical-specific* requirements are usually health- or risk-based numerical values or methods that, when applied to site-specific conditions, result in the establishment of numerical values for the acceptable loading or concentration of a hazardous substance that may be found in, or discharged to, the environment.

- *Location-specific* requirements are restrictions placed on the concentrations of hazardous substance or the conduct of activities solely because they occur in specific locations.

- *Action- (or remedy-) specific* are usually technology- or activity-based, and may include limitations on actions taken with respect to hazardous constituents

ARARs apply to onsite activities, which means the geographical area of contamination to be remediated and all suitable areas in close proximity that are necessary for implementation of the remedial action. For offsite activities, no analysis of ARARs is required under CERCLA, but these activities are still subject to applicable laws. ARARs for the response action to be implemented at the site include those that pertain to capping, waste removal, and backfill activities. Disposal of excavated materials will likely occur offsite; therefore, a complete ARARs analysis pertaining to disposal is not required at this time.

Items to be considered (TBC) are non-promulgated advisories or guidance issued by federal or state governments that are not legally binding and do not have the status of potential ARARs. However, they may be considered, as well as with ARARs to determine the level of remediation necessary to protect health and the environment.

Tables 5-1 through 5-3 identify potential ARARs and TBCs, including the regulatory citation, as well as a brief description. Section 5.4 discusses the potential for waivers to ARARs.

5.1 Chemical-Specific ARARs

Chemical-specific ARARs have been organized by relevant media for the site. These include groundwater, surface water, sediment, soil, and air. Table 5-1 summarizes the chemical-specific ARARs for the site.

5.2 Location-Specific ARARs

Location-specific ARARs are those that generally restrict certain activities or limit concentrations of hazardous substances solely because of geographical or land use concerns. The primary location-specific ARARs for the site are related to the location of portions of the site within the floodplain of the Blackstone River and areas that may be designated as wetlands along its banks or on the Unnamed Island. Table 5-2 summarizes the location-specific ARARs for the site.

5.3 Action-Specific ARARs

Action-specific ARARs are those that may place restrictions on the conduct of remediation activities or the use of certain technologies. Action-specific ARARs for the site would primarily be related to capping of the J.M. Mills Landfill or activities related to isolation of waste or recontouring the land surface on the Unnamed Island and containment of the Nunes Parcel. Table 5-3 summarizes the action-specific ARARs for the site.

5.4 Potential Waivers to ARARs

CERCLA Section 121(d)(4) establishes six waivers to ARARs for onsite actions. Waivers for specific ARARs can be granted for this project based on five of the six statutory waivers, as follows:

- Interim Measure
- Greater Risk to Human Health and the Environment
- Technical Impracticability
- Equivalent Standard of Performance
- Inconsistent Application of State Requirements

Because the remedy would not be funded by a trust, the Interim Measure and Fund Balancing statutory waivers do not pertain. After the remedial alternatives for site cleanup are more fully developed, the potential for ARAR waivers will be revisited.

6. Baseline Human Health Risk Assessment Summary

ARCADIS BBL completed a baseline HHRA for the site in June 2007 with revisions completed in November 2007 and September 2008. In April 2009, the HHRA was updated by the USEPA's Remedial Action Contract 2 Contractor to incorporate current risk assessment guidance (USEPA, 2009a).Conclusions of this HHRA were as follows:

Results of the HHRA indicate that risks/hazards for soil, sediment, surface water, leachate, and/or ambient air for trespassers and recreational users, and soil, shallow groundwater, and outdoor (trench) air for construction workers were generally less than or within the USEPA target levels (i.e., risk range of 1 x 10^{-4} to 1 x 10^{-6} ; hazard index [HI] of 1). The majority of the cancer risks were on the order of 10^{-5} (i.e., above 1 x 10^{-6}).

Non-cancer hazards (expressed as a hazard quotient) for ingestion of potable groundwater by future residents and consumption of fish from the Blackstone River and OU2 ponds were greater than the USEPA target of 1. In addition, risks to hypothetical future residential receptors from ingestion, dermal contact, and inhalation due to potable use of groundwater were greater than 1 x 10^{-4}, even though some constituents of potential concern (COPCs) contributing to elevated risks/hazards were generally present at concentrations less than their respective drinking water MCLs (e.g., benzene). The major contributors to the groundwater risk and hazard are arsenic, carcinogenic PAHs, 1,4-dioxane, 4-chloroaniline, atrazine, bis(2-ethylhexyl)phthalate, naphthalene, 1,4-dichlorobenzene, chloroform, ethylbenzene, methyl tert-butyl ether, tetrachloroethene, trichloroethene, vinyl chloride, aldrin, dieldrin, PCBs, benzene, aluminum, cadmium, cobalt, iron, manganese, and thallium.

Additionally, risks and hazards to recreational receptors eating resident fish from OU2, BR-1, and BR-2 were greater than 1 x 10^{-4} and target organ HIs of 1. However, the background/reference area pond (P-6) also had target organ hazards greater than 1 and risks in the range of 10^{-5}, which places site risks into a more regional perspective. Based on the statistical evaluation conducted for fish tissue PCB data, concentrations in fish from upstream portions of the Blackstone River are not significantly different from concentrations found in fish from OU2. Further, consumption of fish from the background/reference area pond (P-6) at the same rates as those used in the OU2 calculations resulted in hazards above the USEPA target of 1.

Risk to a future commercial worker exposed to soil and indoor air at the Nunes Parcel exceeded 1 x 10^{-4} due primarily to benzene in indoor air. Major contributors to risk are

carcinogenic PAHs, bis(2-ethylhexyl)phthalate, dieldrin, dioxins, and/or arsenic in soil and benzene, naphthalene, and/or tetrachloroethene in indoor air. In addition, hazard and risk to a future resident exposed to soil and indoor air at the Nunes Parcel exceeded target organ HIs of 1 and a cancer risk of 1 x 10^{-4}. The exceedances are primarily due to benzene, naphthalene, 1,4-dichlorobenzene, ethylbenzene, tetrachloroethene, and/or vinyl chloride in indoor air and carcinogenic PAHs, PCBs, dieldrin, dioxins, bis(2-ethylhexyl)phthalate, and/or arsenic in soil.

The lead evaluation identified the following scenarios as having estimated (potential) lead risks above the USEPA target:

- *Exposure of commercial workers to soils within the RIDEM Soil Removal Area.*
- *Exposure of construction workers to soils at the Quinnville well field, Southern Bank, Nunes Parcel, and the RIDEM Soil Removal Area.*
- *Exposure of hypothetical young child residents to soil and groundwater from the RIDEM Soil Removal Area.*

In addition to the quantified risks and hazards mentioned above, physical hazards, such as asbestos, metal debris, tires, dilapidated buildings, and broken glass at the site may also present some risks. Asbestos, in particular, may present significant health risks due to its status as a Class A (known human) carcinogen if fibers are released into the air and inhaled. These physical hazards will be further considered in the FS.

In summary, future residential and commercial exposure to soil and indoor air at the Nunes Parcel, hypothetical future residential potable use of sitewide groundwater, and consumption of fish from the Blackstone River and site ponds by recreational receptors were the only exposure pathways with risks/hazards greater than the USEPA targets (i.e., carcinogenic risks greater than 1 x 10^{-4} and non-carcinogenic hazards greater than 1). Risks/hazards for all other receptors and pathways were less than or within the USEPA target ranges. However, an evaluation of lead indicates that the USEPA target would be exceeded for sitewide groundwater; for construction-related exposures to soil at the Quinnville well field, Southern Bank, and Nunes Parcel; and for commercial, residential, and construction-related exposures in the vicinity of the RIDEM Soil Removal Area of the Nunes Parcel.

M&E/AECOM completed a supplemental HHRA for the Unnamed Island in July 2010 (M&E, 2010). Results of this Supplemental HHRA were as follows:

Results of this [Supplemental] HHRA indicate that risks/hazards for soil, sediment, surface water, and leachate for trespassers and recreational users and soil, shallow groundwater, and outdoor (trench) air for construction workers were within the USEPA target levels (i.e., risk range of 1 x 10^{-4} to 1 x 10^{-6}; HI of 1).

The lead evaluation identified the construction workers scenario as having estimated lead risks above the USEPA target. Estimated lead risks for future recreational users and current trespassers were less than the USEPA target.

In addition to lead, physical hazards, such as metal debris, tires, and broken glass at the Unnamed Island may also present some risks. These physical hazards will be further considered in the FS.

7. Baseline Ecological Risk Assessment Summary

ARCADIS BBL completed a BERA of the site in June 2007 with revisions completed in November 2007 and September 2008. In June 2009, the BERA was updated by the USEPA's Environmental Services Assistance Team Contractor to incorporate USEPA comments to the draft BERA (USEPA, 2009b). The conclusions of that report were excerpted as follows:

The BERA evaluated potential ecological risks associated with COPECs in OU2. The BERA used a WOE approach to evaluate risks for several representative receptors for each subarea of the site. The potential receptors that were identified in the problem formulation (and subsequently evaluated in the BERA) are benthic macroinvertebrates, fish, amphibians, birds, and mammals.

The BERA identified the potential for severe ecological risk to omnivorous birds feeding at the individual terrestrial exposure units (EUs) or at all the terrestrial EUs combined. Lead is the biggest risk driver. The WOE for this measurement endpoint is "low-medium." The food chain modeling assumes a diet of 100% earthworms. Field-collected tissue residue data are not available for earthworms from any of the terrestrial EUs at OU2. Hence, the COPEC levels in earthworm tissues are estimated using generic and conservative biota-soil accumulating factor values.

The BERA also identified the potential for severe ecological risk to fish and embryo-larval stages of amphibians exposed to surface water in Ponds C, D, E, I, N, and P. Lead is the biggest risk driver in three of these EUs and a secondary risk driver in two others. The WOE for this measurement endpoint is "low-medium." Only one measurement endpoint is available for evaluation at these six EUs, namely comparing surface-water chemistry to generic benchmarks. None of the surface-water samples used in the exposure point concentration calculations were filtered before chemical analyses. Hence, the metals data used in the evaluation represent (unfiltered) total metals, instead of (filtered) dissolved metals, which are more representative of the toxic fraction. Also, only one surface-water sample was collected from Ponds N and P and two surface-water samples from Ponds C, D, E, and I. Such small datasets may not represent the full range of exposure conditions in surface water at these habitats.

Finally, some potential for ecological risk to the benthic invertebrate community is possible at one or more locations in Ponds A, D, E, F, and I from sediment exposure. However, the cause for this risk is unclear and may result from a combination of habitat disturbances/differences and COPEC exposures.

A Supplemental Ecological Risk Assessment for Unnamed Island Soils (AECOM) was also completed by the USEPA in July 2010 following a Supplemental Investigation of the Unnamed Island in November 2009. The conclusions of this report, which pertained solely to ecological risks on the Unnamed Island, were as follows:

This supplemental risk evaluation, based on inclusion of additional soil data, resulted in identification of several additional COPCs for further evaluation, including nickel, selenium, and dioxin. Risk calculations for these COPCs resulted in confirmation that none of these poses a high risk for adverse effects on wildlife at the Unnamed Island.

The BERA identified the potential for adverse ecological risk to omnivorous birds feeding at the Unnamed Island. The current analysis confirmed lead as the primary risk driver, with bis(2-ethylhexyl)phthalate and zinc also representing adverse risk to small omnivorous birds, as documented in the BERA.

Due to possible risks to avian species from soil exposures on the Unnamed Island, further consideration in the FS is recommended.

8. Site Conceptual Model

8.1 Purpose and Approach

This section presents a SCM for the site. An SCM is a basic description of how contaminants enter a system from identified sources and their primary fate and transport mechanisms through various environmental media. It also identifies relevant routes of potential exposure that are likely on human and ecological populations. As such, it provides a framework that aids in developing a more focused understanding of site characterization data, which allows for a streamlined assessment of risks from site-related contaminants, development of remedial strategies, determining appropriate source control requirements to alleviate problem areas, and definition of feasible and appropriate remedial approaches to help mitigate any unacceptable risks.

Some of the key dynamics required to develop an SCM are those that are useful in determining contaminant behavior, migration, and fate. A well defined conceptual model of a site contains sufficient information to:

- identify sources of the contamination
- determine the nature and extent of the contamination
- identify the dominant site-specific fate and transport characteristics
- define potential exposure pathways and potential receptors that may be impacted by the contamination

Regional and local shared historical data are also used to develop SCM hypotheses, particularly with regard to the fate and transport characteristics of the site. Because of the complex interplay between the biological and physicochemical components of an ecosystem, SCMs, which attempt to address every nuance and answer every scientific question, can easily become overly complex and difficult to use effectively. The primary objective of this SCM is to rely on reasonable and valid technical assumptions to arrive at a more simplified model.

Much of the information presented in this section is organized from other parts of this RI Report. For example, each of the risk assessments contains a thorough discussion of potential exposure pathways and identified receptors, as well as with an assessment of fate and transport mechanisms. Additionally, the nature and extent of

contamination is discussed in detail in Section 4. For this reason, the SCM will be kept brief, and provide specific references to other sections in the RI Report, where appropriate.

8.2 Identification of Potential Sources of Contamination

The primary sources of contamination that have been identified at the site are waste and debris materials, which have either been deposited as landfill materials or distributed in surface debris areas. The main source is the more than 2.2 mcy of waste estimated to occupy the property referred to as the J.M. Mills Landfill. Additionally, subsurface wastes have also been delineated at the Unnamed Island and the Nunes Parcel. The Nunes Parcel was operated as a transfer station both during the primary landfill era and after. The Blackstone River has also contributed contamination down river along the floodplain historically as a result of the river's long industrial history. Specific discussions on the areal extent and physical characteristics of these potential source areas are presented in Section 4.11.

The subsurface waste deposits vary in content, based on a review of the test pits completed around their perimeter to determine the "footprint" or extent. The J.M. Mills Landfill reportedly operated as a privately owned, mixed commercial/industrial and municipal landfill. The J.M. Mills Landfill received refuse material from residential, commercial, and both heavy and light industry mostly from Rhode Island and Massachusetts.

Presumptive remedies are preferred at sites where treatment is impracticable because of the size and heterogeneity of waste. The J.M. Mills Landfill and sections of the former Nunes Transfer Station qualify as candidates for a presumptive remedy approach to sampling. Selection of the presumptive remedy approach to sampling is consistent with the following USEPA guidance documents: *Presumptive Remedy for CERCLA Municipal Landfill Sites* under the Superfund Accelerated Cleanup Model, and *Presumptive Remedies: CERCLA Landfill Cap RI/FS Data Collection Guide*. When implementing a presumptive remedy, the focus is on containment of the landfill mass, collection and/or treatment of landfill gas, and measures to control landfill leachate and impacted groundwater. Therefore, sampling within the actual J.M. Mills Landfill was not performed.

In addition to buried waste materials, surface DFs and other waste products have also been confirmed at both the J.M. Mills Landfill area, the access road to the J.M. Mills Landfill, and widely distributed on the Nunes Parcel. Prior removal of some of the debris

and surface waste piles were completed at the site, including the removal of lead-contaminated soil by the RIDEM at one location on the Nunes Parcel (Section 4.11.3).

The waste materials observed on the Unnamed Island, the Nunes Parcel, and the DFs appear to be more heavy industrial in nature, consisting of wood, fiberglass, hosing, rubber parts, tires, and scrap metal, mixed with some household waste and other industrial byproducts.

Other potential sources of contamination considered at the site consist of the following:

- Surface-water features containing sediment and debris build up from stormwater runoff. Areas of the site include Wetlands A through D to the north of the site and general overland surface flow throughout the site. General information concerning Wetlands A through D can be found in Sections 4.6.5.1 through 4.6.5.4. However, because these wetlands are considered hydraulically isolated from site-related sources, except for extreme river stages where the Blackstone River tops the railroad tracks in the northern areas, this source is not considered further in this SCM. The Blackstone River's history of intense industrial development left its waters polluted and its course altered. Industrial activity and accompanying settlement left the river severely polluted with untreated sewage, detergents, solvents, heavy metals, and other industrial wastes. The presence of numerous dams, canals, and other human interventions means that little remains of its natural, free-flowing state. A 1990 report, sponsored by the USEPA, described the Blackstone River as "the most polluted river in the country with respect to toxic sediments." While toxic sediments trapped behind industrial-era dams continue to impact the long-term health of the river, considerable water quality improvements have been achieved as a result of the CWA and other pollution reduction initiatives. The Blackstone River became a part of the National Heritage Corridor system in 1986 and was designated as an American Heritage River in 1998. http://www.ririvers.org/wsp/Watersheds/BlackstoneRiverWatershed.htm

- The Blackstone River water quality has been studied for a number of years by both the MassDEP and RIDEM (Section 3.4.3). The MassDEP has issued fish advisories for the Blackstone River below Worcester, Massachusetts, to Blackstone, Massachusetts which is upstream of the site. In addition, localized ecological receptors may also be "stressed" by the levels of PCBs in various subareas, including some of the ponds on the Unnamed Island. Therefore, preventative measures to communicate these potential risks to the public may be warranted.

The Blackstone River has the potential to carry elevated levels of contaminants in both surface water and on entrained particulate matter in the water. These materials can be deposited and redeposited across the Blackstone River channel bottom and within low lying floodplain soils and standing water bodies (e.g., the ponds and vernal pools located on the Unnamed Island and the ponds at other areas of the northern bank of the Blackstone River). Due to the dynamic nature of the flows in the Blackstone River, the exchange of sediment and dissolved materials tend to be highly variable depending on whether a zone is depositional in nature or not. Moreover, wastes that were initially disposed at the J.M. Mills Landfill, the Nunes Parcel, and the Unnamed Island may have been eroded and re-deposited along the floodplain.

In 2001, the RIDEM contracted with The Louis Berger Group to characterize water quality conditions and pollution sources causing impairments of the Blackstone, Mill, and Peters Rivers; Valley Falls Pond; and Scott Pond, in support of the development of total maximum daily limits (TMDLs) for each water body. In January 2002, key stakeholders in the watershed were brought together to form a Technical Advisory Committee (TAC) to provide additional review of key project deliverables as they are completed by the contractor and submitted to the RIDEM. The first phase of the assessment project, to compile existing water quality and pollution source data, including land use data for the Rhode Island portion of the Blackstone River watershed and to identify data gaps, was completed in the spring of 2004. The primary goal of the second phase of the TMDL is to obtain the information needed to develop TMDLs for the identified impairments. Because the Blackstone River is also a major nitrogen source to the Providence and Seekonk Rivers (which are listed as impaired for nutrients (nitrogen), low dissolved oxygen, and excess algal growth/chlorophyll-a), data to assess nitrogen loading and attenuation will also be collected. Additionally, phosphorus data will be collected to support assessment of biodiversity impacts, future National Pollutant Discharge Eliminatino System permit issuance and the significance of phosphorus loading from the Blackstone River on the Valley Falls and Scott Ponds impairments. (http://www.ririvers.org/wsp/Watersheds/BlackstoneRiverWatershed.htm)

- Landfill materials are likely undergoing some degree of active biodegradation processes and, as a result, are creating gases, some of which are currently vented from the J.M. Mills Landfill via a series of five small vent pipes. While several VOCs were observed in samples collected from all five air vents. One of these vents (i.e., Vent #5) had appreciable level of carbon dioxide and methane – these constituents tend to displace nitrogen and oxygen in natural gas resulting from biodegradation

processes at municipal landfills, possibly because of the age and degradation of the landfill materials. The vents were not measured for depth, and because it is known and documented that these vents have been vandalized over time, it may be reasonable to suspect that the readings obtained from vents may not provide accurate contaminant concentration data. Thus, there may be other reasons for the variability of concentrations other than the age and degradation of the wastes. Further assessment may be necessary as part of remedy design. Please refer to Section 4.8 and for additional details.

- Locally there has been a significant quantity of sand and gravel quarrying that can cause eroded material originating from offsite to run on to the property during storm events. This source has not been considered major and will not be considered further.

- At the onset of the RI for OU2, there was technical concern raised by the USEPA that either non-aqueous phase liquid or dissolved-phase chlorinated VOCs and other constituents (e.g., arsenic) were moving from source areas comprising OU1 to OU2. One component of the Phase 1B groundwater investigation was focused on determining whether these classes of constituents were moving deeper in the aquifer. No significant levels of VOCs were observed during this groundwater investigation. Because of that observation, as well as the flow of shallow groundwater toward the Blackstone River under the current (public water supply wells not pumping) conditions, a completed pathway for this potential source has not been established. A recent (USACE, 2009) modeling effort performed for the USEPA also did not show hydraulic connection between OU1 and OU2 under both current (public water supply wells not pumping) and historic (with Quinnville well field pumping at 1 million gallons per day) conditions. Furthermore, OU2 RI groundwater results from the MW-106 well nest located immediately north of the landfill had no MCL exceedances for chlorinated VOCs or arsenic in any the three rounds of OU2 RI groundwater samples collected there in 2003, 2004, or 2005.

- The Lenox Street well field was reported to be contaminated in 1979 and was no longer used as a public water source. Recent investigations, 25 years later, show no residual contamination. Definitive aquifer pump tests were never performed, historically or currently, as a part of the RIs. Therefore, no apparent source can be confirmed with these most recent investigations. Without more sophisticated testing, a full understanding of the causality for the closure of the Lenox Street well in 1979 will remain uncertain. Therefore, no apparent source can be confirmed under these most recent investigations.

8.3 Nature and Extent of Contamination

The nature and extent of contamination was discussed in detail in Section 4. The following summarizes the findings by media and discusses the general distribution by subarea.

8.3.1 Groundwater Medium

Groundwater impacts related to the site appear to be well defined. The Phase 1B groundwater investigation in 2005 completed the delineation of constituents detected in the shallow aquifer to the deeper aquifer and there is marked attenuation of site-related constituents at depth. The most prevalent VOCs observed in groundwater above screening criteria were benzene, chlorobenzene, and 1,4-dichlorobenzene primarily in shallow wells, most notably in wells downgradient of the western end of the J.M. Mills Landfill. Of particular note is the concentration of benzene at SEA-603, although benzene concentrations in this well have decreased by an order of magnitude over the monitoring period of the RI. Low concentrations of PAHs were also observed in shallow monitoring wells. PCBs and pesticides were infrequently observed and generally below screening criteria in groundwater, with only one sample at GNP-705 exceeding the screening criterion for Aroclor-1254.

Several inorganics exceeded screening criteria; however, there is evidence that some of the data may represent sampling artifacts (i.e., where data were generated on unfiltered samples). In addition, upgradient or background groundwater contains concentrations of several inorganics above screening criteria. Reducing conditions that occur in landfills and persist in groundwater beneath and near-buried waste tend to solubilize inorganics; therefore, some of the elevated inorganics levels observed at the site result from dissolution of waste materials or natural soils.

The primary fate of these constituents is predicted to be a combination of natural attenuation and direct flux to the Blackstone River, which hydrogeologically serves as a hydraulic discharge boundary in the Blackstone River Valley. As discussed in Section 3.3.2, the aquifer exhibits strong upward vertical gradients toward the Blackstone River. Just above the Pratt Dam, the Blackstone River is a “losing” stream, as groundwater migrates toward the land. As a result of the overall head drop below the dam, the Blackstone River becomes a discharge zone again. In general, monitoring wells located outside of the J.M. Mills Landfill showed only sporadic detections of constituents, including a few on the Nunes Parcel and the Unnamed Island. While the groundwater contaminants on the Unnamed Island and Nunes Parcel are most likely related to the

localized sources in those two areas, those sources and the J.M. Mills Landfill are all related to general landfilling operations that were conducted throughout the time of disposal. Please refer to Section 4.3 for an expanded discussion of this medium.

8.3.2 Soil Medium

A number of constituents, including PAHs (as well as a few other SVOCs), PCBs, pesticides, and inorganics were observed in a diverse number of locations in soil across the site above their respective screening criterion. VOCs were generally not detected in soil samples and none were observed above screening criteria at the J.M. Mills Landfill or the Unnamed Island. Sampling for dioxins/furans also showed levels well below the screening criteria.

The preponderance of site soil data reviewed suggests that there is no distinct pattern to the distribution of site-related constituents that would suggest unique or significant sources, either current or former. There are a number of locations in floodplain areas that contain elevated concentrations of PCBs, PAHs, pesticides, and metals above screening criteria; however, these constituents are believed to be the result of historical deposition of material from the Blackstone River. This is particularly pronounced in the Quinnville well field surface soil samples. There are elevated levels of lead on the Nunes Parcel and on the Unnamed Island. The Nunes Parcel elevated lead locations are adjacent to areas that were formerly excavated by the RIDEM when the bikeway expansion was completed. The correlation of Blackstone River flooding on low level chemical impacts (certain metals, PCBs, PAHs) into shallow soils, particularly those in flood prone areas, cannot be overlooked and will likely continue in the future.

Surface soils have the potential to leach constituents during surface-water runoff events. Contaminants in subsurface soils have the potential to leach to groundwater and then migrate. During the RI, there were no distinct patterns that these fate and transport mechanisms were occurring. It can be reasonably assumed, however, that subsurface soils are leaching to some extent onsite. Because source area soils and subsurface soils were not intensively sampled, or not sampled at all in the case of the J.M. Mills Landfill, these processes cannot be ruled out.

Please refer to Section 4.4 for an expanded coverage of this medium.

8.3.3 Sediment Medium

A broad range of sediment samples were collected from several subareas of the site, including several within the Blackstone River proper. A significant number of detections of a broad suite of constituents exceeded screening criteria across the site and included several VOCs, SVOCs, PCBs, pesticides, and metals. The exceedances occurred in areas both at and upstream of the site, indicative of broad-based impacts to the sediment throughout the Blackstone River system. As noted in Section 4.3.2, some metals, such as arsenic, which have been observed at higher concentrations immediately downgradient of the landfill may be the result of precipitation reaction of metals from discharging groundwater from the area into the Blackstone River. In addition to the potential sources of contamination at the site (e.g., the J.M. Mills Landfill, former Nunes Transfer Station, and the Unnamed Island), years of industrial pollution and stormwater runoff throughout the Blackstone River Valley are believed to be contributors to the sediment contamination in the Blackstone River system.

Similar distributions of constituents above the screening criteria were observed on the Unnamed Island. Several of the ponds on the Unnamed Island are partially submerged during most high water flow periods as the Blackstone River rises and falls and all are submerged during significant rainfall events (i.e., 100-year storm), a few of which have occurred in the last few years. Therefore, the Unnamed Island ponds, as well as the vernal pools, may serve as “sinks” for particulate matter entrained in the Blackstone River in places where the net effect of the flooding is deposition. These features are immediately adjacent to observed waste deposits co-located on the island, so they are also possible sources of the contaminants in the ponds. Runoff and groundwater discharge associated with neighboring waste sources are also suspected of contributing to sediment contamination in the Unnamed Island ponds.

Please refer to Section 4.5 for an expanded coverage of this medium.

8.3.4 Surface-Water Medium

Generally, surface-water exhibited limited detections of VOCs, SVOCs, PAHs, PCBs, pesticides, and metals. The surface-water data do not suggest ongoing widespread potential impacts are occurring from OU2 to the adjacent surface water, and also show no impacts to Wetlands A through D across the railroad tracks to the northeast of the J.M. Mills Landfill. Concentrations present in upstream locations within the Blackstone River may have the potential to contaminate the areas adjacent to the J.M. Mills Landfill and the Unnamed Island with low concentrations of lead, PAHs, PCBs, and other

constituents until such time as the overall water quality of upstream reaches of the Blackstone River improve further. However, overall water quality of the Blackstone River is shown to be improving over time and surface water does not appear to be a significant source for the flux of contaminants at the site.

Please refer to Section 4.6 for an expanded coverage of this medium.

8.3.5 Fish Tissue

Fish tissue samples were collected from six distinct areas: Blackstone River Area 1 (beginning approximately 1.25 miles upstream of the Ashton Dam and extending for approximately 0.5 miles downstream), Blackstone River Area 2 (beginning at the Ashton Dam and extending approximately 0.65 miles downstream), Blackstone River Area 3 (located within the boundaries of OU-2), Pond A (P-1) (located on the Unnamed Island), Pond F (P-2) (located at the southeastern extent of OU-2 to the Pratt Dam), and P-6 (located approximately 1.6 miles northwest of the Ashton Dam).

Due to the widespread distribution of constituents in all of the subareas, the fish tissue data are discussed in this RI Report by five classes of constituents: PAHs, SVOCs other than PAHs, PCBs, pesticides, and metals. In addition, a discussion of the distribution of constituents is also segregated between whole body and fillets, as well as some discussions of the variability of data among different species of fish. In total, there were over 220 discrete sampling points evaluated.

In general, fish have been widely impacted by a large number of constituents, including the classes identified above. PCBs, pesticides, and metals were the most common constituents identified above the screening criteria. In addition, there was no evident pattern of “hot spots” or sections within the Blackstone River that were free from impacts, suggesting that the fish in the entire river system studied have been exposed to contamination. There was also no clear evidence of an increased level of impact near the OU2 site.

This testing indicates that contaminants appear to be ubiquitously present in edible resident fish in the Blackstone River and in associated ponds at concentrations that exceed health-based values and may or may not be site-related. In general, white sucker had the highest concentrations of chemicals in their edible tissue; small pan fish (e.g., pumpkinseed) had the lowest chemical concentrations. Using two different fish ingestion amounts (two 8-ounce fish meals per week or two 8-ounce fish meals per month), maximum and average concentrations exceeded risk-based

concentrations for fish tissue. Chemicals present in fish tissue in excess of risk-based concentrations assuming the higher fish consumption rate include PCBs, a number of PAHs and pesticides, bis(2-ethylheyxl)phthalate, hexachlorobenzene, arsenic, chromium, and mercury. Exceedances of risk-based concentrations assuming the lower fish consumption rate include PCBs, two PAHs, dieldrin, and arsenic. Similar exceedances were noted in fish from both the site and the reference areas.

It should be noted, however, that these findings are not associated, in any way, with the ongoing Rhode Island State fish stocking program conducted upstream of the site where farm-raised trout are placed into the Blackstone River for recreational purposes. It is commonly thought that these fish are not exposed long enough to contaminants and feed differently from those resident fish species studied. As such, no trout were collected as part of this study.

The fish tissue data are discussed in great detail in Section 4.7.

8.3.6 Air Medium

Several VOCs were observed in samples collected from the five air vents at the J.M. Mills Landfill. Most exhibited low levels of certain VOCs, carbon dioxide, and methane; however, more significant levels of these constituents were observed in Vent #5, with a concentration of 59% by weight of methane, which is more typical of landfill gases resulting from active biological degradation of materials in a municipal landfill. Obviously, the J.M. Mills Landfill vents are not representative of ambient air samples at the site; therefore, ambient air concentrations were modeled in the HHRA to assess that specific exposure pathway. Emissions (and the utility of the landfill vents as representing emissions) will also be reviewed once again in a pre-design phase, as appropriate, to confirm standards are met in the presumptive remedy approach.

Please refer to Section 4.8 for an expanded coverage of this medium.

8.3.7 Leachate Medium

Shield collected a number of grab samples of water from a test trench near the J.M. Mills Landfill that were labeled as leachate samples. However, all of the analyses were completed on non-filtered samples and are likely to not be representative of a leachate sample. It was later agreed to by the USEPA that those samples would not accurately represent leachate seep conditions because the samples were not collected with methods prescribed by the USEPA. While some seeps have been reported by the

USEPA, these seeps have not been observed by the field crews during the RI and, therefore, no other samples have been collected. To accommodate this data gap for the HHRA, local groundwater data from select wells adjacent to the landfilled waste were used as a surrogate. However, seeps that are identified by the USEPA oversight team will be evaluated under the presumptive remedy analyses in the FS. These areas include, but are not limited to, Pond C, Pond B, and a small swale located between the landfill and the railroad tracks.

Please refer to Section 4.9 for an expanded coverage of this medium. A description of the use of groundwater as a "surrogate" for a leachate pathway is described in the HHRA.

8.3.8 Waste Medium

Based on the delineation of waste deposits through the use of test pitting operations, the volumes of waste for the J.M Mills Landfill and the Unnamed Island are projected at 2,300,000 cy and 40,000 cy, respectively. In addition, the three DFs located adjacent to the J.M. Mills Landfill contain approximately 21,000 cy covering a broad area of 5.6 acres.

At the J.M. Mills Landfill, the waste extended into the floodplain located along the Blackstone River and extended somewhat to the north. While much of the surface cover material at the J.M. Mills Landfill is sparse and thin, the area is currently fenced, limiting general access. At the Unnamed Island, waste was encountered in two general areas: in the area surrounding Pond E (a smaller waste deposit, including several hundred tires situated between Pond D and the southern portion of Pond A) and in an elongated area on the west side of the Unnamed Island, parallel to the back channel of the Blackstone River (a larger waste deposit between the back channel and Ponds A and D).

As previously discussed, waste deposits were also encountered at the Nunes Parcel (transfer station) and were originally estimated by Shield at approximately 36,000 cy, although work completed by BBL in November 2006 indicated that the waste deposits were more extensive to the north of the originally delineated area. This increase is projected at up to 50% greater than the initial estimate, bringing the estimated volume of waste material in this area to approximately 56,000 cy.

Please refer to Section 4.11 for an expanded coverage of this medium.

8.4 Site-Specific Fate and Transport Mechanisms

This section focuses principally on the major fate and transport mechanisms believed to be active at this site. A general discussion of the primary chemical fate of the specific classes of COPECs (e.g., VOCs, PAHs, PCBs) was presented in detail in the BERA and is not be repeated here.

A listing of the general mechanisms believed active at the site by media is summarized below. All conclusions presented below were further tested during the risk assessment calculations and evaluation of risk to human health and the environment.

- *Groundwater* – Chemicals may come in contact with groundwater through migration of contaminants from impacted soil media (i.e., leaching), direct contact with sources (e.g., buried landfill material), or from infiltration from river or other surface-water sources. Almost all of the shallow site groundwater flows towards the Blackstone River, the primary hydraulic discharge boundary in the Blackstone River Valley system. This is partially reversed for a relatively short time period during flood events where the Blackstone River stages rise and cause a reversal of localized gradients. Once groundwater commingles with the Blackstone River, it becomes mixed with surface-water flows and also can interact with sediment media. Due to the large daily flows that the Blackstone River experiences in this reach of the river, significant amounts of dilution of constituents contained within groundwater is expected.

  Groundwater gradients in the low lying areas of the site (i.e., Nunes Parcel, Unnamed Island, Quinnville well field, and the floodplain areas at the toe of the landfill) are not very steep (typically 0.005 feet per foot). Groundwater gradients near the valley walls are steeper primarily due to the high topographic relief. Gradients beneath the J.M. Mills Landfill are also relatively low, primarily due to the high hydraulic conductivity of the underlying aquifer materials. Despite the large topographic elevation changes in this area (increase of 80 feet from river elevation), there is no evidence of a groundwater “mound” beneath the J.M. Mills Landfill (however, the J.M. Mills Landfill itself was not drilled). Groundwater in all areas of the site moves in a relatively rapid manner due to the elevated permeability of the sand and gravels located along the Blackstone River and flow gradients present. Additional details concerning the hydrology of groundwater was presented in Section 3.3.

  Due to the proportion of measurable impacts observed in sampling the monitoring wells distributed throughout the site, groundwater fate and transport mechanisms

are considered to be minor at this site relative to increasing the mobility and/or redistribution of contaminants.

- *Soil* – Impacts to soils can occur due to migration of particulates in flood waters from the Blackstone River, colloidal transport in shallow groundwater, impacts from surface infiltration, direct contact, or commingling with source materials (e.g., buried waste materials) either from spills and/or redistribution of surface soils, dust collection, or stormwater runoff. Migration of contaminants can also occur in the reverse of the pathways described above. Because both surface soil and subsurface soils do not exhibit elevated levels of most constituents, soil fate and transport mechanisms are expected to be very localized and are not considered significant.

- *Sediment* – Sediment in the vicinity of the site is subjected to a dynamic physical environment due to the stormwater runoff that occurs in the floodplain areas, potentially increasing the sediment loads and flows from the Blackstone River that may deposit and scour sediment depending on the hydraulic profile of the river at any given cross-section and the level of flow. Many chemicals bind to sediment and, therefore, have the potential to be redistributed sometimes extensive distances from the original source of impact or become trapped in isolated areas at the site (e.g., in the ponds on the Unnamed Island). However, one cannot rule out any contribution from the landfill to the ponds as well.

- Because there are no "hot spots" identified for sediment sampled near the site and because upstream sediment samples are similar in type and content of potential contaminants, sediment fate and transport mechanisms may be a mix of both site-related and upgradient components.

  The benthic community relies on relatively clean sediment environments to sustain their populations in the river ecosystem. The benthic toxicity testing conducted during the RI did show that some locations had adverse toxicity impacts, both at the site and at upstream, background locations. Therefore, some impacts are present at these locations. Improvement of the overall water quality of upstream reaches of the Blackstone River would be expected to improve this condition over time as will taking certain remedial actions within OU2.

- *Surface Water* – Surface-water impacts can arise from impacts from upstream locations within the river, stormwater runoff, direct contact with source materials (e.g., waste debris located along the riverbank), migration of groundwater to the Blackstone River, and dust migration. Surface water does not appear to be a

significant source of flux of contaminants at the site, and the predominant influences in the areas in the Blackstone River and floodplain areas are expected to be from upstream sources.

- *Fish Tissue* – There were a wide variety of fish species observed within the reaches of the Blackstone River that were evaluated. Some species tend to be very mobile, while others restrict their habitat to a relatively small area. Fish containing impacted tissue, widely observed at all study locations, can also move through dams and migrate downstream. Fish become impacted through a combination of eating other organisms (e.g., other fish), consumption of plants, contact with water and sediment through consumption, and through their breathing gills. Fish are then consumed by anglers as sport fish and also by other animals and birds and provide an impact on the food chain. Fish are considered a major pathway at the site. However, these impacts are not significantly site related.

- *Air* – Air sources include the volatilization of impacted soils with relatively volatile compounds (e.g., VOCs), volatilization of groundwater, direct discharges of landfill gases representative of natural biodegradation processes, potential volatilization of surface-water bodies, and offsite sources that migrate to the site. The latter pathway has not been observed at the site to date and the only active pathways are the gas vents located at the crest of the J.M. Mills Landfill. Air pathways are not considered significant pathways unless they come in direct contact with breathing zones of humans and this is typically restricted at the site due to limited access. This scenario, however, must also consider the fact that trespassers, as well as the owner of the J.M. Mills Landfill, have been accessing the J.M. Mills Landfill, including the top of the J.M. Mills Landfill where these emissions are occurring. Thus, further study will be warranted as the presumptive remedy is implemented.

- *Leachate* – Although reportedly witnessed by USEPA personnel, active leachate or seeps have not been observed at the site during site sampling rounds. As a result, this pathway was addressed in the HHRA by utilizing groundwater data as a surrogate. Any seeps will be further addressed in the FS and in implementing the presumptive remedy approach.

- *Waste* – Waste materials in J.M. Mills Landfill areas can relocate or change forms due to changes in the soil structure, surficial erosion by wind and water, and the amount of water in contact with the materials. Trespassers and construction workers who might dig in these areas might be directly exposed to waste deposits. Surface deposits may present a risk of exposure to trespassers. Given the large volume of

subsurface municipal and industrial waste that is present, the timeframe that it has been there, and the limited access due to perimeter fencing, if/when functional, a pathway involving the natural translocation of subsurface waste will be addressed under the presumptive remedy.

8.5 Risk Assessment Findings

Both the HHRA (USEPA, 2009a) and BERA (USEPA, 2009b) highlight, in detail, the potential exposure pathways and receptors for the site. Sections 8.1 and 8.2 briefly summarize the SCM and the potential sources of contamination that indicated elevated levels of potential risk as the result of the completion of the HHRA and BERA, respectively.

9. Conclusions and Recommendations

9.1 Site Characterization Conclusions

Based on a review of the available data collected during the RI, the following site characterization conclusions have been reached:

- Subsurface waste deposits are a principal source of COPECs at the site on land areas and are present at the J.M. Mills Landfill, the Unnamed Island, and the Nunes Parcel. The projected volume of waste is greatest at the J.M. Mills Landfill, followed by the Nunes Parcel, and then the Unnamed Island. The aerial extent of the waste deposits is fairly defined and has been generally mapped based on available data.

  Piles of surface debris are also sporadically distributed at locations within the J.M. Mills Landfill, the Unnamed Island, and the Nunes Parcel. Some materials inventoried on the Nunes Parcel (e.g., motor capacitors and roofing shingles, liquids in 55-gallon drums and tanks) may require further testing during the remedial design stage to more accurately determine appropriate handling and disposal procedures.

  The other significant source of COPECs is the Blackstone River, which has been shown to be impaired at all reaches of the river studied. COPECs are transported downstream from upstream locations though a combination of surface-water flow, sediment transport, or contained in fish species. Additional discussions concerning the observations made from a review of the Blackstone River data are provided below.

- Historically, there have been active leachate seeps identified at the J.M. Mills Landfill area. During the RIs, no active seeps were reported by the Shield and BBL sampling teams. It is important to note, however, that all sampling was conducted in mid-summer to late fall. During this time, active seeps are less obvious due to drier conditions and heavy vegetation obscuring seeps and aiding in absorption of seeps. During the spring, the USEPA noticed a seep at the Pond C and Pond B locations, as well as along the railroad tracks at the toe of slope. Data collected from air emissions at the vents at the J.M. Mills Landfill suggest that there is some evidence of landfill gas generation. Each of these issues will be further reviewed in the FS and through the presumptive remedy approach.

- Groundwater impacts appear to be well-defined. Concentrations of a limited number of VOCs (primarily benzene) have been observed at monitoring wells located at the

toe of the J.M. Mills Landfill, primarily limited to its western end adjacent to the Blackstone River. Groundwater was not impacted at depths greater than approximately 30 feet below the water table. Furthermore, strong upward hydraulic gradients cause groundwater to preferentially discharge to the Blackstone River. The high groundwater flow velocity exhibited by the aquifer, particularly the shallow aquifer, provides significant dilution/attenuation capacity for any dissolved-phased constituents observed in groundwater. The dilution/attenuation is borne out by the surface-water sampling results, which indicate that site groundwater is not adversely affecting this medium. Finally, there is no evidence of chlorinated VOC sources that have been observed in groundwater at OU1, which have contributed to the conditions within the studied areas at OU2 in recent sampling events.

- Due to the extensive use of the Blackstone River and floodplain areas for industrial/commercial uses, direct discharges of wastewater, and urban stormwater runoff, the Blackstone River has served as a "sink" for a broad range of chemical contaminants and solids loadings over the past 250 years.

  The evaluation of a broad range of subareas of interest within the Blackstone River (upstream, downstream, and along the site) watershed during the RI has revealed a consistent pattern of impacts both within the sediment and within the fish community. Elevated concentrations of PCBs, SVOCs (primarily PAHs), pesticides, and inorganic metals have been observed in these media. These impacts can be directly linked to the OU2 site source areas and to upgradient sources. Of particular significance is the ecosystem located on the Unnamed Island, comprised of a series of vernal pools and ponds that are at times hydraulically isolated from the Blackstone River and may serve as localized "sinks" for contaminants transported throughout the area during the rise and fall of the hydraulic Blackstone River stages.

- The adjacent wetlands (labeled A through D) appear to be hydraulically fed by urban stormwater pathways. The adjacent wetlands are also influenced by the Blackstone River's surface water through and around OU2 site source areas during floods, although wetlands are for the most part not influenced by groundwater transport from OU2 site source areas.

- Similar to site groundwater, impacts to soil are variable and do not reflect any "hot spot" distribution. Constituents found in this medium are similar to those found in the Blackstone River, especially where samples were collected in low lying/floodplain areas (i.e., Quinnville well field). These floodplain area soil samples may be indicative of contributions from overland flow and deposition during high river stages,

such as after a significant storm. Because OU2 source area soils were not completely sampled (e.g., no samples were taken from the J.M. Mills Landfill, a sampling approach consistent with a presumptive remedy), source area contributions to adjacent low lying/floodplain areas cannot be ruled out.

- Impacts to sediment, surface-water, and fish tissue media are consistent with the conclusion that the Blackstone River is impacted at all reaches evaluated. While the site source areas may be contributing COPECs, the data also suggests that the Blackstone River is contributing COPECs to the watershed, including depositional areas within the site.

9.2 Quality and Completeness of Existing Data

As illustrated in this RI Report, the site has been investigated using a presumptive remedy approach to sampling. Based on the robust nature of the available information and the quality and usability of the data, data gaps are not of such magnitude that they preclude the final determination as to the nature and extent of contamination or a comprehensive evaluation of potential risks at the site. The percent completeness of the entire RI dataset, based on the number of usable/valid data points (all data not qualified "R" for rejected during validation) compared to the total number of data points generated is greater than 99%, which meets the project data quality assessment for completeness of greater than or equal to 85%, as documented in the site QAPP Addendum (BBL, 2005b). In addition, this achievement of completeness provides sufficient site information to allow the FS process to begin at the site, as part of the initial remedy selection process.

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Tables

TABLE 1-1
SUMMARY OF INVESTIGATION ACTIVITIES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Investigation	Date of Sampling	Objective	Media Sampled	Analyses Performed	Comments
Goldberg-Zoino Associates Inc.	1980 and 1981	Determine source of VOC contamination in Quinnville well field groundwater.	groundwater	VOCs	Report concluded that the probable source of VOC contamination in Quinnville well field was the Peterson Puritan Superfund Site. Wells installed within OU2, specifically Quinnville well field, could not be located.
Malcolm Pirnie, Inc.	1982	Evaluate VOC concentrations in groundwater near the Peterson Puritan Superfund Site OU2.	groundwater	VOCs	Wells installed within OU2 could not be located.
Camp, Dresser & Mckee Inc.	1987	Evaluate groundwater at the Peterson Puritan Superfund Site OU2.	groundwater	split samples collected, analyses unknown	Six wells and three piezometers (one piezometer was damaged) are located within OU2.
GHR Engineering Corp.	1981	Install monitoring wells at landfill.	groundwater	metals	Seven wells installed at OU2 but one cannot be located and one was damaged.
Sitewide Remedial Investigation	1987 to 1989	Characterize nature and extent of contamination in soil, groundwater, surface water, and sediment at the Peterson Puritan Superfund Site OU2.	groundwater	VOCs, SVOCs, pesticides, PCBs, metals, and cyanide	Performed seismic refraction survey to evaluate elevation of bedrock and wetlands mapping to delineate extent and type of wetlands.
			surface water	VOCs, SVOCs, pesticides, PCBs, metals, and cyanide	
			sediment	VOCs, SVOCs, pesticides, PCBs, metals, and cyanide	
Pre-Phase 1 Preparatory Assessment	2002	Locate existing monitoring wells in OU2 and evaluate moisture content of sediment.	sediment	moisture content and PAHs	At USEPA's request, PAH sediment data will not be used in RI/FS.
Bikeway Investigation	2000 to 2002	Evaluate soil quality in area of planned bikeway construction.	soil	pesticides, metals, and TPH	Construction of bikeway includes excavation and removal of about 6,500 cy of material.
Owens Corning Limited Removal	2003	Investigate extent of fiberglass waste present on island.	soil	VOCs, SVOCs, pesticides, PCBs, metals, TPH, and TCLP metals.	Removed fiberglass waste on island in 2003.

TABLE 1-1
SUMMARY OF INVESTIGATION ACTIVITIES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Investigation	Date of Sampling	Objective	Media Sampled	Analyses Performed	Comments
McNulty Properties	2003	Evaluate groundwater quality and hydraulic relationship to known groundwater contamination to the south and northwest.	groundwater	VOCs and metals	Installed four wells along the northeastern boundary of the wetlands.
			surface water	VOCs, SVOCs, and metals	
			sediment	VOCs, SVOCs, and metals	
Phase 1A Investigation	2003	Meet objectives of RI/FS scope identified in the SOW.	soil	VOCs, SVOCs, pesticides, PCBs, metals, cyanide, and conventionals	Results are presented in the DBSR2 and discussed in Sections 2 and 4 of the RI. Performed electromagnetic induction survey to evaluate extent of buried waste.
			groundwater	VOCs, SVOCs, pesticides, PCBs, metals, cyanide, and conventionals	Performed electrical conductivity/membrane interface probe survey to evaluate VOCs at toe of landfill. Performed cone penetrometer tests to evaluate landfill slope stability.
			surface water	VOCs, SVOCs, pesticides, PCBs, metals, cyanide, and conventionals	Performed potentiometric survey, hydraulic well test, and surface flow measurements to evaluate groundwater and surface-water flow.
			sediment	VOCs, SVOCs, pesticides, PCBs, metals, cyanide, and conventionals	
			air	VOCs	
Phase 1A Expanded Investigation	2004	Fill data gaps identified in Phase 1A Investigation.	soil	VOCs, SVOCs, pesticides, PCBs, metals, cyanide, and conventionals	Results are presented in the DBSR2 and discussed in Sections 2 and 4 of the RI. Performed potentiometric survey, hydraulic well test, and surface flow measurements to evaluate groundwater and surface-water flow.
			groundwater	VOCs, SVOCs, pesticides, PCBs, metals, cyanide, and conventionals	
			surface water	VOCs, SVOCs, pesticides, PCBs, metals, cyanide, and conventionals	
			sediment	VOCs, SVOCs, pesticides, PCBs, metals, cyanide, and conventionals	

TABLE 1-1
SUMMARY OF INVESTIGATION ACTIVITIES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Investigation	Date of Sampling	Objective	Media Sampled	Analyses Performed	Comments
Phase 1B Investigation	2005	To support RI and FS and fill data gaps	soil	VOCs, PAHs, non-PAH SVOCs, PCBs and Pesticides, metals and cyanide, PCDDs and PCDFs	Results are presented in the DBSR3 and discussed in Sections 2 and 4of the RI. Performed seismographic geophysical evaluation of bedrock surface along suspected bedrock dip.
			groundwater	VOCs, PAHs, non-PAH SVOCs, PCBs and Pesticides, metals and cyanide	
			surface water	PAHs, PCBS, Pesticides, metals and miscellaneous parameters	
			sediment	VOCs, PAHs, non-PAH SVOCs, PCBs, Pesticides, metals and miscellaneous	Conducted sediment probing in Blackstone River; benthic community surveys and benthic toxicity tests;
			fish tissue	PAHs, SVOCs, PCBs, Pesticides, and metals	Fish community survey conducted in Blackstone River; fish samples collected on whole bodies, filets and carcasses; wildlife and vegetation habitats surveys conducted; Rapid Bioassessment Protocol conducted
Nunes Parcel Investigation	2006	To delineate limits of buried waste	soil	VOCs, SVOCs, Pesticides, PCBs, metal and cyanide	
Supplemental GW Investigation as part of 5 Year OU1 Review	3/2007	Evaluate groundwater quality	groundwater	VOCs and metals	
2009 USEPA Completed Residential Well Sampling Near Lennox Street	11/2009	Evaluate OU2 potential effects on nearby Residential Wells	groundwater	VOCs, SVOCs, pesticide, PCBs, dioxin/furans, metals	USEPA reported to residents results were within Drinking Water Advisory Limits in December 2009
2009 Unnamed Island Supplemental Investigation	11/2009	Supplement existing soil quality data	surface and subsurface soil	VOCs, SVOCs, pesticide, PCBs, dioxin/furans, metals	Additional groundwater quality data were collected in companion with select soil samples to assess leachate potential

TABLE 2-1
SUMMARY OF WELL CONSTRUCTION INFORMATION

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Well	Formation Code[(1)]	Date Installed	Well Diameter (inches)	Well Material	Screen Type	Total Boring Depth (feet bgs)	Well Screen Interval depth (feet bgs)	Ground Surface Elevation (feet NGVD)	Measuring Point Elevation (feet NGVD)	Well Screen Midpoint Elevation (feet NGVD)	Formation Material Screened
Monitoring Wells											
GLF-700A	IN	Nov-05	2.0	Sch. 40 PVC	0.010" factory slot	70.0	40 - 49.7	59.5	62.3	14.7	SAND, fine to coarse
GLF-704	SH	Nov-05	2.0	Sch. 40 PVC	0.010" factory slot	20.0	10 - 19.7	60.8	63.8	46.0	GRAVEL, fine to coarse
GLF-706	SH	Oct-05	2.0	Sch. 40 PVC	0.010" factory slot	20.0	10 - 19.7	64.3	67.43	49.5	SAND and GRAVEL
GLF-706A	IN	Oct-05	2.0	Sch. 40 PVC	0.010" factory slot	95.0	55 - 64.7	64.8	67.96	4.9	SAND, fine to medium
GNP-705	SH	Oct-05	2.0	Sch. 40 PVC	0.010" factory slot	20.0	10 - 19.7	73.7	76.71	58.9	Silty fine SAND
GNP-705B	DP	Oct-05	2.5	Sch. 80 PVC	0.010" factory slot	168.0	117 - 126.7	73.6	76.84	-48.3	SAND and GRAVEL
GNP-707	SH	Oct-05	2.0	Sch. 40 PVC	0.010" factory slot	36.0	25.4 - 35.4	75.0	78.2	44.6	SAND, fine to coarse
GNP-708	SH	Oct-05	2.5	Sch. 80 PVC	0.010" factory slot	20.0	10.5 - 20.5	68.5	71.67	53.0	SAND, fine to coarse
GNP-708A	IN	Oct-05	2.0	Sch. 40 PVC	0.010" factory slot	85.0	63.7 - 73.7	68.3	71.25	-0.4	SAND, fine to coarse
GUI-701	SH	Nov-05	1.5	Sch. 40 PVC	0.010" factory slot	20.0	8 - 17.7	62.2	65.075	49.4	SAND and GRAVEL
GUI-702	SH	Nov-05	1.5	Sch. 40 PVC	0.010" factory slot	20.0	8 - 17.7	64.0	66.67	51.2	SAND and GRAVEL
GUI-703	SH	Nov-05	1.5	Sch. 40 PVC	0.010" factory slot	20.0	5 - 14.7	61.8	64.355	52.0	GRAVEL
GZ-1-1	SH	Feb-81	1.5	Sch. 80 PVC	0.010" factory slot	19.9	9 19	64.60	67.08	50.6	SAND, fine to coarse
GZ-1-2	IN	Feb-81	B	B	B	45.2	43.5 48.2	64.60	----	18.8	SAND, fine to medium
GZ-1-3	DP	Feb-81	B	B	B	87.6	80.1 89	64.60	----	-20.0	SAND, fine
GZ-2-1	SH	Feb-81	1.5	Sch. 80 PVC	0.010" slot	19.8	9.8 - 19.8	---	----	---	SAND, fine to medium
GZ-2-1	SH	Feb-81	1.5	Sch. 80 PVC	0.010" factory slot	19.8	9.8 19.8	---	----	---	SAND, fine to medium
GZ-2-2	IN	Feb-81	B	B	B	38.3	35 40.4	---	----	---	SAND, fine to coarse
GZ-2-3	DP	Feb-81	B	B	B	57.1	53.5 61.5	---	----	---	SAND, fine
GZ-3-1	SH	Feb-81	1.5	Sch. 80 PVC	0.010" factory slot	19.1	9.8 19.8	---	----	---	SAND and GRAVEL
GZ-3-2	IN	Feb-81	B	B	B	36.6	30.4 52	---	----	---	SAND and GRAVEL
GZ-3-3	DP	Feb-81	B	B	B	57.4	53.1 64	---	----	---	SAND and GRAVEL
GZ-4-1	SH	Feb-81	1.5	Sch. 80 PVC	0.010" factory slot	18.5	8.5 18.5	62.30	63.49	48.8	SAND, fine to coarse
GZ-4-2	IN	Feb-81	B	B	B	49.6	41 57.8	62.30	----	12.9	SAND and GRAVEL
GZ-4-3	DP	Feb-81	B	B	B	83.7	79 97	62.30	----	-25.7	SAND and GRAVEL

TABLE 2-1
SUMMARY OF WELL CONSTRUCTION INFORMATION

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Well	Formation Code[(1)]	Date Installed	Well Diameter (inches)	Well Material	Screen Type	Total Boring Depth (feet bgs)	Well Screen Interval depth (feet bgs)	Ground Surface Elevation (feet NGVD)	Measuring Point Elevation (feet NGVD)	Well Screen Midpoint Elevation (feet NGVD)	Formation Material Screened
L-1	---	---	---	---	---	---	--- - 60.8	---	---	---	---
L-2	IN	---	---	---	---	---	--- - 45.5	68.19	69.94	22.7	---
L-3	---	---	---	---	---	---	--- - 73.5	---	---	---	---
L-4	---	---	---	---	---	---	--- - 71.1	---	---	---	---
L-5	---	---	---	---	---	---	--- - 16.7	---	---	---	---
MW-106A	SH	Jul-87	2.0	Sch. 40 PVC	0.010" factory slot	18.0	7.5 - 17.5	66.79	68.61	54.3	FILL, SAND and GRAVEL
MW-106B	IN	Jul-87	2.0	Sch. 40 PVC	0.010" factory slot	43.2	32.7 - 42.7	66.79	68.55	29.1	SAND and GRAVEL
MW-106C	BR	Jul-87	1.5	Sch. 40 PVC	0.020" saw-slot	74.0	53.9 - 73.9	66.79	68.20	2.9	BEDROCK (schist)
MW-107A	SH	Apr-87	2.0	Sch. 40 PVC	0.010" factory slot	35.4	13.9 - 33.9	79.54	81.46	55.6	SAND, SAND and GRAVEL
MW-107B	IN	Apr-87	2.0	Sch. 40 PVC	0.010" factory slot	50.1	40.1 - 45.1	79.54	81.53	36.9	SAND and GRAVEL
MW-107C	BR	Apr-87	1.5	Sch. 40 PVC	0.020" saw-slot	75.0	49 - 69	79.54	81.55	20.5	BEDROCK (schist)
MW-108A	IN	Jun-87	2.0	Sch. 40 PVC	0.010" factory slot	45.0	33.7 - 43.7	67.41	69.00	28.7	SAND, fine to coarse
MW-108AA	SH	Jun-87	2.0	Sch. 40 PVC	0.010" factory slot	20.8	10.3 - 20.3	67.41	69.19	52.1	SAND, fine to medium
MW108B	DP	Jun-87	2.0	Sch. 40 PVC	0.010" factory slot	98.0	87 - 97	67.41	69.31	-24.6	SAND, fine to medium
MW-108C	BR	Jun-87	1.5	Sch. 40 PVC	0.020" saw-slot	140.7	117.4 - 117.4	67.41	69.26	-50.0	BEDROCK (orthoquartzite)
MW-109A	DP	Jun-87	2.0	Sch. 40 PVC	0.010" factory slot	87.2	76.6 - 86.6	67.16	68.64	-14.4	SAND and GRAVEL
MW-109AA	SH	Jun-87	2.0	Sch. 40 PVC	0.010" factory slot	21.7	11.2 - 21.2	67.16	67.77	51.0	SAND and GRAVEL
MW-109B	TL	May-87	1.5	Sch. 40 PVC	0.020" saw-slot	148.0	137.2 - 147.2	67.16	69.13	-75.0	Sandy TILL
MW-109C	BR	Apr-87	1.5	Sch. 40 PVC	0.020" saw-slot	179.0	158.5 - 178.5	67.16	69.30	-101.3	BEDROCK (orthoquartzite)
MW-110A	SH	Jul-87	2.0	Sch. 40 PVC	0.010" factory slot	17.5	6.8 - 16.8	65.89	66.91	54.1	SAND and GRAVEL
MW-110B	TL	Jul-87	2.0	Sch. 40 PVC	0.010" factory slot	65.0	54.4 - 64.4	65.89	67.50	6.5	TILL
MW-110C	BR	Jun-87	1.5	Sch. 40 PVC	0.020" saw-slot	100.0	78.1 - 98.1	65.89	67.93	-22.2	BEDROCK (schist/orthoquartzite)
MW-111A	IN	Jul-87	2.0	Sch. 40 PVC	0.010" factory slot	75.7	64.7 - 74.7	62.56	64.13	-7.1	SAND, fine
MW-111AA	SH	Jul-87	2.0	Sch. 40 PVC	0.010" factory slot	26.0	15.1 - 25.1	62.56	64.53	42.5	SAND and GRAVEL
MW-111B	DP	Jul-87	2.0	Sch. 40 PVC	0.010" factory slot	121.0	109.3 - 119.3	62.56	64.01	-51.7	SAND and GRAVEL

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Well	Formation Code[(1)]	Date Installed	Well Diameter (inches)	Well Material	Screen Type	Total Boring Depth (feet bgs)	Well Screen Interval depth (feet bgs)	Ground Surface Elevation (feet NGVD)	Measuring Point Elevation (feet NGVD)	Well Screen Midpoint Elevation (feet NGVD)	Formation Material Screened
MW-111C	BR	Jul-87	1.5	Sch. 40 PVC	0.020" saw-slot	163.3	140.6 - 160.6	62.56	64.50	-88.0	BEDROCK (orthoquartzite)
MW-112A	IN	Aug-87	2.0	Sch. 40 PVC	0.010" factory slot	56.0	45.1 - 55.1	66.70	68.09	16.6	SAND and GRAVEL
MW-112AA	SH	Aug-87	2.0	Sch. 40 PVC	0.010" factory slot	21.0	9.3 - 19.3	66.70	68.59	52.4	SAND and GRAVEL
MW-112B	DP	Aug-87	2.0	Sch. 40 PVC	0.010" factory slot	82.4	71.7 - 81.7	66.70	68.20	-10.0	SAND, fine
MW-112C	BR	Aug-87	1.5	Sch. 40 PVC	0.020" saw-slot	120.0	99.6 - 119.6	66.70	68.09	-42.9	BEDROCK (orthoquartzite)
MW-501A	SH	---	2.0	Sch. 40 PVC	---	15.0	5 - 15	65.78	68.68	55.8	---
MW-501B	IN	---	2.0	Sch. 40 PVC	---	57.0	47 - 57	65.78	68.46	13.8	---
MW-501C	DP	---	2.0	Sch. 40 PVC	---	102.0	90 - 100	65.78	68.47	-29.2	---
MW-502	IN	---	2.0	Sch. 40 PVC	---	60.0	50 - 60	71.08	73.47	16.1	---
MW-A1	DP	Nov-80	1.5	Sch. 40 PVC	10-ft long saw-slot	85.0	75 - 85	63.23	64.79	-16.8	SAND, fine
MW-A2	SH	Nov-80	1.5	Sch. 40 PVC	10-ft long saw-slot	15.0	5 - 15	63.23	65.20	53.2	SAND, fine
MW-B1	IN	Nov-80	1.5	Sch. 40 PVC	10-ft long saw-slot	60.0	50 - 60	60.53	61.92	5.5	SAND, fine
MW-B2	SH	Oct-80	1.5	Sch. 40 PVC	10-ft long saw-slot	16.5	6.5 - 16.5	60.53	62.04	49.0	SAND, fine to medium
MW-C1	IN	Nov-80	1.5	Sch. 40 PVC	10-ft long saw-slot	70.0	60 - 70	59.52	61.06	-5.5	SAND, fine
MW-C2	SH	Oct-80	1.5	Sch. 40 PVC	10-ft long saw-slot	15.0	5 - 15	59.52	61.48	49.5	SAND, fine
MW-EA-1	SH	Jun-07	2.0	Sch. 40 PVC	0.010" factory slot	40.0	25 - 40	90.20	92.24	57.7	SAND, some Silt, Gravel
MW-EA-2	BR	Jun-07	2.0	Sch. 40 PVC	0.010" factory slot	32.0	7 - 32	76.30	78.32	56.8	BEDROCK
MW-EA-3	BR	Jun-07	2.0	Sch. 40 PVC	0.010" factory slot	52.0	22 - 52	76.80	78.76	39.8	BEDROCK
MW-EA-4	BR	Jun-07	2.0	Sch. 40 PVC	0.010" factory slot	25.0	15 - 25	77.80	79.75	57.8	BEDROCK
P-6	SH	Jul-87	2.0	Sch. 40 PVC	0.010" wire-wrap	30.0	15 - 25	66.15	67.83	46.2	SAND, fine
P-7	SH	Jun-87	2.0	Sch. 40 PVC	0.010" wire-wrap	38.3	27.8 - 37.8	70.03	71.79	37.2	SAND, fine and SILT
P-8	SH	Aug-87	2.0	Sch. 40 PVC	0.010" wire-wrap	20.5	10 - 20	59.95	62.53	45.0	SAND and GRAVEL, SAND
P-9	SH	Jun-87	2.0	Sch. 40 PVC	0.010" wire-wrap	29.0	18.3 - 20.3	66 *(estimated)*	66.07	46.7	SAND, v. fine, and SILT
PZ-01	SH	Jul-03	1.2	Steel	0.010" wire-wrap	5.5	3.2 5.2	59.71	59.71	55.5	---
PZ-02	SH	Jul-03	1.2	Steel	0.010" wire-wrap	5.0	2.7 4.7	60.39	60.39	56.7	---
PZ-03	SH	Jul-03	1.2	Steel	0.010" wire-wrap	3.7	1.7 3.7	61.14	61.14	58.4	---

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Well	Formation Code[(1)]	Date Installed	Well Diameter (inches)	Well Material	Screen Type	Total Boring Depth (feet bgs)	Well Screen Interval depth (feet bgs)	Ground Surface Elevation (feet NGVD)	Measuring Point Elevation (feet NGVD)	Well Screen Midpoint Elevation (feet NGVD)	Formation Material Screened
PZ-04	SH	Jul-03	1.2	Steel	0.010" wire-wrap	3.0	0.7 2.7	61.11	55.87	59.4	---
PZ-04A	SH	Jul-03	1.2	Steel	0.010" wire-wrap	5.1	2.8 4.8	53.99	53.99	50.2	---
PZ-05	SH	Jul-03	1.2	Steel	0.010" wire-wrap	6.3	4 6	59.93	59.93	54.9	---
PZ-06	SH	Jul-03	1.2	Steel	0.010" wire-wrap	4.8	2.5 4.5	58.89	58.89	55.4	---
PZ-06A	SH	Jul-03	1.2	Steel	0.010" wire-wrap	7.3	5 7	26.6	56.6	20.6	---
PZ-07	SH	Jul-03	1.2	Steel	0.010" wire-wrap	6.8	3.5 6.5	59.6	59.6	54.6	---
PZ-08	SH	Jul-03	1.2	Steel	0.010" wire-wrap	14.1	10.8 13.8	63.26	63.26	51.0	---
PZ-09	SH	Jul-03	1.2	Steel	0.010" wire-wrap	4.9	11.6 14.6	57.75	57.75	44.7	---
PZ-10	SH	Jul-03	1.2	Steel	0.010" wire-wrap	3.7	0.4 3.4	63.7	63.7	61.8	---
PZ-11	SH	Jul-03	1.2	Steel	0.010" wire-wrap	4.0	0.7 3.7	63.55	63.55	61.4	---
PZ-12	SH	Jul-03	1.2	Steel	0.010" wire-wrap	4.0	0.7 3.7	64.14	64.14	61.9	---
PZ-13	SH	Jul-03	1.2	Steel	0.010" wire-wrap	4.5	1.2 4.2	65.11	65.11	62.4	---
PZ-14	SH	Jul-03	1.2	Steel	0.010" wire-wrap	4.2	0.9 3.9	61.68	61.68	59.3	---
PZ-15	SH	Jul-03	1.2	Steel	0.010" wire-wrap	3.6	0.3 3.3	68.49	68.49	66.7	---
PZ-15A	SH	Jul-03	1.2	Steel	0.010" wire-wrap	5.2	2.6 4.6	69.12	69.12	65.5	---
PZ-16	SH	Jul-03	1.2	Steel	0.010" wire-wrap	12.0	8.7 11.7	66.08	66.08	55.9	---
PZ-17	SH	Jul-03	1.2	Steel	0.010" wire-wrap	12.0	8.7 11.7	65.15	65.15	55.0	---
PZ-18	SH	Jul-03	1.2	Steel	0.010" wire-wrap	14.9	11.6 14.6	65.97	65.97	52.9	---
PZ-19	SH	Jul-03	1.2	Steel	0.010" wire-wrap	13.2	9.9 12.9	69.69	69.69	58.3	---
PZ-20	SH	Jul-03	1.2	Steel	0.010" wire-wrap	4.5	2.2 4.2	59.11	59.11	55.9	---
PZ-21	SH	Sep-05	1.25	Steel	1.6-foot steel well point	6.0	4.0 - 5.6	50.4 *(estimated)*	----	45.6	driven well - no samples collected
PZ-22	SH	Sep-05	1.25	Steel	1.6-foot steel well point	6.5	4.6 - 6.2	54.3 *(estimated)*	----	48.9	driven well - no samples collected
PZ-23	SH	Sep-05	1.25	Steel	1.6-foot steel well point	6.0	4.0 - 5.6	49.1 *(estimated)*	----	44.3	driven well - no samples collected
SEA-601	SH	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	20.4	10.2 - 20.2	60.42	63.47	45.2	SAND, some Gravel
SEA-602A	SH	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	20.5	10.3 - 20.3	59.76	62.51	44.5	SAND and GRAVEL

TABLE 2-1
SUMMARY OF WELL CONSTRUCTION INFORMATION

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Well	Formation Code[(1)]	Date Installed	Well Diameter (inches)	Well Material	Screen Type	Total Boring Depth (feet bgs)	Well Screen Interval depth (feet bgs)	Ground Surface Elevation (feet NGVD)	Measuring Point Elevation (feet NGVD)	Well Screen Midpoint Elevation (feet NGVD)	Formation Material Screened
SEA-602B	IN	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	61.5	51.3 - 61.3	59.76	61.99	3.5	SAND, fine to coarse
SEA-603	SH	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	20.2	10 - 20	59.23	61.97	44.2	SAND and GRAVEL
SEA-604	SH	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	20.2	10 - 20	62.34	65.34	47.3	SAND, fine to medium, and SILT
SEA-605	SH	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	20.2	10 - 20	62.32	65.20	47.3	SAND, some Silt and Gravel
SEA-606	SH	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	20.2	10 - 20	61.65	64.43	46.7	SAND and GRAVEL
SEA-607	SH	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	20.3	10.1 - 20.1	63.14	65.82	48.0	SAND and GRAVEL
SEA-608	SH	Sep-03	2.0	Sch. 40 PVC	0.010" factory slot	20.2	10 - 20	64.68	67.02	49.7	SAND and GRAVEL
Former Municipal Supply Wells											
Linc-1 (LW-383)	---	1957	24.0	Steel	---	62.0	--- - 63	---	---	---	OVERBURDEN
Lenox St (CW-405)	---	1964	---	Steel	---	---	--- - 59.5	---	----	---	OVERBURDEN
Linc-6 (LW-420)	---	1969	24.0	Steel	---	64.0	--- - 47	---	----	---	OVERBURDEN
Linc-9	---	1975	16.0	Steel	---	65.0	----	---	----	---	OVERBURDEN

Notes:
---- = information not available
B = BarCad Sampler interval (temporary well screen for vertical groundwater quality profiling)
bgs = below ground surface
NGVD29 = elevation datum is National Geodetic Vertical Datum 1929
Information on wells installed prior to 2005 compiled by Shield Environmental Associates, Inc.
(1) Formation Codes (FM):
SH = screen in unconsolidated sediments, middle screen elevation above 35 feet
IN = screen in unconsolidated sediments, middle screen elevation between -10 feet and 35 feet
DP = screen in unconsolidated sediments, middle screen elevation below -10 feet
TL = screened interval in till
BR = screened interval in bedrock

TABLE 2-2
SUMMARY OF VERTICAL PROFILING DATA

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Sample ID	Depth of sample (ft)	Sample Date/Time	Purge Interval	pH_i (std units)	pH_f (std units)	$Temp_i$ (°C)	$Temp_f$ (°C)	$Cond_i$ (mS/cm)	$Cond_f$ (mS/cm)	DO_i	DO_f	ORP_i (mV)	ORP_f (mV)	$Turb_i$ (NTU)	$Turb_f$ (NTU)
GLF - 706A	30-35	10/11/05 11:15	10:00-11:13	7.08	7.25	15.9	16.1	0.317	0.296	8.1	3.2	274	-128	21	52.8
GLF - 706A	50-55	10/11/05 13:45	13:05-13:40	7.86	8.58	15.8	16.8	0.306	0.302	8.33	5.89	245	177	31.9	44.2
GLF - 706A	70-75	10/11/05 16:25	15:25-16:20	8.35	7.3	15.7	16.8	0.24	0.261	8.35	3.27	-41	-132	>999	>999
GLF - 706A	90-95	10/12/05 15:05	12:45-15:00	7.72	6.75	15.4	14.2	0.301	0.358	9.64	1.3	253	-295	203	80.1
GNP - 705B	30-35	10/13/05 16:00	14:40-15:55	6.36	6.26	16.3	11.3	0.33	0.411	8.19	1.26	19	-64	550	48.7
GNP - 705B	50-55	10/14/05 11:58	9:30-11:53	6.9	6.87	16.7	17.9	0.294	0.319	9.33	2.04	183	-85	184	255
GNP - 705B	70-75	10/14/05 15:10	13:55-15:05	7.04	6.36	17.7	12.83	0.287	0.818	8.43	1.43	90	-25	>999	99.3
GNP - 705B	90-95	10/17/05 13:30	11:08-13:23	7.98	6.38	11.89	12.44	0.295	0.501	8.95	3.67	-2	-12	201	33
GNP - 705B	110-115	10/17/05 16:50	15:20-16:45	7.23	6.23	15.12	13.59	0.293	0.625	10.47	1.83	190	-78	308	67.6
GNP - 705B	130-140	10/18/05 11:30	09:30-11:24	7.25	6.82	12.55	14.09	0.327	0.554	8.19	1.20	43	-251	>999	>999
GNP - 708A	40-45	10/21/05	14:30 - 15:13	7.56	6.94	15.06	14.43	0.261	0.306	10.11	1.93	157	-122	74	52.1
GNP - 708A	60-65	10/24/05	11:22 - 12:02	7.59	7.02	12.24	12.99	0.27	0.39	10.59	1.73	141	-174	186	17
GNP - 708A	80-85	10/24/05	14:40-16:20	8.11	7.1	11.53	13.64	0.292	0.351	10.12	1.22	66	-154	40.7	26
GLF-700A	5-10	11/9/05	08:40-09:47	6.63	6.40	13.09	14.52	0.43	1.230	2.59	0	5	-78	>999	88.3
GLF-700A	25-30	11/9/05	14:30-15:30	6.74	6.76	14.89	14.48	0.545	1.71	5.72	0	-72	-123	965	48.2
GLF-700A	45-50	11/10/05	08:00-9:25	6.48	6.48	13.10	13.06	0.452	0.522	0.03	6.6	21	55	>999	10.5
GLF-700A	65-70	11/10/05	11:29-12:34	7.10	6.35	13.19	13.02	0.419	0.416	5.94	7.62	94	90	>999	>999
Equipment rinsate		10/12/05													
Drill Water		10/12/05		7.63		17		0.302		6.79		283		77.3	
Drill Water		10/17/05		6.77		14.33		0.296		4.52		71		82	
Drill Water		10/18/05		6.97		11.01		0.28		8.2		83		77.1	
Drill Water		10/21/05		7.01		15.44		0.253		10.53		-69		15.44	
Drill Water		10/24/05		7.37		9.71		0.276		7.46		50		34.9	
Drill Water		11/09/05		8.34		10.98		0.269		11.63		-94		0	
Drill Water		11/10/05		8.41		10.82		0.252		10.95		-83		1.3	
River Water		11/10/05		7.12		10.3		0.276		11.69		104		28.5	

These samples may not have been sufficiently purged (may not be representative of groundwater quality).
No drilling water was used at this location prior to taking this sample; therefore, these data are not used in comparative calculations/graphs.
Blank cells represent nondetected or no analyzed not pertinent to the THM water supply issue that affected the profiling work.

TABLE 2-2
SUMMARY OF VERTICAL PROFILING DATA

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Sample ID	Depth of sample (ft)	Acetone	Benzene	2-Butanone	Bromodichloro-methane	Chlorobenzene	Chloroform	Dibromochloro-methane	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Methyl isobutyl ketone	MTBE	Toluene
GLF - 706A	30-35	2.3			13		78	3.7					
GLF - 706A	50-55				18		85	6.7					
GLF - 706A	70-75	3			6		75	1.5J					
GLF - 706A	90-95				1.0J		20						
GNP - 705B	30-35					1.3 J	3.7						
GNP - 705B	50-55				6.4		35	2					
GNP - 705B	70-75						2.8						
GNP - 705B	90-95				6.4		29	2.2					
GNP - 705B	110-115				1.4J		6.9					1.6J	
GNP - 705B	130-140				<2		9.8	<2					
GNP - 708A	40-45	<2			<2	<2	11	<2				<2	<2
GNP - 708A	60-65	<2			<2	<2	1.5 J	<2				<2	<2
GNP - 708A	80-85	<2			1.3 J	<2	16	<2				<2	<2
GLF-700A	5-10	14	19	4.1	1.2J	16	11	<2	1.2J	2.8	1.2J	<2	<2
GLF-700A	25-30	1.8J	<2	<2	<2	14	2.4	<2	<2	1.8J	<2	<2	<2
GLF-700A	45-50						1.4 J						
GLF-700A	65-70												
Equipment rinsate		4					1.9 J						1.2 J
Drill Water					18		81	6.5					
Drill Water		1.2J			13		54	4.1					
Drill Water					16		67	5.3					
Drill Water		<2			18	<2	110	3.7				<2	<2
Drill Water		<2			14	<2	74	3.2				<2	<2
Drill Water		1.1J			13	<2	74	3.1				<2	<2
Drill Water		<2			14	<2	78	3.2				<2	<2
River Water													

These samples may not have been sufficiently purged (may not be representative of groundwater quality).
No drilling water was used at this location prior to taking this sample; therefore, these data are not used in comparative calculations/graphs.
All organics results are in units of ug/L.
Blank cells represent nondetected or no analyzed not pertinent to the THM water supply issue that affected the profiling work.

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-01	2nd	0	0.7	1.8	Fine Sand over Rock
PBR-01	2nd	5	1.9	1.0	Fine Sand over Rock
PBR-01	2nd	10	2.0	0.9	Fine Sand over Rock
PBR-01	main	30	1.0	0.5	Gravel & Fine to Coarse Sand over Rock
PBR-01	main	40	0.8	0.2	Gravel & Fine to Coarse Sand over Rock
PBR-01	main	60	1.1	0.2	Gravel & Fine to Coarse Sand over Rock
PBR-01	main	70	1.6	0.1	Gravel & Fine to Coarse Sand over Rock
PBR-01	main	90	2.3	0.1	Gravel & Fine to Coarse Sand over Rock
PBR-01	main	110	2.7	0.1	Gravel & Fine to Coarse Sand over Rock
PBR-01	main	130	2.9	0.1	Rock & Coarse Gravel Trace Fine to Coarse Sand over Rock
PBR-01	main	150	2.0	0.1	Fine to Coarse Sand & Coarse Gravel over Rock
PBR-01	main	155	1.6	0.9	Fine Sand & Silt over Rock
PBR-01	main	161	0.0	1.5	Fine to Coarse Sand over Rock
PBR-02	2nd	0	0.0	0.0	Fine Sand over Rock
PBR-02	2nd	5	1.2	0.1	Fine to Coarse Sand Gravel over Rock
PBR-02	2nd	10	2.1	0.1	Gravel with Trace Fine to Coarse Sand over Rock
PBR-02	2nd	15	1.6	0.1	Gravel with Trace Fine to Coarse Sand over Rock
PBR-02	2nd	20	1.6	0.1	Gravel with Trace Fine to Coarse Sand over Rock
PBR-02	2nd	25	1.0	0.1	Gravel Rock Trace Fine Sand over Rock
PBR-02	2nd	30	0.0	0.1	Fine Sand Little Gravel over Rock
PBR-02	main	0	0.0	0.2	Gravel Little Fine to Coarse Sand over Rock
PBR-02	main	5	2.2	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-02	main	10	3.5	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-02	main	15	3.9	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-02	main	20	3.0	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-02	main	25	2.0	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-02	main	30	0.8	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-02	main	35	0.7	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-02	main	40	0.9	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-03	2nd	0	0.0	2.0	Fine Sand Large Gravel over Fine Sand over Tight Fine Sand
PBR-03	2nd	5	1.5	0.2	Gravel with Little Fine to Medium Sand over Gravel
PBR-03	2nd	10	1.5	0.0	Gravel with Trace Fine to Medium Sand
PBR-03	2nd	15	1.3	0.0	Gravel with Trace Fine to Medium Sand
PBR-03	2nd	20	1.2	0.1	Gravel with Trace Fine to Medium Sand
PBR-03	2nd	25	1.0	0.1	Gravel with Trace Fine to Medium Sand

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-03	2nd	30	1.0	0.1	Gravel with Trace Fine to Medium Sand
PBR-03	2nd	35	1.0	0.1	Gravel with Trace Fine to Medium Sand
PBR-03	2nd	40	1.0	0.2	Fine Sand over Gravel down Tree
PBR-03	2nd	45	0.8	0.2	Fine Sand over Gravel down Tree
PBR-03	2nd	50	0.8	0.2	Fine Sand over Gravel down Tree
PBR-03	2nd	54	0.0	0.8	Fine Sand over Rock
PBR-03	main	0	0.0	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-03	main	5	0.7	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-03	main	10	1.3	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-03	main	20	1.7	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-03	main	30	2.0	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-03	main	40	1.8	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-03	main	50	1.6	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-03	main	62	0.0	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-03	main	67	1.0	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-04	main	0	0.0	0.5	Fine Sand over Gravel
PBR-04	main	5	0.8	0.1	Fine Sand over Gravel
PBR-04	main	10	1.6	0.1	Gravel with Little Fine Sand over Gravel
PBR-04	main	20	2.3	0.1	Fine Sand over Gravel
PBR-04	main	30	2.5	0.2	Fine Sand over Gravel
PBR-04	main	40	3.0	0.2	Fine Sand over Gravel
PBR-04	main	50	3.2	0.0	Gravel
PBR-04	main	60	3.0	0.1	Gravel Trace Fine Sand
PBR-04	main	70	1.8	0.0	Gravel Trace Fine to Coarse Sand
PBR-04	main	80	2.0	0.0	Gravel Trace Fine to Coarse Sand
PBR-04	main	90	2.0	0.0	Gravel Trace Fine to Coarse Sand
PBR-04	main	100	1.7	0.0	Gravel Little Fine to Coarse Sand
PBR-04	main	110	1.0	0.1	Gravel Little Fine to Coarse Sand
PBR-04	main	115	0.0	0.0	Gravel Trace Fine to Coarse Sand
PBR-05	main	0	0.0	0.1	Fine Sand over Gravel
PBR-05	main	5	2.0	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-05	main	10	2.9	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-05	main	20	4.9	0.0	Gravel Trace Fine Sand over Gavel
PBR-05	main	30	5.4	0.0	Gravel Trace Fine Sand over Gavel
PBR-05	main	40	5.0	0.0	Gravel Trace Fine Sand over Gavel
PBR-05	main	50	4.8	0.1	Trace Fine to Medium Sand over Rock
PBR-05	main	60	4.2	0.0	Gravel Trace Fine to Medium Sand over Rock

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-05	main	70	3.1	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-05	main	80	2.2	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-05	main	90	0.9	0.2	Fine to Medium Sand Little Gravel over Rock
PBR-05	main	93	0.0	0.5	Fine Sand over Rock
PBR-06	main	0	0.0	1.0	Fine Sand over Rock
PBR-06	main	5	0.6	0.1	Rock Gravel Little Medium to Coarse Sand over Rock
PBR-06	main	10	1.7	0.2	Coarse Sand & Gravel over Gravel
PBR-06	main	20	3.3	0.0	Rock Gravel Little Medium to Course Sand over Rock
PBR-06	main	30	4.1	0.0	Rock Gravel Little Medium to Course Sand over Rock
PBR-06	main	40	4.3	0.0	Rock Gravel Little Medium to Course Sand over Rock
PBR-06	main	50	4.0	0.0	Rock Gravel Little Medium to Course Sand over Rock
PBR-06	main	60	3.9	0.1	Medium to Coarse Sand Little Gravel over Rock
PBR-06	main	70	2.2	0.2	Medium to Coarse Sand Little Gravel over Rock
PBR-06	main	77	1.0	0.1	Medium to Coarse Sand Little Gravel over Rock
PBR-06	main	82	0.0	0.2	Fine Sand over Rock
PBR-07	main	0	0.0	0.1	Fine Sand over Rock
PBR-07	main	5	1.9	0.1	Gravel Little Fine Sand over Gravel
PBR-07	main	10	3.1	0.1	Gravel Little Fine Sand over Gravel
PBR-07	main	20	5.8	0.0	Gravel Little Fine Sand over Gravel
PBR-07	main	30	7.8	0.0	Gravel Little Fine Sand over Gravel
PBR-07	main	40	8.9	5.3	Fine to Medium Sand Little Gravel over Tight Sand
PBR-07	main	50	9.0	5.2	Fine to Medium Sand Little Gravel over Tight Sand
PBR-07	main	60	9.0	6.7	Gravel over Fine to Medium Sand over Tight Sand
PBR-07	main	70	7.0	6.3	Gravel over Fine to Medium Sand over Tight Sand
PBR-07	main	80	2.2	2.6	Gravel over Fine to Medium Sand over Rock
PBR-07	main	85	0.0	0.2	Fine Sand & Gravel over Gravel
PBR-08	main	0	0.0	0.2	Gravel Little Fine Sand over Gravel
PBR-08	main	5	2.5	0.2	Gravel Little Fine Sand over Gravel
PBR-08	main	10	4.2	0.0	Gravel Trace Fine Sand over Gravel
PBR-08	main	20	7.7	0.2	Gravel Little Fine to Medium Sand over Gravel
PBR-08	main	30	10.0	0.1	Gravel Little Fine to Medium Sand over Gravel
PBR-08	main	40	10.2	0.0	Gravel Little Fine to Medium Sand over Gravel
PBR-08	main	50	9.1	0.1	Gravel Little Fine to Medium Sand over Gravel
PBR-08	main	60	9.1	1.0	Medium to Coarse Sand over Gravel
PBR-08	main	70	9.0	0.9	Medium to Coarse Sand Little Gravel over Gravel

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-08	main	80	8.9	0.1	Gravel Little Medium to Coarse Sand over Gravel
PBR-08	main	90	6.1	0.2	Gravel Little Medium to Coarse Sand over Gravel
PBR-08	main	97	2.0	0.2	Gravel Little Medium to Coarse Sand over Gravel
PBR-08	main	102	0.0	0.1	Gravel Little Fine to Coarse Sand over Gravel
PBR-09	main	0	0.0	0.2	Fine Sand over Rock
PBR-09	main	5	2.0	0.5	Gravel with Little Fine Sand over Gravel
PBR-09	main	10	3.0	0.2	Gravel with Little Fine Sand over Gravel
PBR-09	main	20	7.1	1.0	Gravel with Little Fine Sand over Gravel over Rock
PBR-09	main	30	9.1	0.1	Gravel Little Coarse Sand over Rock
PBR-09	main	40	9.0	0.2	Gravel Little Coarse Sand over Rock
PBR-09	main	50	8.9	0.2	Gravel Little Coarse Sand over Rock
PBR-09	main	60	8.6	0.1	Medium Sand Little Gravel over Gravel
PBR-09	main	70	8.3	0.1	Medium Sand Little Gravel over Gravel
PBR-09	main	80	8.7	1.0	Medium Sand over Gravel
PBR-09	main	90	5.0	1.2	Medium to Coarse Sand Little Grvel over Tight Sands
PBR-09	main	95	3.0	1.0	Gravel Little Medium to Coarse Sand over Rock
PBR-09	main	100	0.0	0.3	Fine Sand over Gravel
PBR-10	main	0	0.0	0.2	Gravel Fine to Coarse Sand over Gravel
PBR-10	main	5	2.0	0.2	Gravel Fine to Coarse Sand over Gravel
PBR-10	main	10	3.0	0.1	Gravel Little Fine to Coarse Sand over Gravel
PBR-10	main	20	6.4	0.0	Gravel Little Fine to Coarse Sand over Gravel
PBR-10	main	30	6.2	0.1	Gravel Little Fine to Coarse Sand over Gravel
PBR-10	main	40	6.0	0.2	Fine to Coarse Sand Little Gravel over Gravel
PBR-10	main	50	5.8	1.1	Fine to Coarse Sand Little Gravel over Gravel
PBR-10	main	60	5.5	0.7	Fine to Coarse Sand Little Gravel over Gravel
PBR-10	main	70	5.2	1.7	Gravel & Fine Sand over Fine Sand over Gravel
PBR-10	main	80	2.2	0.1	Gravel Little Fine Sand over Gravel
PBR-10	main	85	0.0	1.8	Fine Sand over Rock
PBR-11	main	0	0.0	0.4	Fine Sand over Gravel
PBR-11	main	5	2.1	0.2	Gravel with Little Fine Sand over Gravel
PBR-11	main	10	4.2	1.3	Gravel & Fine Sand over Rock
PBR-11	main	20	7.9	0.2	Gravel Little Fine to Medium Sand over Gravel
PBR-11	main	30	8.1	0.1	Medium to Coarse Sand over Gravel
PBR-11	main	40	7.9	0.2	Medium to Coarse Sand over Gravel
PBR-11	main	50	7.5	0.3	Medium to Coarse Sand over Gravel
PBR-11	main	60	7.0	0.1	Medium to Coarse Sand over Gravel
PBR-11	main	70	5.7	0.1	Gravel Little Medium to Coarse Sand

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-11	main	80	2.9	0.0	Gravel Little Medium to Coarse Sand
PBR-11	main	90	3.2	1.6	Fine to Medium Sand Trace Coarse Sand over Rock
PBR-11	main	100	3.7	0.5	Fine to Medium Sand Trace Coarse Sand over Gravel
PBR-11	main	105	3.0	1.0	Fine to Medium Sand Trace Coarse Sand over Rock
PBR-11	main	110	2.0	0.9	Fine Sand over Gravel
PBR-11	main	111	0.0	2.3	Fine Sand Little Silt over Rock
PBR-12	main	0	0.0	0.4	Fine Sand over Gravel
PBR-12	main	5	2.0	0.3	Gravel Little Fine Sand over Rock
PBR-12	main	10	3.0	0.2	Gravel Little Fine Sand over Rock
PBR-12	main	20	4.5	0.1	Gravel Little Fine Sand over Rock
PBR-12	main	30	5.3	0.1	Fine to Coarse Sand & Gravel over Rock
PBR-12	main	40	5.6	0.2	Gravel Fine to Medium Sand over Rock
PBR-12	main	50	4.9	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-12	main	60	4.0	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-12	main	70	3.7	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-12	main	80	3.0	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-12	main	90	3.0	0.2	Medium to Coarse Sand & Gravel over Rock
PBR-12	main	100	4.2	0.2	Fine to Coarse Sand Little Gravel over Rock
PBR-12	main	110	2.8	0.0	Gravel Trace Medium to Coarse Sand over Rock
PBR-12	main	114	0.0	0.3	Fine Sand over Gravel
PBR-13	main	0	0.0	0.3	Fine to Medium Sand Little Silt Little Gravel over Gravel
PBR-13	main	5	2.9	0.1	Gravel Little Fine to Medium Sand over Gravel
PBR-13	main	10	3.3	0.1	Gravel Little Fine to Medium Sand over Gravel
PBR-13	main	20	3.9	0.3	Fine to Coarse Sand over Rock
PBR-13	main	30	4.4	0.1	Gravel Little Medium to Coarse Sand over Rock
PBR-13	main	40	4.5	0.1	Gravel Little Medium to Coarse Sand over Rock
PBR-13	main	50	4.1	0.2	Gravel Little Medium to Coarse Sand over Rock
PBR-13	main	60	2.1	0.1	Gravel Little Medium to Coarse Sand over Rock
PBR-13	main	70	1.6	0.0	Gravel Little Medium to Coarse Sand over Rock
PBR-13	main	80	1.6	0.0	Gravel Trace Fine to Coarse Sand over Rock
PBR-13	main	85	1.3	0.1	Gravel Trace Fine to Coarse Sand over Rock
PBR-13	main	90	0.0	0.1	Gravel Trace Fine to Coarse Sand over Rock
PBR-14	main	0	0.0	3.5	Fine Sand with Silt over Rock
PBR-14	main	5	1.0	2.4	Fine Sand with Silt over Rock
PBR-14	main	10	2.0	1.1	Fine Sand over Gravel
PBR-14	main	20	2.2	0.9	Fine Sand over Gravel

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-14	main	30	3.2	0.6	Medium to Coarse Sand Little Fine Sand over Rock
PBR-14	main	40	4.2	0.3	Medium to Coarse Sand over Rock
PBR-14	main	50	6.0	0.0	Rock & Gravel Tace Fine to Coarse Sand
PBR-14	main	60	7.1	0.1	Rock & Gravel Tace Fine to Coarse Sand
PBR-14	main	70	7.1	0.0	Rock & Gravel Tace Fine to Coarse Sand
PBR-14	main	80	6.1	0.0	Rock & Gravel Tace Fine to Coarse Sand
PBR-14	main	90	4.5	0.0	Rock & Gravel Tace Fine to Coarse Sand
PBR-14	main	100	3.2	0.0	Rock & Gravel Tace Fine to Coarse Sand
PBR-14	main	105	1.9	0.1	Rock & Gravel Tace Fine to Coarse Sand
PBR-14	main	109	0.0	0.3	Gravel Little Fine to Course Sand
PBR-15	main	0	0.0	1.5	Fine Sand over Rock
PBR-15	main	5	1.0	2.9	Fine Sand over Rock
PBR-15	main	10	2.0	1.3	Fine Sand over Rock
PBR-15	main	20	2.9	0.1	Gravel Little Fine Sand over Gravel
PBR-15	main	30	3.0	0.2	Fine Sand over Gravel
PBR-15	main	40	2.9	0.2	Gravel with Fine to Coarse Sand over Gravel
PBR-15	main	50	2.8	0.1	Gavel Trace Fine to Coarse Sand over Gravel
PBR-15	main	60	3.0	0.0	Gavel Trace Fine to Coarse Sand over Gravel
PBR-15	main	70	2.8	0.0	Gravel to Fine Sand
PBR-15	main	80	3.9	0.1	Gravel Little Fine to Medium Sand
PBR-15	main	90	4.0	0.1	Gravel Little Fine to Medium Sand
PBR-15	main	100	3.9	0.2	Gravel Trace Fine to Medium Sand
PBR-15	main	110	2.9	0.1	Gravel Trace Fine to Medium Sand
PBR-15	main	115	1.8	0.1	Gravel with Medium to Coarse Sand Trace Fine Sand
PBR-15	main	121	0.0	0.1	Gravel with Fine to Coarse Sand
PBR-16	main	0	1.0	0.0	Gravel Trace Fine to Medium Sand
PBR-16	main	5	2.9	2.3	Gravel Little Fine to Medium Sand
PBR-16	main	10	3.9	2.2	Fine to Medium Sand Little Gravel over Tight Sand
PBR-16	main	20	4.2	1.9	Medium to Coarse Sand Little Fine Sand over Tight Sand
PBR-16	main	30	4.0	0.4	Medium to Coarse Sand Trace Fine Sand Little Gravel over Rock
PBR-16	main	40	4.1	0.2	Gravel Medium to Coarse Sand to Fine Sand over Rock
PBR-16	main	50	4.3	0.1	Gravel Medium to Coarse Sand to Fine Sand over Rock
PBR-16	main	60	4.6	0.1	Gravel Medium to Coarse Sand to Fine Sand over Rock
PBR-16	main	70	4.5	0.1	Gravel Medium to Coarse Sand to Fine Sand over Rock
PBR-16	main	80	5.0	0.1	Gravel Medium to Coarse Sand to Fine Sand over Rock
PBR-16	main	90	4.7	1.2	Medium to Coarse Sand Trace Fine Sand Little Gravel over Tight Sand

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-16	main	100	1.9	0.1	Gravel Little Medium to Coarse Sand Trace Fine Sand over Gravel
PBR-16	main	103	0.0	0.1	Gravel Little Medium to Coarse Sand Trace Fine Sand over Gravel
PBR-17	main	0	0.0	0.1	Gravel Fine to Coarse Sand
PBR-17	main	5	2.0	0.3	Gravel Fine to Coarse Sand
PBR-17	main	10	3.9	0.1	Gravel Fine to Coarse Sand
PBR-17	main	20	6.5	0.1	Gravel Fine to Coarse Sand
PBR-17	main	30	6.5	0.5	Fine to Medium Sand over Rock
PBR-17	main	40	6.1	2.8	Fine to Coarse Sand Gravel over Fine to Coarse Sand over Rock
PBR-17	main	50	5.5	0.3	Gravel Fine to Coarse Sand over Rock
PBR-17	main	60	5.5	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-17	main	70	4.5	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-17	main	80	3.9	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-17	main	90	2.1	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-17	main	95	0.0	0.1	Gravel Little Fine to Medium Sand over Rock
PBR-18	main	0	0.0	0.0	Gravel & Rock Trace Sands
PBR-18	main	5	2.5	1.0	Gravel & Fine to Coarse Sand over Rock
PBR-18	main	10	3.8	1.0	Fine to Medium Sand little Silt over Rock
PBR-18	main	20	4.7	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-18	main	30	4.3	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-18	main	40	4.3	0.0	Rock Little Gravel Trace Fine to Medium Sand
PBR-18	main	50	4.3	0.0	Rock Little Gravel Trace Fine to Medium Sand
PBR-18	main	60	4.1	0.0	Rock Little Gravel Trace Fine to Medium Sand
PBR-18	main	70	4.0	0.1	Gravel Little Fine to Coarse Sand over Rock
PBR-18	main	80	4.0	0.7	Fine to Medium Sand Trace Coarse Sand over Rock
PBR-18	main	85	3.0	0.2	Fine to Medium Sand Trace Coarse Sand over Rock
PBR-18	main	90	1.8	0.1	Gravel & Rock little Fine to Coarse Sand over Rock
PBR-18	main	93	0.0	0.1	Fine Sand & Silt over Rock
PBR-19	main	0	0.0	0.0	Gravel Little Medium to Coarse Sand
PBR-19	main	5	1.2	0.0	Gravel Little Medium to Coarse Sand
PBR-19	main	10	2.9	0.0	Gravel Trace Medium to Coarse Sand
PBR-19	main	15	4.0	0.0	Gravel Trace Medium to Coarse Sand
PBR-19	main	20	4.2	0.0	Gravel Trace Medium to Coarse Sand
PBR-19	main	25	4.5	0.0	Gravel Trace Medium to Coarse Sand
PBR-19	main	30	3.3	0.0	Gravel Trace Medium to Coarse Sand
PBR-19	main	35	2.8	0.0	Gravel Trace Medium to Coarse Sand
PBR-19	main	40	1.8	0.0	Gravel Trace Medium to Coarse Sand

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-19	main	45	1.0	0.0	Gravel Trace Medium to Coarse Sand
PBR-19	main	48	0.0	0.2	Gravel Little Fine to Coarse Sand over Gravel
PBR-20	main	0	0.0	0.3	Fine Sand over Gravel
PBR-20	main	5	1.6	0.2	Gravel Fine to Medium Sand
PBR-20	main	10	2.5	0.2	Fine to Medium Sand over Gravel
PBR-20	main	15	2.5	0.2	Fine to Coarse Sand & Gravel over Gravel
PBR-20	main	20	2.6	0.1	Fine to Coarse Sand & Gravel over Gravel
PBR-20	main	25	2.0	0.1	Fine to Coarse Sand & Gravel over Gravel
PBR-20	main	30	2.3	0.0	Gravel Trace Medium to Coarse Sand
PBR-20	main	35	2.2	0.0	Gravel Trace Medium to Coarse Sand
PBR-20	main	40	2.3	0.0	Gravel Trace Medium to Coarse Sand
PBR-20	main	45	2.5	0.0	Gravel Trace Medium to Coarse Sand
PBR-20	main	50	2.6	0.0	Gravel Trace Medium to Coarse Sand
PBR-20	main	55	2.0	0.1	Gravel Trace Medium to Coarse Sand
PBR-20	main	60	2.0	0.0	Gravel Trace Medium to Coarse Sand
PBR-20	main	65	1.9	0.1	Gravel Trace Medium to Coarse Sand
PBR-20	main	68	0.0	0.4	Fine Sand Little Silt over Gravel
PBR-21	main	0	0.0	0.1	Fine Sand Little Silt over Gravel
PBR-21	main	5	2.1	0.0	Gravel Trace Fine to Medium Sand
PBR-21	main	10	3.8	0.0	Gravel Rock Trace Fine Sand over Rock
PBR-21	main	15	5.0	0.0	Gravel Rock Trace Fine Sand over Rock
PBR-21	main	20	5.2	0.0	Gravel Trace Fine to Coarse Sands
PBR-21	main	25	5.0	0.0	Gravel Trace Fine to Coarse Sands
PBR-21	main	30	5.0	0.0	Gravel Trace Fine to Coarse Sands
PBR-21	main	35	4.2	0.0	Gravel Trace Fine to Coarse Sands
PBR-21	main	40	2.2	0.0	Gravel Trace Fine to Coarse Sands
PBR-21	main	46	0.0	0.3	Fine Sand Little Silt over Rock
PBR-22	main	0	0.0	0.4	Fine Sand Little Silt over Gravel
PBR-22	main	5	1.9	0.1	Gravel Trace Fine to Coarse Sand
PBR-22	main	10	3.9	0.0	Gravel Trace Fine to Medium Sand
PBR-22	main	15	4.9	0.0	Gravel Trace Fine to Medium Sand
PBR-22	main	20	4.3	0.0	Gravel Trace Fine to Medium Sand
PBR-22	main	25	4.2	0.0	Gravel Trace Fine to Medium Sand
PBR-22	main	30	4.1	0.1	Gravel Trace Fine to Medium Sand over Gravel
PBR-22	main	35	3.9	0.0	Gravel Trace Fine to Medium Sand over Gravel

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-22	main	40	3.9	0.0	Gravel Trace Fine to Medium Sand over Gravel
PBR-22	main	45	2.9	2.6	Fine Sand over Fine to Coarse Sand over Rock
PBR-22	main	50	2.8	0.5	Fine Sand over Gravel
PBR-22	main	55	1.7	0.2	Gravel Little Fine to Coarse Sand over Gravel
PBR-22	main	60	0.0	1.0	Fine Sand over Gravel
PBR-23	main	0	0.0	2.6	Fine Sand Little Silt over Rock
PBR-23	main	5	1.3	0.2	Fine Sand Little Gravel over Rock
PBR-23	main	10	1.7	0.2	Gravel Little Fine to Coarse Sand over Rock
PBR-23	main	20	1.9	0.1	Fine to Coarse Sand Gravel over Rock
PBR-23	main	30	1.9	0.1	Gravel Little Fine to Coarse Sand over Gravel
PBR-23	main	40	2.2	0.1	Gravel Little Fine to Coarse Sand over Gravel
PBR-23	main	50	2.0	0.0	Gravel Little Fine to Coarse Sand over Gravel
PBR-23	main	60	3.0	0.0	Gravel Little Fine to Coarse Sand over Gravel
PBR-23	main	70	3.0	0.2	Medium to Coarse Sand Trace Fine Sand Little Gravel over Gravel
PBR-23	main	80	1.3	0.0	Medium to Coarse Sand Trace Fine Sand Little Gravel over Gravel
PBR-23	main	87	0.0	0.8	Fine Sand Little Silt over Rock
PBR-24	main	0	0.0	0.8	Fine Sand Little Silt over Gravel
PBR-24	main	5	2.0	0.0	Gravel Trace Fine to Medium Sand
PBR-24	main	10	3.1	0.0	Gravel Trace Fine to Medium Sand
PBR-24	main	20	3.4	0.2	Medium to Coarse Sand Little Gravel over Gavel
PBR-24	main	30	2.8	0.5	Medium to Coarse Sand Trace Fine Sand over Gravel
PBR-24	main	40	1.7	0.3	Gravel Little Medium to Coarse Sand Trace Fine Sand over Gravel
PBR-24	main	50	1.0	0.2	Gravel Little Medium to Coarse Sand Trace Fine Sand over Gravel
PBR-24	main	60	0.8	0.2	Gravel Little Medium to Coarse Sand Trace Fine Sand over Gravel
PBR-24	main	65	1.0	0.3	Gravel Little Medium to Coarse Sand Trace Fine Sand over Gravel
PBR-24	main	70	1.1	3.9	Fine Sand & Gravel over Fine Sand over Gravel
PBR-24	main	75	1.0	0.2	Fine Sand & Gravel over Fine Sand over Gravel
PBR-24	main	80	1.8	1.2	Gravel Fine to Medium Sand over Fine Sand over Gravel
PBR-24	main	85	2.0	2.1	Fine Sand Little Gravel over Fine Sand over Gravel
PBR-24	main	90	1.8	1.5	Fine Sand Little Silt over Gravel
PBR-24	main	95	1.8	2.7	Fine Sand over Fine to Coarse Sand over Gravel; Sheen appeared, sulphur odor
PBR-24	main	99	0.0	3.2	Fine Sand & Silt over Fine Sand over Rock
PBR-25	main	0	0.0	0.2	Fine Sand Little Silt over Gravel
PBR-25	main	5	1.9	0.1	Gravel Little Fine to Medium Sand
PBR-25	main	10	4.1	0.3	Medium to Coarse Sand Trace Fine Sand Coarse Gravel over Gravel
PBR-25	main	20	4.8	2.9	Fine to Coarse Sand over Tight Sand

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-25	main	30	4.0	2.7	Fine to Medium Sand over Tight Sand
PBR-25	main	40	3.5	3.1	Fine Sand over Medium to Coarse Sand Fine Sand over Tight Sand
PBR-25	main	50	1.8	1.5	Fine Sand over Fine to Coarse Sand over Tight Sand
PBR-25	main	60	1.0	1.0	Fine Sand over Rock
PBR-25	main	67	0.0	1.3	Fine Sand over Rock
PBR-26	main	0	0.0	0.8	Fine Sand Little Silt over Gravel
PBR-26	main	5	2.0	1.2	Medium to Coarse Sand Little Gravel over Gravel
PBR-26	main	10	2.2	1.0	Medium to Coarse Sand Little Gravel over Rock
PBR-26	main	20	3.3	0.1	Gravel Little Medium to Coarse Sand over Gravel
PBR-26	main	30	3.9	0.0	Gravel Trace Sand
PBR-26	main	40	3.2	0.0	Gravel Trace Fine to Coarse Sand
PBR-26	main	50	3.2	0.2	Medium to Coarse Sand Trace Gravel over Gravel
PBR-26	main	54	1.7	1.5	Fine Sand over Gravel
PBR-26	main	59	0.0	3.3	Fine Sand over Rock
PBR-27	main	0	0.0	0.2	Fine to Coarse Sand/Gravel over Gravel
PBR-27	main	5	2.0	6.0	Fine to Medium Sand over Silt
PBR-27	main	10	3.5	3.0	Fine to Coarse Sand over Gravel
PBR-27	main	20	6.0	3.0	Gravel with Medium to Coarse Sand over Rock
PBR-27	main	30	5.0	4.5	Rock and Gravel with Fine to Corase Sand over Rock and Gravel
PBR-27	main	40	1.8	1.4	Fine to Medium Sand over Rock *(veg)*
PBR-27	main	50	1.7	1.6	Rock with Fine to Medium Sand
PBR-27	main	60	1.0	2.5	Fine to Medium Sand over Tight Sand
PBR-27	main	65	1.0	1.4	Fine to Medium Sand over Tight Sand
PBR-27	main	69	0.0	0.2	Fine to Coarse Sand Gravel over Rock
PBR-28	main	0	0.0	4.0	Gravel with Fine to Coarse Sand over Silt and Fine Sand over Rock
PBR-28	main	5	1.7	3.3	Gravel over Silt and Fine Sand over Rock
PBR-28	main	10	3.1	3.1	Rock and Gravel with Fine to Coarse Sand over Rock and Gravel
PBR-28	main	20	6.5	5.0	Medium to Coarse Sand over Gravel
PBR-28	main	30	4.5	4.4	Rock and Gravel
PBR-28	main	40	1.8	1.8	Rock and Gravel
PBR-28	main	50	0.9	0.9	Rock and Gravel
PBR-28	main	60	0.5	0.5	Rock and Gravel with Fine Sand
PBR-28	main	63	0.0	0.2	Fine to Coarse Sand with Gravel over Rock
PBR-29	main	0	0.0	6.5	Gravel over Fine to Coarse Sand over Rock
PBR-29	main	5	2.0	1.8	Gravel/Rock Trace Fine to Coarse Sand
PBR-29	main	10	4.0	4.0	Gravel/Rock Trace Fine to Coarse Sand

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-29	main	20	6.0	5.9	Gravel/Rock Trace Fine to Coarse Sand
PBR-29	main	30	5.5	5.0	Gravel Trace Fine to Coarse Sand over Gravel
PBR-29	main	40	4.0	3.8	Rock and Gravel over Medium to Coarse Sand over Rock
PBR-29	main	43	3.0	2.0	Fine to Coarse Sand Trace Gravel over Rock
PBR-29	main	47	0.0	0.3	Silt with Fine Sand over Rock
PBR-30	main	0	0.0	0.2	Silt with Fine Sand over Rock
PBR-30	main	5	2.1	0.2	Rock, Gravel, Trace Fine to Coarse Sand
PBR-30	main	10	3.3	1.5	Rock, Gravel over Trace Fine to Coarse Sand over Rock
PBR-30	main	20	3.3	0.1	Rock, Gravel Trace Fine to Coarse Sand
PBR-30	main	30	3.8	0.1	Rock, Gravel Trace Fine to Coarse Sand
PBR-30	main	40	3.8	0.2	Gravel with Fine to Coarse Sand over Rock
PBR-30	main	50	1.9	4.1	Fine to Coarse Sand Trace Gravel over Rock
PBR-30	main	54	1.1	4.7	Fine to Coarse Sand Trace Gravel over Rock
PBR-30	main	58	0.0	5.0	Fine to Medium Sand over Fine to Coarse Sand over Tight Sand
PBR-31	main	0	0.0	1.1	Silt Fine Sand over Rock
PBR-31	main	5	1.0	0.2	Fine to Coarse Sand over Silt over Rock
PBR-31	main	10	2.9	0.4	Rock over Gravel over Medium to Coarse Sand over Rock
PBR-31	main	20	5.9	0.0	Rock Trace Fine to Coarse Sand
PBR-31	main	30	7.1	0.0	Rock Trace Fine to Coarse Sand
PBR-31	main	40	5.9	2.0	Fine to Coarse Sand Trace Gravel over Rock
PBR-31	main	50	3.9	0.6	Fine to Medium Sand Trace Gravel over Rock
PBR-31	main	60	3.0	0.5	Fine to Coarse Sand over Silt
PBR-31	main	70	2.2	1.4	Fine to Coarse Sand over Silt
PBR-31	main	76	0.0	0.2	Rock Gravel Trace Silts Fine to Coarse Sand over Rock
PBR-32	main	0	0.0	0.2	Rock/Gravel Fine to Coarse Sand Trace Silt
PBR-32	main	5	1.1	0.0	Rock and Gravel
PBR-32	main	10	3.1	0.5	Gravel/Rock Fine to Coarse Sand over Rock
PBR-32	main	20	3.3	2.4	Medium to Coarse Sand over Tight Sand
PBR-32	main	30	2.5	5.5	Fine to Coarse Sand Trace Gravel over Fine to Medium Sand
PBR-32	main	40	1.9	4.9	Fine to Coarse Sand Trace Gravel over Fine to Medium Sand
PBR-32	main	50	2.1	0.4	Rock and Gravel over Fine to Medium Sand over Rock
PBR-32	main	60	2.0	0.3	Rock and Gravel over Fine to Coarse Sand over Rock
PBR-32	main	70	1.6	0.0	Rock and Gravel Trace Fine to Coarse Sand
PBR-32	main	80	3.0	0.0	Rock and Gravel Trace Fine to Coarse Sand
PBR-32	main	90	3.0	0.7	Silt over Rock

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PBR-32	main	91	0.5	4.0	Silt over Rock
PBR-32	main	93	0.0	4.5	Silt over Rock
PBR-34	main	0	0.0	0.2	Trace Silt Fine to Coarse Sand Rock and Gravel over Rock
PBR-34	main	5	0.5	0.0	Rock and Gravel Fine to Coarse Sand
PBR-34	main	10	0.6	0.1	Rock and Gravel Fine to Coarse Sand
PBR-34	main	20	0.0	0.0	Rock and Gravel Fine to Coarse Sand
PBR-34	main	30	0.0	0.2	Rock and Gravel Fine to Coarse Sand
PBR-34	main	40	0.0	0.8	Rock and Gravel Fine to Coarse Sand
PBR-34	main	44	0.0	2.0	Rock and Gravel Fine to Coarse Sand over Tight Sands
PBR-34	main	50	0.7	0.0	Rock and Gravel Fine to Coarse Sand over Rock
PBR-34	main	60	0.5	0.3	Gravel with Fine to Coarse Sand over Gravel
PBR-34	main	65	0.0	0.1	Trace Silts Fine to Coarse Sand over Gravel
PRB-35	main	0	0.0	0.3	Silt with Trace Fine to Medium Sand over Rock
PRB-35	main	5	0.7	0.0	Rock with Medium to Coarse Sand with slight Silt
PRB-35	main	10	1.8	0.0	Rock with Medium to Coarse Sand with slight Silt
PRB-35	main	20	2.3	0.0	Rock with Medium to Coarse Sand with slight Silt
PRB-35	main	30	2.3	0.0	Rock with Medium to Coarse Sand with slight Silt
PRB-35	main	40	2.1	0.1	Gravel with Medium to Coarse Sand over Gravel
PRB-35	main	50	1.8	0.4	Rock and Gravel over Medium to Coarse Sand over Tight Sands
PRB-35	main	60	1.7	2.2	Rock and Gravel over Medium to Coarse Sand over Rock
PRB-35	main	70	2.0	3.0	Gravel with Medium to Coarse Sand over Silt with Fine to Medium Sand over Rock
PRB-35	main	80	1.8	1.0	Rock and Gravel over Medium to Coarse Sand over Rock
PRB-35	main	86	0.0	0.1	Rock and Gravel Trace Silt Fine to Coarse Sand over Rock
PRB-36	main	0	0.0	0.3	Silt over Medium to Coarse Sand
PRB-36	main	5	1.5	0.5	Silt over Medium to Coarse Sand over Rock
PRB-36	main	10	2.8	0.5	Rock and Gravel with Silt Fine to Medium Sand over Rock
PRB-36	main	20	2.5	0.1	Gravel Medium to Coarse Sand over Gravel
PRB-36	main	30	2.4	0.1	Gravel and Rock Trace Medium to Coarse Sand over Rock
PRB-36	main	40	2.6	0.5	Gravel with Medium to Coarse Sand over Tight Medium to Coarse Sand
PRB-36	main	50	2.7	0.3	Gravel with Medium to Coarse Sand over Tight Medium to Coarse Sand
PRB-36	main	60	2.8	1.3	Gravel with Medium to Coarse Sand over Tight Medium to Coarse Sand
PRB-36	main	70	2.9	2.5	Gravel with Medium to Coarse Sand over Tight Medium to Coarse Sand
PRB-36	main	80	3.0	3.3	Gravel with Medium to Coarse Sand over Tight Medium to Coarse Sand
PRB-36	main	90	3.1	1.0	Silt with Fine Sand over Gravel over Medium to Coarse Sand
PRB-36	main	93	0.0	0.1	Silt Trace Fine Sand over Rock
PRB-37	main	0	0.0	0.1	Rock and Gravel Fine to Medium Sand Trace Silts

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PRB-37	main	5	1.6	0.4	Rock and Gravel over Silt and Fine Sand over Medium to Coarse Sand
PRB-37	main	10	2.7	1.1	Rock and Gravel over Fine to Coarse Sand over Rock
PRB-37	main	20	4.4	0.0	Rock and Gravel
PRB-37	main	30	4.0	3.2	Rock/Gravel over Medium to Coarse Sand
PRB-37	main	40	3.8	0.1	Rock/Gravel over Rock
PRB-37	main	50	3.7	0.2	Gravel/Fine To Coarse Sand over Rock
PRB-37	main	60	3.4	0.2	Gravel/Fine To Coarse Sand over Rock
PRB-37	main	70	2.8	0.4	Fine Sand with Silt over Rock
PRB-37	main	80	3.3	0.2	Fine Sand with Silt over Rock
PRB-37	main	90	1.2	1.3	Fine Sand with Silts Trace Gravel over Rock
PRB-37	main	91	0.0	2.0	Fine Sand with Silts Trace Gravel over Rock
PRB-38	main	0	0.0	1.8	Silt with Fine Sand over Tight Sands
PRB-38	main	5	1.0	0.8	Fine to Medium Sand Trace Coarse Gravel over Rock
PRB-38	main	10	1.7	0.2	Fine to Coarse Sand Trace Silts over Rock
PRB-38	main	20	1.5	0.1	Trace Fine to Coarse Sand Gravel/Rock over Rock
PRB-38	main	30	2.0	0.2	Trace Fine to Coarse Sand Gravel/Rock over Rock
PRB-38	main	40	2.9	0.1	Trace Fine to Coarse Sand Gravel/Rock over Rock
PRB-38	main	50	3.2	0.0	Trace Fine to Coarse Sand Gravel/Rock over Rock
PRB-38	main	60	3.2	0.2	Trace Fine to Coarse Sand Gravel/Rock over Rock
PRB-38	main	70	3.2	0.8	Trace Fine to Coarse Sand Gravel/Rock over Rock
PRB-38	main	80	3.7	1.2	Fine to Coarse Sand over Silt over Medium to Coarse Sand over Rock
PRB-38	main	85	3.4	1.4	Silts with Fine Sand over Gravel Trace Medium to Coarse Sand over Rock
PRB-38	main	90	1.2	3.3	Silt with Trace Fine Sand over Rock
PRB-38	main	98	0.0	5.0	Silt with Trace Fine Sand over Rock
PRB-39	main	0	0.0	1.8	Silt Trace Fine Sand over Tight Sand
PRB-39	main	5	1.1	1.1	Silt with Fine Sand Trace Gravel over Gravel
PRB-39	main	10	1.8	2.6	Gravel, Silt, Fine Sand over Medium to Coarse Sand over Gravel
PRB-39	main	20	2.6	0.2	Gravel/Rock Fine to Coarse Sand over Rock
PRB-39	main	30	3.2	0.7	Gravel with Medium to Coarse Sand over Rock
PRB-39	main	40	3.5	1.0	Fine to Medium Sand with Gravel over Rock Trace Silts
PRB-39	main	50	3.5	0.0	Rock and Gravel
PRB-39	main	60	3.7	0.0	Rock and Gravel
PRB-39	main	70	3.4	0.0	Rock and Gravel
PRB-39	main	80	3.5	0.0	Rock and Gravel
PRB-39	main	85	3.1	0.2	Fine Sand Trace Silt over Rock

TABLE 2-3
SEDIMENT PROBING RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Probing Transect	Channel	Station	Water Depth (ft)	Probe (ft)	Description
PRB-39	main	90	1.9	1.9	Gravel with Fine to Medium Sand over Silt and Fine Sand over Rock
PRB-39	main	99	0.0	2.0	Silt and Fine Sand over Rock
PRB-40	main	0	0.0	3.5	Silt Trace Fine Sand over Tight Fine Sand
PRB-40	main	5	1.7	1.8	Gravel over Silt with Fine Sand over Rock
PRB-40	main	10	3.0	1.5	Gravel over Silt with Fine Sand over Rock
PRB-40	main	20	5.0	0.0	Rock/Gravel Trace Fine to Coarse Sand
PRB-40	main	30	5.0	1.0	Rock/Gravel Trace Fine to Coarse Sand
PRB-40	main	40	4.8	1.0	Rock/Gravel Trace Fine to Coarse Sand
PRB-40	main	50	4.6	0.9	Rock/Gravel Trace Fine to Coarse Sand
PRB-40	main	60	4.4	0.9	Rock/Gravel Trace Fine to Coarse Sand
PRB-40	main	70	4.2	0.8	Silt Fine to Coarse Sand over Gravel over Rock
PRB-40	main	80	4.0	0.0	Rock
PRB-40	main	85	2.5	0.3	Silt Trace Fine Sand over Rock
PRB-40	main	92	0.0	3.0	Silt Trace Fine Sand over Rock
PRB-41	main	0	0.0	2.0	Silt/Fine Sand over Fine to Medium Sand over Tight Sand
PRB-41	main	5	1.1	0.0	Rock/Gravel Fine to Coarse Sand
PRB-41	main	10	3.0	1.0	Rock/Gravel over Fine to Coarse Sand over Rock
PRB-41	main	20	5.0	1.3	Silt to Fine Sand over Fine to Coarse Sand over Gravel
PRB-41	main	30	4.0	2.0	Gravel/ Medium to Coarse Sand over Silt and Fine Sand over Rock
PRB-41	main	40	4.0	2.5	Gravel/ Medium to Coarse Sand over Silt and Fine Sand over Rock
PRB-41	main	50	4.2	0.5	Gravel with Medium to Coarse Sand over Rock
PRB-41	main	60	3.5	0.5	Gravel over Medium to Coarse Sand over Rock
PRB-41	main	70	2.6	1.4	Fine to Coarse Sand over Fine to Medium Sand over Rock
PRB-41	main	80	1.9	0.2	Fine to Medium Sand Trace Silt over Rock
PRB-41	main	85	1.2	2.2	Silts Trace Fine Sand over Rock
PRB-41	main	91	0.0	2.0	Silt Trace Fine Sand over Rock
PRB-42	main	0	0.0	4.8	Fine Sand Trace Silt over Rock
PRB-42	main	5	1.0	4.0	Fine to Medium Sand over Rock
PRB-42	main	10	2.5	3.0	Fine to Medium Sand over Rock
PRB-42	main	20	3.4	1.6	Gravel over Fine to Medium Sand over Rock
PRB-42	main	30	3.4	1.4	Gravel over Fine to Medium Sand over Rock
PRB-42	main	40	3.5	0.1	Gravel/Rock
PRB-42	main	50	2.8	0.0	Gravel/Rock
PRB-42	main	60	1.8	0.2	Gravel/Rock Fine to Coarse Sand
PRB-42	main	64	0.0	0.8	Silt Trace Fine Sand over Rock

TABLE 2-4
FISH COMMUNITY SURVEY: SPECIES ABUNDANCE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location		River				Pond		
		BR-1	BR-2	BR-3		P-1	P-2	P-6
Survey Date		9/29/05	9/28/05	9/27/05	9/28/05	9/27/05	9/27/05	9/29/05
Fish Species	**Scientific Name**	**Number of Organisms**						
American Eel	*Anguila rostrata*	3	7	5	2			
Black Crappie	*Pomoxis nigromaculatus*					2	2	
Blacknose Dace	*Rhinichthys atratulus*			2				
Bluegill	*Lepomis macrochirus*	10	2		23	50	13	51
Carp	*Cyprinus carpio*	2	2	8	6	6	6	
Chain Pickerel	*Esox niger*		1	1	2	1		
Common Shiner	*Notropis cornutus*	28	38	25	27			
Fallfish	*Semotilus corporalis*	44	13	10			3	
Golden Shiner	*Notemigonus crysoleucas*	16	3		1	1	9	
Johnny Darter	*Etheostoma nigrum*		3					
Largemouth Bass	*Micropterus salmoides*	63	35	20	21	71	9	144
Longnose Dace	*Rhinichthys cataractae*		3	2				
Northern Pike	*Esox lucius*							1
Pumpkinseed	*Lepomis gibbosus*	78	2	2	13	3	13	
Rockbass	*Ambloplites rupestris*	2	5					
Smallmouth Bass	*Micropterus dolomieui*	2	18	6				
Tessellated Darter	*Etheostoma olmstedi*			2				
White Perch	*Morone americana*			4	1	11		
White Sucker	*Catostomus commersoni*	12	25	62	66	11	32	
Yellow Bullhead	*Ictalurus natalis*		2	1			1	
Yellow Perch	*Perca flavescens*	1		2		27	9	1

Notes:
BR-3 September 27, 2005 survey data is from the main channel of the Blackstone River.
BR-3 September 28, 2005 survey data is from the backwater behind the Unnamed Island.

TABLE 2-5
FISH COMMUNITY SURVEY: POPULATION CHARACTERISTICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location	Survey Date	Fish Species	Number of Organisms	Length (cm) / Weight (g)	Number of Organisms Measured																								
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
BR-1	9/29/05	American Eel	3	<15	<15	<15																							
				na	na	na																							
Background upstream of Ashton Dam		Bluegill	10	20.2	19.7	5.2	19	17.9	7	7.2	19.6	21.5	7.5															
				191	183	3	148	132	8	7	196	222	6															
		Carp	2	69.2	71.6																							
				5605	5736																							
		Common Shiner	28	15	14.5	15.4	15.2	15.6	12.7	16.6	15.4	15.2	15.4	15	15	16	15.9	16.5	15.7	15.4	15.5	12	12	12.6	12	16	14.5	12.4
				42	36	40	43	40	23	47	42	41	41	36	38	47	48	52	41	45	40	17	14	21	16	45	36	16
		Fallfish	44	16.6	16.8	16.6	15	17.6	16	17	15.3	17.2	17.6	17.5	16.5	16.1	17.5	17.2	15.5	18.9	17	15.2	15.5	17.1	15.1	17	16.2	8.3
				43	50	42	29	48	37	44	32	49	47	49	40	40	53	51	34	60	46	34	27	43	32	49	38	5
		Golden Shiner	16	15.2	14.5	13	12.2	14.5	13	14.6	14.5	13.5	13.5	14	14.2	13	13.6	12	15									
				35	30	21	17	27	16	37	35	20	22	22	30	20	23	14	32									
		Largemouth Bass	63	10.6	11	11.2	9.5	22.2	25.5	22	13.7	11	12.2	12	11.6	11	20.7	13	11.6	12.7	10	19	9.6	12	10	8.8	10.6	12.2
				17	15	14	10	140	220	146	37	14	30	24	29	23	122	29	19	22	14	80	14	24	15	10	16	23
		Pumpkinseed	78	16.2	15	15	15	15.4	16.5	16.5	16.5	11.5	8.4	7.1	13.6	12	10.5	15.3	15.4	16	12.4	15.7	13	15	15.7	12.3	14.3	11.6
				100	76	63	43	86	90	96	100	29	12	7	55	36	25	90	80	90	44	82	48	63	86	44	63	35
		Rockbass	2	23	21																							
				275	202																							
		Smallmouth Bass	2	28.2	18.3																							
				284	90																							
		White Sucker	12	28.2	14	23	33.6	16.1	45.5	30	25.1	47.5	27.6	25.1	25													
				250	24	133	407	39	1130	502	171	1250	236	166	166													
		Yellow Perch	1	23.7																								
				173																								
BR-2	9/29/05	American Eel	7	55	66	60	25	<15	<15	<15																		
				363	496	756	39	na	na	na																		
Background downstream of Ashton Dam		Bluegill	2	17.5	10																							
				124	22																							
		Carp	2	67.4	60.3																							
				5095	3560																							
		Chain Pickerel	1	38.1																								
				380																								
		Common Shiner	38	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
				na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
		Fallfish	13	15.1	13.9	7.3	14.4	13.3	14.6	9.4	15.3	8.2	8.2	6.8	8	8.4												
				35	27	7	36	25	27	7	33	6	6	3	5	6												
		Golden Shiner	3	8.7	6.8	7.3																						
				8	3	3																						
		Johnny Darter	3	7.1	5.9	6.2																						
				4	1	2																						
		Largemouth Bass	35	16	21.2	10.8	6.8	8.7	12.1	8.8	9.1	21.1	21.9	9	30.7	22.7	21.7	21.4	19.5	19	24.3	8.1	7.4	9.8	25.8	9.1	24.7	19.5
				59	136	19	6	12	24	11	13	122	164	10	471	145	137	128	97	98	205	7	5	12	264	10	227	96
		Longnose Dace	3	8.5	8.3	7																						
				9	7	3																						
		Pumpkinseed	2	10.2	8.2																							
				24	11																							
		Rockbass	5	20.8	21.4	20.2	21.2	13.9																				
				188	92	149	132	60																				
		Smallmouth Bass	18	19.9	13.2	13.1	12.9	11.2	25.2	9	11	21.6	19.2	19.8	19.2	10.4	11.7	10.6	12.1	12.5	11.7							
				97	31	28	31	21	203	9	17	137	84	96	89	14	24	19	23	31	23							
		White Sucker	25	23.9	19.4	27.3	22.9	21.6	37.6	23	23.2	21	22.3	38.1	24.3	19.8	25	22.3	19.4	39.3	20.1	21.6	44.9	35.6	39	38.1	32.3	37.6
				154	86	211	129	95	549	136	117	84	105	531	164	77	172	119	68	714	83	88	968	509	643	600	398	571
		Yellow Bullhead	2	18.1	16.2																							
				73	53																							

TABLE 2-5
FISH COMMUNITY SURVEY: POPULATION CHARACTERISTICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location	Survey Date	Fish Species	Number of Organisms	Length (cm) / Weight (g)	Number of Organisms Measured																									
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
BR-3	9/27/05	American Eel	5	60	28	60	55	40																				
				405	27	385	275	111																				
Site river main channel		Blacknose Dace	2	8.6	5.3																							
				8	1																							
		Carp	8	71.2	65.7	56.1	83	66.2	56.2	55.6	56.8																	
				4594	4246	2663	4539	4685	2675	2640	2940																	
		Chain Pickerel	1	23.3																								
				76																								
		Common Shiner	25	15	14.6	15.2	14.6	7.5	8.2	7.7	7.9	7.8	15.5	15.7	12.4	14.7	7.6	8.5	8.7	8.6	13.4	14.7	14.3	7.5	8.5	11.6	11.7	15
				38	38	38	37	4	5	4	5	5	40	42	15.5	35	4	6	7	6	25	40	33	4	6	16	17	38
		Fallfish	10	15.2	15.3	14.7	14.5	14.8	14.9	8.4	15.5	15.4	8															
				37	29	29	29	27	23	2	37	33	2															
		Largemouth Bass	20	9.6	17.8	25.2	10.1	27.5	25.9	10.5	12.1	9.8	19.2	9.4	9.1	10.1	11.2	10.1	31.1	33.9	28.4	26.9	25.3					
				18	72	200	17	259	246	22	34	13	83	14	12	14	19	16	502	729	383	263	239					
		Longnose Dace	2	6.1	6.3																							
				3	2																							
		Pumpkinseed	2	17	6.4																							
				117	2																							
		Smallmouth Bass	6	17.2	20.9	20	18.6	16.6	17.9																			
				57	112	108	74	63	72																			
		Tessellated Darter	2	6.7	7.8																							
				5	14																							
		White Perch	4	23.6	31.3	31.2	26																					
				197	464	425	234																					
		White Sucker	62	44.7	40.9	23	22.1	20.5	34	40.6	22.4	21.1	18.8	27.3	38.3	20.9	19.5	38.7	38.4	23.2	22.2	31.9	25.1	22.4	34.1	21.2	20.7	39.8
				911	768	130	111	104	421	782	136	86	68	219	749	99	86	588	619	147	119	392	180	111	499	101	91	757
		Yellow Bullhead	1	15.4																								
				57																								
		Yellow Perch	2	25.3	25.8																							
				220	234																							
BR-3	9/28/05	American Eel	2	55	39																							
				266	85																							
Site river backwater		Bluegill	23	17.3	19.8	17.6	11.5	10.9	17.3	12.5	10.5	11.5	16.4	12.8	5	5.1	5.1	18.2	14.1	5.8	15.7	8.9	16.2	15.3	16.7	16.8		
				104	154	102	27	23	117	45	22	26	95	45	1	1	1	124	57	4	80	12	82	76	94	100		
		Carp	6	71	60	62.2	60.3	53.5	65.8																			
				4765	3488	3547	3175	2700	4217																			
		Chain Pickerel	2	20.1	25.8																							
				46	89																							
		Common Shiner	27	11.5	14.3	7.2	6.7	7.2	11.3	8	7	7.1	5.2	7	7.1	7.6	5.1	7	7.1	7.2	6.7	7.9	6.1	6.5	6.4	6.7	7.7	8.5
				15	30	2	1	3	15	4	3	3	1	2	2	5	1	2	2	3	3	4	2	2	2	2	5	6
		Golden Shiner	1	15.2																								
				41																								
		Largemouth Bass	21	13.9	9.5	6.5	8.8	10.3	6.7	12.3	9.2	36.2	41.7	31.1	10.2	11.1	9.8	10.3	11.6	6.3	6.3	22.1	22.6	10.8				
				35	9	4	10	13	5	44	10	763	1120	944	13	18	12	12	20	4	3	144	161	17				
		Pumpkinseed	13	10.2	10.9	11.6	14.2	10.7	13.5	6.6	12.4	10.5	11.1	10	12.2	16.2												
				26	24	29	52	25	49	10	36	20	30	17	32	100												
		White Perch	1	27																								
				306																								
		White Sucker	66	46.5	43.3	37	22.7	21	22	19	40.2	22.3	21.4	21.3	23.8	25.7	23.1	9.3	42.5	33.3	22.7	22.2	24.1	22.5	26	20.5	21.3	21.1
				1041	838	442	119	90	95	77	755	122	97	113	140	162	117	9	770	353	109	103	158	108	177	87	99	108

TABLE 2-5
FISH COMMUNITY SURVEY: POPULATION CHARACTERISTICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location	Survey Date	Fish Species	Number of Organisms	Length (cm) / Weight (g) — Number of Organisms Measured																										
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
P-1	9/27/05	Black Crappie	2	17.4 83	26.2 287																							
Pond A		Bluegill	50	9.3 16	13.2 49	13 42	11.5 35	11.3 29	7.7 12	6 4	11 27	11.2 27	12.2 47	15.3 83	19.8 173	14.3 75	13.7 57	7.5 9	20 190	17.9 129	12 33	12.3 34	8.2 10	19.7 175	18.2 144	19.8 173	13.2 48	12.7 36
		Carp	6	72 na	64.5 na	60 na	60 na	64 na	56 na																			
		Chain Pickerel	1	40.8 367																								
		Golden Shiner	1	16.7 61																								
		Largemouth Bass	71	18.5 76	21.3 125	21.5 125	22 126	9.2 9	17.2 65	9.7 11	9.7 11	10.4 13	7.6 6	9.7 10	19.3 93	37.3 878	31.8 473	9.7 14	37.2 750	32.7 472	19.3 90	19.2 92	13.4 32	11.8 21	9.1 9	9.4 11	20.7 109	38.5 748
		Pumpkinseed	3	17 115	16.8 103	16.7 107																						
		White Perch	11	29.8 372	20.1 115	26.3 260	20.2 108	30.3 385	18.3 85	18.7 97	18.5 90	19.2 99	19 93	20 107														
		White Sucker	11	45.5 1068	38.6 590	45 757	25.7 201	41.2 723	27.8 254	29 284	27.4 244	37.8 668	37.8 632	27.3 246														
		Yellow Perch	27	16.2 46	19 77	17.2 50	21.4 108	14.3 31	22 108	21.2 106	14.7 32	15 35	22.3 129	21.6 117	14.1 32	18.1 58	19.2 82	14.8 34	13.2 28	8.6 7	16.4 52	14 29	20.5 106	17.7 56	13.7 23	15.2 36	14.7 31	14.2 26
P-2	9/27/05	Black Crappie	2	15.7 51	7.2 5																							
Pond F		Bluegill	13	13.2 37	9.2 17	11.2 30	15.2 66	14.3 53	18 108	10.2 16	8.5 11	9.2 14	18 110	16.2 80	15 65	9.7 16												
		Carp	6	78 na	61 na	67 na	62 na	67 na	23.5 198																			
		Fallfish	3	7.1 3	6.2 3	5.5 1.5																						
		Golden Shiner	9	18.5 79	13.6 24	17.4 48	18.7 54	15 45	17 55	16.7 55	8.3 4	16.9 53																
		Largemouth Bass	9	8 8	9.3 10	15.5 44	19 87	10.5 14	12.6 23	18 69	6.7 5	18.2 77																
		Pumpkinseed	13	13.4 42	8.8 13	10.7 23	9.5 18	14.3 54	13 48	9.8 16	10.5 23	7.5 8	7.3 8	12 37	14 57	10.1 20												
		White Sucker	32	21.7 103	38 533	26 193	18.8 61	21.2 87	17.5 54	21.9 88	17.5 57	21.5 93	42.3 760	21.5 95	21.5 95	20.5 78	21.9 108	23.5 145	40.3 699	36 460	21.5 95	18.5 63	35.7 445	25.7 150	22.7 113	23.2 132	21 95	38.7 585
		Yellow Bullhead	1	23 185																								
		Yellow Perch	9	20 80	19.3 70	17.7 63	18.5 68	18.5 70	13 20	15.5 38	14.5 34	14 27																
P-6	9/29/05	Bluegill	51	16.5 83	20.3 149	17.1 98	18.7 127	7.9 7	14.1 47	7.4 6	7.1 15	11.3 24	7.7 7	11.3 23	11.1 23	5.9 3	7.2 5	12.3 32	14 49	6.2 3	11.9 31	8.3 6	12.6 31	10.6 21	6.9 5	11.7 27	9.6 14	6.1 2
Pond background		Largemouth Bass	144	37 750	40.2 923	35.1 565	32.2 445	31.3 450	30.2 385	31.7 408	39 801	22 145	26 232	29.5 334	26.1 324	28.5 302	20.4 112	10.7 15	10.9 17	12.5 21	13.2 32	23.1 154	12.2 22	11.1 20	9.7 9	10.2 9	9.4 12	11.3 18
		Northern Pike	1	22.2 73																								
		Yellow Perch	1	29.7 297																								

Notes:
BR-3 9/27/05 survey data is from the main channel of the Blackstone River.
BR-3 9/28/05 survey data is from the backwater behind the island.
na = not applicable; no data collected
cm = centimeter
g = grams
If large numbers of fish were collected, a representative subset of as many as 25 individuals of each fish species were selected randomly, measured, and weighed.

TABLE 2-6
RESIDENT FISH SAMPLING: FISH SAMPLES COLLECTED FOR ANALYSIS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location	Species	Sample ID	Sample Date	Number of Fish	Length (cm)			Weight (g)
					Total	Min	Max	
BR-1	Bluegill	BR1-FI-121	9/29/05	1	21.2			222
		BR1-FI-122	9/29/05	1	19.9			191
Background		BR1-FI-123	9/29/05	1	18.7			192
upstream of		BR1-FI-124	9/29/05	1	19.4			183
Ashton Dam		BR1-FI-125	9/29/05	2		17.2	18.2	274
	Pumpkinseed	BR1-FI-126	9/29/05	2		15.9	16.2	205
		BR1-FI-127	9/29/05	2		15.7	17.8	258
		BR1-FI-128	9/29/05	2		15.8	16.0	209
	White Sucker	BR1-FI-113	9/29/05	1	45.6			1255
		BR1-FI-114	9/29/05	1	47.4			1221
		BR1-FI-115	9/29/05	1	31.9			437
		BR1-FI-116	9/29/05	1	29.5			300
		BR1-FI-117	9/29/05	1	32.5			405
		BR1-FI-118	9/29/05	1	27.8			249
		BR1-FI-119	9/29/05	1	44.1			1130
		BR1-FI-120	9/29/05	1	45.2			1048
	Common Shiner	BR1-FI-129	9/29/05	3		14.6	15.4	122
		BR1-FI-130	9/29/05	3		13.9	15.4	120
		BR1-FI-131	9/29/05	3		14.4	15.9	127
		BR1-FI-132	9/29/05	3		15.2	15.6	129
		BR1-FI-133	9/29/05	3		13.8	14.8	112
		BR1-FI-134	9/29/05	3		11.5	14.7	96
		BR1-FI-135	9/29/05	3		11.6	15.3	104
		BR1-FI-136	9/29/05	5		11.9	14.2	126
BR-2	Largemouth Bass	BR2-FI-73	9/28/05	1	30.7			471
		BR2-FI-74	9/28/05	1	30.0			414
Background		BR2-FI-75	9/28/05	1	30.4			543
downstream of		BR2-FI-76	9/28/05	1	25.2			231
Ashton Dam		BR2-FI-77	9/28/05	1	25.8			264
		BR2-FI-78	9/28/05	1	25.4			260
		BR2-FI-79	9/28/05	1	25.0			229
		BR2-FI-80	9/28/05	1	24.3			236
	White Sucker	BR2-FI-81	9/28/05	1	44.9			968
		BR2-FI-82	9/28/05	1	39.8			697
		BR2-FI-83	9/28/05	1	35.6			509
		BR2-FI-84	9/28/05	1	39.0			643
		BR2-FI-85	9/28/05	1	38.1			600
		BR2-FI-86	9/28/05	1	32.3			398
		BR2-FI-87	9/28/05	1	39.3			714
		BR2-FI-88	9/28/05	1	37.6			521
	Common Shiner	BR2-FI-89	9/28/05	4		10.8	15.0	91
		BR2-FI-90	9/28/05	4		10.8	13.5	72
		BR2-FI-91	9/28/05	4		11.6	12.2	65
		BR2-FI-92	9/28/05	4		10.6	13.2	71
		BR2-FI-93	9/28/05	4		10.4	14.9	80
		BR2-FI-94	9/28/05	4		9.9	11.7	55
		BR2-FI-95	9/28/05	4		10.4	13.6	72
		BR2-FI-96	9/28/05	10		10.6	14.2	176

TABLE 2-6
RESIDENT FISH SAMPLING: FISH SAMPLES COLLECTED FOR ANALYSIS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location	Species	Sample ID	Sample Date	Number of Fish	Length (cm)			Weight (g)
					Total	Min	Max	
BR-3	Largemouth Bass	BR3-FI-1	9/27/05	1	33.9			729
		BR3-FI-2	9/27/05	1	31.1			502
Site river		BR3-FI-3	9/27/05	1	28.4			383
main channel		BR3-FI-4	9/27/05	1	26.9			263
		BR3-FI-5	9/27/05	1	25.3			239
		BR3-FI-6*	9/28/05	1	35.2			753
		BR3-FI-7*	9/28/05	1	40.9			1092
		BR3-FI-8*	9/28/05	1	38.3			931
	White Sucker	BR3-FI-9	9/27/05	1	31.9			392
		BR3-FI-10	9/27/05	1	34.1			499
		BR3-FI-11	9/27/05	1	31.7			418
		BR3-FI-12	9/27/05	1	39.8			757
		BR3-FI-13	9/27/05	1	41.5			872
		BR3-FI-14*	9/28/05	1	36.8			439
		BR3-FI-15*	9/28/05	1	35.1			478
		BR3-FI-16*	9/28/05	1	37.6			558
	Common Shiner	BR3-FI-17*	9/28/05	2		11.3	13.9	44
		BR3-FI-18	9/27/05	2		11.2	14.7	54
		BR3-FI-19	9/27/05	2		14.2	15.1	74
		BR3-FI-20	9/27/05	2		14.1	14.9	79
		BR3-FI-21	9/27/05	2		14.4	15.2	80
		BR3-FI-22	9/27/05	2		11.6	15.2	63
		BR3-FI-23	9/27/05	2		11.1	15.5	57
		BR3-FI-24	9/27/05	7		13.4	15.7	268
P-1	Largemouth Bass	P1-FI-25	9/27/05	1	36.2			865
		P1-FI-26	9/27/05	1	35.8			739
Pond A		P1-FI-27	9/27/05	1	31.5			472
		P1-FI-28	9/27/05	1	32.1			471
		P1-FI-29	9/27/05	1	30.7			425
		P1-FI-30	9/27/05	1	37.9			861
		P1-FI-31	9/27/05	1	32.4			460
		P1-FI-32	9/27/05	1	37.1			799
	White Sucker	P1-FI-33	9/27/05	1	40.1			704
		P1-FI-34	9/27/05	1	35.1			467
		P1-FI-35	9/27/05	1	37.2			585
		P1-FI-36	9/27/05	1	43.4			747
		P1-FI-37	9/27/05	1	43.1			930
		P1-FI-38	9/27/05	1	36.3			664
		P1-FI-39	9/27/05	1	40.4			725
		P1-FI-40	9/27/05	1	36.4			627
	Bluegill	P1-FI-41	9/27/05	3		11.1	12.8	108
		P1-FI-42	9/27/05	3		9.6	11.0	67
		P1-FI-43	9/27/05	3		10.4	10.7	73
		P1-FI-44	9/27/05	3		10.1	11.7	90
		P1-FI-45	9/27/05	3		8.9	12.6	65
		P1-FI-46	9/27/05	3		8.9	11.4	74
		P1-FI-47	9/27/05	3		9.2	12.0	76
		P1-FI-48	9/27/05	7		7.6	12.3	195

TABLE 2-6
RESIDENT FISH SAMPLING: FISH SAMPLES COLLECTED FOR ANALYSIS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location	Species	Sample ID	Sample Date	Number of Fish	Length (cm)			Weight (g)
					Total	Min	Max	
Location	**Species**	**Sample ID**	**Sample Date**	**Number of Fish**	**Length (cm) Total**	**Min**	**Max**	**Weight (g)**
P-2	Bluegill	P2-FI-49	9/27/05	1	17.4			104
		P2-FI-50	9/27/05	2		15.2	15.6	151
Pond F		P2-FI-51	9/27/05	2		13.9	17.0	159
		P2-FI-52	9/27/05	2		15.6	15.9	154
		P2-FI-53	9/27/05	2		14.7	17.5	154
		P2-FI-54	9/27/05	2		15.0	15.2	131
		P2-FI-55	9/27/05	3		14.1	14.5	166
	Pumpkinseed	P2-FI-56	9/27/05	4		13.0	13.9	219
	White Sucker	P2-FI-57	9/27/05	1	39.1			693
		P2-FI-58	9/27/05	1	34.6			501
		P2-FI-59	9/27/05	1	40.4			755
		P2-FI-60	9/27/05	1	34.9			442
		P2-FI-61	9/27/05	1	37.0			595
		P2-FI-62	9/27/05	1	33.0			380
		P2-FI-63	9/27/05	1	35.9			532
		P2-FI-64	9/27/05	1	34.6			460
	Golden Shiner	P2-FI-65	9/27/05	3		14.7	16.4	141
		P2-FI-66	9/27/05	3		14.4	15.8	119
		P2-FI-67	9/27/05	3		13.7	14.4	112
		P2-FI-68	9/27/05	3		13.8	15.4	117
		P2-FI-69	9/27/05	3		13.4	16.4	112
		P2-FI-70	9/27/05	2		15.0	15.9	86
		P2-FI-71	9/27/05	2		14.1	16.0	89
		P2-FI-72	9/27/05	2		15.4	16.3	92
P-6	Laregemouth Bass	PG-FI-97	9/29/05	1	34.6			567
		PG-FI-98	9/29/05	1	36.6			731
Pond background		PG-FI-99	9/29/05	1	31.4			402
		PG-FI-100	9/29/05	1	38.5			814
		PG-FI-101	9/29/05	1	29.9			373
		PG-FI-102	9/29/05	1	31.9			442
		PG-FI-103	9/29/05	1	31.3			447
		PG-FI-104	9/29/05	1	39.0			907
	Bluegill	PG-FI-105	9/29/05	3		9.3	12.4	71
		PG-FI-106	9/29/05	3		8.1	12.1	56
		PG-FI-107	9/29/05	3		10.3	11.6	69
		PG-FI-108	9/29/05	3		9.4	11.1	51
		PG-FI-109	9/29/05	3		10.0	11.4	65
		PG-FI-110	9/29/05	2		12.7	13.9	77
		PG-FI-111	9/29/05	2		11.5	13.8	75
		PG-FI-112	9/29/05	2		11.1	13.6	71

Notes:
cm = centimeter
g = grams
Min = minimum; Max = maximum
* = collected from backwater behind island

TABLE 2-7
BENTHIC COMMUNITY: WATER QUALITY DATA

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location		Sample ID	Sample Date	Water Depth (ft)	Water Temperature (C)	pH	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Velocity (ft/s)
River	Site	T05BR-001	6/21/05	2.0	22.0	7.20	19.0	0.30	0.71
		T05BR-003	6/21/05	0.6	22.0	7.40	15.6	0.30	0.35
		T05BR-005	6/22/05	0.7	14.2	6.50	1.9	0.36	0.00
		T05BR-006	6/22/05	2.6	20.0	7.20	12.3	0.30	-0.01
		T05BR-007	6/23/05	1.4	21.0	7.00	12.5	0.29	0.00
	Background	T05BL-001	6/23/05	1.9	20.0	7.30	12.7	0.31	0.00
		T05BL-002	6/23/05	1.2	23.0	7.50	13.5	0.33	-0.01
		T05BL-005	6/23/05	6.1	22.0	7.60	12.4	0.32	0.03
		T05BL-006	6/23/05	1.7	21.2	6.51	5.9	0.27	0.00
		T05BL-007	6/23/05	6.9	22.0	7.50	11.7	0.32	0.03
Pond	Site	T05PA-001	6/21/05	9.4	19.9	6.74	2.8	0.27	na
		T05PA-003	6/21/05	5.3	21.8	7.17	7.1	0.26	na
		T05PD-002	6/21/05	2.1	22.3	6.75	7.1	0.26	na
		T05PF-004	6/21/05	8.9	18.3	6.41	4.0	0.36	na
	Background	T05BL-003	6/23/05	2.1	22.2	6.89	6.6	1.83	na
		T05BL-004	6/23/05	2.9	23.5	6.93	5.5	1.70	na

Notes:
ft = feet
C = Celsius
mg/L = milligrams per liter
mS/cm = milliSiemens per centimeter
ft/s = feet per second
na = not applicable; data not collected at the pond sites
Analyses performed by Normandeau Associates, Inc.

TABLE 2-8
BENTHIC COMMUNITY: SPECIES ABUNDANCE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location	River										Pond					
	Site					Background (BG)					Site				BG	
Sample ID	BR-001	BR-003	BR-005	BR-006	BR-007	BL-001	BL-002	BL-005	BL-006	BL-007	PA-001	PA-003	PD-002	PF-004	BL-003	BL-004
Sample Date	06/21/05	06/21/05	06/22/05	06/22/05	06/23/05	06/23/05	06/23/05	06/23/05	06/23/05	06/23/05	06/21/05	06/21/05	06/21/05	06/21/05	06/23/05	06/23/05
Invertebrate Species	**Number of Organisms**															
Lumbriculida																
Lumbriculidae																
Lumbriculus variegatus		1														
Lumbricina																
Lumbricidae	1	1		1									1			
Tubificida																
Naididae																
Dero sp.					4											
Ophiodonais serpentina									2							
Tubificidae																
Aulodrilus pleuriseta	1		7	6	5		4	5								
Bothrioneurum vejdovskyanum	1	34				5				10						
Brachiura sowerbyi										1		2				
Ilydrilus templetoni		1	6		16	11		5	1	14		2				
immature tubificid with hair chaetae												3				
Limnodrilus claparedianus														3		
Limnodrilus hoffmeisteri	76	6	106	2	52		5	16	6	79		11	50		9	
Limnodrilus sp.	19	18	53	5	6	52	38	72	5	66		23		3	4	
Veneroida																
Sphaeriidae																
Pisidium sp.				1		1	1									
Amphipoda																
Gammaridae																
Gammarus fasciatus		10			2	1	1	1								
Talitridae																
Hyalella azteca													1			
Isopoda																
Asellidae																
Caecidotea sp..					1											
Odonata																
Gomphidae																
Dromogomphus spinosus										2						
Stylurus spiniceps		1														
Coleoptera																
Dytiscidae																
Hydroporus sp.															1	
Elmidae																
Ancyronyx variegatus										1						
Dubiraphia vittata					1		1			8						
Haliplidae																
Peltodytes sp.									1							
Diptera																
Ceratopogonidae																
Culicoides sp.													1			
Mallochohelia sp.												1				
Sphaeromias sp.			1										6			
Chaoboridae																
Chaoborus punctipennis											3					
Chironomidae																
Chironomini												1				
Chironomus sp.		22	12	21	49	40	82	1	38	1		2			53	82
Cladopelma sp.				1		2	2	8								
Cladotanytarsus sp.		1														
Cryptochironomus fulvus gr.		2			3	5	1			2			1			
Dicrotendipes sp.							1						1			
Enfeldia sp.												2				
Glyptotendipes sp.					1								1			
Paralaterborniella nigrohalteralis							1	1								
Paratanytarsus sp.													1		2	3
Parachironomus tenuicaudatus gr.													2			
Polypedilum scalaenum gr.							1									
Polypedilum sp.			1													
Procladius sp.			5		5			1	1	1			1		2	1
Stictochironomus sp.																1
Tanypus sp.									1						5	1
Tanytarsus sp.		7			3		9	1		3			1		16	3
Ephydridae																
nr. Hydrellia sp.	1															
Total Organisms	99	104	191	37	148	117	147	111	55	188	3	47	67	6	92	91
Biomass (mg)	22.2	123	35	19.4	25.5	15	30.9	18.8	18.7	61.3	0.4	15.2	22.1	1.0	50.4	62.8

Notes:
mg = milligram wet weight

TABLE 2-9
BENTHIC TOXICITY TESTS: SURVIVAL GROWTH DATA

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location		Sample ID	Species	*Chironomus dilutus (20-day)*		*Hyalella azteca (28-day)*	
			Sample Date	Survival (%)	Growth (mg/larvae)	Survival (%)	Growth (mg/amphipod)
Lab Control				83.75	1.79	91.25	0.597
River	Site	T05BR-001	6/21/05	85.00	2.03	90.00	0.416
		T05BR-003	6/21/05	85.00	1.40	95.00	0.401
		T05BR-005	6/22/05	88.75	1.20	92.50	0.314
		T05BR-006	6/22/05	56.25	1.84	2.50	0.140
		T05BR-007	6/23/05	85.00	2.03	95.00	0.494
	Background	T05BL-001	6/23/05	88.75	2.20	91.25	0.475
		T05BL-002	6/23/05	81.25	1.42	95.00	0.352
		T05BL-005	6/23/05	92.50	1.22	17.50	0.315
		T05BL-006	6/23/05	78.75	1.47	82.50	0.282
		T05BL-007	6/23/05	98.75	1.57	87.50	0.399
Pond	Site	T05PA-001	6/21/05	76.25	1.68	8.75	0.300
		T05PA-003	6/21/05	71.25	1.47	1.25	0.080
		T05PD-002	6/21/05	77.50	1.81	16.25	0.528
		T05PF-004	6/21/05	86.25	1.63	77.50	0.439
	Background	T05BL-003	6/23/05	86.25	1.39	51.25	0.237
		T05BL-004	6/23/05	93.75	1.56	88.75	0.290

Notes:
% = percent
mg/larvae = milligram per larvae ash free dry weight
mg/amphipod = milligram per amphipod ash free dry weight
C. dilutus: The 20-day midge survival and growth evaluation sediment tests were conducted according to American Society for Testing and Materials (ASTM) method E 1706-95 (ASTM, 2004) and United States Environmental Protection Agency (USEPA) method 100.5 (USEPA, 2000). Endpoints of the 20-day exposure were survival and growth, measured as ash free dry weight
H. azteca: The 28-day amphipod survival and growth tests were conducted according to ASTM Method E 1706-95 (ASTM, 2001) and USEPA method 100.4 (USEPA, 2000). Endpoints of the assay were survival and growth, measured as dry weight

ASTM, 2001 Annual Book of ASTM Standards. Volume 11.05. Test Methods for Measuring the Toxicity of sediment-Associated Contaminants with Freshwater Invertebrates. E 1706-00. ASTM, Philadelphia.
USEPA, 2000. Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates. Second Edition. USEPA/600-R-99/064.

Analyses performed by Enviro Systems, Inc.

TABLE 2-10
WILDLIFE OBSERVATIONS BY HABITAT

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Common Name	Scientific Name	Observation Location						
		Landfill	Disturbed/ Developed Areas	Wetlands	Ponds	Riparian Areas	Quinnville Well Field	Blackstone River
Birds								
Belted Kingfisher	*Ceryle alcyon*							x
Black-capped Chickadee	*Parus atricapillus*		x	x		x		
Blue Jay	*Cyanocitta cristata*	x					x	
Cardinal	*Carlinalis cardinalis*	x	x				x	
Chimney Swift	*Chaetura pelgica*	x	x	x	x			
Common Grackle	*Quiscalus quiscula*	x		x	x	x	x	
Cormorant	*Phalarcrocorax auritus*			x				x
Duck, Mallard	*Anas platyrhynchos*			x	x			
Duck, Wood	*Aix sponsa*			x	x			
Eastern Kingbird	*Tyrannus tyrannus*	x	x			x		
Geese, Canada	*Branta canadensis*			x	x	x		x
Goldfinch, American	*Carduelis tristis*	x	x		x			
Gray Catbird	*Dumetella carolinensis*	x	x	x		x	x	
Heron, Great Blue	*Ardea herodias*			x	x	x		x
Indigo Bunting	*Passerina cyanea*	x				x		
Killdeer	*Charadrius vociferous*		x					
Mourning Dove	*Zenaida macroura*	x	x			x		
Northern Mockingbird	*Minus polyglottos*		x					
Nuthatch, White-breasted	*Sitta carolinensis*						x	
Oriole, Northern	*Icterus galbula*	x						
Phoebe	*Sayornis phoebe*		x	x				
Red-winged Blackbird	*Agelaius phoeniceus*	x		x	x			
Robin, American	*Turdus migratorius*	x	x	x		x	x	
Rock Dove	*Columba livia*							
Sandpiper, Spotted	*Actitis macularia*							x
Sparrow, House	*Passer domesticus*		x					
Sparrow, Song	*Melospiza melodia*	x			x	x	x	
Starling, European	*Sturnus vulgaris*	x	x					
Swallow, Barn	*Hirundo rustica*	x	x		x			
Swallow, Rough-winged	*Stelgidopteryx semipennis*	x	x	x	x			x
Swallow, Tree	*Tachycineta bicolor*	x		x	x			x
Tanager, Scarlet	*Piranga olivacea*	x						
Warbler, Yellow	*Dendroica petechia*	x		x			x	
Wild Turkey	*Meleagris gallopavo*	x	x				x	
Woodcock	*Scolopax minor*			x				
Woodpecker, Downy	*Picoides pubescens*	x		x				
Yellow-shafted flicker	*Colaptes auratus*	x						
Common Yellowthroat	*Geothlypis trichas*			x		x	x	
Mammals								
Cat	*Felis domestica*		x					
Dog	*Canis domestica*		x					
Muskrat	*Ondatra zibethica*			x				
Rat	*Rattus norvegicus*					x		
Deer	*Odocoileus virginianus*	x	x	x		x	x	
Cottontail	*Sylvilagus floridanus*	x	x			x		
Fox, Red	*Vulpus fulva*	x						
Raccoon	*Procyon lotor*			x		x		
Herptiles								
Toad, American	*Bufo americanus*					x		
Toad, Fowler's	*Bufo woodhousei fowleri*				x	x		
Frog, Bull	*Rana catesbeiana*			x				
Frog, Green	*Rana clamitans melanota*			x				
Treefrog, Northern Gray	*Hyla vericolor*				x			
Turtle, Painted	*Chrysemys picta*			x	x			
Snake, Garter	*Thamnophis sirtalis*						x	

Notes:
- Wildlife observations recorded during three (one for each: dusk, dawn, and mid-day) 30-minute observation periods.
- Three observation periods conducted at each habitat.
- Wildlife observations performed by BBL personnel as part of habitat assessment and activities between July 11 and 13, 2005.

TABLE 2-11
VEGETATION OBSERVATIONS BY HABITAT

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Common Name	Scientific Name	Observation Location					
		Landfill	Disturbed/ Developed Areas	Wetlands	Ponds	Riparian Areas	Quinnville Well Field
Trees							
Ash, Green	*Fraxinus pennsylvanica*	x	x	x		x	x
Aspen, Quaking	*Populus tremula*	x					
Basswood, American	*Tilia americana*					x	
Birch, Gray	*Betula populifolia*	x		x		x	x
Box-elder	*Acer negundo*	x	x	x	x	x	x
Catalpa	*Catalpa speciosa*	x	x			x	x
Cherry, Wild Black	*Prunus serotina*	x	x			x	x
Eastern cottonwood	*Populus deltoides*	x	x	x		x	x
Eastern red cedar	*Juniperus virginiana*	x	x				
Elm, Slippery	*Ulmus rubra*	x	x	x	x	x	x
Hackberry	*Celtis laevigata*	x					
Locust, Black	*Robinia pseudo-acacia*	x	x			x	
Locust, Honey	*Gleditsia triacanthos*	x					
Maple, Red	*Acer rubrum*	x	x	x		x	x
Maple, Silver	*Acer saccharinum*	x		x		x	x
Mulberry, Red	*Morus rubra*	x	x			x	x
Oak, Red	*Quercus rubra*	x				x	x
Oak, White	*Quercus alba*	x		x		x	x
Silk tree	*Albizia julibrissin*	x					
Sweet Gum	*Liquidambar styraciflua*					x	
Sycamore	*Platanus occidentalis*			x	x	x	x
Tree of Heaven	*Ailanthus altissima*	x	x			x	x
Willow, Black	*Salix nigra*	x	x	x		x	x
Willow, Weeping	*Salix babylonica*		x				
Shrubs							
Alder, Speckled	*Alnus incana*				x		x
Blackberry, Allegheny	*Rubus allegheniensis*	x	x			x	x
Buttonbush	*Cephalanthus occidentialis*			x	x	x	
Dogwood, Silky	*Cornus amomum*	x	x	x	x	x	x
Elderberry	*Sambucus canadensis*	x	x	x	x	x	x
European privet	*Ligustrum vulgare*	x					
Honeysuckle, Tartarian	*Lonicera tatarica*	x		x		x	
Meadowsweet	*Spirea latifolia*	x	x	x		x	x
Olive, Russian	*Elaeagnus angustifolia*	x	x				x
Raspberry, Black	*Rubus occidentalis*	x	x				x
Rose, Multiflora	*Rosa multiflora*	x	x			x	x
Spicebush, Northern	*Lindera benzoin*	x		x		x	x
Sumac, Dwarf	*Rhus copallina*	x	x				x
Sumac, Staghorn	*Rhus typhina*	x	x				x
Viburnum, Maple-leaf	*Viburnum acerifolium*					x	x
Viburnum, Arrowwood	*Viburnum dentatum*			x		x	x
Vines							
Bindweed, Field	*Convolvulus arvensis*	x	x				
Bindweed, Hedge	*Calystegia sepium*	x	x				
Bittersweet, Oriental	*Celastrus orbiculatas*	x	x				x
Catbrier	*Smilax glauca*	x	x			x	x
Cucumber, Wild	*Sicyos angulatus*		x				
Dewberry, Common	*Rubus flagellaris*		x			x	
Fox Grape	*Vitis labrusca*	x				x	x
Honeysuckle, Japanese	*Lonicera japonica*	x					x
Ivy, Ground	*Glechoma hederacea*	x	x				x
Ivy, Poison	*Toxicodendron radicans*	x	x			x	x
Virginia Creeper	*Parthenocissus quinquefolia*	x	x	x		x	x
Herbs							
Beggar ticks	*Bidens,* spp.	x	x	x		x	x
Black-eyed Susan	*Rudbeckia serotina*		x				
Boneset, Common	*Eupatorium perfoliatum*			x	x		x
Butter and Eggs	*Linaria vulgaris*	x					
Campion, White	*Lychnis alba*	x	x				

TABLE 2-11
VEGETATION OBSERVATIONS BY HABITAT

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Common Name	Scientific Name	Observation Location					
		Landfill	Disturbed/ Developed Areas	Wetlands	Ponds	Riparian Areas	Quinnville Well Field
Cattail, Broadleaf	*Typha latifolia*			x	x		
Chicory	*Cichorium intybus*	x	x				
Cinquefoil, Oldfield	*Potentilla simplex*	x	x				x
Clearweed	*Pilea pumila*					x	x
Clover, Red	*Trifoliuim pretense*	x	x				
Clover, Slender bush	*Lespedeza virginica*	x	x				
Clover, Sweet White	*Melilotus alba*	x	x				x
Clover, Sweet Yellow	*Melilotus officinalis*	x	x				x
Clover, White	*Trifolium repens*	x	x				
Daisy, Fleabane	*Erigeron annuus*	x	x				x
Daisy, Ox-eyed	*Chrysanthemum leucanthemum*	x					
Dandelion, Common	*Taraxacum officinale*	x	x				
Deptford Pink	*Dianthus armeria*	x	x				
Dock, Bitter	*Rumex obtusifolius*	x	x				
Dock, Curly	*Rumex crispus*	x	x			x	x
Fern, New York	*Thelypteris noveboracensis*	x				x	x
Fern, Royal	*Osmunda regalis*			x		x	x
Fern, Sensitive	*Onoclea sensibilis*			x		x	x
Garlic, Field	*Allium vineale*	x	x				x
Goldenrods	*Solidago* spp.	x	x	x		x	x
Horsenettle	*Solanum carolinense*	x	x				
Horsestail, Field	*Equisetum arvense*					x	x
Horseweed, Canada	*Conyza canadensis*	x	x				
Iris, Blue	*Iris versicolor*			x		x	x
Iris, Yellow	*Iris pseudacorus*		x	x		x	x
Jewelweed	*Impatiens capensis*			x	x	x	
Joe-pye weed	*Eupatorium dubium*			x	x	x	x
Knapweed, Black	*Centaurea nigra*	x	x				
Knotweed, Japanese	*Polygonum cuspidatum*	x	x				x
Knotweed, Virginia	*Tovara virginiana*			x		x	x
Lamb's Quarters, Common	*Chenopodium album*	x	x				
Lettuce, Wild	*Lactuca canadensis*	x	x				
Lily of the Valley	*Convallaria majalis*						x
Lily, White water	*Nymphaea odorata*	x	x			x	x
Lily, Yellow Pond	*Nuphar variegatum*			x			
Medic, Black	*Medicago lupulina*	x	x				
Milkweed, Common	*Asclepias syriaca*	x	x			x	x
Millkweed, Swamp	*Asclepias incarnata*			x	x	x	
Mugwort, Common	*Artemisia vulgaris*	x	x			x	x
Mullien, Common	*Verbascum thapsus*	x	x				
Mullien, Moth	*Verbascum blattaria*	x	x				
Mustard, Garlic	*Alliaria petiolata*	x	x			x	x
Nettle, False	*Boehmeria cylindrica*					x	x
Nettle, Stinging	*Urtica dioica*			x		x	x
Nightshade, Black	*Solanum ptychanthum*	x	x				
Pennycress, Field	*Thlaspi arvense*	x	x				
Plantain, Common	*Plantago major*	x	x				
Plantain, English	*Plantago lanceolata*	x	x				
Pokeweed	*Phytolacca americana*	x	x			x	x
Primrose, Evening	*Oenothera biennis*	x	x				
Herbs (cont.)							
Purple Loosestrife	*Lythrum salicaria*	x		x	x	x	x
Queen-Anne' Lace	*Daucus carota*	x	x				
Ragweed, Annual	*Ambrosia artemisiifolia*	x	x				
Ragweed, Great	*Ambrosia trifida*	x	x			x	x
Skunk Cabbage	*Symplocarpus foetidus*			x		x	x
Small white aster	*Aster vimineus*	x	x				
Smartweed, Lady's thumb	*Polygonum persicaria*	x			x	x	

TABLE 2-11
VEGETATION OBSERVATIONS BY HABITAT

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Common Name	Scientific Name	Observation Location					
		Landfill	Disturbed/ Developed Areas	Wetlands	Ponds	Riparian Areas	Quinnville Well Field
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	x		x		x	x
Snakeroot, White	*Eupatorium rugosum*					x	x
Sorrel, Yellow Wood	*Oxalis stricta*					x	x
Tall meadow rue	*Thalictrum polygamum*					x	x
Tansey	*Tanacetum vulgare*	x				x	
Teasel, Common	*Dipsacus sylvestris*	x					
Thistle, Canada	*Cirsiuim arvense*	x	x				
Trefoil, Birds-foot	*Lotus corniculatus*	x	x				
Velvetleaf	*Abutilon theophrasti*	x	x				
Vervain, Blue	*Verbena hastata*			x	x	x	
Vervain, White	*Verbena urticifolia*	x	x			x	x
Vetch, Cow	*Vicia cracca*	x	x			x	x
Vetch, Crown	*Coronilla varia*	x	x				x
Water purslane	*Ludwigia palustris*			x	x	x	
White-top Fleabane	*Erigeron annuus*	x	x				
Yarrow	*Achillea millefolium*	x	x				
Grasses/Sedges							
Barley, Foxtail	*Hordeum jubatum*	x	x				
Deer-tongue	*Dichanthelium clandestinum*	x	x			x	x
Fox sedge	*Carex vulpinoidea*			x			
Little Bluestem	*Schizachyrium scoparium*	x					
Nepal microstegium	*Eulalia vimine*			x		x	x
Pathrush	*Juncus tenuis*	x	x			x	x
Redtop	*Agrostis alba*	x	x				x
Reed canary grass	*Phalaris arundinacea*	x		x		x	x
Reed, Common	*Phragmites australis*	x	x	x		x	x
Rice cutgrass	*Leersia oryzoides*			x		x	x
Soft Rush	*Juncus effusus*	x	x	x	x	x	x
Softstem bulrush	*Scirpus validus*			x			
Spikerush	*Eleocharis* spp.				x	x	
Straw-color Flat Sedge	*Cyperus strigosus*		x		x		
Switchgrass	*Panicum virgatum*	x	x				
Timothy	*Phleum pretense*		x	x			
Woolgrass	*Scirpus cyperinus*	x		x	x	x	x

Notes:
- Vegitation observations performed by BBL personnel as part of habitiat assessment activities between July 11 and 13, 2005.

TABLE 2-12
RAPID BIOASSESSMENT PROTOCOL HABITAT ASSESSMENT RESULTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

RBP Habitat Parameters - Low Gradient Streams Reaches	Condition Category and Score Optimal (20 - 16) --- Suboptimal (15 - 11) --- Marginal (10 - 6) --- Poor (5 - 0)										
	T05BR001	T05BR002	T05BR003	T05BR004	T05BR005	T05BR006	T05BR007	T05BL-DWN	T05BL-AM	T05BL-UP1	T05BL-UP2
Epifaunal Substrate/Available Cover	9	18	6	10	8	6	13	13	8	7	7
Pool Substrate Characterization	8	16	8	8	8	8	16	-	8	8	6
Pool Variability	3	2	7	0	2	5	0	-	13	0	0
Sediment Deposition	15	18	7	15	15	8	20	15	11	8	6
Channel Flow Status	16	16	20	18	20	19	16	18	20	19	18
Channel Alteration	12	15	13	13	13	13	15	14	6	14	12
Channel Sinuosity	6	6	6	3	3	3	0	0	0	0	0
Bank Stability											
Right Bank (10 - 0)	1	7	4	4	0	8	3	6	8	9	10
Left Bank (10 - 0)	4	7	3	3	4	8	3	6	10	9	10
Vegetative Protection											
Right Bank (10 - 0)	8	7	8	7	9	9	10	10	9	10	10
Left Bank (10 - 0)	7	7	8	7	9	9	10	10	2	10	10
Riparian Vegetative Zone Width											
Right Bank (10 - 0)	8	8	10	9	10	9	2	7	3	9	7
Left Bank (10 - 0)	3	8	1	9	2	9	9	9	0	8	10
TOTAL SCORE	100	135	101	106	103	114	117	108	98	111	106

Notes:
- Parameter scoring based on USEPA Rapid Bioassessment Protocols for Streams and Wadable Rivers (USEPA 841-B-99-002).
- Habitat Assessment scopring performed by BBL personnel between July 11 and 13, 2005.
- Right and left banks identified while facing downstream.
- Assessment locations consist of a 100-meter reach using each triad sediment sample location as the centerpoint.

TABLE 3-1
HYDRAULIC CONDUCTIVITY SUMMARY

REMEIDAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Unit	Formation Code	Unit Description	Hydraulic Conductivity (feet per day)				
			Single-Well Pumping Test[(1)]	Cone Penetrometer[(1)]	Aquifer Tests[(1)]	USGS Model[(2)]	ARCADIS BBL Specific-Capacity Tests
Upper Glaciofluvial	SH	Wells screened in glaciofluvial sediments; the screen midpoint elevation is above 35 feet NGVD29.	251	30	140	120	--
	IN	Wells screened in glaciofluvial sediments; the screen midpoint elevation is between -10 and 35 feet NGVD29.	115				--
Lower Glaciofluvial	DP	Wells screened in glaciofluvial sediments; the screen midpoint elevation is below -10 feet NGVD29.	4	--	--	20	10
Till	TL	Wells screened in till just above bedrock.	7.7	--	--	--	--
Bedrock	BR	Wells screened in bedrock.	0.39	--	--	--	--

Notes:
(1) Shield, 2004b
(2) Friesz, 2004
NGVD29 = elevation datum is National Geodetic Vertical Datum 1929
-- = not available

TABLE 3-2
GROUNDWATER ELEVATION DATA

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Measuring Point	Measuring Point Reference Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Bottom (feet)	Bottom Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)
		May 6-8, 2002		August 13 & 14, 2003		August 25-27, 2003		September 25, 2003		August 27, 2004		September 20, 2004		April 27, 2005		October 4, 2005		November 14 & 15, 2005				November 28 & 29, 2005	
Upper Glaciofluvial Formation - wells screened above 35 feet elevation																							
GLF-704	63.62	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	5.77	57.85
GLF-706	67.35	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	8.81	58.54
GNP-705	76.55	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	18.53	58.02
GNP-707	78.04	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	19.69	58.35
GNP-708	71.50	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	16.50	55.00	23.82	47.68	15.63	55.87
GUI-701	64.97	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	6.71	58.26
GUI-702	66.49	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	7.99	58.50
GUI-703	64.21	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	5.73	58.48
GZ-1	67.08	8.45	58.63	8.98	58.10	9.94	57.14	9.14	57.94	9.92	57.16	7.84	59.24	6.59	60.49	NC	NC	NC	NC	NC	NC	7.24	59.84
GZ-4	63.49	NC	NC	NC	NC	8.09	55.40	NC	NC	8.05	55.44	5.12	58.37	3.68	59.81	NC	NC	NC	NC	NC	NC	4.41	59.08
MW-106A	68.61	10.71	57.90	NC	NC	12.47	56.14	11.65	56.96	12.62	55.99	10.28	58.33	8.70	59.91	NC	NC	NC	NC	NC	NC	9.16	59.45
MW-107A	81.46	18.25	63.21	19.22	62.24	20.98	60.48	22.56	58.90	21.72	59.74	21.73	59.73	18.01	63.45	NC	NC	NC	NC	NC	NC	18.01	63.45
MW-108AA	69.19	9.68	59.51	10.14	59.05	11.78	57.41	11.47	57.72	12.22	56.97	11.15	58.04	7.51	61.68	NC	NC	NC	NC	NC	NC	7.81	61.38
MW-109AA	67.77	10.66	57.11	11.60	56.17	12.88	54.89	12.28	55.49	12.93	54.84	10.46	57.31	8.76	59.01	NC	NC	NC	NC	NC	NC	9.26	58.51
MW-110A	66.91	7.70	59.21	8.28	58.63	9.56	57.35	11.69	55.22	11.02	55.89	10.62	56.29	5.84	61.07	NC	NC	NC	NC	NC	NC	6.02	60.89
MW-111AA	64.53	7.80	56.73	8.29	56.24	9.59	54.94	9.65	54.88	10.01	54.52	8.24	56.29	5.41	59.12	NC	NC	NC	NC	NC	NC	6.00	58.53
MW-112AA	68.59	10.48	58.11	11.25	57.34	12.64	55.95	14.20	54.39	13.89	54.70	12.77	55.82	11.61	56.98	NC	NC	NC	NC	NC	NC	9.38	59.21
MW-501A	68.68	NC	NC	ob@9.40	ob@59.28	ob@9.76	ob@58.92	ob@10.41	ob@58.27	11.28	57.40	9.46	59.22	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
MW-501B	68.46	NC	NC	10.19	58.27	11.10	57.36	10.38	58.08	11.04	57.42	9.24	59.22	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
MW-A2	65.20	7.60	57.60	8.25	56.95	9.60	55.60	8.38	56.82	9.57	55.63	6.73	58.47	5.27	59.93	NC	NC	NC	NC	NC	NC	5.52	59.68
MW-B2	62.04	4.76	57.28	5.75	56.29	7.06	54.98	5.82	56.22	7.01	55.03	4.10	57.94	2.79	59.25	NC	NC	NC	NC	NC	NC	3.33	58.71
MW-C2	61.48	4.70	56.78	5.61	55.87	6.82	54.66	5.69	55.79	6.79	54.69	3.99	57.49	2.66	58.82	NC	NC	NC	NC	NC	NC	3.23	58.25
MW-EA1	92.24	NC	NC	NC	NC	NC	NC	30.23	62.01	30.22	62.02	30.36	61.88	22.85	69.39	NC	NC	NC	NC	NC	NC	22.72	69.52
P-6	67.83	8.89	58.94	9.54	58.29	10.48	57.35	9.71	58.12	10.42	57.41	8.59	59.24	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
P-7	71.79	12.39	59.40	13.44	58.35	14.89	56.90	13.61	58.18	14.84	56.95	11.75	60.04	NC	NC	NC	NC	NC	NC	NC	NC	10.85	60.94
P-8	62.53	5.22	57.31	6.22	56.31	7.56	54.97	6.04	56.49	7.45	55.08	4.32	58.21	3.15	59.38	NC	NC	NC	NC	NC	NC	3.80	58.73
P-9	66.07	8.04	58.03	NC	NC	10.01	56.06	10.47	55.60	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	6.25	59.82
PZ-01 inside	59.71	NC	NC	4.00	55.71	5.24	54.47	4.19	55.52	5.24	54.47	2.46	57.25	1.40	58.31	6.26	53.45	NC	NC	NC	NC	1.95	57.76
PZ-02 inside	60.39	NC	NC	4.56	55.83	5.73	54.66	4.60	55.79	5.66	54.73	2.82	57.57	NC	NC	7.59	52.80	NC	NC	NC	NC	3.64	56.75
PZ-03 inside	61.14	NC	NC	4.20	56.94	6.87	54.27	4.85	56.29	5.79	55.35	3.07	58.07	2.03	59.11	dry@6.05	dry@55.09	NC	NC	NC	NC	2.61	58.53
PZ-04 inside	55.87	NC	NC	3.33	52.54	4.03	51.84	3.43	52.44	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
PZ-04A inside	53.99	NC	NC	NC	NC	NC	NC	NC	NC	2.28	51.71	0.85	53.14	Underwater		not found		NC	NC	NC	NC	NC	NC
PZ-05 inside	59.93	NC	NC	3.44	56.49	5.73	54.20	6.33	53.60	6.37	53.56	1.81	58.12	0.99	58.94	dry@6.49	dry@53.44	NC	NC	NC	NC	NC	NC
PZ-06 inside	58.89	NC	NC	4.70	54.19	dry@4.84	dry@54.47	dry@4.88	dry@54.43	5.31	53.58	2.31	56.58	Underwater		5.32	53.57	NC	NC	NC	NC	1.33	57.56
PZ-06A inside	56.60	NC	NC	NC	NC	NC	NC	NC	NC	2.98	53.62	0.50	56.10	Unable to Open		4.20	52.40	1.80	54.80	8.28	48.32	NC	NC
PZ-07 inside	59.60	NC	NC	4.54	55.06	5.57	54.03	4.97	54.63	5.60	54.00	2.10	57.50	10.30	49.30	6.47	53.13	2.45	57.15	7.20	52.40	2.21	57.39
PZ-08 inside	63.26	NC	NC	8.18	55.08	9.35	53.91	8.71	54.55	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
PZ-09 inside	57.75	NC	NC	2.14	61.12	3.86	53.89	3.66	54.09	3.25	54.50	2.17	55.58	NC	NC	4.28	53.47	NC	NC	NC	NC	Underwater	
PZ-09 inside	57.75	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
PZ-10 inside	63.70	NC	NC	3.98	59.72	5.46	58.24	7.31	56.39	5.79	57.91	5.79	57.91	1.33	62.37	dry@7.84	dry@55.86	NC	NC	NC	NC	1.52	62.18
PZ-11 inside	63.55	NC	NC	3.64	59.91	5.27	58.28	7.49	56.06	5.84	57.71	5.22	58.33	1.29	62.26	could not locate		NC	NC	NC	NC	1.41	62.14
PZ-12 inside	64.14	NC	NC	4.21	59.93	6.07	58.07	6.58	57.56	6.45	57.69	5.57	58.57	1.66	62.48	dry@8.3	dry@55.84	NC	NC	NC	NC	1.85	62.29
PZ-13 inside	65.11	NC	NC	3.98	61.13	4.04	61.07	4.22	60.89	4.05	61.06	3.91	61.20	2.04	63.07	could not locate		NC	NC	NC	NC	NC	NC
PZ-14 inside	61.68	NC	NC	4.45	57.23	4.63	57.05	4.57	57.11	5.08	56.60	3.37	58.31	3.36	58.32	6.27	55.41	NC	NC	NC	NC	4.09	57.59
PZ-15 inside	68.49	NC	NC	dry	dry	dry@6.03	dry@62.46	5.80	62.69	dry@5.98	dry@62.51	dry@5.95	dry@62.54	dry	dry	dry@6.03	dry@62.46	NC	NC	NC	NC	5.70	62.79
PZ-15A inside	69.12	NC	NC	NC	NC	NC	NC	NC	NC	7.10	62.02	7.27	61.85	7.05	62.07	7.39	61.73	NC	NC	NC	NC	7.03	62.09
PZ-16 inside	66.08	NC	NC	11.00	55.08	12.17	53.91	11.24	54.84	12.17	53.91	9.57	56.51	7.71	58.37	12.47	53.61	9.75	56.33	15.66	50.42	8.57	57.51
PZ-17 inside	65.15	NC	NC	9.52	55.63	10.87	54.28	9.98	55.17	10.81	54.34	8.49	56.66	6.33	58.82	11.30	53.85	8.63	56.52	19.78	45.37	7.06	58.09
PZ-18 inside	65.97	NC	NC	10.08	55.89	11.25	54.72	10.29	55.68	11.20	54.77	8.44	57.53	6.92	59.05	11.69	54.28	9.11	56.86	18.23	47.74	7.52	58.45
PZ-19 inside	69.69	NC	NC	NC	NC	12.44	57.25	12.38	57.31	12.42	57.27	11.47	58.22	7.75	61.94	14.18	55.51	NC	NC	NC	NC	8.02	61.67

TABLE 3-2
GROUNDWATER ELEVATION DATA

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Measuring Point	Measuring Point Reference Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Bottom (feet)	Bottom Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)
		May 6-8, 2002		August 13 & 14, 2003		August 25-27, 2003		September 25, 2003		August 27, 2004		September 20, 2004		April 27, 2005		October 4, 2005		November 14 & 15, 2005				November 28 & 29, 2005	
Upper Glaciofluvial Formation - wells screened above 35 feet elevation [cont.]																					
PZ-20 inside	59.11	NC	NC	NC	NC	NC	NC	NC	NC	3.14	55.97	1.07	58.04	--	NA	3.41	55.70	NC	NC	NC	NC	-	-
PZ-21 inside	61.28	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	6.75	54.53	NC	NC	NC	NC	2.56	58.72
PZ-22 inside	66.40	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	12.25	54.15	9.30	57.10	18.00	48.40	7.88	58.52
PZ-23 inside	59.89	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	6.60	53.29	NC	NC	NC	NC	1.67	58.22
SEA-601	63.47	NC	NC	NC	NC	NC	NC	6.96	56.51	8.67	54.80	5.22	58.25	4.00	59.47	NC	NC	NC	NC	NC	NC	4.67	58.80
SEA-602A	62.51	NC	NC	NC	NC	NC	NC	6.00	56.51	7.53	54.98	4.34	58.17	3.15	59.36	NC	NC	NC	NC	NC	NC	3.80	58.71
SEA-603	61.97	NC	NC	NC	NC	NC	NC	5.61	56.36	6.94	55.03	3.86	58.11	2.65	59.32	NC	NC	NC	NC	NC	NC	3.23	58.74
SEA-604	65.34	NC	NC	NC	NC	NC	NC	9.38	55.96	10.38	54.96	7.62	57.72	6.11	59.23	NC	NC	NC	NC	NC	NC	6.68	58.66
SEA-605	65.20	NC	NC	NC	NC	NC	NC	9.74	55.46	10.76	54.44	8.08	57.12	6.55	58.65	NC	NC	NC	NC	NC	NC	7.18	58.02
SEA-606	64.43	NC	NC	NC	NC	NC	NC	11.29	53.14	11.70	52.73	10.12	54.31	11.61	52.82	12.30	52.13	NC	NC	NC	NC	8.68	55.75
SEA-607	65.82	NC	NC	NC	NC	NC	NC	11.31	54.51	11.77	54.05	9.93	55.89	6.93	58.89	Unable to open		NC	NC	NC	NC	7.74	58.08
SEA-608	67.02	NC	NC	NC	NC	NC	NC	12.47	54.55	12.96	54.06	10.37	56.65	8.18	58.84	13.24	53.78	NC	NC	NC	NC	8.80	58.22
Upper Glaciofluvial Formation - wells screened between 10 and 35 feet elevation																					
GLF-700A	61.93	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	3.00	58.93
GLF-706A	67.84	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	9.12	58.72
GNP-708A	71.09	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	16.28	54.81	76.75	-5.66	15.53	55.56
L-2	69.94	11.46	53.33	12.13	57.81	13.27	56.67	12.50	57.44	13.27	56.67	11.08	58.86	9.66	60.28	NC	NC	NC	NC	NC	NC	10.21	59.73
MW-106B	68.55	NC	NC	11.46	57.09	12.54	56.01	11.53	57.02	12.46	56.09	10.21	58.34	8.55	60.00	NC	NC	NC	NC	NC	NC	9.06	59.49
MW-107B	81.53	19.26	62.27	19.91	61.62	21.53	60.00	22.71	58.82	22.07	59.46	21.80	59.73	18.59	62.94	NC	NC	NC	NC	NC	NC	18.69	62.84
MW-108A	69.00	9.66	59.34	10.10	58.90	11.73	57.27	11.33	57.67	12.16	56.84	10.98	58.02	7.46	61.54	NC	NC	NC	NC	NC	NC	7.79	61.21
MW-111A	64.13	7.35	56.78	7.89	56.24	9.18	54.95	9.44	54.69	9.64	54.49	8.19	55.94	5.07	59.06	NC	NC	NC	NC	NC	NC	5.50	58.63
MW-112A	68.09	10.23	57.86	10.78	57.31	12.34	55.75	13.77	54.32	13.64	54.45	12.54	55.55	8.85	59.24	NC	NC	NC	NC	NC	NC	8.97	59.12
MW-B1	61.92	3.92	58.00	5.15	56.77	6.54	55.38	5.50	56.42	6.64	55.28	3.71	58.21	2.47	59.45	NC	NC	NC	NC	NC	NC	3.07	58.85
MW-C1	61.06	3.83	57.23	4.72	56.34	6.02	55.04	5.12	55.94	6.03	55.03	3.39	57.67	1.78	59.28	NC	NC	NC	NC	NC	NC	2.33	58.73
SEA-602B	61.99	NC	NC	NC	NC	NC	NC	5.46	56.53	6.71	55.28	3.73	58.26	2.31	59.68	NC	NC	NC	NC	NC	NC	2.95	59.04
Deep Glaciofluvial Formation - wells screened below 10 feet elevation																					
GNP-705B	76.67	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	19.25	57.42
MW-108B	69.31	11.18	58.13	11.73	57.58	13.16	56.15	12.89	56.42	13.38	55.93	11.50	57.81	8.87	60.44	NC	NC	NC	NC	NC	NC	9.32	59.99
MW-109A	68.64	10.47	58.17	11.27	57.37	12.64	56.00	12.92	55.72	12.91	55.73	11.48	57.16	8.43	60.21	NC	NC	NC	NC	NC	NC	8.79	59.85
MW-111B	64.01	7.22	56.79	7.75	56.26	9.03	54.98	9.30	54.71	9.51	54.50	8.05	55.96	4.94	59.07	NC	NC	NC	NC	NC	NC	5.37	58.64
MW-112B	68.20	11.52	56.68	12.04	56.16	13.37	54.83	13.94	54.26	14.12	54.08	12.65	55.55	9.61	58.59	NC	NC	NC	NC	NC	NC	9.91	58.29
MW-501C	68.47	NC	NC	10.15	58.32	11.08	57.39	10.37	58.10	10.99	57.48	9.20	59.27	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
MW-502	73.47	NC	NC	15.56	57.91	16.68	56.79	15.90	57.57	16.68	56.79	14.56	58.91	13.18	60.29	NC	NC	NC	NC	NC	NC	13.75	59.72
MW-A1	64.79	7.06	57.73	7.82	56.97	9.13	55.66	7.91	56.88	9.08	55.71	6.26	58.53	4.82	59.97	NC	NC	NC	NC	NC	NC	5.97	58.82
Till Formation																					
MW-109B	69.13	11.21	57.92	11.98	57.15	13.32	55.81	13.53	55.60	13.62	55.51	12.17	56.96	9.07	60.06	NC	NC	NC	NC	NC	NC	9.48	59.65
MW-110B	67.50	8.73	58.77	9.32	58.18	10.64	56.86	12.38	55.12	11.99	55.51	11.75	55.75	6.83	60.67	NC	NC	NC	NC	NC	NC	7.11	60.39
Bedrock Formation																					
MW-106C	68.20	NC	NC	10.98	57.22	12.00	56.20	11.08	57.12	11.95	56.25	10.78	57.42	8.14	60.06	NC	NC	NC	NC	NC	NC	8.54	59.66
MW-107C	81.55	20.07	61.48	20.65	60.90	22.17	59.38	23.00	58.55	22.59	58.96	21.99	59.56	19.25	62.30	NC	NC	NC	NC	NC	NC	19.45	62.10
MW-108C	69.26	11.23	58.03	11.77	57.49	13.18	56.08	12.89	56.37	13.39	55.87	11.49	57.77	8.90	60.36	NC	NC	NC	NC	NC	NC	9.37	59.89
MW-109C	69.30	11.35	57.95	12.20	57.10	13.56	55.74	13.65	55.65	13.81	55.49	12.15	57.15	9.36	59.94	NC	NC	NC	NC	NC	NC	9.70	59.60
MW-110C	67.93	8.79	59.14	9.39	58.54	10.59	57.34	11.97	55.96	11.77	56.16	11.39	56.54	6.39	61.54	NC	NC	NC	NC	NC	NC	6.63	61.30
MW-111C	64.50	6.06	58.44	6.62	57.88	7.86	56.64	8.74	55.76	8.71	55.79	7.96	56.54	3.70	60.80	NC	NC	NC	NC	NC	NC	4.03	60.47
MW-112C	68.09	11.31	56.78	11.87	56.22	13.21	54.88	13.74	54.35	13.89	54.20	10.51	57.58	9.35	58.74	NC	NC	NC	NC	NC	NC	9.70	58.39
MW-EA2	78.32	NC	NC	NC	NC	NC	NC	15.21	63.11	14.96	63.36	14.35	63.97	14.20	64.12	NC	NC	NC	NC	NC	NC	14.45	63.87
MW-EA3	78.76	NC	NC	NC	NC	NC	NC	20.46	58.30	20.36	58.40	19.27	59.49	15.15	63.61	NC	NC	NC	NC	NC	NC	14.66	64.10
MW-EA4	79.75	NC	NC	NC	NC	NC	NC	17.03	62.72	15.48	64.27	15.61	64.14	15.15	64.60	NC	NC	NC	NC	NC	NC	NC	NC

TABLE 3-2
GROUNDWATER ELEVATION DATA

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Measuring Point	Measuring Point Reference Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)	Depth to Bottom (feet)	Bottom Elevation (ft NGVD29)	Depth to Water (feet)	Water Level Elevation (ft NGVD29)
		May 6-8, 2002		August 13 & 14, 2003		August 25-27, 2003		September 25, 2003		August 27, 2004		September 20, 2004		April 27, 2005		October 4, 2005		November 14 & 15, 2005				November 28 & 29, 2005	
Surface-Water Measuring Points																							
HW-01	69.64	NC	NC	NC	NC	3.43	66.21	dry@3.32	dry@66.32	dry		NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
HW-02	59.37	NC	NC	NC	NC	NC	NC	2.57	56.80	1.36	58.01	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
PZ-01 outside	59.71	NC	NC	4.50	55.21	5.63	54.08	4.29	55.42	5.59	54.12	2.59	57.12	1.75	57.96	dry@6.18	dry@53.53	NC	NC	NC	NC	2.35	57.36
PZ-02 outside	60.39	NC	NC	4.82	55.57	dry@5.14	dry@55.28	4.68	55.71	dry@4.95	dry@55.44	2.98	57.41	NC	NC	dry@9.41	dry@50.98	NC	NC	NC	NC	3.89	56.50
PZ-03 outside	61.14	NC	NC	4.72	56.42	dry@4.79	dry@56.32	dry@4.72	dry@56.39	dry@4.55	dry@56.59	3.06	58.08	2.26	58.88	dry@4.78	dry@56.36	NC	NC	NC	NC	2.83	58.31
PZ-04 outside	55.87	NC	NC	3.50	52.37	4.03	51.84	3.31	52.56	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
PZ-04A outside	53.99	NC	NC	NC	NC	NC	NC	NC	NC	2.29	51.70	0.82	53.17	Underwater		not found		NC	NC	NC	NC	NC	NC
PZ-05 outside	59.93	NC	NC	3.44	56.49	5.67	54.26	dry@6.16	dry@53.79	dry@5.95	dry@53.98	1.84	58.09	0.99	58.94	dry@6.16	dry@53.77	NC	NC	NC	NC	NC	NC
PZ-06 outside	58.89	NC	NC	4.89	54.00	dry@4.94	dry@54.37	4.83	54.06	dry@5.00	dry@53.89	2.50	56.39	Underwater		5.49	53.40	NC	NC	NC	NC	1.56	57.33
PZ-06A outside	56.60	NC	NC	NC	NC	NC	NC	NC	NC	3.19	53.41	0.22	56.38	Unable to Open		4.38	52.22	2.20	54.40	NC	NC	NC	NC
PZ-07 outside	59.60	NC	NC	4.50	55.10	5.37	54.23	4.95	54.65	5.40	54.20	1.70	57.90	NC	NC	dry@5.68	dry@53.92	2.40	57.20	NC	NC	2.21	57.39
PZ-08 outside	63.26	NC	NC	NC	NC	dry@3.89	dry@59.37	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
PZ-09 outside	57.75	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
PZ-09 outside	57.75	NC	NC	2.08	55.67	3.84	53.91	3.64	54.11	3.22	54.53	2.18	55.57	NC	NC	4.28	53.47	NC	NC	NC	NC	Underwater	
PZ-10 outside	63.70	NC	NC	3.98	59.72	5.45	58.25	dry@5.58	dry@58.12	dry@5.40	dry@58.30	dry@5.45	dry@58.25	1.33	62.37	dry@5.38	dry@58.32	NC	NC	NC	NC	1.50	62.20
PZ-11 outside	63.55	NC	NC	3.64	59.91	5.06	58.49	dry@5.36	dry@58.17	dry@5.37	dry@58.18	5.15	58.40	1.32	62.23	could not locate		NC	NC	NC	NC	1.42	62.13
PZ-12 outside	64.14	NC	NC	4.18	59.96	dry@5.00	dry@59.14	dry@4.88	dry@59.26	dry@4.82	dry@59.32	dry@4.85	dry@59.29	1.63	62.51	dry@4.87	dry@59.27	NC	NC	NC	NC	1.92	62.22
PZ-13 outside	65.11	NC	NC	4.27	60.84	4.43	60.68	4.64	60.47	4.69	60.42	4.51	60.60	2.63	62.48	could not locate		NC	NC	NC	NC	NC	NC
PZ-14 outside	61.68	NC	NC	4.56	57.12	5.03	56.65	4.61	57.07	dry@4.62	dry@57.06	3.44	58.24	3.41	58.27	6.03	55.65	NC	NC	NC	NC	4.15	57.53
PZ-15 outside	68.49	NC	NC	1.86	66.63	1.87	66.62	1.75	66.74	1.94	66.55	1.94	66.55	1.40	67.09	1.69	66.80	NC	NC	NC	NC	1.35	67.14
PZ-15A outside	69.12	NC	NC	NC	NC	NC	NC	NC	NC	2.60	66.52	2.59	66.53	2.01	67.11	2.38	66.74	NC	NC	NC	NC	1.95	67.17
PZ-16 outside	66.08	NC	NC	NC	NC	dry@3.36	dry@62.72	NC	NC	NC	NC	NC	NC	NC	NC	dry@3.40	dry@62.68	NC	NC	NC	NC	dry	dry
PZ-17 outside	65.15	NC	NC	NC	NC	dry@3.31	dry@61.84	NC	NC	NC	NC	NC	NC	NC	NC	dry@3.18	dry@61.97	NC	NC	NC	NC	dry	dry
PZ-18 outside	65.97	NC	NC	NC	NC	dry@3.67	dry@62.29	NC	NC	NC	NC	NC	NC	NC	NC	dry@6.33	dry@59.64	NC	NC	NC	NC	dry	dry
PZ-19 outside	69.69	NC	NC	NC	NC	NC	NC	NC	NC	dry@2.85	dry@66.84	NC	NC	NC	NC	dry@2.98	dry@66.71	NC	NC	NC	NC	2.82	66.87
PZ-20 outside	59.11	NC	NC	NC	NC	NC	NC	NC	NC	3.22	55.89	1.15	57.96	3.20	55.91	3.53	55.58	NC	NC	NC	NC	NC	NC
PZ-21 outside	61.28	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	dry@9.46	dry@51.82	NC	NC	NC	NC	2.72	58.56
PZ-22 outside	66.40	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	12.03	54.37	9.32	57.08	NC	NC	7.98	58.42
PZ-23 outside	59.89	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	dry@9.48	dry@50.41	NC	NC	NC	NC	2.58	57.31
SEA-606 outside	64.43	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	dry@2.83	dry@61.60	NC	NC	NC	NC	NC	NC
SEA-607 outside	65.82	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	10.00	55.82	22.22	43.60	NC	NC
SEA-608 outside	67.02	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	dry@2.13	dry@64.89	NC	NC	NC	NC	NC	NC
SG-1	72.57	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	21.27	51.30	19.70	52.87	NC	NC	19.20	53.37
SG-2	69.30	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	17.70	51.60	14.00	55.30	NC	NC	13.02	56.28

Notes:
NC = not collected (measuring point may have not have been installed)
ft NGVD29 = elevation datum is National Geodetic Vertical Datum 1929. All elevation values shown are in feet NGVD29.
ob = obstruction in well encountered

TABLE 3-3
VERTICAL HYDRAULIC GRADIENTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Measuring Point	Middle Screen Elev. (ft NGVD29)	Water-Level Elevation (feet NGVD29)										Vertical Hydraulic Gradient[1] [positive value = upward flow; negative value = downward flow]										
		5/6-5/8/02	8/13-8/14/03	8/15-8/27/03	9/25/03	8/27/04	9/20/04	4/27/05	10/4/05	11/14-11/15/05	11/28-11/29/05	5/6-5/8/02	8/13-8/14/03	8/15-8/27/03	9/25/03	8/27/04	9/20/04	4/27/05	10/4/05	11/14-11/15/05	11/28-11/29/05	Average
GLF-706	49.5	NC	NC	NC	NC	NC	NC	NC	NC	NC	58.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0040	0.0040
GLF-706A	5.0	NC	NC	NC	NC	NC	NC	NC	NC	NC	58.72	---	---	---	---	---	---	---	---	---	---	---
GNP-705	58.9	NC	NC	NC	NC	NC	NC	NC	NC	NC	58.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.0056	-0.0056
GNP-705B	-48.3	NC	NC	NC	NC	NC	NC	NC	NC	NC	57.42	---	---	---	---	---	---	---	---	---	---	---
GNP-708	53.0	NC	NC	NC	NC	NC	NC	NC	NC	55.00	55.87	NA	NA	NA	NA	NA	NA	NA	NA	-0.0036	-0.0058	-0.0047
GNP-708A	0.0	NC	NC	NC	NC	NC	NC	NC	NC	54.81	55.56	---	---	---	---	---	---	---	---	---	---	---
MW-106A	54.3	57.90	NC	56.14	56.96	55.99	58.33	59.91	NC	NC	59.45	NA	NA	-0.0052	0.0024	0.0040	0.0004	0.0036	NA	NA	0.0016	0.0011
MW-106B	29.1	NC	57.09	56.01	57.02	56.09	58.34	60.00	NC	NC	59.49	NA	0.0050	0.0073	0.0038	0.0061	-0.0351	0.0023	NA	NA	0.0065	-0.00060
MW-106C	2.9	NC	57.22	56.20	57.12	56.25	57.42	60.06	NC	NC	59.66	---	---	---	---	---	---	---	---	---	---	---
MW-107A	55.6	63.21	62.24	60.48	58.90	59.74	59.73	63.45	NC	NC	63.45	-0.050	-0.033	-0.026	-0.004	-0.015	0.0000	-0.027	NA	NA	-0.033	-0.024
MW-107B	36.9	62.27	61.62	60.00	58.82	59.46	59.73	62.94	NC	NC	62.84	-0.048	-0.044	-0.038	-0.016	-0.030	-0.010	-0.039	NA	NA	-0.045	-0.034
MW-107C	20.5	61.48	60.90	59.38	58.55	58.96	59.56	62.30	NC	NC	62.10	---	---	---	---	---	---	---	---	---	---	---
MW-108AA	52.1	59.51	59.05	57.41	57.72	56.97	58.04	61.68	NC	NC	61.38	-0.0073	-0.0064	-0.0060	-0.0021	-0.0056	-0.00085	-0.0060	NA	NA	-0.0073	-0.0052
MW-108A	28.7	59.34	58.90	57.27	57.67	56.84	58.02	61.54	NC	NC	61.21	-0.023	-0.025	-0.021	-0.023	-0.017	-0.0039	-0.021	NA	NA	-0.023	-0.020
MW-108B	-24.6	58.13	57.58	56.15	56.42	55.93	57.81	60.44	NC	NC	59.99	-0.0028	-0.0025	-0.0020	-0.0014	-0.0017	-0.0011	-0.0023	NA	NA	-0.0028	-0.0021
MW-108C	-60.0	58.03	57.49	56.08	56.37	55.87	57.77	60.36	NC	NC	59.89	---	---	---	---	---	---	---	---	---	---	---
MW-109AA	51.0	57.11	56.17	54.89	55.49	54.84	57.31	59.01	NC	NC	58.51	0.016	0.018	0.017	0.0035	0.014	-0.0023	0.018	NA	NA	0.020	0.013
MW-109A	-14.4	58.17	57.37	56.00	55.72	55.73	57.16	60.21	NC	NC	59.85	-0.0041	-0.0036	-0.0031	-0.0020	-0.0036	-0.0033	-0.0025	NA	NA	-0.0033	-0.0032
MW-109B	-75.0	57.92	57.15	55.81	55.60	55.51	56.96	60.06	NC	NC	59.65	0.0011	-0.0019	-0.0027	0.0019	-0.00076	0.0072	-0.0046	NA	NA	-0.0019	-0.00019
MW-109C	-101.3	57.95	57.10	55.74	55.65	55.49	57.15	59.94	NC	NC	59.60	---	---	---	---	---	---	---	---	---	---	---
MW-110A	54.1	59.21	58.63	57.35	55.22	55.89	56.29	61.07	NC	NC	60.89	-0.0092	-0.0095	-0.010	-0.0021	-0.0080	-0.011	-0.0084	NA	NA	-0.011	-0.0087
MW-110B	6.5	58.77	58.18	56.86	55.12	55.51	55.75	60.67	NC	NC	60.39	0.013	0.013	0.017	0.029	0.023	0.028	0.030	NA	NA	0.032	0.023
MW-110C	-22.2	59.14	58.54	57.34	55.96	56.16	56.54	61.54	NC	NC	61.30	---	---	---	---	---	---	---	---	---	---	---
MW-111AA	42.5	56.73	56.24	54.94	54.88	54.52	56.29	59.12	NC	NC	58.53	NA	0.0000	0.00020	-0.0038	-0.00060	-0.0071	-0.0012	NA	NA	0.0020	-0.0015
MW-111A	-7.1		56.24	54.95	54.69	54.49	55.94	59.06	NC	NC	58.63	NA	0.00045	0.00067	0.00045	0.00022	0.00045	0.00022	NA	NA	0.00022	0.00038
MW-111B	-51.7	56.79	56.26	54.98	54.71	54.50	55.96	59.07	NC	NC	58.64	0.045	0.045	0.046	0.029	0.036	0.016	0.048	NA	NA	0.050	0.039
MW-111C	-88.0	58.44	57.88	56.64	55.76	55.79	56.54	60.80	NC	NC	60.47	---	---	---	---	---	---	---	---	---	---	---
MW-112AA	52.4	58.11	57.34	55.95	54.39	54.70	55.82	56.98	NC	NC	59.21	-0.0070	-0.00084	-0.0056	-0.0020	-0.0070	-0.0075	0.063	NA	NA	-0.0025	0.0038
MW-112A	16.6	57.86	57.31	55.75	54.32	54.45	55.55	59.24	NC	NC	59.12	-0.044	-0.043	-0.035	-0.0023	-0.014	0.0000	-0.024	NA	NA	-0.031	-0.024
MW-112B	-10.0	56.68	56.16	54.83	54.26	54.08	55.55	58.59	NC	NC	58.29	0.0030	0.0018	0.0015	0.0027	0.0036	0.062	0.0046	NA	NA	0.0030	0.010
MW-112C	-42.9	56.78	56.22	54.88	54.35	54.20	57.58	58.74	NC	NC	58.39	---	---	---	---	---	---	---	---	---	---	---
MW-501A	55.8	NC	ob@59.28	ob@58.92	ob@58.27	57.40	59.22	NC	NC	NC	NC	NA	NA	NA	NA	0.00048	0.0000	NA	NA	NA	NA	0.0002
MW-501B	13.8	NC	58.27	57.36	58.08	57.42	59.22	NC	NC	NC	NC	NA	0.0012	0.00070	0.00047	0.0014	0.0012	NA	NA	NA	NA	0.0010
MW-501C	-29.2	NC	58.32	57.39	58.10	57.48	59.27	NC	NC	NC	NC	---	---	---	---	---	---	---	---	---	---	---

TABLE 3-3
VERTICAL HYDRAULIC GRADIENTS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Measuring Point	Middle Screen Elev. (ft NGVD29)	Water-Level Elevation (feet NGVD29)										Vertical Hydraulic Gradient[1] [positive value = upward flow; negative value = downward flow]										
		5/6-5/8/02	8/13-8/14/03	8/15-8/27/03	9/25/03	8/27/04	9/20/04	4/27/05	10/4/05	11/14-11/15/05	11/28-11/29/05	5/6-5/8/02	8/13-8/14/03	8/15-8/27/03	9/25/03	8/27/04	9/20/04	4/27/05	10/4/05	11/14-11/15/05	11/28-11/29/05	Average
MW-A2	53.2	57.60	56.95	55.60	56.82	55.63	58.47	59.93	NC	NC	59.68	0.0019	0.00029	0.00086	0.00086	0.0011	0.00086	0.0006	NA	NA	-0.012	-0.0007
MW-A1	-16.8	57.73	56.97	55.66	56.88	55.71	58.53	59.97	NC	NC	58.82	---	---	---	---	---	---	---	---	---	---	---
MW-B2	49.0	57.28	56.29	54.98	56.22	55.03	57.94	59.25	NC	NC	58.71	0.0166	0.0110	0.0092	0.0046	0.0057	0.0062	0.0046	NA	NA	0.0032	0.0076
MW-B1	5.5	58.00	56.77	55.38	56.42	55.28	58.21	59.45	NC	NC	58.85	---	---	---	---	---	---	---	---	---	---	---
MW-C2	49.5	56.78	55.87	54.66	55.79	54.69	57.49	58.82	NC	NC	58.25	0.0082	0.0085	0.0069	0.0027	0.0062	0.0033	0.0084	NA	NA	0.0087	0.0066
MW-C1	-5.5	57.23	56.34	55.04	55.94	55.03	57.67	59.28	NC	NC	58.73	---	---	---	---	---	---	---	---	---	---	---
PZ-01 inside	49.3	NC	55.71	54.47	55.52	54.47	57.25	58.31	53.45	NC	57.76	NA	0.085	0.082	0.016	0.073	0.017	0.040	NA	NA	0.050	0.052
PZ-01 outside	NA	NC	55.21	54.08	55.42	54.12	57.12	57.96	dry@53.53	NC	57.36	---	---	---	---	---	---	---	---	---	---	---
PZ-02 inside	51.5	NC	55.83	54.66	55.79	54.73	57.57	NC	52.80	NC	56.75	NA	0.064	NA	0.019	NA	0.027	NA	NA	NA	0.050	0.040
PZ-02 outside	NA	NC	55.57	dry@55.28	55.71	dry@55.44	57.41	NC	dry@50.98	NC	56.50	---	---	---	---	---	---	---	---	---	---	---
PZ-03 inside	53.9	NC	56.94	54.27	56.29	55.35	58.07	59.11	dry@55.09	NC	58.53	NA	0.21	NA	NA	NA	-0.0024	0.046	NA	NA	0.050	0.075
PZ-03 outside	NA	NC	56.42	dry@56.32	dry@56.39	dry@56.59	58.08	58.88	dry@56.36	NC	58.31	---	---	---	---	---	---	---	---	---	---	---
PZ-04 inside	48.8	NC	52.54	51.84	52.44	NC	NC	NC	NC	NC	NC	NA	0.048	0.000	-0.032	NA	NA	NA	NA	NA	NA	0.0052
PZ-04 outside	NA	NC	52.37	51.84	52.56	NC	NC	NC	NC	NC	NC	---	---	---	---	---	---	---	---	---	---	---
PZ-05 inside	53.0	NC	56.49	54.20	53.60	53.56	58.12	58.94	dry@53.44	NC	NC	NA	0.000	-0.048	NA	NA	0.0059	0.000	NA	NA	NA	-0.010
PZ-05 outside	NA	NC	56.49	54.26	dry@53.79	dry@53.98	58.09	58.94	dry@53.77	NC	NC	---	---	---	---	---	---	---	---	---	---	---
PZ-06 inside	50.3	NC	54.19	dry@54.47	dry@54.43	53.58	56.58	underwater	53.57	NC	57.56	NA	0.051	NA	NA	NA	0.031	0.000	0.055	NA	0.033	0.034
PZ-06 outside	NA	NC	54.00	dry@54.37	54.06	dry@53.89	56.39	underwater	53.40	NC	57.33	---	---	---	---	---	---	---	---	---	---	---
PZ-07 inside	49.0		55.06	54.03	54.63	54.00	57.50	49.30	53.13	57.15	57.39	NA	-0.007	-0.038	-0.0035	-0.038	-0.045	NA	NA	-0.0061	0.000	-0.020
PZ-07 outside	NA	NC	55.10	54.23	54.65	54.20	57.90	NC	dry@53.92	57.20	57.39	---	---	---	---	---	---	---	---	---	---	---
PZ-10 inside	56.0	NC	59.72	58.24	56.39	57.91	57.91	62.37	dry@55.86	NC	62.18	NA	0.000	-0.004	NA	NA	NA	0.000	NA	NA	-0.0032	-0.0019
PZ-10 outside	NA	NC	59.72	58.25	dry@58.12	dry@58.30	dry@58.25	62.37	dry@58.32	NC	62.20	---	---	---	---	---	---	---	---	---	---	---
PZ-11 inside	55.9	NC	59.91	58.28	56.06	57.71	58.33	62.26	not located	NC	62.14	NA	0.000	-0.081	NA	NA	-0.028	0.0047	0.000	NA	0.0016	-0.017
PZ-11 outside	NA	NC	59.91	58.49	dry@58.17	dry@58.18	58.40	62.23	not located	NC	62.13	---	---	---	---	---	---	---	---	---	---	---
PZ-12 inside	56.5	NC	59.93	58.07	57.56	57.69	58.57	62.48	dry@55.84	NC	62.29	NA	-0.0087	NA	NA	NA	NA	-0.005	NA	NA	0.012	-0.0005
PZ-12 outside	NA	NC	59.96	dry@59.14	dry@59.26	dry@59.32	dry@59.29	62.51	dry@59.27	NC	62.22	---	---	---	---	---	---	---	---	---	---	---
PZ-13 inside	57.4	NC	61.13	61.07	60.89	61.06	61.20	63.07	not located	NC	NC	NA	0.084	0.12	0.14	0.21	0.19	0.12	0.000	NA	NA	0.12
PZ-13 outside	NA	NC	60.84	60.68	60.47	60.42	60.60	62.48	not located	NC	NC	---	---	---	---	---	---	---	---	---	---	---
PZ-14 inside	54.1	NC	57.23	57.05	57.11	56.60	58.31	58.32	55.41	NC	57.59	NA	0.036	0.16	0.013	NA	0.017	0.012	-0.15	NA	0.017	0.014
PZ-14 outside	NA	NC	57.12	56.65	57.07	dry@57.06	58.24	58.27	55.65	NC	57.53	---	---	---	---	---	---	---	---	---	---	---

Notes:

(1) Values shown in each row represent the vertical gradient between the well in that row and the well in the row beneath (i.e., the value in the MW-106A row is the gradient between MW-106A and MW-106B).

NC = not collected (measuring point may have not have been installed)

NA = not applicable

ft NGVD29 = elevation datum is National Geodetic Vertical Datum 1929

ob = obstruction in well encountered

TABLE 4-1
SUMMARY OF WELLS SAMPLED DURING THE REMEDAL INVESTIGATION

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

Monitoring Well Number	Phase 1A (2003)	Phase 1A Expanded (2004)	Phase 1B (2005)	March 2007 OU1 Review Sampling	Notes
GLF-700A			X		
GLF-704			X	X	
GNP-705			X	X	
GNP-705B			X	X	
GLF-706			X	X	
GLF-706A			X		
GNP-707			X		
GNP-708			X	X	
GNP-708A			X	X	
GUI-701			X		
GUI-702			X		
GUI-703			X	X	
GZ-1					not sampled during RI
GZ-2					not sampled during RI
GZ-3					not sampled during RI
GZ-4-1	X	X			
L-1					not sampled during RI
L-2					not sampled during RI
L-3					not sampled during RI
L-4					not sampled during RI
L-5					not sampled during RI
MP-11					not sampled during RI
MW-106A	X	X	X		
MW-106B		X	X		
MW-106C		X	X		
MW-107A					not sampled during RI
MW-107B					not sampled during RI
MW-107C					not sampled during RI
MW-108A	X	X			
MW-108AA	X		X		
MW-108B		X			
MW-108C		X		X	
MW-109A	X	X		X	
MW-109AA	X	X			
MW-109B		X			
MW-109C		X		X	
MW-110A	X	X			
MW-110B	X	X		X	
MW-110C		X		X	
MW-111A	X	X			

TABLE 4-1
SUMMARY OF WELLS SAMPLED DURING THE REMEDAL INVESTIGATION

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

Monitoring Well Number	Phase 1A (2003)	Phase 1A Expanded (2004)	Phase 1B (2005)	March 2007 OU1 Review Sampling	Notes
MW-111AA	X	X			
MW-111B		X			
MW-111C		X			
MW-112A	X	X	X		
MW-112AA		X	X		
MW-112B	X	X	X		
MW-112C		X	X	X	
MW-501A					not sampled during RI
MW-501B					not sampled during RI
MW-501C					not sampled during RI
MW-502			X		
MW-A1					not sampled during RI
MW-A2	X	X	X		
MW-B1	X	X			
MW-B2	X	X			
MW-C1	X	X	X		
MW-C2	X	X	X	X	
MW-EA-1		X	X		
MW-EA-2		X			
MW-EA-3					not sampled during RI
MW-EA-4					not sampled during RI
P-5					not sampled during RI
P-6					not sampled during RI
P-7	X	X			
P-8	X	X			
P-9					not sampled during RI
SEA-601	X	X			
SEA-602A	X	X	X	X	
SEA-602B	X	X			
SEA-603	X	X	X		
SEA-604	X	X			
SEA-605	X	X	X		
SEA-606	X	X	X		
SEA-607	X	X			
SEA-608	X	X	X		
Linc-1 (LW-383)					not sampled during RI
Lenox St. (CW-405)					not sampled during RI
Linc-6 (LW-420)					not sampled during RI
Linc-9					not sampled during RI

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B	GNP-705B	GNP-707	GNP-708	GNP-708
Sample Depth():																		
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05	03/13/07	11/29/05	11/29/05	03/12/07
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B	GNP-705B	GNP-707	GNP-708	GNP-708
VOC																		
1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,1,2-Trichloroethane	2.4	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,1-Dichloroethane	24	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,1-Dichloroethene	7	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,2,3-Trichlorobenzene	- -	µg/L																
1,2,4-Trichlorobenzene	8.2	µg/L	0.5 U	0.5 U	0.5 U	2 U	**0.24 J**	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,2-Dibromo-3-chloropropane	0.0032	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,2-Dichlorobenzene	370	µg/L	0.5 U	**0.86**	**0.82**	2 U	**2**	**1.5 J**	**1.6 J**	0.5 U	0.5 U	**4.4 J**	**4.4**	0.5 U	2 U	0.5 U	**0.29 J**	2 U
1,2-Dichloroethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,2-Dichloropropane	3.9	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,3-Dichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	2 U	**0.69**	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
1,4-Dichlorobenzene	4.3	µg/L	0.5 U	**2.1**	**2.1**	2 U	**6.3**	**5**	**5**	0.5 U	0.5 U	**8.4**	**8.2**	0.5 U	2 U	0.5 U	**0.56**	2 U
2-Butanone	7,100	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 UJ	2 U	0.5 U	0.5 U	2 U
2-Hexanone	- -	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
4-Methyl-2-pentanone	2,000	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Acetone	22,000	µg/L	2 UJ	2 UJ	2 UJ	9 U	1.8 UJ	5 U	5 U	1.6 UJ	1 UJ	10 UJ	7.4 U	2 UJ	5 U	1.2 UJ	1.5 UJ	5 U
Benzene	4.1	µg/L	0.5 U	**0.39 J**	**0.4 J**	2 U	**3.7**	**2.6**	**2.5**	0.5 U	0.5 U	**19**	**21**	0.5 U	2 U	0.5 U	**1.9**	2 U
Bromochloromethane	- -	µg/L																
Bromodichloromethane	1.2	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Bromoform	85	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Carbon disulfide	1,000	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Carbon tetrachloride	2	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Chlorobenzene	91	µg/L	0.5 U	**28**	**28**	**11**	**93**	**79**	**81**	0.5 U	0.5 U	39 U	**40**	0.5 U	2 U	0.5 U	1.7 U	2 U
Chloroethane	- -	µg/L	1 UJ	1 UJ	1 UJ	2 U	1 U	2 U	2 U	1 U	1 U	10 U	2 U	1 UJ	2 U	1 U	1 U	2 U
Chloroform	1.9	µg/L	**0.51**	0.5 U	**0.24 J**	2 U	0.5 U	2 U	2 U	**2.6**	**2.4**	5 U	2 U	**2.4**	2 U	0.5 U	0.5 U	2 U
Chloromethane	190	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	**0.43 J**	2 U
cis-1,2-Dichloroethene	70	µg/L	0.5 U	0.5 U	0.5 U	2 U	**0.27 J**	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	**0.89**	2 U
cis-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Cyclohexane	13,000	µg/L	0.5 U	**0.3 J**	**0.34 J**	2 U	**0.25 J**	**1.4 J**	**1.5 J**	0.5 U	0.5 U	5 U	**3.2**	0.5 U	2 U	0.5 U	0.5 U	2 U
Cyclohexane, methyl-	- -	µg/L	0.5 U	**0.38 J**	**0.37 J**	2 U	**0.35 J**	2 U	2 U	0.5 U	0.5 U	5 U	**1.3 J**	0.5 U	2 U	0.5 U	0.5 U	2 U
Dibromochloromethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Dichlorodifluoromethane	390	µg/L	0.5 U	**0.58**	**0.61**	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Ethylbenzene	15	µg/L	0.5 U	0.5 U	0.5 U	2 U	**0.22 J**	2 U	2 U	0.5 U	0.5 U	**17**	**25**	0.5 U	2 U	0.5 U	0.5 U	2 U
Isopropylbenzene	680	µg/L	0.5 U	**2.5**	**2.4**	2 U	**8.1**	**6.2**	**6.7**	0.5 U	0.5 U	**160**	**180 J**	0.5 U	2 U	0.5 U	**0.73**	2 U
Methyl acetate	37,000	µg/L	1 U	1 U	1 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	1 U	2 U	0.5 U	0.5 U	2 U
Methyl tert butyl ether	120	µg/L	0.5 U	**0.51**	**0.5**	2 U	0.5 U	2 U	2 U	**0.3 J**	**0.25 J**	**21**	**8.4**	1.4 U	**1.4 J**	0.5 U	**0.3 J**	2 U
Methylene chloride	5	µg/L	2 U	2 U	2 U	5 U	2.4 UJ	5 U	5 U	2 UJ	2 UJ	20 UJ	5 U	3.7 U	5 U	2 UJ	2 UJ	5 U
o-Xylene	200	µg/L																
p/m-Xylene	- -	µg/L																
Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 UJ	0.5 U	2 U	0.5 U	0.5 U	2 U
Tetrachloroethene	1.1	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Toluene	1,000	µg/L	0.5 U	**0.22 J**	**0.24 J**	2 U	**0.53**	2 U	2 U	**0.22 J**	0.5 U	**4.9 J**	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
trans-1,2-Dichloroethene	100	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
trans-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Trichlorofluoromethane	1,300	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U
Vinyl Chloride	0.16	µg/L	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U	0.5 U	0.5 U	5 U	2 U	0.5 U	2 U	0.5 U	**0.59**	2 U
Xylene (Total)	200	µg/L	1.5 U	**0.55 J**	**0.56 J**	6 U	**0.99 J**	6 U	6 U	1.5 U	1.5 U	**51**	**54**	1.5 U	6 U	1.5 U	**0.2 J**	6 U

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A
Sample Depth():																
Date Collected:			12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09	11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03	09/30/04
Sample Name:	PAL	Units	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF
VOC																
1,1,1-Trichloroethane	200	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	1 U [1 U]	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	2.4	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	24	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L											0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	8.2	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.0032	µg/L	0.5 U	2 U	0.5 U	0.5 UJ	0.5 UJ	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
1,2-Dibromoethane	0.05	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	370	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	1.5	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	3.9	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	4.3	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	**2 [1.93 J]**	2 U	2 U	**3.19**	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	7,100	µg/L	0.5 UJ	2 U	0.5 UJ	0.5 U	0.5 U	2 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	5 U [5 U]	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 U
4-Methyl-2-pentanone	2,000	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	5 U [5 U]	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 U
Acetone	22,000	µg/L	2 UJ	5 U	2 UJ	2 UJ	2 UJ	5 U	5 U [5 U]	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	4.1	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	**5.13 [4.63]**	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L											0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	1.2	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	85	µg/L	0.5 U	2 U	0.5 U	1 U	1 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	2 U	0.5 U	1 UJ	1 UJ	2 U	5 U [5 U]	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	1,000	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	2	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	91	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	**5.8 [5.61]**	2 U	2 U	**2.46**	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	µg/L	1 UJ	2 U	1 UJ	2 UJ	2 UJ	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.9	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	190	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	**0.67**
cis-1,3-Dichloropropene	4.3	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	13,000	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	- -	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	**1.34 J**	0.5 UJ	0.5 U	0.5 UJ	0.5 U
Dibromochloromethane	1.5	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	390	µg/L	0.5 U	2 U	0.5 U	0.5 UJ	0.5 UJ	2 U	2 UJ [2 UJ]	2 UJ	2 UJ	2 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	15	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	680	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	**5.2 [5]**	2 U	2 U	**1 J**	0.5 UJ	0.5 U	0.5 UJ	0.5 U
Methyl acetate	37,000	µg/L	1 U	2 U	1 U	1 U	1 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	120	µg/L	0.5 U	2 U	**0.27 J**	**0.36 J**	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	5	µg/L	2 U	5 U	2 U	2 U	2 U	5 U	5 U [5 U]	5 U	5 U	5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
o-Xylene	200	µg/L							2 U [2 U]	2 U	2 U	2 U				
p/m-Xylene	- -	µg/L							4 U [4 U]	4 U	4 U	**2.12 J**				
Styrene	100	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
Tetrachloroethene	1.1	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	**18.7 [18.4]**	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	4.3	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1,300	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Vinyl Chloride	0.16	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U [2 U]	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	200	µg/L	1.5 U	6 U	1.5 U	1.5 U	1.5 U	6 U					0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106A	MW-106B	MW-106B	MW-106B	MW-106C	MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A
Sample Depth():																
Date Collected:			12/02/05	09/28/04	09/28/04	12/02/05	09/28/04	12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03
Sample Name:	PAL	Units	MW-106A	GW-078-DF	GW-FD-12	MW-106B	GW-077-DF	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF
VOC																
1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ
1,1,2-Trichloroethane	2.4	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,1-Dichloroethane	24	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**0.54**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,1-Dichloroethene	7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L		0.5 U	0.5 U		0.5 U		0.5 U	0.5 UJ	0.5 U		0.5 UJ	0.5 UJ		0.5 U
1,2,4-Trichlorobenzene	8.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	2 U	0.5 U
1,2-Dibromo-3-chloropropane	0.0032	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ
1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,2-Dichlorobenzene	370	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,2-Dichloroethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,2-Dichloropropane	3.9	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,3-Dichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
1,4-Dichlorobenzene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
2-Butanone	7,100	µg/L	0.5 UJ	5 U	5 U	0.5 UJ	5 U	0.5 UJ	5 U	5 U	5 U	0.5 UJ	5 U	5 U	2 U	5 U
2-Hexanone	- -	µg/L	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	5 U	5 UJ	0.5 U	5 U	5 U	2 U	5 U
4-Methyl-2-pentanone	2,000	µg/L	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	5 U	5 UJ	0.5 U	5 U	5 U	2 U	5 U
Acetone	22,000	µg/L	2 UJ	5 U	5 U	2 UJ	5 U	2 UJ	5 U	5 U	5 U	2 UJ	5 U	5 U	5 U	5 U
Benzene	4.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Bromochloromethane	- -	µg/L		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U		0.5 U
Bromodichloromethane	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Bromoform	85	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ
Carbon disulfide	1,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Carbon tetrachloride	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ
Chlorobenzene	91	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Chloroethane	- -	µg/L	1 UJ	0.5 U	0.5 U	1 UJ	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	1 UJ	0.5 U	0.5 U	2 U	0.5 UJ
Chloroform	1.9	µg/L	**0.47 J**	0.5 U	0.5 U	**0.81**	0.5 U	**0.72**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Chloromethane	190	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
cis-1,2-Dichloroethene	70	µg/L	0.5 U	**5.1**	**4.8**	0.5 U	**22**	**2.5**	0.5 U	0.5 U	**0.43 J**	0.5 U	0.5 U	0.5 U	2 U	0.5 U
cis-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Cyclohexane	13,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ
Cyclohexane, methyl-	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ
Dibromochloromethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Dichlorodifluoromethane	390	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Ethylbenzene	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Isopropylbenzene	680	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Methyl acetate	37,000	µg/L	1 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	2 U	0.5 U
Methyl tert butyl ether	120	µg/L	0.5 U	0.5 U	0.5 U	**0.46 J**	0.5 U	**0.49 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Methylene chloride	5	µg/L	2 U	0.5 U	0.5 U	2 U	0.5 U	2 U	0.5 UJ	0.5 UJ	0.5 UJ	2 U	0.5 UJ	0.5 UJ	5 U	0.5 UJ
o-Xylene	200	µg/L														
p/m-Xylene	- -	µg/L														
Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Tetrachloroethene	1.1	µg/L	0.5 U	**0.58**	**0.54**	0.5 U	**2.5**	**0.29 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Toluene	1,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
trans-1,2-Dichloroethene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
trans-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	**1.2**	0.5 U	0.5 U	**4.1**	**2.6**	0.5 U
Trichlorofluoromethane	1,300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Vinyl Chloride	0.16	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U
Xylene (Total)	200	µg/L	1.5 U	0.5 U	0.5 U	1.5 U	0.5 U	1.5 U	0.5 U	0.5 U	0.5 U	1.5 U	0.5 U	0.5 U	6 U	0.5 U

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109A	MW-109A	MW-109AA	MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B	MW-110B	MW-110B
Sample Depth():																
Date Collected:			09/23/04	03/14/07	09/30/03	09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03	09/30/03	09/22/04
Sample Name:	PAL	Units	GW-047-LF	MW-109A	GW-003-LF	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02	GW-005-WT	GW-044-WT
VOC																
1,1,1-Trichloroethane	200	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	0.5 U	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
1,1,2-Trichloroethane	2.4	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	24	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 UJ		0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U		0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
1,2,4-Trichlorobenzene	8.2	µg/L	0.5 UJ	2 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
1,2-Dibromo-3-chloropropane	0.0032	µg/L	0.5 U	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
1,2-Dibromoethane	0.05	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	370	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	1.5	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	3.9	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	4.3	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	7,100	µg/L	5 U	2 U	5 U	5 U	5 U	5 U	5 U	5 U	2 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	- -	µg/L	5 U	2 U	5 U	5 U	5 U	5 U	5 U	5 U	2 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	2,000	µg/L	5 U	2 U	5 U	5 U	5 U	5 U	5 U	5 U	2 U	5 U	5 U	5 U	5 U	5 U
Acetone	22,000	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	4.1	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	1.2	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	85	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Carbon disulfide	1,000	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	2	µg/L	0.5 U	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Chlorobenzene	91	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	µg/L	0.5 U	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Chloroform	1.9	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.9**
Chloromethane	190	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.61**	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	4.3	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	13,000	µg/L	0.5 U	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Cyclohexane, methyl-	- -	µg/L	0.5 U	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Dibromochloromethane	1.5	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	390	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	15	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	680	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Methyl acetate	37,000	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	120	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	5	µg/L	0.5 UJ	5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
o-Xylene	200	µg/L														
p/m-Xylene	- -	µg/L														
Styrene	100	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Tetrachloroethene	1.1	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	4.3	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1,300	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.16	µg/L	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	200	µg/L	0.5 U	6 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110B	MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C	MW-112A	MW-112A	MW-112A	MW-112AA
Sample Depth():															
Date Collected:			03/14/07	09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04	10/02/03	09/27/04	11/30/05	10/03/03
Sample Name:	PAL	Units	MW-110B	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP	GW-055-NP	MW-112A	GW-020-NP
VOC															
1,1,1-Trichloroethane	200	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
1,1,2-Trichloroethane	2.4	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
1,1-Dichloroethane	24	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
1,1-Dichloroethene	7	µg/L	2 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L		0.5 UJ		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
1,2,4-Trichlorobenzene	8.2	µg/L	2 U	0.5 UJ	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.0032	µg/L	2 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,2-Dichlorobenzene	370	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.59**	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	1.5	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	3.9	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	4.3	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	7,100	µg/L	2 U	5 U	2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.5 U	5 U
2-Hexanone	- -	µg/L	2 U	5 U	2 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.5 U	5 U
4-Methyl-2-pentanone	2,000	µg/L	2 U	5 U	2 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.5 U	5 U
Acetone	22,000	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	1 UJ	8.4 UJ
Benzene	4.1	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L		0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Bromodichloromethane	1.2	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	85	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Bromomethane	8.7	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	1,000	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	2	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
Chlorobenzene	91	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	- -	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
Chloroform	1.9	µg/L	**1 J**	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	190	µg/L	2 U	0.5 U	2 U	0.5 U	**0.58**	0.5 U	**0.62**	**0.52**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	4.3	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Cyclohexane	13,000	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
Cyclohexane, methyl-	- -	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	1.5	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
Dichlorodifluoromethane	390	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	15	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	680	µg/L	2 U	0.5 U	2 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Methyl acetate	37,000	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
Methyl tert butyl ether	120	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
Methylene chloride	5	µg/L	5 U	0.5 UJ	5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	2 UJ	0.5 UJ
o-Xylene	200	µg/L													
p/m-Xylene	- -	µg/L													
Styrene	100	µg/L	2 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1.1	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.66**	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	4.3	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Trichloroethene	5	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1,300	µg/L	2 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
Vinyl Chloride	0.16	µg/L	2 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
Xylene (Total)	200	µg/L	6 U	0.5 U	6 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5 U	0.5 U

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502	MW-A2	MW-A2	MW-A2	MW-B1	MW-B1	MW-B2
Sample Depth():																
Date Collected:			09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05	10/01/03	09/30/04	12/08/05	10/01/03	09/24/04	09/29/03
Sample Name:	PAL	Units	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502	GW-012-QW	GW-080-QW	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF
VOC																
1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,1,2-Trichloroethane	2.4	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,1-Dichloroethane	24	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U		0.5 U		0.5 UJ				0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	8.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.0032	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ
1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	370	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.87**
1,2-Dichloroethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	3.9	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.2**
2-Butanone	7,100	µg/L	5 U	0.5 U	5 U	0.5 U	5 U	0.5 UJ	2 U	0.5 UJ	5 U	5 U	0.5 UJ	5 U	5 U	5 U
2-Hexanone	- -	µg/L	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	2 U	0.5 U	5 U	5 UJ	0.5 U	5 UJ	5 U	5 U
4-Methyl-2-pentanone	2,000	µg/L	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	2 U	0.5 U	5 U	5 U	0.5 U	5 UJ	5 U	5 U
Acetone	22,000	µg/L	5 U	1.2 UJ	5 U	1.2 UJ	5 U	2 UJ	5 U	2 UJ	5 U	5 U	2 UJ	5 U	5 U	5 U
Benzene	4.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.64 J**
Bromochloromethane	- -	µg/L	0.5 U		0.5 U		0.5 U				0.5 U	0.5 U		0.5 U	0.5 U	0.5 UJ
Bromodichloromethane	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	85	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Carbon disulfide	1,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Chlorobenzene	91	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**19 J**
Chloroethane	- -	µg/L	0.5 U	1 U	0.5 U	1 U	0.5 U	1 UJ	2 U	1 UJ	0.5 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 UJ
Chloroform	1.9	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	190	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Cyclohexane	13,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Cyclohexane, methyl-	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ
Dibromochloromethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	390	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	680	µg/L	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Methyl acetate	37,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.5 UJ	1 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	120	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	5	µg/L	0.5 U	2 UJ	0.5 U	2 UJ	0.5 UJ	2 U	5 U	2 U	0.5 UJ	0.5 U	2 U	3.1 UJ	0.5 U	0.5 UJ
o-Xylene	200	µg/L														
p/m-Xylene	- -	µg/L														
Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Tetrachloroethene	1.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1,300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U
Vinyl Chloride	0.16	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	200	µg/L	0.5 U	1.5 U	0.5 U	1.5 U	0.5 U	1.5 U	6 U	1.5 U	0.5 U	0.5 U	1.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-B2	MW-C1	MW-C1	MW-C1	MW-C2	MW-C2	MW-C2	MW-C2	MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8
Sample Depth():																
Date Collected:			09/27/04	09/30/03	09/28/04	12/07/05	09/30/03	09/27/04	12/06/05	03/13/07	10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03
Sample Name:	PAL	Units	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF	MW-C2	MW-C2	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF
VOC																
1,1,1-Trichloroethane	200	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1,2-Trichloroethane	2.4	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ
1,1-Dichloroethane	24	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	**0.33 J**	**0.58**	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1-Dichloroethene	7	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,2,3-Trichlorobenzene	- -	µg/L	0.5 UJ	0.5 U	0.5 U		0.5 U	0.5 UJ			0.5 U		0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	8.2	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.0032	µg/L	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,2-Dibromoethane	0.05	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2-Dichlorobenzene	370	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	**0.5**	**0.55 J**	**0.59**	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.57**
1,2-Dichloroethane	1.5	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	3.9	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	4.3	µg/L	**2 J**	0.5 U	0.5 U	0.5 U	**1**	**1.2 J**	**1.1**	**1.6 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.9**
2-Butanone	7,100	µg/L	5 UJ	5 U	5 U	0.5 UJ	5 U	5 UJ	0.5 UJ	2 U	5 U	0.5 UJ	5 U	5 U	5 U	5 U
2-Hexanone	- -	µg/L	5 UJ	5 U	5 U	0.5 U	5 U	5 UJ	0.5 U	2 U	5 UJ	0.5 U	5 UJ	5 U	5 U	5 U
4-Methyl-2-pentanone	2,000	µg/L	5 UJ	5 U	5 U	0.5 U	5 U	5 UJ	0.5 U	2 U	5 U	0.5 U	5 U	5 U	5 U	5 U
Acetone	22,000	µg/L	5 UJ	5 U	5 U	2 UJ	5 U	5 UJ	2 UJ	6.5 U	5 U	2 UJ	5 U	5 UJ	5 U	5 U
Benzene	4.1	µg/L	**0.59 J**	0.5 U	0.5 U	0.5 U	**0.84**	**0.61 J**	**2.8**	**1.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**
Bromochloromethane	- -	µg/L	0.5 UJ	0.5 U	0.5 U		0.5 U	0.5 UJ			0.5 U		0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	1.2	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	**0.32 J**	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	85	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	1,000	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	2	µg/L	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Chlorobenzene	91	µg/L	**12 J**	0.5 U	0.5 U	0.5 U	3.2 U	**3.3 J**	4.2 U	**5.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**9.7**
Chloroethane	- -	µg/L	0.5 UJ	0.5 UJ	0.5 U	1 UJ	0.5 UJ	0.5 UJ	1 UJ	2 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.9	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	**0.95**	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	190	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	**0.7**	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	4.3	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Cyclohexane	13,000	µg/L	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Cyclohexane, methyl-	- -	µg/L	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Dibromochloromethane	1.5	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Dichlorodifluoromethane	390	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	**5.4 J**	**11**	**7.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	15	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	680	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	**0.85**	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ
Methyl acetate	37,000	µg/L	0.5 UJ	0.5 U	0.5 U	1 U	0.5 U	0.5 UJ	1 U	2 U	0.5 UJ	1 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Methyl tert butyl ether	120	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	**0.23 J**	2 U	0.5 U	**3.8**	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	5	µg/L	0.5 UJ	0.5 UJ	0.5 U	2 U	0.5 UJ	0.5 UJ	2.4 U	5 U	0.5 U	2 U	0.5 U	1.9 UJ	0.5 U	0.5 UJ
o-Xylene	200	µg/L														
p/m-Xylene	- -	µg/L														
Styrene	100	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Tetrachloroethene	1.1	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	4.3	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Trichloroethene	5	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1,300	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ
Vinyl Chloride	0.16	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	**1.2**	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	200	µg/L	0.5 UJ	0.5 U	0.5 U	1.5 U	0.5 U	0.5 UJ	1.5 U	6 U	0.5 U	1.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			P-8	SEA-601	SEA-601	SEA-602A	SEA-602A	SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604
Sample Depth():																
Date Collected:			09/30/04	10/02/03	09/28/04	10/03/03	09/28/04	12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03
Sample Name:	PAL	Units	GW-063-LF	GW-017-LF	GW-060-LF	GW-022-LF	GW-062-LF	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF
VOC																
1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	2.4	µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
1,1-Dichloroethane	24	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
1,1-Dichloroethene	7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
1,2,4-Trichlorobenzene	8.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.0032	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
1,2-Dichlorobenzene	370	µg/L	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	**1.9**	**1.9**	**2**	**2**	0.5 U
1,2-Dichloroethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	3.9	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	4.3	µg/L	**1**	0.5 U	0.5 U	0.5 U	**0.66**	**0.57**	**1.7 J**	**0.54**	0.5 U	**3**	**3.6**	**3.6**	**3.6**	**0.72**
2-Butanone	7,100	µg/L	5 U	5 U	5 U	5 U	5 U	0.5 UJ	2 U	5 U	5 U	5 U	5 U	5 U	0.5 UJ	5 U
2-Hexanone	- -	µg/L	5 U	5 U	5 U	5 U	5 U	0.5 U	2 U	5 U	5 UJ	5 U	5 UJ	5 UJ	0.5 U	5 U
4-Methyl-2-pentanone	2,000	µg/L	5 U	5 U	5 U	5 U	5 U	0.5 U	2 U	5 U	5 U	5 U	5 U	5 U	**1.1**	5 U
Acetone	22,000	µg/L	5 U	5 UJ	5 U	5 UJ	5 U	2 UJ	8.7 U	5 UJ	5 U	5 UJ	5 U	5 U	2 UJ	5 UJ
Benzene	4.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	**1,100**	**730**	**620**	**140**	**1.8**
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Bromodichloromethane	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	85	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
Bromomethane	8.7	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	1,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
Chlorobenzene	91	µg/L	**5.7**	**0.33 J**	**0.56**	0.5 U	**2**	2.1 U	**6**	**1.8 J**	0.5 U	**20**	**22**	**23**	**20**	**7.4**
Chloroethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 UJ	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 UJ	0.5 U
Chloroform	1.9	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	190	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
Cyclohexane	13,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.58**	2 U	0.5 U	0.5 U	**0.83 J**	**1**	0.5 U	**1.1**	0.5 UJ
Cyclohexane, methyl-	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	**1.1**	**1.3**	**1.3**	**1.5**	0.5 U
Dibromochloromethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
Dichlorodifluoromethane	390	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	**0.58**	0.5 U	0.5 U	**0.54**	**1.6**
Ethylbenzene	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	**1**	**1.3**	**1.5**	0.5 U	0.5 U
Isopropylbenzene	680	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.24 J**	2 U	0.5 U	0.5 U	**7.4**	**8**	**8.4**	**8.5**	**0.51**
Methyl acetate	37,000	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	1 U	2 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	1 U	0.5 UJ
Methyl tert butyl ether	120	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	**0.4 J**	0.5 UJ
Methylene chloride	5	µg/L	0.5 U	1.9 UJ	0.5 U	0.5 UJ	0.5 U	2 U	5 U	0.5 UJ	0.5 U	2.2 UJ	0.5 U	0.5 U	2 U	0.5 UJ
o-Xylene	200	µg/L														
p/m-Xylene	- -	µg/L														
Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	**0.68**	0.5 U	0.5 U	**3**	0.5 U
trans-1,2-Dichloroethene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1,300	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ
Vinyl Chloride	0.16	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5 U	6 U	0.5 U	0.5 U	**9.8**	**16**	**17**	**4.3**	0.5 U

TABLE 4-2
GROUNDWATER RESULTS FOR VOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	SEA-604	SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():															
Date Collected:			09/30/04	10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:			GW-067-LF	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
VOC															
1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.67	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	59,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	2.4	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1-Dichloroethane	24	µg/L	0.5 U	0.5 U	0.5 U	**0.57**	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	**0.75**	**0.83**	0.5 U	0.5 U
1,1-Dichloroethene	7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U		0.5 U	0.5 UJ		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
1,2,4-Trichlorobenzene	8.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.0032	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
1,2-Dichlorobenzene	370	µg/L	0.5 U	**0.47 J**	**0.54**	**0.34 J**	0.5 U	0.5 UJ	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**
1,2-Dichloroethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	3.9	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	4.3	µg/L	**1**	**1.3**	**1.7**	**1.1**	**0.95**	**1.2 J**	**0.25 J**	0.5 U	0.5 U	**2.2**	**2.2**	**0.81**	**2.2**
2-Butanone	7,100	µg/L	5 U	5 U	5 U	**1.3 J**	5 U	5 UJ	0.5 UJ	5 U	5 U	5 U	5 U	5 U	0.5 U
2-Hexanone	- -	µg/L	5 U	5 U	5 U	0.5 U	5 U	5 UJ	0.5 U	5 UJ	5 UJ	5 U	5 UJ	5 UJ	0.5 U
4-Methyl-2-pentanone	2,000	µg/L	5 U	5 U	5 U	**2.1**	5 U	5 UJ	0.5 U	5 UJ	5 U	5 U	5 UJ	5 U	0.5 U
Acetone	22,000	µg/L	5 U	5 UJ	5 U	2.9 UJ	5 UJ	5 UJ	2 UJ	5 UJ	5 U	5 UJ	5 UJ	5 U	2 UJ
Benzene	4.1	µg/L	**0.7**	0.5 U	0.5 U	**2.3**	0.5 U	0.5 UJ	**0.42 J**	0.5 U	0.5 U	**8.3**	**7.4**	**0.72**	**7.7**
Bromochloromethane	- -	µg/L	0.5 U	0.5 UJ	0.5 U		0.5 U	0.5 UJ		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Bromodichloromethane	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	85	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	1 U
Bromomethane	8.7	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	1 UJ
Carbon disulfide	1,000	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	91	µg/L	**12**	**4.1**	**2.4**	4.6 U	**2.2**	**2.7 J**	0.71 U	0.5 U	0.5 U	**28**	**28**	**7**	**24**
Chloroethane	- -	µg/L	0.5 U	0.5 U	0.5 U	1 UJ	0.5 U	0.5 UJ	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.1 J**
Chloroform	1.9	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	190	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	µg/L	0.5 U	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 UJ	**0.23 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.72**	0.5 U
cis-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Cyclohexane	13,000	µg/L	0.5 U	0.5 U	0.5 U	**0.36 J**	0.5 UJ	0.5 UJ	**0.25 J**	0.5 U	0.5 U	**0.51**	**0.41 J**	0.5 U	**0.63**
Cyclohexane, methyl-	- -	µg/L	0.5 U	0.5 U	0.5 U	**0.38 J**	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.36 J**
Dibromochloromethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Dichlorodifluoromethane	390	µg/L	0.5 U	0.5 U	0.5 U	**0.27 J**	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Ethylbenzene	15	µg/L	0.5 U	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	680	µg/L	0.5 U	0.5 U	0.5 U	**0.98**	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.91**
Methyl acetate	37,000	µg/L	0.5 U	0.5 UJ	0.5 U	1 U	0.5 UJ	0.5 UJ	1 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	1 U
Methyl tert butyl ether	120	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**1.5 J**	**1.7 J**	**0.87**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	5	µg/L	0.5 U	0.5 UJ	0.5 U	2 U	0.5 UJ	0.5 UJ	2 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	2 U
o-Xylene	200	µg/L													
p/m-Xylene	- -	µg/L													
Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	µg/L	0.5 U	0.5 U	0.5 U	**0.59**	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.22 J**
trans-1,2-Dichloroethene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	**0.55**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1,300	µg/L	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U
Vinyl Chloride	0.16	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	**0.85**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	200	µg/L	0.5 U	0.5 U	0.5 U	**3.2**	0.5 U	0.5 UJ	1.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.68 J**

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B
Sample Depth():														
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B
VOC TICS														
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**87 JN**	**120 JN**	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	**1 NJ**	**2 NJ**	**2 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	**3 JN**
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	**17 JN**	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	150 UJ	160 UJ	NA	NA	NA	210 UJ	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9 JN**	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	**47 NJ**	**51 NJ**	**9 JN**	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**0.8 JN**	**0.5 JN**	**6 JN**	NA	**0.5 JN**
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	**4 NJ**	**5 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**33 JN**	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9 JN**	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**14 JN**	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9 JN**	**18 JN**	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**8 JN**	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**11 JN**	**13 JN**	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**610 JN**	**900 JN**	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	**0.6 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	**0.8 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**16 JN**	**14 JN**	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10 JN**	**100 JN**	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**82 JN**	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**27 JN**	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**12 JN**	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	GLF-700a 12/06/05 GLF-700a	GLF-704 12/06/05 DUP-2	GLF-704 12/06/05 GLF-704	GLF-704 03/13/07 GLF-704	GLF-706 11/29/05 GLF-706	GLF-706 03/13/07 FD-031307	GLF-706 03/13/07 GLF-706	GLF-706a 11/29/05 DUP-1	GLF-706a 11/29/05 GLF-706a	GNP-705 11/28/05 GNP-705	GNP-705 03/13/07 GNP-705	GNP-705B 12/01/05 GNP-705B
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**8 JN**	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**13 JN**	**18 JN**	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**230 JN**	**330 JN**	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	**0.7 JN**	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**13 JN**	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.6 JN**
Cyclotetrasiloxane, octamethyl-	- -	µg/L	**0.5 NJ**	NA	NA	NA	NA	NA	NA	**0.6 JN**	**0.9 JN**	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	**14 NJ**	**14 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1 JN**
Hexane	- -	µg/L	NA	NA	NA	NA	NA	330 UJ	NA	NA	NA	NA	390 UJ	**0.6 JN**
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**6 JN**	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	**4 JN**	NA	NA	**84 JN**	**130 JN**	NA
Isopropyl Alcohol	- -	µg/L	NA	NA	**1 NJ**	NA	**2 JN**	NA	NA	**2 JN**	**0.8 JN**	NA	NA	**2 JN**
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	**3 JN**	NA	NA	NA	NA	**20 JN**	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	**2 NJ**	**2 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	**4 JN**	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	**18 JN**	NA	NA	NA	**21 JN**	NA
Silanol, trimethyl-	- -	µg/L	NA	**19 NJ**	**19 NJ**	**5 JN**	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	2	NA	1	NA	NA	NA	1	1	1	NA	NA	4

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Sample Depth():													
Date Collected:			03/13/07	11/29/05	11/29/05	03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09
Sample Name:	PAL	Units	GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
VOC TICS													
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	**0.6 JN**	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	**0.8 JN**	NA	NA	**0.5 JN**	NA	NA	NA	NA	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**76.2 JN [76.5 JN]**
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Sample Depth():													
Date Collected:			03/13/07	11/29/05	11/29/05	03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09
Sample Name:	PAL	Units	GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9.88 JN [9.99 JN]**
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	**0.7 JN**	NA	NA	NA	NA	NA	**0.8 NJ**	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**18.7 JN [10.6 JN]**
Isopropyl Alcohol	- -	µg/L	NA	**1 JN**	**2 JN**	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorodifluoro-	- -	µg/L	NA	NA	**3 JN**	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	NA	1	1	NA	2	NA	1	2	1	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A	MW-106A	MW-106B	MW-106B	MW-106B
Sample Depth():													
Date Collected:			11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03	09/30/04	12/02/05	09/28/04	09/28/04	12/02/05
Sample Name:	PAL	Units	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B
VOC TICS													
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**0.6 JN**	NA	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	**7.37 JN**	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A	MW-106A	MW-106B	MW-106B	MW-106B
Sample Depth():													
Date Collected:			11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03	09/30/04	12/02/05	09/28/04	09/28/04	12/02/05
Sample Name:	PAL	Units	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**2 JN**	NA	NA	**2 JN**
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**0.8 JN**	NA	NA	**0.6 JN**
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	NA	NA	NA	2	NA	2	1	2	NA	NA	1

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106C	MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A	MW-109A	MW-109A
Sample Depth():														
Date Collected:			09/28/04	12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03	09/23/04	03/14/07
Sample Name:	PAL	Units	GW-077-DF	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF	GW-047-LF	MW-109A
VOC TICS														
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 UJ
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106C	MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A	MW-109A	MW-109A
Sample Depth():														
Date Collected:			09/28/04	12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03	09/23/04	03/14/07
Sample Name:	PAL	Units	GW-077-DF	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF	GW-047-LF	MW-109A
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	**2 JN**	NA	NA	NA	**0.7 NJ**	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	90 UJ
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	- -	µg/L	NA	**0.8 JN**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	1.1 UJ	NA	NA	NA	0.6 UJ	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	NA	1	2	2	3	1	4	3	NA	2	1	1

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109AA	MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B	MW-110B	MW-110B
Sample Depth():														
Date Collected:			09/30/03	09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03	09/30/03	09/22/04
Sample Name:	PAL	Units	GW-003-LF	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02	GW-005-WT	GW-044-WT
VOC TICS														
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	MW-109AA 09/30/03 GW-003-LF	MW-109AA 09/23/04 GW-048-LF	MW-109AA 09/23/04 GW-FD-11	MW-109B 09/21/04 GW-042-LF	MW-109B 09/21/04 GW-DUP-01	MW-109C 09/21/04 GW-041-LF	MW-109C 03/14/07 MW-109C	MW-110A 09/30/03 GW-004-WT	MW-110A 09/22/04 GW-045-WT	MW-110B 09/30/03 GW-FD02	MW-110B 09/30/03 GW-005-WT	MW-110B 09/22/04 GW-044-WT
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	2.5 UJ	2 UJ	1.7 UJ	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	2	2	2	2	1	1	NA	2	2	3	3	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110B	MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C	MW-112A	MW-112A	MW-112A
Sample Depth():														
Date Collected:			03/14/07	09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04	10/02/03	09/27/04	11/30/05
Sample Name:	PAL	Units	MW-110B	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP	GW-055-NP	MW-112A
VOC TICS														
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	MW-110B 03/14/07 MW-110B	MW-110C 09/23/04 GW-053-WT	MW-110C 03/14/07 MW-110C	MW-111A 10/02/03 GW-016-WT	MW-111A 09/24/04 GW-051-WT	MW-111AA 10/02/03 GW-015-WT	MW-111AA 09/24/04 GW-052-WT	MW-111B 09/24/04 GW-050-WT	MW-111C 09/20/04 GW-057-WT	MW-112A 10/02/03 GW-019-NP	MW-112A 09/27/04 GW-055-NP	MW-112A 11/30/05 MW-112A
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.7 JN**
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2 JN**
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	0.51 UJ	2.9 UJ	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	NA	2	NA	2	1	3	NA	NA	2	3	NA	1

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112AA	MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502	MW-A2	MW-A2	MW-A2
Sample Depth():														
Date Collected:			10/03/03	09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05	10/01/03	09/30/04	12/08/05
Sample Name:	PAL	Units	GW-020-NP	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502	GW-012-QW	GW-080-QW	MW-A2
VOC TICS														
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	**0.7 JN**	NA	NA	NA	**0.7 JN**	NA	NA	NA	NA	**0.6 NJ**
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112AA	MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502	MW-A2	MW-A2	MW-A2
Sample Depth():														
Date Collected:			10/03/03	09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05	10/01/03	09/30/04	12/08/05
Sample Name:	PAL	Units	GW-020-NP	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502	GW-012-QW	GW-080-QW	MW-A2
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	**0.5 JN**	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	NA	NA	NA	**1 JN**	NA	NA	NA	NA	NA	NA	**0.7 NJ**
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	- -	µg/L	NA	NA	**0.7 JN**	NA	NA	NA	**1 JN**	NA	NA	NA	NA	NA
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**5.9 J**	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	7	NA	NA	NA	1	1	1	NA	1	4	1	1

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-B1	MW-B1	MW-B2	MW-B2	MW-C1	MW-C1	MW-C1	MW-C2	MW-C2	MW-C2	MW-C2	MW-EA-1
Sample Depth():														
Date Collected:			10/01/03	09/24/04	09/29/03	09/27/04	09/30/03	09/28/04	12/07/05	09/30/03	09/27/04	12/06/05	03/13/07	10/01/04
Sample Name:	PAL	Units	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF	MW-C2	MW-C2	GW-075-WT
VOC TICS														
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	**0.59 NJ**	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**5 NJ**	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1 NJ**	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-B1	MW-B1	MW-B2	MW-B2	MW-C1	MW-C1	MW-C1	MW-C2	MW-C2	MW-C2	MW-C2	MW-EA-1
Sample Depth():														
Date Collected:			10/01/03	09/24/04	09/29/03	09/27/04	09/30/03	09/28/04	12/07/05	09/30/03	09/27/04	12/06/05	03/13/07	10/01/04
Sample Name:	PAL	Units	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF	MW-C2	MW-C2	GW-075-WT
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	**2 NJ**	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	**1.4 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2 NJ**	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	- -	µg/L	NA	NA	NA	NA	NA	NA	**2 NJ**	NA	NA	**1 NJ**	NA	NA
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**96 NJ**	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**12 NJ**	**6.2 NJ**	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**1.2 NJ**	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	**17 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	3	1	4	1	2	1	2	5	6	2	1	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8	SEA-601	SEA-601	SEA-602A	SEA-602A
Sample Depth():												
Date Collected:			12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04	10/02/03	09/28/04	10/03/03	09/28/04
Sample Name:	PAL	Units	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF	GW-017-LF	GW-060-LF	GW-022-LF	GW-062-LF
VOC TICS												
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	**0.69 NJ**	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	**0.91 NJ**	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	**0.6 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8	SEA-601	SEA-601	SEA-602A	SEA-602A
Sample Depth():												
Date Collected:			12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04	10/02/03	09/28/04	10/03/03	09/28/04
Sample Name:	PAL	Units	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF	GW-017-LF	GW-060-LF	GW-022-LF	GW-062-LF
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	- -	µg/L	**1 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	**0.78 NJ**	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	**0.92 NJ**	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	**0.53 NJ**	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	**0.5 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	1	4	NA	3	1	4	NA	3	1

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604	SEA-604	SEA-605
Sample Depth():													
Date Collected:			12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03	09/30/04	10/04/03
Sample Name:	PAL	Units	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF	GW-067-LF	GW-028-LF
VOC TICS													
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	**2.2 NJ**	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	**0.5 NJ**	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**1 NJ**	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	**2 NJ**	NA	NA	NA	NA	NA	NA	**16 NJ**	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	**0.93 NJ**	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	**1.5 NJ**	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.68 NJ**	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	**1.4 NJ**	NA	NA	**3 NJ**	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	**0.76 NJ**	**0.76 NJ**	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	**8.4 NJ**	**1.7 NJ**	**1.7 NJ**	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	**1.1 NJ**	**1.1 NJ**	**1 NJ**	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	**1.3 NJ**	NA	NA	**8 NJ**	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	**1 NJ**	**0.68 NJ**	**0.72 NJ**	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	**1.3 NJ**	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	**1.4 NJ**	**2 NJ**	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	**3.3 NJ**	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	**1.6 NJ**	NA	**2.6 NJ**	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	**0.81 NJ**	**0.8 NJ**	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	**0.56 NJ**	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**2 NJ**	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	**1.5 NJ**	**1.5 NJ**	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	**0.61 NJ**	**3 NJ**	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**7 NJ**	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**3 NJ**	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	**3.1 NJ**	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604	SEA-604	SEA-605
Sample Depth():													
Date Collected:			12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03	09/30/04	10/04/03
Sample Name:	PAL	Units	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF	GW-067-LF	GW-028-LF
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	**1.2 NJ**	**2.4 NJ**	**0.56 NJ**	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	**4.3 NJ**	NA	**2.5 NJ**	**2 NJ**	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	**2 NJ**	NA	NA	**2 NJ**	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	**0.58 NJ**	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	**0.9 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	**1 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	**1.1 NJ**	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	**3 NJ**	NA	NA	NA	NA	NA	NA	**9 NJ**	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	- -	µg/L	**0.7 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Chlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**8 NJ**	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**2 NJ**	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	**1.1 NJ**	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	**4 JN**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	**2 NJ**	NA	NA	NA	**2.4 NJ**	NA	NA	**10 NJ**	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	**0.7 J**	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	1	3	NA	6	5	6	NA	2	5	4

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():													
Date Collected:			09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
VOC TICS													
(E)-1-Phenyl-1-butene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Cyclopentadiene, 5-(1-methylethylide	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexanol, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Hexene, 4-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1H-Inden-1-one, 2,3-dihydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Pentene, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3-Dihydro-1-methylindene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptanone, 4,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Heptenal, (E)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol, 2-methyl-	- -	µg/L	NA	**1 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylheptyl acetate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-t-Butyl-o-xylene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2,4-diisopropylphenol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amylene hydrate	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azulene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (1-methyl-1-propenyl)-, (Z)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methyl-1-propeny	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, (2-methylpropyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,3-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4,5-tetramethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2,4-trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,2-diethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,3-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1,4-bis(1-methylethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-ethyl-3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-2-(2-propenyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 1-propenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-butenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3,5-trimethyl-	- -	µg/L	NA	NA	**0.64 NJ**	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethenyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3
GROUNDWATER RESULTS FOR VOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():													
Date Collected:			09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
Benzene, 2-ethyl-1,4-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, propyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene, tert-butyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzeneacetaldehyde, .alpha.-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butane, 2-methoxy-2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclopropane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclotetrasiloxane, octamethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diphenyl ether	- -	µg/L	NA	NA	NA	**0.6 NJ**	NA	NA	NA	NA	NA	NA	NA
Ethane, 1,1-difluoro-	- -	µg/L	NA	NA	NA	NA	**2 NJ**	NA	NA	NA	NA	NA	NA
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanone, 1-(2,4,5-Trimethyl	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Furan, tetrahydro-	- -	µg/L	NA	**0.8 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexanal, 2-ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indan, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	**2.6 NJ**	NA	NA	**0.8 NJ**
Isopropyl Alcohol	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2 NJ**
Methane, chlorodifluoro-	- -	µg/L	NA	NA	NA	NA	**2 NJ**	NA	NA	NA	NA	NA	**2 NJ**
Methane, Chlorofluoro-	- -	µg/L	NA	**3 NJ**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane, Dichlorofluoro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,3-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1,6-dimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene, 1-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, 2-methyl-2-phenyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane, ethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 2-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentane, 3-methyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silanol, trimethyl-	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylsilyl fluoride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	3	3	6	1	1	3	NA	7	7	NA	1

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B
Sample Depth():														
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B
SVOC														
1,1'-Biphenyl	1,800	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2,4,5-Trichlorophenol	3,700	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2,4,6-Trichlorophenol	37	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2,4-Dichlorophenol	110	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2,4-Dimethylphenol	730	µg/L	R	R	R	NA	**0.26 J**	NA	NA	0.5 UJ	0.57 UJ	**8 J**	NA	0.5 UJ
2,4-Dinitrophenol	73	µg/L	0.56 UJ	0.56 UJ	0.56 UJ	NA	0.52 UJ	NA	NA	0.5 UJ	0.57 UJ	0.5 UJ	NA	0.5 UJ
2,4-Dinitrotoluene	2.2	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2,6-Dinitrotoluene	37	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2-Chloronaphthalene	2,900	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	**2.3**	NA	0.5 U
2-Chlorophenol	180	µg/L	0.56 U	0.56 U	0.56 U	NA	**0.34 J**	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2-Methylphenol	1,800	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2-Nitroaniline	110	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
2-Nitrophenol	- -	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
3,3'-Dichlorobenzidine	1.5	µg/L	0.56 UJ	0.56 UJ	0.56 UJ	NA	0.52 UJ	NA	NA	0.5 UJ	0.57 UJ	0.5 UJ	NA	0.5 UJ
3-Nitroaniline	110	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 UJ	0.5 U	NA	0.5 UJ
4,6-Dinitro-2-methylphenol	3.7	µg/L	0.56 UJ	0.56 UJ	0.56 UJ	NA	0.52 UJ	NA	NA	0.5 UJ	0.57 UJ	0.5 UJ	NA	0.5 UJ
4-Bromophenyl-phenylether	- -	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
4-Chloro-3-methylphenol	- -	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
4-Chloroaniline	34	µg/L	0.56 UJ	0.56 UJ	0.56 UJ	NA	0.52 UJ	NA	NA	0.5 UJ	0.57 UJ	**1.4 J**	NA	0.5 UJ
4-Chlorophenyl-phenylether	- -	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
4-Methylphenol	180	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	**4.5**	NA	0.5 U
4-Nitroaniline	34	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 UJ	0.5 U	NA	0.5 UJ
4-Nitrophenol	- -	µg/L	0.56 UJ	0.56 UJ	0.56 UJ	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Acetophenone	3,700	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Atrazine	2.9	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Benzaldehyde	3,700	µg/L	0.56 UJ	**1.9 J**	0.56 UJ	NA	0.52 UJ	NA	NA	0.5 UJ	0.57 UJ	0.5 UJ	NA	0.5 UJ
bis(2-Chloroethoxy)methane	110	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
bis(2-Chloroethyl)ether	0.12	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
bis(2-Ethylhexyl)phthalate	6	µg/L	**0.29 J**	**0.78**	**0.34 J**	NA	1.1 U	NA	NA	0.64 U	0.74 U	**6.2**	NA	0.71 U
Butyl benzyl phthalate	350	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Caprolactam	18,000	µg/L	0.56 UJ	0.56 UJ	0.56 UJ	NA	**3 J**	NA	NA	0.5 UJ	0.57 UJ	0.5 UJ	NA	0.5 UJ
Carbazole	- -	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	**0.48 J**	NA	0.5 U
Dibenzofuran	- -	µg/L	0.56 U	0.56 U	0.56 U	NA	**0.32 J**	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Diethylphthalate	29,000	µg/L	0.56 U	0.56 U	0.56 U	NA	**1.2**	NA	NA	0.5 U	0.57 U	**3.1**	NA	0.5 U
Dimethyl phthalate	- -	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Di-N-Butyl phthalate	3,700	µg/L	0.56 U	**0.36 J**	0.56 U	NA	**0.71**	NA	NA	0.5 U	0.57 U	**1.1**	NA	0.5 U
Di-N-Octyl phthalate	- -	µg/L	0.56 UJ	0.56 UJ	0.56 UJ	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Hexachlorobenzene	0.42	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Hexachlorobutadiene	8.6	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Hexachlorocyclopentadiene	50	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 UJ	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Hexachloroethane	37	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Isophorone	710	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
N-Nitroso-di-N-propylamine	0.096	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U
N-Nitrosodiphenylamine	140	µg/L	0.56 U	0.56 U	0.56 U	NA	**2.3**	NA	NA	0.5 U	0.57 U	**9.5**	NA	0.5 U
Pentachlorophenol	1	µg/L	0.56 UJ	0.56 UJ	0.56 UJ	NA	0.52 UJ	NA	NA	0.5 UJ	0.57 UJ	0.5 UJ	NA	0.5 UJ
Phenol	11,000	µg/L	0.56 U	0.56 U	0.56 U	NA	0.52 U	NA	NA	0.5 U	0.57 U	0.5 U	NA	0.5 U

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Sample Depth():													
Date Collected:			03/13/07	11/29/05	11/29/05	03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09
Sample Name:	PAL	Units	GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
SVOC													
1,1'-Biphenyl	1,800	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
1,2,4,5-Tetrachlorobenzene	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2,4,5-Trichlorophenol	3,700	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2,4,6-Trichlorophenol	37	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2,4-Dichlorophenol	110	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2,4-Dimethylphenol	730	µg/L	NA	0.5 UJ	0.5 UJ	NA	0.53 UJ	NA	R	0.52 UJ	0.52 UJ	NA	0.543 U [0.658 U]
2,4-Dinitrophenol	73	µg/L	NA	0.5 UJ	0.5 UJ	NA	0.53 UJ	NA	0.57 UJ	2.1 UJ	2.1 UJ	NA	2.17 U [2.63 U]
2,4-Dinitrotoluene	2.2	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2,6-Dinitrotoluene	37	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2-Chloronaphthalene	2,900	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2-Chlorophenol	180	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2-Methylphenol	1,800	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2-Nitroaniline	110	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
2-Nitrophenol	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
3,3'-Dichlorobenzidine	1.5	µg/L	NA	0.5 UJ	0.5 UJ	NA	0.53 UJ	NA	0.57 UJ	0.52 UJ	0.52 UJ	NA	0.543 UJ [0.658 U]
3-Nitroaniline	110	µg/L	NA	0.5 UJ	0.5 U	NA	0.53 UJ	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
4,6-Dinitro-2-methylphenol	3.7	µg/L	NA	0.5 UJ	0.5 UJ	NA	0.53 UJ	NA	0.57 UJ	0.52 UJ	0.52 UJ	NA	2.17 U [2.63 U]
4-Bromophenyl-phenylether	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
4-Chloro-3-methylphenol	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	2.1 U	2.1 U	NA	0.543 U [0.658 U]
4-Chloroaniline	34	µg/L	NA	0.5 UJ	0.5 UJ	NA	0.53 UJ	NA	0.57 UJ	0.52 UJ	0.52 UJ	NA	0.543 UJ [0.658 U]
4-Chlorophenyl-phenylether	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
4-Methylphenol	180	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	**0.37 J [0.526 J]**
4-Nitroaniline	34	µg/L	NA	0.5 UJ	0.5 U	NA	0.53 UJ	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
4-Nitrophenol	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 UJ	2.1 UJ	2.1 UJ	NA	1.09 U [1.32 U]
Acetophenone	3,700	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
Atrazine	2.9	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
Benzaldehyde	3,700	µg/L	NA	0.5 UJ	0.5 UJ	NA	0.53 UJ	NA	0.57 UJ	0.52 UJ	0.52 UJ	NA	0.543 U [0.658 U]
bis(2-Chloroethoxy)methane	110	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
bis(2-Chloroethyl)ether	0.12	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
bis(2-Ethylhexyl)phthalate	6	µg/L	NA	0.5 U	0.5 U	NA	0.62 U	NA	**0.87 J**	0.71 UJ	0.79 UJ	NA	**4.52 [5.17]**
Butyl benzyl phthalate	350	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	1.8 U [0.658 U]
Caprolactam	18,000	µg/L	NA	0.5 UJ	0.5 UJ	NA	0.53 UJ	NA	0.57 UJ	0.52 UJ	0.52 UJ	NA	0.543 UJ [0.658 UJ]
Carbazole	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
Dibenzofuran	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	**0.283 J [0.658 U]**
Diethylphthalate	29,000	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	**0.283 J [0.658 U]**
Dimethyl phthalate	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
Di-N-Butyl phthalate	3,700	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	**0.51 J**	0.52 U	0.52 U	NA	**0.522 J [0.434 J]**
Di-N-Octyl phthalate	- -	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 UJ	0.52 U	0.52 U	NA	**0.543 U [0.382 J]**
Hexachlorobenzene	0.42	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
Hexachlorobutadiene	8.6	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 UJ [0.658 U]
Hexachlorocyclopentadiene	50	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
Hexachloroethane	37	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
Isophorone	710	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
N-Nitroso-di-N-propylamine	0.096	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]
N-Nitrosodiphenylamine	140	µg/L	NA	0.5 U	**1.2**	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	**14.8 [13.5]**
Pentachlorophenol	1	µg/L	NA	0.5 UJ	0.5 UJ	NA	0.53 UJ	NA	0.57 UJ	2.1 UJ	2.1 UJ	NA	2.17 U [2.63 U]
Phenol	11,000	µg/L	NA	0.5 U	0.5 U	NA	0.53 U	NA	0.57 U	0.52 U	0.52 U	NA	0.543 U [0.658 U]

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A	MW-106A	MW-106B	MW-106B	MW-106B
Sample Depth():													
Date Collected:			11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03	09/30/04	12/02/05	09/28/04	09/28/04	12/02/05
Sample Name:	PAL	Units	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B
SVOC													
1,1'-Biphenyl	1,800	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	NA	NA	NA	5 U	5 U	5 U	5 U	NA	R	R	NA
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	0.538 U	0.532 U	0.515 U	5 UJ	5 UJ	5 UJ	5 UJ	0.54 U	R	R	0.53 U
2,4,5-Trichlorophenol	3,700	µg/L	0.538 U	0.532 U	0.515 U	20 U	20 U	20 U	20 U	0.54 U	R	R	0.53 U
2,4,6-Trichlorophenol	37	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
2,4-Dichlorophenol	110	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
2,4-Dimethylphenol	730	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 UJ	R	R	0.53 UJ
2,4-Dinitrophenol	73	µg/L	2.15 U	2.13 U	2.06 U	20 UJ	20 UJ	20 UJ	20 UJ	0.54 UJ	R	R	0.53 UJ
2,4-Dinitrotoluene	2.2	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
2,6-Dinitrotoluene	37	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
2-Chloronaphthalene	2,900	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
2-Chlorophenol	180	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
2-Methylphenol	1,800	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
2-Nitroaniline	110	µg/L	0.538 U	0.532 U	0.515 U	20 U	20 U	20 U	20 U	0.54 U	R	R	0.53 U
2-Nitrophenol	- -	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
3,3'-Dichlorobenzidine	1.5	µg/L	0.538 UJ	0.532 U	0.515 U	5 UJ	5 UJ	R	5 UJ	0.54 UJ	R	R	0.53 UJ
3-Nitroaniline	110	µg/L	0.538 UJ	0.532 U	0.515 U	20 UJ	20 U	20 UJ	20 U	0.54 UJ	R	R	0.53 U
4,6-Dinitro-2-methylphenol	3.7	µg/L	2.15 U	2.13 U	2.06 U	20 U	20 U	20 U	20 U	0.54 UJ	R	R	0.53 UJ
4-Bromophenyl-phenylether	- -	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
4-Chloro-3-methylphenol	- -	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
4-Chloroaniline	34	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	R	5 U	0.54 UJ	R	R	0.53 UJ
4-Chlorophenyl-phenylether	- -	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
4-Methylphenol	180	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
4-Nitroaniline	34	µg/L	0.538 U	0.532 U	0.515 U	20 UJ	20 U	20 UJ	20 U	0.54 UJ	R	R	0.53 U
4-Nitrophenol	- -	µg/L	1.08 U	1.06 U	1.03 U	20 UJ	20 U	20 UJ	20 U	0.54 U	R	R	0.53 U
Acetophenone	3,700	µg/L	0.538 U	0.532 U	**0.897**	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Atrazine	2.9	µg/L	0.538 U	0.532 U	0.515 U	5 UJ	5 U	5 UJ	5 U	0.54 U	R	R	0.53 U
Benzaldehyde	3,700	µg/L	0.538 UJ	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 UJ	R	R	0.53 UJ
bis(2-Chloroethoxy)methane	110	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
bis(2-Chloroethyl)ether	0.12	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
bis(2-Ethylhexyl)phthalate	6	µg/L	0.538 U	**2.34**	**2.93**	5 U	5 U	5 U	5 U	0.81 U	R	R	0.56 U
Butyl benzyl phthalate	350	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Caprolactam	18,000	µg/L	0.538 UJ	0.532 UJ	0.515 UJ	5 U	5 U	**80**	5 U	0.54 UJ	R	R	0.53 UJ
Carbazole	- -	µg/L	0.538 U	0.532 U	0.515 U	NA	NA	NA	NA	0.54 U	NA	NA	0.53 U
Dibenzofuran	- -	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Diethylphthalate	29,000	µg/L	0.538 U	0.532 U	**0.897**	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Dimethyl phthalate	- -	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Di-N-Butyl phthalate	3,700	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Di-N-Octyl phthalate	- -	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Hexachlorobenzene	0.42	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Hexachlorobutadiene	8.6	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Hexachlorocyclopentadiene	50	µg/L	0.538 U	0.532 U	0.515 U	5 UJ	5 U	R	5 U	0.54 U	R	R	0.53 U
Hexachloroethane	37	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Isophorone	710	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U
N-Nitroso-di-N-propylamine	0.096	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 UJ	5 U	0.54 U	R	R	0.53 U
N-Nitrosodiphenylamine	140	µg/L	0.538 U	0.532 U	**0.67**	5 UJ	5 U	5 U	5 U	0.54 U	R	R	0.53 U
Pentachlorophenol	1	µg/L	2.15 U	2.13 U	2.06 U	5 U	5 UJ	5 UJ	5 UJ	0.54 UJ	R	R	0.53 UJ
Phenol	11,000	µg/L	0.538 U	0.532 U	0.515 U	5 U	5 U	5 U	5 U	0.54 U	R	R	0.53 U

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106C	MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A	MW-109A
Sample Depth():													
Date Collected:			09/28/04	12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03	09/23/04
Sample Name:	PAL	Units	GW-077-DF	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF	GW-047-LF
SVOC													
1,1'-Biphenyl	1,800	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	NA	5 U	5 U	5 U	NA	5 U	R	NA	5 U	5 U
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	5 UJ	0.53 U	5 UJ	5 U	5 UJ	0.56 U	5 U	R	NA	5 UJ	5 U
2,4,5-Trichlorophenol	3,700	µg/L	20 U	0.53 U	20 U	20 U	20 U	0.56 U	20 U	R	NA	20 U	20 U
2,4,6-Trichlorophenol	37	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
2,4-Dichlorophenol	110	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
2,4-Dimethylphenol	730	µg/L	5 U	0.53 UJ	5 U	5 U	5 U	R	5 U	R	NA	5 U	5 U
2,4-Dinitrophenol	73	µg/L	20 UJ	0.53 UJ	20 UJ	20 UJ	20 UJ	0.56 UJ	20 UJ	R	NA	20 U	20 UJ
2,4-Dinitrotoluene	2.2	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
2,6-Dinitrotoluene	37	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
2-Chloronaphthalene	2,900	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
2-Chlorophenol	180	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
2-Methylphenol	1,800	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
2-Nitroaniline	110	µg/L	20 UJ	0.53 U	20 U	20 U	20 U	0.56 U	20 U	R	NA	20 U	20 U
2-Nitrophenol	- -	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
3,3'-Dichlorobenzidine	1.5	µg/L	5 UJ	0.53 UJ	5 UJ	5 UJ	5 UJ	0.56 UJ	5 UJ	R	NA	5 UJ	5 UJ
3-Nitroaniline	110	µg/L	20 U	0.53 UJ	20 UJ	20 U	20 UJ	0.56 U	20 U	R	NA	20 UJ	20 U
4,6-Dinitro-2-methylphenol	3.7	µg/L	20 U	0.53 UJ	20 U	20 U	20 U	0.56 UJ	20 U	R	NA	20 U	20 U
4-Bromophenyl-phenylether	- -	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
4-Chloroaniline	34	µg/L	5 U	0.53 UJ	5 U	5 U	5 U	0.56 UJ	5 U	R	NA	5 UJ	5 UJ
4-Chlorophenyl-phenylether	- -	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
4-Methylphenol	180	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
4-Nitroaniline	34	µg/L	20 U	0.53 UJ	20 UJ	20 U	20 UJ	0.56 U	20 U	R	NA	20 UJ	20 U
4-Nitrophenol	- -	µg/L	20 U	0.53 U	20 UJ	20 U	20 UJ	0.56 UJ	20 U	R	NA	20 UJ	20 U
Acetophenone	3,700	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Atrazine	2.9	µg/L	5 U	0.53 U	5 UJ	5 U	5 UJ	0.56 U	5 U	R	NA	5 UJ	5 U
Benzaldehyde	3,700	µg/L	5 U	0.53 UJ	5 U	5 U	5 U	0.56 UJ	5 U	R	NA	5 U	5 U
bis(2-Chloroethoxy)methane	110	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
bis(2-Chloroethyl)ether	0.12	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
bis(2-Ethylhexyl)phthalate	6	µg/L	5 U	0.53 U	5 U	5 U	5 U	**0.37 J**	5 U	R	NA	5 U	5 U
Butyl benzyl phthalate	350	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Caprolactam	18,000	µg/L	5 U	0.53 UJ	**160**	5 U	**140**	0.56 UJ	5 U	R	NA	5 UJ	5 U
Carbazole	- -	µg/L	NA	0.53 U	NA	NA	NA	0.56 U	NA	NA	NA	NA	NA
Dibenzofuran	- -	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Diethylphthalate	29,000	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Dimethyl phthalate	- -	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Di-N-Butyl phthalate	3,700	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Di-N-Octyl phthalate	- -	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 UJ	5 U	R	NA	5 U	5 U
Hexachlorobenzene	0.42	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Hexachlorobutadiene	8.6	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Hexachlorocyclopentadiene	50	µg/L	5 UJ	0.53 U	5 UJ	5 U	5 UJ	0.56 U	5 U	R	NA	5 U	5 U
Hexachloroethane	37	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Isophorone	710	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
N-Nitroso-di-N-propylamine	0.096	µg/L	5 U	0.53 U	5 UJ	5 U	5 UJ	0.56 U	5 U	R	NA	5 UJ	5 U
N-Nitrosodiphenylamine	140	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U
Pentachlorophenol	1	µg/L	5 UJ	0.53 UJ	5 U	5 UJ	5 U	0.56 UJ	5 UJ	R	NA	5 U	5 UJ
Phenol	11,000	µg/L	5 U	0.53 U	5 U	5 U	5 U	0.56 U	5 U	R	NA	5 U	5 U

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109A	MW-109AA	MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B
Sample Depth():													
Date Collected:			03/14/07	09/30/03	09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03
Sample Name:	PAL	Units	MW-109A	GW-003-LF	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02
SVOC													
1,1'-Biphenyl	1,800	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	NA	5 UJ	5 U	5 U	5 U	NA	5 U	NA	5 UJ	5 U	5 UJ
2,4,5-Trichlorophenol	3,700	µg/L	NA	20 U	20 U	20 U	20 U	NA	20 U	NA	20 U	20 U	20 U
2,4,6-Trichlorophenol	37	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2,4-Dichlorophenol	110	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2,4-Dimethylphenol	730	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2,4-Dinitrophenol	73	µg/L	NA	20 UJ	20 UJ	20 UJ	20 UJ	NA	20 UJ	NA	20 U	20 UJ	20 UJ
2,4-Dinitrotoluene	2.2	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2,6-Dinitrotoluene	37	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2-Chloronaphthalene	2,900	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2-Chlorophenol	180	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2-Methylphenol	1,800	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
2-Nitroaniline	110	µg/L	NA	20 U	20 U	20 U	20 U	NA	20 U	NA	20 U	20 U	20 U
2-Nitrophenol	- -	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
3,3'-Dichlorobenzidine	1.5	µg/L	NA	5 UJ	5 UJ	5 UJ	5 UJ	NA	5 UJ	NA	5 UJ	5 UJ	5 UJ
3-Nitroaniline	110	µg/L	NA	20 UJ	20 U	20 U	20 U	NA	20 U	NA	20 UJ	20 U	20 UJ
4,6-Dinitro-2-methylphenol	3.7	µg/L	NA	20 U	20 U	20 U	20 U	NA	20 U	NA	20 UJ	20 U	20 U
4-Bromophenyl-phenylether	- -	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
4-Chloroaniline	34	µg/L	NA	5 U	5 UJ	5 UJ	5 U	NA	5 U	NA	5 UJ	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
4-Methylphenol	180	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
4-Nitroaniline	34	µg/L	NA	20 UJ	20 U	20 U	20 U	NA	20 U	NA	20 UJ	20 U	20 UJ
4-Nitrophenol	- -	µg/L	NA	20 UJ	20 U	20 U	20 U	NA	20 U	NA	20 UJ	20 U	20 UJ
Acetophenone	3,700	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Atrazine	2.9	µg/L	NA	5 UJ	5 U	5 U	5 U	NA	5 U	NA	5 UJ	5 U	5 UJ
Benzaldehyde	3,700	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	110	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.12	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	6	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Butyl benzyl phthalate	350	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Caprolactam	18,000	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 UJ	5 U	5 U
Carbazole	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	**2.8 J**	5 U	5 U
Diethylphthalate	29,000	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Dimethyl phthalate	- -	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Di-N-Butyl phthalate	3,700	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Di-N-Octyl phthalate	- -	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Hexachlorobenzene	0.42	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Hexachlorobutadiene	8.6	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Hexachlorocyclopentadiene	50	µg/L	NA	5 UJ	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 UJ
Hexachloroethane	37	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Isophorone	710	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.096	µg/L	NA	5 UJ	5 U	5 U	5 U	NA	5 U	NA	5 UJ	5 U	5 UJ
N-Nitrosodiphenylamine	140	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U
Pentachlorophenol	1	µg/L	NA	5 U	5 UJ	5 UJ	5 UJ	NA	5 UJ	NA	5 U	5 UJ	5 U
Phenol	11,000	µg/L	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110B	MW-110B	MW-110B	MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C
Sample Depth():													
Date Collected:			09/30/03	09/22/04	03/14/07	09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04
Sample Name:	PAL	Units	GW-005-WT	GW-044-WT	MW-110B	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT
SVOC													
1,1'-Biphenyl	1,800	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	5 UJ	5 U	NA	5 U	NA	5 UJ	5 U	5 UJ	5 U	5 U	5 U
2,4,5-Trichlorophenol	3,700	µg/L	20 U	20 U	NA	20 U	NA	20 U	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	37	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	110	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	730	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	73	µg/L	20 U	20 UJ	NA	20 UJ	NA	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	2.2	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	37	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	2,900	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	180	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	1,800	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	110	µg/L	20 U	20 U	NA	20 U	NA	20 U	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	- -	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	1.5	µg/L	5 UJ	5 UJ	NA	5 UJ	NA	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	110	µg/L	20 UJ	20 U	NA	20 U	NA	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 U
4,6-Dinitro-2-methylphenol	3.7	µg/L	20 UJ	20 U	NA	20 U	NA	20 U	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	- -	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	34	µg/L	5 UJ	5 UJ	NA	5 UJ	NA	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	180	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	34	µg/L	20 UJ	20 U	NA	20 U	NA	20 UJ	20 U	20 UJ	20 U	20 U	20 U
4-Nitrophenol	- -	µg/L	20 UJ	20 U	NA	20 U	NA	20 UJ	20 U	20 UJ	20 U	20 U	20 U
Acetophenone	3,700	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Atrazine	2.9	µg/L	5 UJ	5 U	NA	5 U	NA	5 UJ	5 U	5 UJ	5 U	5 U	5 U
Benzaldehyde	3,700	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	110	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.12	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	6	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	350	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Caprolactam	18,000	µg/L	5 UJ	5 U	NA	5 U	NA	**52**	5 UJ	**140**	5 UJ	5 UJ	5 U
Carbazole	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	29,000	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	- -	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	3,700	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	- -	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.42	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	8.6	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	50	µg/L	5 U	5 U	NA	5 U	NA	5 UJ	5 U	5 UJ	5 U	5 U	5 U
Hexachloroethane	37	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Isophorone	710	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.096	µg/L	5 UJ	5 U	NA	5 U	NA	5 UJ	5 U	5 UJ	5 U	5 U	5 U
N-Nitrosodiphenylamine	140	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	1	µg/L	5 U	5 UJ	NA	5 UJ	NA	5 U	5 U	5 U	5 U	5 U	5 UJ
Phenol	11,000	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112A	MW-112A	MW-112A	MW-112AA	MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C	MW-112C
Sample Depth():													
Date Collected:			10/02/03	09/27/04	11/30/05	10/03/03	09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05	03/14/07
Sample Name:	PAL	Units	GW-019-NP	GW-055-NP	MW-112A	GW-020-NP	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C
SVOC													
1,1'-Biphenyl	1,800	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	NA	5 U	5 U	NA	5 U	NA	5 U	NA	NA
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	5 U	5 UJ	0.5 U	5 U	5 UJ	0.5 U	5 UJ	0.5 U	5 U	0.5 U	NA
2,4,5-Trichlorophenol	3,700	µg/L	20 U	20 U	0.5 U	20 U	20 U	0.5 U	20 U	0.5 U	20 U	0.5 U	NA
2,4,6-Trichlorophenol	37	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
2,4-Dichlorophenol	110	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
2,4-Dimethylphenol	730	µg/L	5 U	5 U	0.5 UJ	5 U	5 U	0.5 UJ	5 U	0.5 UJ	5 U	0.5 UJ	NA
2,4-Dinitrophenol	73	µg/L	20 U	20 UJ	0.5 UJ	20 U	20 UJ	0.5 UJ	20 UJ	0.5 UJ	20 UJ	0.5 UJ	NA
2,4-Dinitrotoluene	2.2	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
2,6-Dinitrotoluene	37	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
2-Chloronaphthalene	2,900	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
2-Chlorophenol	180	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
2-Methylphenol	1,800	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
2-Nitroaniline	110	µg/L	20 U	20 UJ	0.5 U	20 U	20 UJ	0.5 U	20 UJ	0.5 U	20 U	0.5 U	NA
2-Nitrophenol	- -	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
3,3'-Dichlorobenzidine	1.5	µg/L	5 UJ	5 UJ	0.5 UJ	5 UJ	5 UJ	0.5 UJ	5 UJ	0.5 UJ	5 UJ	0.5 UJ	NA
3-Nitroaniline	110	µg/L	20 UJ	20 U	0.5 UJ	20 UJ	20 U	0.5 UJ	20 U	0.5 UJ	20 U	0.5 UJ	NA
4,6-Dinitro-2-methylphenol	3.7	µg/L	20 U	20 U	0.5 UJ	20 U	20 U	0.5 UJ	20 U	0.5 UJ	20 U	0.5 UJ	NA
4-Bromophenyl-phenylether	- -	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
4-Chloroaniline	34	µg/L	5 U	5 U	0.5 UJ	5 U	5 U	0.5 UJ	5 U	0.5 UJ	5 U	0.5 UJ	NA
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
4-Methylphenol	180	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
4-Nitroaniline	34	µg/L	20 UJ	20 U	0.5 UJ	20 UJ	20 U	0.5 UJ	20 U	0.5 UJ	20 U	0.5 UJ	NA
4-Nitrophenol	- -	µg/L	20 U	20 U	0.5 U	20 U	20 U	0.5 U	20 U	0.5 U	20 U	0.5 U	NA
Acetophenone	3,700	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Atrazine	2.9	µg/L	5 UJ	5 U	0.5 U	5 UJ	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Benzaldehyde	3,700	µg/L	5 U	5 U	0.5 UJ	5 U	5 U	0.5 UJ	5 U	0.5 UJ	5 U	0.5 UJ	NA
bis(2-Chloroethoxy)methane	110	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
bis(2-Chloroethyl)ether	0.12	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
bis(2-Ethylhexyl)phthalate	6	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.73 U	5 U	0.88 U	5 U	**50**	NA
Butyl benzyl phthalate	350	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Caprolactam	18,000	µg/L	**65**	5 U	0.5 UJ	5 U	5 U	0.5 UJ	5 U	0.5 UJ	5 U	0.5 UJ	NA
Carbazole	- -	µg/L	NA	NA	0.5 U	NA	NA	0.5 U	NA	0.5 U	NA	0.5 U	NA
Dibenzofuran	- -	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Diethylphthalate	29,000	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Dimethyl phthalate	- -	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Di-N-Butyl phthalate	3,700	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Di-N-Octyl phthalate	- -	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Hexachlorobenzene	0.42	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Hexachlorobutadiene	8.6	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Hexachlorocyclopentadiene	50	µg/L	5 U	5 UJ	0.5 U	5 U	5 UJ	0.5 U	5 UJ	0.5 U	5 U	0.5 U	NA
Hexachloroethane	37	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Isophorone	710	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
N-Nitroso-di-N-propylamine	0.096	µg/L	5 U	5 U	0.5 U	5 U	5 UJ	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
N-Nitrosodiphenylamine	140	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA
Pentachlorophenol	1	µg/L	5 UJ	5 UJ	0.5 UJ	5 UJ	5 UJ	0.5 UJ	5 UJ	0.5 UJ	5 UJ	0.5 UJ	NA
Phenol	11,000	µg/L	5 U	5 U	0.5 U	5 U	5 U	0.5 U	5 U	0.5 U	5 U	0.5 U	NA

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-502	MW-A2	MW-A2	MW-A2	MW-B1	MW-B1	MW-B2	MW-B2	MW-C1	MW-C1	MW-C1	MW-C2
Sample Depth():														
Date Collected:			12/08/05	10/01/03	09/30/04	12/08/05	10/01/03	09/24/04	09/29/03	09/27/04	09/30/03	09/28/04	12/07/05	09/30/03
Sample Name:	PAL	Units	MW-502	GW-012-QW	GW-080-QW	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF
SVOC														
1,1'-Biphenyl	1,800	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	NA	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	0.56 U	5 UJ	5 UJ	0.6 U	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	0.58 U	5 UJ
2,4,5-Trichlorophenol	3,700	µg/L	0.56 U	20 U	20 U	0.6 U	20 U	20 U	20 U	20 U	20 U	20 U	0.58 U	20 U
2,4,6-Trichlorophenol	37	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
2,4-Dichlorophenol	110	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
2,4-Dimethylphenol	730	µg/L	R	5 U	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	R	5 U
2,4-Dinitrophenol	73	µg/L	0.56 UJ	20 UJ	20 UJ	0.6 UJ	20 UJ	20 UJ	20 U	20 UJ	20 U	20 UJ	0.58 UJ	20 U
2,4-Dinitrotoluene	2.2	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
2,6-Dinitrotoluene	37	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
2-Chloronaphthalene	2,900	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
2-Chlorophenol	180	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
2-Methylphenol	1,800	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
2-Nitroaniline	110	µg/L	0.56 U	20 U	20 U	0.6 U	20 U	20 U	20 U	20 U	20 U	20 UJ	0.58 U	20 U
2-Nitrophenol	- -	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
3,3'-Dichlorobenzidine	1.5	µg/L	0.56 UJ	5 UJ	5 UJ	0.6 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	0.58 UJ	5 UJ
3-Nitroaniline	110	µg/L	0.56 U	20 UJ	20 U	0.6 U	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 U	0.58 U	20 UJ
4,6-Dinitro-2-methylphenol	3.7	µg/L	0.56 UJ	20 U	20 U	0.6 UJ	20 U	20 U	20 U	20 U	20 UJ	20 U	0.58 UJ	20 U
4-Bromophenyl-phenylether	- -	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
4-Chloroaniline	34	µg/L	0.56 UJ	5 U	5 U	0.6 UJ	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U	0.58 UJ	5 UJ
4-Chlorophenyl-phenylether	- -	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
4-Methylphenol	180	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
4-Nitroaniline	34	µg/L	0.56 U	20 UJ	20 U	0.6 U	20 UJ	20 U	20 UJ	20 U	20 UJ	20 U	0.58 U	20 UJ
4-Nitrophenol	- -	µg/L	0.56 UJ	20 UJ	20 U	0.6 UJ	20 UJ	20 U	20 UJ	20 U	20 UJ	20 U	0.58 UJ	20 UJ
Acetophenone	3,700	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Atrazine	2.9	µg/L	0.56 U	5 UJ	5 U	0.6 U	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U	0.58 U	5 UJ
Benzaldehyde	3,700	µg/L	0.56 UJ	5 U	5 U	0.6 UJ	5 U	5 U	5 U	5 U	5 U	5 U	0.58 UJ	5 U
bis(2-Chloroethoxy)methane	110	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
bis(2-Chloroethyl)ether	0.12	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
bis(2-Ethylhexyl)phthalate	6	µg/L	0.56 U	5 U	5 U	**0.52 J**	5 U	5 U	5 U	5 U	5 U	5 U	**0.51 J**	5 U
Butyl benzyl phthalate	350	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Caprolactam	18,000	µg/L	0.56 UJ	5 U	5 U	0.6 UJ	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U	0.58 UJ	5 UJ
Carbazole	- -	µg/L	0.56 U	NA	NA	0.6 U	NA	NA	NA	NA	NA	NA	0.58 U	NA
Dibenzofuran	- -	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Diethylphthalate	29,000	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Dimethyl phthalate	- -	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Di-N-Butyl phthalate	3,700	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Di-N-Octyl phthalate	- -	µg/L	0.56 UJ	5 U	5 U	0.6 UJ	5 U	5 U	5 U	5 U	5 U	5 U	0.58 UJ	5 U
Hexachlorobenzene	0.42	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Hexachlorobutadiene	8.6	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Hexachlorocyclopentadiene	50	µg/L	0.56 U	5 UJ	5 U	0.6 U	5 UJ	5 U	5 U	5 U	5 U	5 UJ	0.58 U	5 U
Hexachloroethane	37	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Isophorone	710	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U
N-Nitroso-di-N-propylamine	0.096	µg/L	0.56 U	5 UJ	5 U	0.6 U	5 U	5 U	5 UJ	5 U	5 UJ	5 U	0.58 U	5 UJ
N-Nitrosodiphenylamine	140	µg/L	0.56 U	5 U	5 U	0.6 U	5 UJ	5 U	5 U	**1.1 J**	5 U	5 U	0.58 U	**1.8 J**
Pentachlorophenol	1	µg/L	0.56 UJ	5 U	5 UJ	0.6 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	0.58 UJ	5 U
Phenol	11,000	µg/L	0.56 U	5 U	5 U	0.6 U	5 U	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-C2	MW-C2	MW-C2	MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8	SEA-601	SEA-601
Sample Depth():														
Date Collected:			09/27/04	12/06/05	03/13/07	10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04	10/02/03	09/28/04
Sample Name:	PAL	Units	GW-071-LF	MW-C2	MW-C2	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF	GW-017-LF	GW-060-LF
SVOC														
1,1'-Biphenyl	1,800	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	NA	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	5 U	0.56 U	NA	5 UJ	0.53 U	5 UJ	5 U	5 UJ	5 UJ	5 U	5 U	5 UJ
2,4,5-Trichlorophenol	3,700	µg/L	20 U	0.56 U	NA	20 U	R	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	37	µg/L	5 U	0.56 U	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	110	µg/L	5 U	0.56 U	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	730	µg/L	5 U	R	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	73	µg/L	20 UJ	0.56 UJ	NA	20 UJ	R	20 UJ	20 U	20 UJ	20 UJ	20 UJ	20 U	20 UJ
2,4-Dinitrotoluene	2.2	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	37	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	2,900	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	180	µg/L	5 U	0.56 U	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	1,800	µg/L	5 U	0.56 U	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	110	µg/L	20 U	0.56 U	NA	20 U	0.53 U	20 U	20 U	20 UJ	20 U	20 U	20 U	20 UJ
2-Nitrophenol	- -	µg/L	5 U	0.56 U	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	1.5	µg/L	5 UJ	0.56 UJ	NA	5 UJ	0.53 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	110	µg/L	20 UJ	0.56 U	NA	20 U	0.53 U	20 U	20 UJ	20 U	20 UJ	20 U	20 UJ	20 U
4,6-Dinitro-2-methylphenol	3.7	µg/L	20 U	0.56 UJ	NA	20 U	R	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	- -	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	0.56 U	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	34	µg/L	5 UJ	0.56 UJ	NA	5 U	0.53 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	180	µg/L	5 U	0.56 U	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	34	µg/L	20 U	0.56 U	NA	20 U	0.53 U	20 U	20 UJ	20 U	20 UJ	20 U	20 UJ	20 U
4-Nitrophenol	- -	µg/L	20 U	0.56 UJ	NA	20 U	R	20 U	20 U	20 U	20 UJ	20 U	20 U	20 U
Acetophenone	3,700	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Atrazine	2.9	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Benzaldehyde	3,700	µg/L	5 U	0.56 UJ	NA	5 U	0.53 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	110	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.12	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	6	µg/L	5 U	**0.7**	NA	5 U	**1.3 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	350	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Caprolactam	18,000	µg/L	5 UJ	0.56 UJ	NA	5 U	0.53 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbazole	- -	µg/L	NA	0.56 U	NA	NA	0.53 U	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	29,000	µg/L	5 U	**0.48 J**	NA	5 U	**0.32 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	- -	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	3,700	µg/L	5 U	**0.52 J**	NA	5 U	**0.53**	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	- -	µg/L	5 U	0.56 UJ	NA	5 U	0.53 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.42	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	8.6	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	50	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 UJ
Hexachloroethane	37	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isophorone	710	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.096	µg/L	5 U	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U
N-Nitrosodiphenylamine	140	µg/L	**1.8 J**	0.56 U	NA	5 U	0.53 U	5 U	5 U	5 U	5 U	5 U	**1.3 J**	5 U
Pentachlorophenol	1	µg/L	5 U	0.56 UJ	NA	5 UJ	R	5 UJ	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 UJ
Phenol	11,000	µg/L	5 U	0.56 U	NA	5 U	R	5 U	5 U	5 U	5 U	5 U	5 U	5 U

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-602A	SEA-602A	SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604	SEA-604
Sample Depth():														
Date Collected:			10/03/03	09/28/04	12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03	09/30/04
Sample Name:	PAL	Units	GW-022-LF	GW-062-LF	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF	GW-067-LF
SVOC														
1,1'-Biphenyl	1,800	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	5 U	5 UJ	0.56 U	NA	5 U	5 UJ	5 U	5 U	5 U	0.58 U	5 U	5 UJ
2,4,5-Trichlorophenol	3,700	µg/L	20 U	20 U	0.56 U	NA	20 U	20 U	20 U	20 U	20 U	0.58 U	20 U	20 U
2,4,6-Trichlorophenol	37	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
2,4-Dichlorophenol	110	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
2,4-Dimethylphenol	730	µg/L	5 U	5 U	R	NA	5 U	5 U	5 U	5 U	5 U	R	5 U	5 U
2,4-Dinitrophenol	73	µg/L	20 U	20 UJ	0.56 UJ	NA	20 U	20 UJ	20 U	20 UJ	20 UJ	0.58 UJ	20 U	20 UJ
2,4-Dinitrotoluene	2.2	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
2,6-Dinitrotoluene	37	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
2-Chloronaphthalene	2,900	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
2-Chlorophenol	180	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
2-Methylphenol	1,800	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
2-Nitroaniline	110	µg/L	20 U	20 UJ	0.56 U	NA	20 U	20 U	20 U	20 U	20 U	0.58 U	20 U	20 U
2-Nitrophenol	- -	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
3,3'-Dichlorobenzidine	1.5	µg/L	5 UJ	5 UJ	0.56 UJ	NA	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	0.58 UJ	5 UJ	5 UJ
3-Nitroaniline	110	µg/L	20 UJ	20 U	0.56 U	NA	20 UJ	20 U	20 UJ	20 U	20 U	0.58 U	20 UJ	20 U
4,6-Dinitro-2-methylphenol	3.7	µg/L	20 U	20 U	0.56 UJ	NA	20 U	20 U	20 U	20 U	20 U	0.58 UJ	20 U	20 U
4-Bromophenyl-phenylether	- -	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
4-Chloroaniline	34	µg/L	5 U	5 U	0.56 UJ	NA	5 U	5 U	5 U	5 U	5 U	0.58 UJ	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
4-Methylphenol	180	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	**1.1**	5 U	5 U
4-Nitroaniline	34	µg/L	20 UJ	20 U	0.56 U	NA	20 UJ	20 U	20 UJ	20 U	20 U	0.58 U	20 UJ	20 U
4-Nitrophenol	- -	µg/L	20 U	20 U	0.56 UJ	NA	20 U	20 U	20 U	20 U	20 U	0.58 UJ	20 U	20 U
Acetophenone	3,700	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
Atrazine	2.9	µg/L	5 UJ	5 U	0.56 U	NA	5 UJ	5 U	5 UJ	5 U	5 U	0.58 U	5 UJ	5 U
Benzaldehyde	3,700	µg/L	5 U	5 U	0.56 UJ	NA	5 U	5 U	5 U	5 U	5 U	0.58 UJ	5 U	5 U
bis(2-Chloroethoxy)methane	110	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
bis(2-Chloroethyl)ether	0.12	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	6	µg/L	5 U	5 U	**0.42 J**	NA	5 U	5 U	5 U	5 U	5 U	**1**	5 U	5 U
Butyl benzyl phthalate	350	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
Caprolactam	18,000	µg/L	**110**	**3.5 J**	0.56 UJ	NA	**120**	5 U	**150**	5 U	5 U	0.58 UJ	**68**	5 U
Carbazole	- -	µg/L	NA	NA	0.56 U	NA	NA	NA	NA	NA	NA	0.58 U	NA	NA
Dibenzofuran	- -	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	**0.42 J**	5 U	5 U
Diethylphthalate	29,000	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	**5.7**	5 U	5 U
Dimethyl phthalate	- -	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
Di-N-Butyl phthalate	3,700	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	**0.43 J**	5 U	5 U
Di-N-Octyl phthalate	- -	µg/L	5 U	5 U	0.56 UJ	NA	5 U	5 U	5 U	5 U	5 U	0.58 UJ	5 U	5 U
Hexachlorobenzene	0.42	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
Hexachlorobutadiene	8.6	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
Hexachlorocyclopentadiene	50	µg/L	5 U	5 UJ	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
Hexachloroethane	37	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
Isophorone	710	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3 NJ**	NA	NA
Nitrobenzene	1.2	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.096	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	5 U	5 U	5 U	0.58 U	5 U	5 U
N-Nitrosodiphenylamine	140	µg/L	5 U	5 U	**0.35 J**	NA	5 U	5 U	**4.5 J**	**3 J**	**2.8 J**	**2.9**	5 U	**1.1 J**
Pentachlorophenol	1	µg/L	5 UJ	5 UJ	0.56 UJ	NA	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	0.58 UJ	5 UJ	5 UJ
Phenol	11,000	µg/L	5 U	5 U	0.56 U	NA	5 U	5 U	**34**	**16**	**17**	**1.8**	5 U	5 U

TABLE 4-4
GROUNDWATER RESULTS FOR PAHs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():														
Date Collected:			10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
SVOC														
1,1'-Biphenyl	1,800	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	NA	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	NA
2,2'-oxybis(1-Chloropropane)	3.2	µg/L	5 U	5 U	0.57 U	5 U	5 UJ	0.56 U	5 U	5 UJ	5 U	5 U	5 UJ	0.52 U
2,4,5-Trichlorophenol	3,700	µg/L	20 U	20 U	0.57 U	20 U	20 U	0.56 U	20 U	20 U	20 U	20 U	20 U	0.52 U
2,4,6-Trichlorophenol	37	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
2,4-Dichlorophenol	110	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
2,4-Dimethylphenol	730	µg/L	5 U	5 U	R	5 U	5 U	R	5 U	5 U	5 U	5 U	5 U	0.52 UJ
2,4-Dinitrophenol	73	µg/L	20 U	20 UJ	0.57 UJ	20 U	20 UJ	0.56 UJ	20 U	20 UJ	20 U	20 U	20 UJ	2.1 UJ
2,4-Dinitrotoluene	2.2	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
2,6-Dinitrotoluene	37	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
2-Chloronaphthalene	2,900	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
2-Chlorophenol	180	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
2-Methylphenol	1,800	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
2-Nitroaniline	110	µg/L	20 U	20 U	0.57 U	20 U	20 U	0.56 U	20 U	20 U	20 U	20 U	20 U	0.52 U
2-Nitrophenol	- -	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
3,3'-Dichlorobenzidine	1.5	µg/L	5 UJ	5 UJ	0.57 UJ	5 UJ	5 UJ	R	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	0.52 UJ
3-Nitroaniline	110	µg/L	20 UJ	20 U	0.57 U	20 UJ	20 U	0.56 U	20 UJ	20 U	20 UJ	20 UJ	20 U	0.52 U
4,6-Dinitro-2-methylphenol	3.7	µg/L	20 U	20 U	0.57 UJ	20 U	20 U	0.56 UJ	20 U	20 U	20 U	20 U	20 U	0.52 UJ
4-Bromophenyl-phenylether	- -	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	2.1 U
4-Chloroaniline	34	µg/L	5 U	5 U	0.57 UJ	5 U	5 U	0.56 UJ	5 U	5 U	5 U	5 U	5 U	0.52 UJ
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
4-Methylphenol	180	µg/L	5 U	5 U	**1**	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
4-Nitroaniline	34	µg/L	20 UJ	20 U	0.57 U	20 UJ	20 U	0.56 U	20 UJ	20 U	20 UJ	20 UJ	20 U	0.52 U
4-Nitrophenol	- -	µg/L	20 U	20 U	0.57 UJ	20 U	20 U	0.56 UJ	20 U	20 U	20 U	20 U	20 U	2.1 UJ
Acetophenone	3,700	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Atrazine	2.9	µg/L	5 UJ	5 U	0.57 U	5 UJ	5 U	0.56 U	5 UJ	5 U	**2.9 J**	**3.4 J**	5 U	0.52 U
Benzaldehyde	3,700	µg/L	5 U	5 U	0.57 UJ	5 U	5 U	0.56 UJ	5 U	5 U	5 U	5 U	5 U	0.52 UJ
bis(2-Chloroethoxy)methane	110	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
bis(2-Chloroethyl)ether	0.12	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
bis(2-Ethylhexyl)phthalate	6	µg/L	**1.5 J**	5 U	**0.37 J**	5 U	5 U	**0.4 J**	5 U	5 U	5 U	5 U	5 U	0.8 UJ
Butyl benzyl phthalate	350	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Caprolactam	18,000	µg/L	5 U	5 U	0.57 UJ	5 U	5 U	0.56 UJ	5 U	5 U	5 U	5 U	5 U	0.52 UJ
Carbazole	- -	µg/L	NA	NA	0.57 U	NA	NA	0.56 U	NA	NA	NA	NA	NA	0.52 U
Dibenzofuran	- -	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Diethylphthalate	29,000	µg/L	5 U	5 U	**0.92**	5 U	5 U	**0.3 J**	5 U	5 U	5 U	5 U	5 U	**0.53**
Dimethyl phthalate	- -	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Di-N-Butyl phthalate	3,700	µg/L	5 U	5 U	0.57 U	5 U	5 U	**0.3 J**	5 U	5 U	5 U	5 U	5 U	0.52 U
Di-N-Octyl phthalate	- -	µg/L	5 U	5 U	0.57 UJ	5 U	5 U	0.56 UJ	5 U	5 U	5 U	5 U	5 U	0.52 U
Hexachlorobenzene	0.42	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Hexachlorobutadiene	8.6	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Hexachlorocyclopentadiene	50	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Hexachloroethane	37	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Isophorone	710	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
Isopropylbenzene	680	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.2	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
N-Nitroso-di-N-propylamine	0.096	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U
N-Nitrosodiphenylamine	140	µg/L	5 U	**1.4 J**	**0.56 J**	5 U	**1.1 J**	**0.47 J**	5 U	5 U	**6.9 J**	5 UJ	**2.4 J**	0.52 U
Pentachlorophenol	1	µg/L	5 UJ	5 UJ	0.57 UJ	5 UJ	5 UJ	0.56 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	2.1 UJ
Phenol	11,000	µg/L	5 U	5 U	0.57 U	5 U	5 U	0.56 U	5 U	5 U	5 U	5 U	5 U	0.52 U

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B
Sample Depth():														
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05
Sample Name:			GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B
SVOC SIM														
1,4-Dioxane	61	µg/L	0.53 U	**51**	**55**	NA	**0.81**	NA	NA	0.5 U	0.58 U	**1.4**	NA	0.5 U
2-Methylnaphthalene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	**0.071**	NA	NA	0.01 U	0.011 U	**2**	NA	0.01 U
Acenaphthene	0.2	µg/L	0.011 U	**0.17 J**	**0.098 J**	NA	**0.6**	NA	NA	0.01 U	0.011 U	**0.33**	NA	0.01 U
Acenaphthylene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	**0.018**	NA	NA	0.01 U	0.011 U	**0.035**	NA	0.01 U
Anthracene	0.2	µg/L	0.011 U	**0.019 J**	**0.03 J**	NA	**0.048**	NA	NA	0.01 U	0.011 U	**0.092**	NA	0.01 U
Benzo(a)pyrene	0.029	µg/L	0.011 U	0.011 U	0.011 U	NA	0.01 U	NA	NA	0.01 U	0.011 U	0.018 U	NA	0.01 U
Benzo(b)fluoranthene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	0.01 U	NA	NA	0.01 U	0.011 U	0.015 U	NA	0.01 U
Benzo(g,h,i)perylene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	0.01 U	NA	NA	0.01 U	0.011 U	0.018 U	NA	0.01 U
Benzo(k)fluoranthene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	0.01 U	NA	NA	0.01 U	0.011 U	0.02 U	NA	0.01 U
Benzo[a]anthracene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	0.01 U	NA	NA	0.01 U	0.011 U	**0.024**	NA	0.01 U
Chrysene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	0.012 U	NA	NA	0.01 U	0.011 U	0.03 U	NA	0.01 U
Dibenz[a,h]anthracene	0.029	µg/L	0.011 U	0.011 U	0.011 U	NA	0.01 U	NA	NA	0.01 U	0.011 U	0.01 U	NA	0.01 U
Fluoranthene	- -	µg/L	0.011 U	0.011 U	0.011 U	NA	**0.048**	NA	NA	**0.015**	0.011 U	**0.11**	NA	0.01 U
Fluorene	0.2	µg/L	0.011 U	**0.12 J**	**0.082 J**	NA	**0.51**	NA	NA	0.01 U	0.011 U	**0.34**	NA	0.01 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	0.01 U	NA	NA	0.01 U	0.011 U	0.015 U	NA	0.01 U
Naphthalene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	**1.5**	NA	NA	0.01 U	0.016 U	**14**	NA	0.019 U
Phenanthrene	0.2	µg/L	0.011 U	0.019 U	0.011 U	NA	**0.21**	NA	NA	0.016 U	0.011 U	**0.35**	NA	0.028 U
Pyrene	0.2	µg/L	0.011 U	0.011 U	0.011 U	NA	0.01 U	NA	NA	0.015 U	0.011 U	**0.075**	NA	0.01 U
Total PAHs	- -	µg/L	ND	**0.309 J**	**0.21 J**	NA	**3.01**	NA	NA	**0.015**	ND	**17.4**	NA	ND

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Sample Depth():													
Date Collected:			03/13/07	11/29/05	11/29/05	03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09
Sample Name:	PAL	Units	GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
SVOC SIM													
1,4-Dioxane	61	µg/L	NA	0.5 U	0.5 U	NA	0.62 U	NA	0.56 U	0.52 U	0.51 U	NA	0.562 U [0.667 U]
2-Methylnaphthalene	0.2	µg/L	NA	0.01 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	0.01 U	NA	**0.577 [0.53]**
Acenaphthene	0.2	µg/L	NA	0.01 U	**0.033**	NA	0.011 U	NA	0.011 U	0.01 U	**0.012**	NA	**0.401 [0.404]**
Acenaphthylene	0.2	µg/L	NA	0.01 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	0.01 U	NA	**0.0365 [0.027]**
Anthracene	0.2	µg/L	NA	0.01 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	**0.018**	NA	**0.084 [0.0868]**
Benzo(a)pyrene	0.029	µg/L	NA	0.012 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	0.01 U	NA	**0.0197 [0.0183]**
Benzo(b)fluoranthene	0.2	µg/L	NA	0.015 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	**0.014**	NA	**0.0192 [0.0172]**
Benzo(g,h,i)perylene	0.2	µg/L	NA	0.038 U	0.017 U	NA	0.011 U	NA	0.011 U	0.01 U	0.01 U	NA	**0.0143 [0.0138]**
Benzo(k)fluoranthene	0.2	µg/L	NA	0.012 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	0.01 U	NA	**0.0198 [0.0187]**
Benzo[a]anthracene	0.2	µg/L	NA	0.01 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	**0.013**	NA	**0.0409 [0.0408]**
Chrysene	0.2	µg/L	NA	0.01 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	**0.019**	NA	**0.0477 [0.0482]**
Dibenz[a,h]anthracene	0.029	µg/L	NA	0.013 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	0.01 U	NA	0.0105 U [0.01 U]
Fluoranthene	- -	µg/L	NA	0.01 U	0.01 U	NA	0.011 U	NA	**0.014**	0.01 U	**0.064**	NA	**0.174 [0.174]**
Fluorene	0.2	µg/L	NA	0.01 U	0.01 U	NA	0.011 U	NA	0.011 U	0.01 U	**0.011**	NA	**0.437 [0.446]**
Indeno(1,2,3-cd)pyrene	0.2	µg/L	NA	0.02 U	0.012 U	NA	0.011 U	NA	0.011 U	0.01 U	0.01 U	NA	**0.0116 [0.0113]**
Naphthalene	0.2	µg/L	NA	0.015 U	0.039 U	NA	0.011 U	NA	0.011 U	**0.012**	**0.013**	NA	**3.53 [3.07]**
Phenanthrene	0.2	µg/L	NA	0.01 U	0.01 U	NA	0.011 U	NA	0.011 U	**0.012**	**0.02**	NA	**0.866 [0.92]**
Pyrene	0.2	µg/L	NA	0.013 U	0.01 U	NA	0.011 U	NA	0.021 U	0.01 U	0.01 U	NA	**0.188 J [0.221]**
Total PAHs	- -	µg/L	NA	ND	**0.033**	NA	ND	NA	**0.014**	**0.024**	**0.184**	NA	**6.47 J [6.05]**

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A	MW-106A	MW-106B	MW-106B	MW-106B
Sample Depth():													
Date Collected:			11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03	09/30/04	12/02/05	09/28/04	09/28/04	12/02/05
Sample Name:	PAL	Units	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B
SVOC SIM													
1,4-Dioxane	61	µg/L	0.526 U	0.521 U	0.526 U	NA	NA	NA	NA	0.54 U	NA	NA	0.52 U
2-Methylnaphthalene	0.2	µg/L	0.0104 U	**0.0104**	**0.175**	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.011 U	0.1 UJ	0.1 UJ	0.01 U
Acenaphthene	0.2	µg/L	**0.0154**	**0.0503**	**0.0673**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.01 U
Acenaphthylene	0.2	µg/L	0.0104 U	0.01 U	**0.0178**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.01 U
Anthracene	0.2	µg/L	**0.00545 J**	**0.015**	**0.0188**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	**0.012**
Benzo(a)pyrene	0.029	µg/L	0.0104 U	0.01 U	**0.00756 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	0.039 UJ
Benzo(b)fluoranthene	0.2	µg/L	**0.00922 J**	0.01 U	**0.00867 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	0.041 UJ
Benzo(g,h,i)perylene	0.2	µg/L	0.0104 U	0.01 U	**0.00826 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	0.042 UJ
Benzo(k)fluoranthene	0.2	µg/L	**0.00604 J**	0.01 U	**0.00778 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	0.045 UJ
Benzo[a]anthracene	0.2	µg/L	**0.0057 J**	**0.00749 J**	**0.0107**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	**0.042**
Chrysene	0.2	µg/L	0.0104 U	**0.0062 J**	**0.0177**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	**0.057**
Dibenz[a,h]anthracene	0.029	µg/L	0.0104 U	0.01 U	0.01 U	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	0.01 UJ
Fluoranthene	- -	µg/L	**0.0119**	**0.0459**	**0.0248**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	**0.084**
Fluorene	0.2	µg/L	0.0104 U	**0.0458**	**0.0955**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.01 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.0104 U	0.01 U	**0.00718 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	0.034 UJ
Naphthalene	0.2	µg/L	**0.00914 J**	**0.0218**	**0.973**	**0.11**	0.1 UJ	0.1 U	0.1 UJ	0.011 U	0.1 UJ	0.1 U	0.01 U
Phenanthrene	0.2	µg/L	**0.0145**	**0.0525**	**0.146**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.034 U
Pyrene	0.2	µg/L	**0.0183**	**0.046**	**0.0471**	0.1 U	0.1 U	0.1 U	0.1 U	0.011 UJ	0.1 U	0.1 U	**0.11**
Total PAHs	- -	µg/L	**0.0957 J**	**0.301 J**	**1.63 J**	**0.11**	ND	ND	ND	ND	ND	ND	**0.305**

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106C	MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A	MW-109A
Sample Depth():													
Date Collected:			09/28/04	12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03	09/23/04
Sample Name:	PAL	Units	GW-077-DF	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF	GW-047-LF
SVOC SIM													
1,4-Dioxane	61	µg/L	NA	0.5 U	NA	NA	NA	0.56 U	NA	NA	NA	NA	NA
2-Methylnaphthalene	0.2	µg/L	0.1 UJ	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Acenaphthene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Acenaphthylene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Anthracene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Benzo(a)pyrene	0.029	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Benzo(b)fluoranthene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Benzo(k)fluoranthene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Benzo[a]anthracene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Chrysene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.029	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Fluoranthene	- -	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Fluorene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Naphthalene	0.2	µg/L	0.1 UJ	0.01 U	0.1 U	0.1 U	**0.1**	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Phenanthrene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Pyrene	0.2	µg/L	0.1 U	0.01 U	0.1 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	NA	0.1 U	0.1 U
Total PAHs	- -	µg/L	ND	ND	ND	ND	**0.1**	ND	ND	ND	NA	ND	ND

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109A	MW-109AA	MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B
Sample Depth():													
Date Collected:			03/14/07	09/30/03	09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03
Sample Name:	PAL	Units	MW-109A	GW-003-LF	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02
SVOC SIM													
1,4-Dioxane	61	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	0.2	µg/L	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**0.93**	0.1 U	0.1 U
Acenaphthene	0.2	µg/L	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**2.9**	0.1 U	0.1 U
Acenaphthylene	0.2	µg/L	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 UJ	0.1 U
Anthracene	0.2	µg/L	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**1**	0.1 U	0.1 UJ
Benzo(a)pyrene	0.029	µg/L	NA	**0.26**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**0.11**	0.1 U	0.1 U
Benzo(b)fluoranthene	0.2	µg/L	NA	**0.38**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**0.16**	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.2	µg/L	NA	**0.15**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.2	µg/L	NA	**0.16**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.2	µg/L	NA	**0.24**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**0.36**	0.1 U	0.1 U
Chrysene	0.2	µg/L	NA	**0.26**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**0.34**	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.029	µg/L	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U
Fluoranthene	- -	µg/L	NA	**0.15**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**2.3**	0.1 U	0.1 U
Fluorene	0.2	µg/L	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**2.8**	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	NA	**0.14**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U
Naphthalene	0.2	µg/L	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**0.18**	0.1 U	0.1 U
Phenanthrene	0.2	µg/L	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**5.9**	0.1 U	0.1 UJ
Pyrene	0.2	µg/L	NA	**0.18**	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	**1.5**	0.1 U	0.1 U
Total PAHs	- -	µg/L	NA	**1.92**	ND	ND	ND	NA	ND	NA	**18.5**	ND	ND

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110B	MW-110B	MW-110B	MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C
Sample Depth():													
Date Collected:			09/30/03	09/22/04	03/14/07	09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04
Sample Name:	PAL	Units	GW-005-WT	GW-044-WT	MW-110B	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT
SVOC SIM													
1,4-Dioxane	61	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.2	µg/L	**1 J**	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.029	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.029	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	- -	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U
Phenanthrene	0.2	µg/L	**0.14 J**	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	0.2	µg/L	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total PAHs	- -	µg/L	**1.14 J**	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	MW-112A	MW-112A	MW-112A	MW-112AA	MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502
Sample Depth():														
Date Collected:			10/02/03	09/27/04	11/30/05	10/03/03	09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05
Sample Name:			GW-019-NP	GW-055-NP	MW-112A	GW-020-NP	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502
SVOC SIM														
1,4-Dioxane	61	µg/L	NA	NA	0.53 U	NA	NA	0.5 U	NA	0.53 U	NA	0.5 U	NA	0.52 U
2-Methylnaphthalene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 UJ	0.1 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 U	NA	0.011 U
Acenaphthene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 UJ	0.1 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 U	NA	0.011 U
Acenaphthylene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 UJ	0.1 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 U	NA	0.011 U
Anthracene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 U	NA	0.011 U
Benzo(a)pyrene	0.029	µg/L	0.1 UJ	0.1 U	0.01 UJ	0.1 U	0.1 U	0.01 U	0.1 U	0.016 U	0.1 U	0.01 UJ	NA	0.011 U
Benzo(b)fluoranthene	0.2	µg/L	0.1 UJ	0.1 U	0.01 UJ	0.1 U	0.1 U	0.01 U	0.1 U	0.025 U	0.1 U	0.01 UJ	NA	0.011 U
Benzo(g,h,i)perylene	0.2	µg/L	0.1 UJ	0.1 U	0.01 UJ	0.1 U	0.1 U	0.01 U	0.1 U	0.02 U	0.1 U	0.01 UJ	NA	0.011 U
Benzo(k)fluoranthene	0.2	µg/L	0.1 UJ	0.1 U	0.01 UJ	0.1 U	0.1 U	0.01 U	0.1 U	0.023 U	0.1 U	0.01 UJ	NA	0.011 U
Benzo[a]anthracene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	**0.019**	0.1 U	0.01 U	NA	0.011 U
Chrysene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.028 U	0.1 U	0.01 U	NA	0.011 U
Dibenz[a,h]anthracene	0.029	µg/L	0.1 UJ	0.1 U	0.01 UJ	0.1 U	0.1 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 UJ	NA	0.011 U
Fluoranthene	- -	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	**0.042**	0.1 U	**0.011**	NA	0.011 U
Fluorene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 UJ	0.1 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 U	NA	0.011 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.1 UJ	0.1 U	0.01 UJ	0.1 U	0.1 U	0.01 U	0.1 U	0.019 U	0.1 U	0.01 UJ	NA	0.011 U
Naphthalene	0.2	µg/L	0.1 UJ	0.1 UJ	0.01 U	0.1 U	0.1 UJ	0.01 U	0.1 UJ	0.01 U	0.1 U	0.01 U	NA	0.011 U
Phenanthrene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.02 U	0.1 U	0.013 U	NA	0.011 U
Pyrene	0.2	µg/L	0.1 UJ	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.044 U	0.1 U	0.034 U	NA	0.011 U
Total PAHs	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	**0.061**	ND	**0.011**	NA	ND

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-A2	MW-A2	MW-A2	MW-B1	MW-B1	MW-B2	MW-B2	MW-C1	MW-C1	MW-C1	MW-C2	MW-C2
Sample Depth():														
Date Collected:			10/01/03	09/30/04	12/08/05	10/01/03	09/24/04	09/29/03	09/27/04	09/30/03	09/28/04	12/07/05	09/30/03	09/27/04
Sample Name:	PAL	Units	GW-012-QW	GW-080-QW	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF
SVOC SIM														
1,4-Dioxane	61	µg/L	NA	NA	0.63 U	NA	NA	NA	NA	NA	NA	0.59 U	NA	NA
2-Methylnaphthalene	0.2	µg/L	0.1 U	0.1 UJ	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	0.012 U	0.1 U	0.1 U
Acenaphthene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	**0.24**	**0.41**	0.1 U	0.1 U	0.012 U	0.13 U	**0.19**
Acenaphthylene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Anthracene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	**0.13**	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo(a)pyrene	0.029	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo[a]anthracene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Chrysene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.029	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Fluoranthene	- -	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Fluorene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	**0.1**	**0.19**	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Naphthalene	0.2	µg/L	0.1 U	0.1 UJ	0.012 U	0.1 U	0.1 UJ	**0.1**	0.1 UJ	0.1 U	0.1 U	0.012 U	0.1 U	0.1 UJ
Phenanthrene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Pyrene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Total PAHs	- -	µg/L	ND	ND	ND	ND	ND	**0.57**	**0.6**	ND	ND	ND	ND	**0.19**

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-C2	MW-C2	MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8	SEA-601	SEA-601	SEA-602A
Sample Depth():														
Date Collected:			12/06/05	03/13/07	10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04	10/02/03	09/28/04	10/03/03
Sample Name:	PAL	Units	MW-C2	MW-C2	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF	GW-017-LF	GW-060-LF	GW-022-LF
SVOC SIM														
1,4-Dioxane	61	µg/L	**11**	NA	NA	0.67 U	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	0.2	µg/L	**0.027**	NA	0.1 UJ	0.011 U	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
Acenaphthene	0.2	µg/L	**0.16**	NA	0.1 U	0.011 U	0.1 U	0.1 UJ	0.1 U	**0.13**	**0.13**	**0.13 J**	**0.15**	0.1 UJ
Acenaphthylene	0.2	µg/L	**0.015**	NA	0.1 U	0.011 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ
Anthracene	0.2	µg/L	**0.025**	NA	0.1 U	**0.018**	0.1 U	0.1 U	0.1 U	**0.1**	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.029	µg/L	0.015 U	NA	0.1 U	0.011 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.2	µg/L	0.015 U	NA	0.1 U	0.022 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.12**	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.2	µg/L	0.018 U	NA	0.1 U	0.02 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.2	µg/L	0.017 U	NA	0.1 U	0.019 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.2	µg/L	**0.017**	NA	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.11**	0.1 U	0.1 U
Chrysene	0.2	µg/L	0.016 U	NA	0.1 U	0.012 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.029	µg/L	0.024 U	NA	0.1 U	0.011 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	- -	µg/L	**0.022**	NA	0.1 U	**0.015**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	0.2	µg/L	**0.11**	NA	0.1 U	0.011 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.02 U	NA	0.1 U	0.014 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	0.2	µg/L	0.047 U	NA	0.1 UJ	0.011 U	0.1 U	0.1 U	0.1 UJ	**0.12**	0.1 UJ	0.1 U	0.1 UJ	0.1 U
Phenanthrene	0.2	µg/L	0.026 U	NA	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	0.2	µg/L	0.019 U	NA	0.1 U	0.015 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total PAHs	- -	µg/L	**0.376**	NA	ND	**0.033**	ND	ND	ND	**0.35**	**0.13**	**0.36 J**	**0.15**	ND

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-602A	SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604	SEA-604
Sample Depth():													
Date Collected:			09/28/04	12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03	09/30/04
Sample Name:	PAL	Units	GW-062-LF	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF	GW-067-LF
SVOC SIM													
1,4-Dioxane	61	µg/L	NA	**6.7**	NA	NA	NA	NA	NA	NA	**18**	NA	NA
2-Methylnaphthalene	0.2	µg/L	0.1 UJ	0.011 U	NA	0.1 UJ	0.1 UJ	**0.9 J**	**1.2 J**	**1.2 J**	**1.9**	**0.15 J**	0.1 UJ
Acenaphthene	0.2	µg/L	**0.23**	**0.18**	NA	0.1 UJ	0.1 U	**0.59 J**	**1.2**	**1.1**	**1.2**	**0.46 J**	**0.12**
Acenaphthylene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.012 U	0.1 UJ	0.1 U
Anthracene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	**0.16**	**0.2**	**0.17**	**0.094**	**0.26**	0.1 U
Benzo(a)pyrene	0.029	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Benzo[a]anthracene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Chrysene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.029	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Fluoranthene	- -	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.029**	**0.26**	**0.15**
Fluorene	0.2	µg/L	0.1 U	**0.031**	NA	0.1 UJ	0.1 U	**0.33 J**	**0.62 J**	**0.71 J**	**0.79**	**0.32 J**	0.1 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U
Naphthalene	0.2	µg/L	0.1 UJ	0.018 U	NA	0.1 U	0.1 UJ	**0.34**	**0.24 J**	**0.25 J**	**0.98**	**0.39**	0.1 UJ
Phenanthrene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	**0.13**	**0.31**	**0.3**	**0.27**	**0.95**	0.1 U
Pyrene	0.2	µg/L	0.1 U	0.011 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.023 U	**0.25**	**0.19**
Total PAHs	- -	µg/L	**0.23**	**0.211**	NA	ND	ND	**36.5 J**	**19.8 J**	**20.7 J**	**7.06**	**3.04 J**	**0.46**

TABLE 4-5
GROUNDWATER RESULTS FOR NON-PAH SVOCs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():														
Date Collected:			10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:			GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
SVOC SIM														
1,4-Dioxane	61	µg/L	NA	NA	**1.5**	NA	NA	0.53 U	NA	NA	NA	NA	NA	0.52 U
2-Methylnaphthalene	0.2	µg/L	0.1 UJ	0.1 UJ	**0.068**	0.1 UJ	0.1 UJ	**0.014**	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.01 U
Acenaphthene	0.2	µg/L	**0.13 J**	**0.31**	**0.18**	**0.47 J**	**0.63**	**0.55**	0.1 UJ	0.1 U	**0.14 J**	**0.13 J**	0.1 U	**0.14**
Acenaphthylene	0.2	µg/L	0.1 UJ	0.1 U	0.012 U	0.1 UJ	0.1 U	**0.024**	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	0.1 U	**0.019**
Anthracene	0.2	µg/L	0.1 U	0.1 U	**0.014**	0.1 U	0.1 U	**0.029**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.017**
Benzo(a)pyrene	0.029	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U
Benzo(b)fluoranthene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U
Benzo(g,h,i)perylene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U
Benzo(k)fluoranthene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U
Benzo[a]anthracene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	**0.11**	0.1 U	**0.028**
Chrysene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U
Dibenz[a,h]anthracene	0.029	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U
Fluoranthene	- -	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	**0.014**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.01**
Fluorene	0.2	µg/L	0.1 UJ	**0.34 J**	**0.066**	**0.15 J**	**0.24 J**	**0.16**	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	0.1 U	**0.058**
Indeno(1,2,3-cd)pyrene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U
Naphthalene	0.2	µg/L	0.1 U	0.1 UJ	**0.83**	**0.12**	0.1 UJ	0.021 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 UJ	**0.072**
Phenanthrene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.021 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.01**
Pyrene	0.2	µg/L	0.1 U	0.1 U	0.012 U	0.1 U	0.1 U	0.011 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U
Total PAHs	- -	µg/L	**0.13 J**	**0.65 J**	**1.16**	**0.74 J**	**0.87 J**	**0.791**	ND	ND	**0.14 J**	**0.24 J**	ND	**0.354**

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B	GNP-705B	GNP-707	GNP-708
Sample Depth():																	
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05	03/13/07	11/29/05	11/29/05
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B	GNP-705B	GNP-707	GNP-708
SVOC TICS																	
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L															
1 (2H)-Isoquinolinone	- -	µg/L															
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L					**2 JN**										
1,2-Cyclohexanedione	- -	µg/L														**7 JN**	
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L															
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L															
1,8-Naphthalic anhydride	- -	µg/L															
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L															
13-Docosenamide, (Z)-	- -	µg/L															
17-Pentatriacontene	- -	µg/L															
1-Docosene	- -	µg/L															
1-Hexadecanol, 2-methyl-	- -	µg/L															
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L															
1-Undecene	- -	µg/L															
2 (3H)-Benzothiazolone	- -	µg/L	**1 NJ**	**150 NJ**	**130 NJ**		**150 JN**					**26 JN**					**45 JN**
2,2'-Azo-bis-isobutyronitrile	- -	µg/L															
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L					**4 JN**										
2-Pentanol, 2,3-dimethyl-	- -	µg/L															
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L	**25 NJ**	**9 NJ**	**8 NJ**		**36 JN**			**45 JN**	**67 JN**	**38 JN**		**42 JN**		**55 JN**	**47 JN**
2-Pentenal, (E)-	- -	µg/L															
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L															
3-Buten-2-one, 3-methyl-	- -	µg/L														**2 JN**	
3-Hexanol, 4-methyl-	- -	µg/L												**2 JN**			
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L												**1 JN**			
9-Octadecenamide, (Z)-	- -	µg/L															
Benzenamine, 3-methyl-	- -	µg/L		**2 NJ**	**2 NJ**												
Benzenamine, N,N-diethyl-	- -	µg/L															**1 JN**
Benzene, 1,2,3-trimethyl-	- -	µg/L										**250 JN**					
Benzene, 1,2,4-trimethyl-	- -	µg/L										**56 JN**					
Benzene, 1,3-dimethyl-	- -	µg/L										**10 JN**					
Benzene, 1-ethyl-3-methyl-	- -	µg/L										**39 JN**					
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L										**11 JN**					
Benzene, propyl-	- -	µg/L										**74 JN**					
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L															
Benzenemethanol, α,α-dimethyl-	- -	µg/L		**2 NJ**	**2 NJ**		**3 JN**										

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	GLF-700a 12/06/05 GLF-700a	GLF-704 12/06/05 DUP-2	GLF-704 12/06/05 GLF-704	GLF-704 03/13/07 GLF-704	GLF-706 11/29/05 GLF-706	GLF-706 03/13/07 FD-031307	GLF-706 03/13/07 GLF-706	GLF-706a 11/29/05 DUP-1	GLF-706a 11/29/05 GLF-706a	GNP-705 11/28/05 GNP-705	GNP-705 03/13/07 GNP-705	GNP-705B 12/01/05 GNP-705B	GNP-705B 03/13/07 GNP-705B	GNP-707 11/29/05 GNP-707	GNP-708 11/29/05 GNP-708
Benzenesulfonamide, N-butyl-	- -	µg/L		**3 NJ**	**2 NJ**		**2 JN**										
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L															
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L					**3 JN**										**1 JN**
Benzoic acid, p-tert-butyl-	- -	µg/L			**5 NJ**		**2 JN**										
Benzothiazole	- -	µg/L															
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L															
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L															
Cyclohexanol	- -	µg/L															
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L															
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L															
Cyclopentasiloxane, decamethyl-	- -	µg/L															
Diethyltoluamide	- -	µg/L		**3 NJ**	**3 NJ**												
Diphenyl ether	- -	µg/L															
Di-sec-butyl ether	- -	µg/L															
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L		**2 NJ**													
Dodecanoic acid	- -	µg/L			**3 NJ**												**1 JN**
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L		**6 NJ**			**8 JN**					**10 JN**					
Formamide, N,N-dibutyl-	- -	µg/L															
Hexadecanoic acid	- -	µg/L															
Hexanoic Acid, 2-Ethyl-	- -	µg/L												**8 JN**			
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L			**3 JN**												
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L															
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L															
Hydroquinone	- -	µg/L															
Indane	- -	µg/L										**38 JN**					
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L															
Methylated Phenol	- -	µg/L															
Morpholine, 4-Acetyl-	- -	µg/L															
Naphthalene, 1-methyl-	- -	µg/L															
Nonacosanol	- -	µg/L															

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B	GNP-705B	GNP-707	GNP-708
Sample Depth():																	
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05	03/13/07	11/29/05	11/29/05
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B	GNP-705B	GNP-707	GNP-708
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L															
Octadecanoic acid, butyl ester	- -	µg/L															
Octasulfur	- -	µg/L															
Oleic Acid	- -	µg/L														**3 JN**	
Oleic acid, eicosyl ester	- -	µg/L														**2 JN**	
Organic acid	- -	µg/L															
Organic ester	- -	µg/L															
Phenol, 2-(phenylmethyl)-	- -	µg/L															
Phenol, 2,2'-methylenebis-	- -	µg/L										**49 JN**					
Phenol, 2,4'-isopropylidenedi-	- -	µg/L			**2 NJ**												
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L										**25 JN**					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L															
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L															**1 JN**
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L		**35 NJ**	**24 NJ**		**29 JN**					**64 JN**					**10 JN**
Phenol, 4,4'-methylenebis-	- -	µg/L										**16 JN**					
Phenol, M-Tert-Butyl-	- -	µg/L															
Phenol, p-tert-butyl-	- -	µg/L		**2 NJ**	**2 NJ**		**2 JN**					**58 JN**					
Phosphoric acid, triphenyl ester	- -	µg/L					**2 JN**										
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L															
Propylene Glycol	- -	µg/L															
Pyridine, 2-methyl-	- -	µg/L										**10 JN**					
saturated carboxylic acid isomer	- -	µg/L															
Substituted Benzene	- -	µg/L															
Substituted Benzene 1	- -	µg/L															
Substituted Benzene 2	- -	µg/L															
Substituted Benzene 3	- -	µg/L															
Tetradecanamide	- -	µg/L															
Tetradecanoic acid	- -	µg/L					**1 JN**										
Triethyl phosphate	- -	µg/L															
Tri-n-butylphosphate	- -	µg/L															**1 JN**
Unknown TICs (SVOCs) - occurences	- -	(Count)	1	8	14		7				2	2		2		4	1

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A
Sample Depth():																
Date Collected:			03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09	11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03
Sample Name:	PAL	Units	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF
SVOC TICS																
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L														
1 (2H)-Isoquinolinone	- -	µg/L														
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L														
1,2-Cyclohexanedione	- -	µg/L														
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L														
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L														
1,8-Naphthalic anhydride	- -	µg/L														
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L														
13-Docosenamide, (Z)-	- -	µg/L														
17-Pentatriacontene	- -	µg/L				**2 NJ**										
1-Docosene	- -	µg/L				**2 NJ**										
1-Hexadecanol, 2-methyl-	- -	µg/L				**4 NJ**										
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L														
1-Undecene	- -	µg/L														
2 (3H)-Benzothiazolone	- -	µg/L								**204 JN [225 JN]**			**89.1 JN**			
2,2'-Azo-bis-isobutyronitrile	- -	µg/L														
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L														
2-Pentanol, 2,3-dimethyl-	- -	µg/L														
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L		**60 JN**		**45 NJ**	**49 NJ**	**46 NJ**								
2-Pentenal, (E)-	- -	µg/L														
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L														
3-Buten-2-one, 3-methyl-	- -	µg/L														
3-Hexanol, 4-methyl-	- -	µg/L														
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L														
9-Octadecenamide, (Z)-	- -	µg/L													**5.7 NJ**	
Benzenamine, 3-methyl-	- -	µg/L														
Benzenamine, N,N-diethyl-	- -	µg/L														
Benzene, 1,2,3-trimethyl-	- -	µg/L														
Benzene, 1,2,4-trimethyl-	- -	µg/L														
Benzene, 1,3-dimethyl-	- -	µg/L														
Benzene, 1-ethyl-3-methyl-	- -	µg/L														
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L														
Benzene, propyl-	- -	µg/L								**4.54 JN [5.14 JN]**			**0.907 JN**			
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L														
Benzenemethanol, α,α-dimethyl-	- -	µg/L														

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A
Sample Depth():																
Date Collected:			03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09	11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03
Sample Name:	PAL	Units	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF
Benzenesulfonamide, N-butyl-	- -	µg/L														
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L								**3.12 JN**						
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L														
Benzoic acid, p-tert-butyl-	- -	µg/L														
Benzothiazole	- -	µg/L														
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L														
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L														
Cyclohexanol	- -	µg/L														
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L														
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L														
Cyclopentasiloxane, decamethyl-	- -	µg/L					**1 NJ**	**1 NJ**								
Diethyltoluamide	- -	µg/L														
Diphenyl ether	- -	µg/L														
Di-sec-butyl ether	- -	µg/L														
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L														
Dodecanoic acid	- -	µg/L														
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L														
Formamide, N,N-dibutyl-	- -	µg/L														
Hexadecanoic acid	- -	µg/L								**1.99 JN**			**1 JN**			
Hexanoic Acid, 2-Ethyl-	- -	µg/L														
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L														
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L														
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L														
Hydroquinone	- -	µg/L														
Indane	- -	µg/L								**7.01 JN**						
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L														
Methylated Phenol	- -	µg/L														
Morpholine, 4-Acetyl-	- -	µg/L														
Naphthalene, 1-methyl-	- -	µg/L														
Nonacosanol	- -	µg/L				**3 NJ**										

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A
Sample Depth():																
Date Collected:			03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09	11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03
Sample Name:	PAL	Units	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L														
Octadecanoic acid, butyl ester	- -	µg/L														
Octasulfur	- -	µg/L														
Oleic Acid	- -	µg/L														
Oleic acid, eicosyl ester	- -	µg/L														
Organic acid	- -	µg/L								**3.61 J [4.14 J]**			**0.763 J**			
Organic ester	- -	µg/L										**1.23 J**				
Phenol, 2-(phenylmethyl)-	- -	µg/L														
Phenol, 2,2'-methylenebis-	- -	µg/L														
Phenol, 2,4'-isopropylidenedi-	- -	µg/L														
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L											**0.66 JN**			
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L														
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L														
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L											**32.6 JN**			
Phenol, 4,4'-methylenebis-	- -	µg/L														
Phenol, M-Tert-Butyl-	- -	µg/L														
Phenol, p-tert-butyl-	- -	µg/L														
Phosphoric acid, triphenyl ester	- -	µg/L											**4.23 JN**			
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L														
Propylene Glycol	- -	µg/L														
Pyridine, 2-methyl-	- -	µg/L														
saturated carboxylic acid isomer	- -	µg/L														
Substituted Benzene	- -	µg/L								**8.48 J [9.03 J]**			**2.49 J**			
Substituted Benzene 1	- -	µg/L											**1.27 J**			
Substituted Benzene 2	- -	µg/L											**0.959 J**			
Substituted Benzene 3	- -	µg/L											**0.856 J**			
Tetradecanamide	- -	µg/L														
Tetradecanoic acid	- -	µg/L														
Triethyl phosphate	- -	µg/L														
Tri-n-butylphosphate	- -	µg/L											**2.37 JN**			
Unknown TICs (SVOCs) - occurences	- -	(Count)				19		2								2

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106A	MW-106A	MW-106B	MW-106B	MW-106B	MW-106C	MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A
Sample Depth():																	
Date Collected:			09/30/04	12/02/05	09/28/04	09/28/04	12/02/05	09/28/04	12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03
Sample Name:	PAL	Units	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B	GW-077-DF	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF
SVOC TICS																	
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L															
1 (2H)-Isoquinolinone	- -	µg/L															
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L															
1,2-Cyclohexanedione	- -	µg/L															
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L															
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L															
1,8-Naphthalic anhydride	- -	µg/L															
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L															
13-Docosenamide, (Z)-	- -	µg/L			R												
17-Pentatriacontene	- -	µg/L															
1-Docosene	- -	µg/L															
1-Hexadecanol, 2-methyl-	- -	µg/L															
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L															
1-Undecene	- -	µg/L															
2 (3H)-Benzothiazolone	- -	µg/L															
2,2'-Azo-bis-isobutyronitrile	- -	µg/L															
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L															
2-Pentanol, 2,3-dimethyl-	- -	µg/L															
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L		**53 JN**			**46 JN**		**54 JN**				**51 NJ**				
2-Pentenal, (E)-	- -	µg/L					**1 JN**										
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L															
3-Buten-2-one, 3-methyl-	- -	µg/L					**12 JN**										
3-Hexanol, 4-methyl-	- -	µg/L															
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L															
9-Octadecenamide, (Z)-	- -	µg/L	**5 NJ**														**4 NJ**
Benzenamine, 3-methyl-	- -	µg/L															
Benzenamine, N,N-diethyl-	- -	µg/L															
Benzene, 1,2,3-trimethyl-	- -	µg/L															
Benzene, 1,2,4-trimethyl-	- -	µg/L															
Benzene, 1,3-dimethyl-	- -	µg/L															
Benzene, 1-ethyl-3-methyl-	- -	µg/L															
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L															
Benzene, propyl-	- -	µg/L															
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L															
Benzenemethanol, α,α-dimethyl-	- -	µg/L															

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth(): Date Collected: Sample Name:	PAL	Units	MW-106A 09/30/04 GW-074-DF	MW-106A 12/02/05 MW-106A	MW-106B 09/28/04 GW-078-DF	MW-106B 09/28/04 GW-FD-12	MW-106B 12/02/05 MW-106B	MW-106C 09/28/04 GW-077-DF	MW-106C 12/02/05 MW-106C	MW-108A 10/01/03 GW-010-LF	MW-108A 09/22/04 GW-046-LF	MW-108AA 10/01/03 GW-011-LF	MW-108AA 12/07/05 MW-108AA	MW-108B 09/21/04 GW-043-LF	MW-108C 09/22/04 GW-058-LF	MW-108C 03/14/07 MW-108C	MW-109A 09/29/03 GW-001-LF
Benzenesulfonamide, N-butyl-	- -	µg/L															
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L															
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L															
Benzoic acid, p-tert-butyl-	- -	µg/L															
Benzothiazole	- -	µg/L															
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L															
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L					**11 JN**										
Cyclohexanol	- -	µg/L															
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L															
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L															
Cyclopentasiloxane, decamethyl-	- -	µg/L															
Diethyltoluamide	- -	µg/L															
Diphenyl ether	- -	µg/L															
Di-sec-butyl ether	- -	µg/L															
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L															
Dodecanoic acid	- -	µg/L															
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L															
Formamide, N,N-dibutyl-	- -	µg/L															
Hexadecanoic acid	- -	µg/L															
Hexanoic Acid, 2-Ethyl-	- -	µg/L															
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L															
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L															
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L															
Hydroquinone	- -	µg/L															
Indane	- -	µg/L															
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L															
Methylated Phenol	- -	µg/L															
Morpholine, 4-Acetyl-	- -	µg/L															
Naphthalene, 1-methyl-	- -	µg/L															
Nonacosanol	- -	µg/L															

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	MW-106A 09/30/04 GW-074-DF	MW-106A 12/02/05 MW-106A	MW-106B 09/28/04 GW-078-DF	MW-106B 09/28/04 GW-FD-12	MW-106B 12/02/05 MW-106B	MW-106C 09/28/04 GW-077-DF	MW-106C 12/02/05 MW-106C	MW-108A 10/01/03 GW-010-LF	MW-108A 09/22/04 GW-046-LF	MW-108AA 10/01/03 GW-011-LF	MW-108AA 12/07/05 MW-108AA	MW-108B 09/21/04 GW-043-LF	MW-108C 09/22/04 GW-058-LF	MW-108C 03/14/07 MW-108C	MW-109A 09/29/03 GW-001-LF
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L															
Octadecanoic acid, butyl ester	- -	µg/L															
Octasulfur	- -	µg/L									**2.7 NJ**						
Oleic Acid	- -	µg/L															
Oleic acid, eicosyl ester	- -	µg/L															
Organic acid	- -	µg/L															
Organic ester	- -	µg/L															
Phenol, 2-(phenylmethyl)-	- -	µg/L															
Phenol, 2,2'-methylenebis-	- -	µg/L															
Phenol, 2,4'-isopropylidenedi-	- -	µg/L															
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L															
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L															
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L															
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L															
Phenol, 4,4'-methylenebis-	- -	µg/L															
Phenol, M-Tert-Butyl-	- -	µg/L															
Phenol, p-tert-butyl-	- -	µg/L															
Phosphoric acid, triphenyl ester	- -	µg/L															
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L															
Propylene Glycol	- -	µg/L															
Pyridine, 2-methyl-	- -	µg/L															
saturated carboxylic acid isomer	- -	µg/L															
Substituted Benzene	- -	µg/L															
Substituted Benzene 1	- -	µg/L															
Substituted Benzene 2	- -	µg/L															
Substituted Benzene 3	- -	µg/L															
Tetradecanamide	- -	µg/L															
Tetradecanoic acid	- -	µg/L					**1 JN**										
Triethyl phosphate	- -	µg/L															
Tri-n-butylphosphate	- -	µg/L															
Unknown TICs (SVOCs) - occurences	- -	(Count)	1	1	4	1	4	2		2	1	1	3	1	2		

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109A	MW-109A	MW-109AA	MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B	MW-110B	MW-110B	MW-110B
Sample Depth():																	
Date Collected:			09/23/04	03/14/07	09/30/03	09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03	09/30/03	09/22/04	03/14/07
Sample Name:	PAL	Units	GW-047-LF	MW-109A	GW-003-LF	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02	GW-005-WT	GW-044-WT	MW-110B
SVOC TICS																	
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L															
1 (2H)-Isoquinolinone	- -	µg/L										**3 NJ**					
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L															
1,2-Cyclohexanedione	- -	µg/L															
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L															
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L															
1,8-Naphthalic anhydride	- -	µg/L															
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L															
13-Docosenamide, (Z)-	- -	µg/L						7 UJ		8.1 UJ			8 UJ			4.8 UJ	
17-Pentatriacontene	- -	µg/L															
1-Docosene	- -	µg/L															
1-Hexadecanol, 2-methyl-	- -	µg/L															
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L															
1-Undecene	- -	µg/L															
2 (3H)-Benzothiazolone	- -	µg/L															
2,2'-Azo-bis-isobutyronitrile	- -	µg/L															
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L															
2-Pentanol, 2,3-dimethyl-	- -	µg/L															
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L															
2-Pentenal, (E)-	- -	µg/L															
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L															
3-Buten-2-one, 3-methyl-	- -	µg/L															
3-Hexanol, 4-methyl-	- -	µg/L															
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L															
9-Octadecenamide, (Z)-	- -	µg/L	5.4 UJ														
Benzenamine, 3-methyl-	- -	µg/L															
Benzenamine, N,N-diethyl-	- -	µg/L															
Benzene, 1,2,3-trimethyl-	- -	µg/L															
Benzene, 1,2,4-trimethyl-	- -	µg/L															
Benzene, 1,3-dimethyl-	- -	µg/L															
Benzene, 1-ethyl-3-methyl-	- -	µg/L															
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L															
Benzene, propyl-	- -	µg/L															
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L															
Benzenemethanol, α,α-dimethyl-	- -	µg/L															

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	MW-109A 09/23/04 GW-047-LF	MW-109A 03/14/07 MW-109A	MW-109AA 09/30/03 GW-003-LF	MW-109AA 09/23/04 GW-048-LF	MW-109AA 09/23/04 GW-FD-11	MW-109B 09/21/04 GW-042-LF	MW-109B 09/21/04 GW-DUP-01	MW-109C 09/21/04 GW-041-LF	MW-109C 03/14/07 MW-109C	MW-110A 09/30/03 GW-004-WT	MW-110A 09/22/04 GW-045-WT	MW-110B 09/30/03 GW-FD02	MW-110B 09/30/03 GW-005-WT	MW-110B 09/22/04 GW-044-WT	MW-110B 03/14/07 MW-110B
Benzenesulfonamide, N-butyl-	- -	µg/L															
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L															
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L															
Benzoic acid, p-tert-butyl-	- -	µg/L															
Benzothiazole	- -	µg/L															
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L															
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L															
Cyclohexanol	- -	µg/L															
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L															
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L															
Cyclopentasiloxane, decamethyl-	- -	µg/L															
Diethyltoluamide	- -	µg/L															
Diphenyl ether	- -	µg/L															
Di-sec-butyl ether	- -	µg/L															
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L															
Dodecanoic acid	- -	µg/L															
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L															
Formamide, N,N-dibutyl-	- -	µg/L															
Hexadecanoic acid	- -	µg/L															
Hexanoic Acid, 2-Ethyl-	- -	µg/L															
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L															
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L															
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L															
Hydroquinone	- -	µg/L															
Indane	- -	µg/L															
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L															
Methylated Phenol	- -	µg/L															
Morpholine, 4-Acetyl-	- -	µg/L															
Naphthalene, 1-methyl-	- -	µg/L															
Nonacosanol	- -	µg/L															

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109A	MW-109A	MW-109AA	MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B	MW-110B	MW-110B	MW-110B
Sample Depth():																	
Date Collected:			09/23/04	03/14/07	09/30/03	09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03	09/30/03	09/22/04	03/14/07
Sample Name:	PAL	Units	GW-047-LF	MW-109A	GW-003-LF	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02	GW-005-WT	GW-044-WT	MW-110B
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L															
Octadecanoic acid, butyl ester	- -	µg/L															
Octasulfur	- -	µg/L				**4.8 NJ**	**2.4 NJ**										
Oleic Acid	- -	µg/L															
Oleic acid, eicosyl ester	- -	µg/L															
Organic acid	- -	µg/L															
Organic ester	- -	µg/L															
Phenol, 2-(phenylmethyl)-	- -	µg/L															
Phenol, 2,2'-methylenebis-	- -	µg/L															
Phenol, 2,4'-isopropylidenedi-	- -	µg/L															
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L															
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L															
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L															
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L															
Phenol, 4,4'-methylenebis-	- -	µg/L															
Phenol, M-Tert-Butyl-	- -	µg/L															
Phenol, p-tert-butyl-	- -	µg/L															
Phosphoric acid, triphenyl ester	- -	µg/L															
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L															
Propylene Glycol	- -	µg/L															
Pyridine, 2-methyl-	- -	µg/L															
saturated carboxylic acid isomer	- -	µg/L															
Substituted Benzene	- -	µg/L															
Substituted Benzene 1	- -	µg/L															
Substituted Benzene 2	- -	µg/L															
Substituted Benzene 3	- -	µg/L															
Tetradecanamide	- -	µg/L															
Tetradecanoic acid	- -	µg/L															
Triethyl phosphate	- -	µg/L															
Tri-n-butylphosphate	- -	µg/L															
Unknown TICs (SVOCs) - occurences	- -	(Count)				1	1					1		3	1		

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C	MW-112A	MW-112A	MW-112A	MW-112AA	MW-112AA	MW-112AA
Sample Depth():																
Date Collected:			09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04	10/02/03	09/27/04	11/30/05	10/03/03	09/27/04	11/30/05
Sample Name:	PAL	Units	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP	GW-055-NP	MW-112A	GW-020-NP	GW-056-NP	MW-112AA
SVOC TICS																
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L														
1 (2H)-Isoquinolinone	- -	µg/L														
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L														
1,2-Cyclohexanedione	- -	µg/L														
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L														
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L														
1,8-Naphthalic anhydride	- -	µg/L														
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L														
13-Docosenamide, (Z)-	- -	µg/L										4.1 UJ				
17-Pentatriacontene	- -	µg/L														
1-Docosene	- -	µg/L														
1-Hexadecanol, 2-methyl-	- -	µg/L														
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L														
1-Undecene	- -	µg/L														
2 (3H)-Benzothiazolone	- -	µg/L														
2,2'-Azo-bis-isobutyronitrile	- -	µg/L														
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L														
2-Pentanol, 2,3-dimethyl-	- -	µg/L														
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L											**45 JN**			**49 JN**
2-Pentenal, (E)-	- -	µg/L														
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L														
3-Buten-2-one, 3-methyl-	- -	µg/L														
3-Hexanol, 4-methyl-	- -	µg/L														
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L														
9-Octadecenamide, (Z)-	- -	µg/L				**3.3 NJ**				6.7 UJ					**5.2 NJ**	
Benzenamine, 3-methyl-	- -	µg/L														
Benzenamine, N,N-diethyl-	- -	µg/L														
Benzene, 1,2,3-trimethyl-	- -	µg/L														
Benzene, 1,2,4-trimethyl-	- -	µg/L														
Benzene, 1,3-dimethyl-	- -	µg/L														
Benzene, 1-ethyl-3-methyl-	- -	µg/L														
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L														
Benzene, propyl-	- -	µg/L														
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L														
Benzenemethanol, α,α-dimethyl-	- -	µg/L														

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C	MW-112A	MW-112A	MW-112A	MW-112AA	MW-112AA	MW-112AA
Sample Depth():																
Date Collected:			09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04	10/02/03	09/27/04	11/30/05	10/03/03	09/27/04	11/30/05
Sample Name:	PAL	Units	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP	GW-055-NP	MW-112A	GW-020-NP	GW-056-NP	MW-112AA
Benzenesulfonamide, N-butyl-	- -	µg/L														
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L														
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L														
Benzoic acid, p-tert-butyl-	- -	µg/L														
Benzothiazole	- -	µg/L														
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L														
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L														
Cyclohexanol	- -	µg/L														
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L														
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L														
Cyclopentasiloxane, decamethyl-	- -	µg/L														
Diethyltoluamide	- -	µg/L														
Diphenyl ether	- -	µg/L														
Di-sec-butyl ether	- -	µg/L														
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L														
Dodecanoic acid	- -	µg/L														
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L														
Formamide, N,N-dibutyl-	- -	µg/L														
Hexadecanoic acid	- -	µg/L														
Hexanoic Acid, 2-Ethyl-	- -	µg/L														
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L														
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L														
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L														
Hydroquinone	- -	µg/L														
Indane	- -	µg/L														
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L														
Methylated Phenol	- -	µg/L														
Morpholine, 4-Acetyl-	- -	µg/L														
Naphthalene, 1-methyl-	- -	µg/L														
Nonacosanol	- -	µg/L														

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C	MW-112A	MW-112A	MW-112A	MW-112AA	MW-112AA	MW-112AA
Sample Depth():																
Date Collected:			09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04	10/02/03	09/27/04	11/30/05	10/03/03	09/27/04	11/30/05
Sample Name:	PAL	Units	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP	GW-055-NP	MW-112A	GW-020-NP	GW-056-NP	MW-112AA
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L														
Octadecanoic acid, butyl ester	- -	µg/L														
Octasulfur	- -	µg/L														
Oleic Acid	- -	µg/L														
Oleic acid, eicosyl ester	- -	µg/L														
Organic acid	- -	µg/L														
Organic ester	- -	µg/L														
Phenol, 2-(phenylmethyl)-	- -	µg/L														
Phenol, 2,2'-methylenebis-	- -	µg/L														
Phenol, 2,4'-isopropylidenedi-	- -	µg/L														
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L														
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L														
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L														
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L														
Phenol, 4,4'-methylenebis-	- -	µg/L														
Phenol, M-Tert-Butyl-	- -	µg/L														
Phenol, p-tert-butyl-	- -	µg/L														
Phosphoric acid, triphenyl ester	- -	µg/L														
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L											**2 JN**			
Propylene Glycol	- -	µg/L														
Pyridine, 2-methyl-	- -	µg/L														
saturated carboxylic acid isomer	- -	µg/L														
Substituted Benzene	- -	µg/L														
Substituted Benzene 1	- -	µg/L														
Substituted Benzene 2	- -	µg/L														
Substituted Benzene 3	- -	µg/L														
Tetradecanamide	- -	µg/L														
Tetradecanoic acid	- -	µg/L														
Triethyl phosphate	- -	µg/L														
Tri-n-butylphosphate	- -	µg/L														
Unknown TICs (SVOCs) - occurences	- -	(Count)	2		1	2	2	2	2				2		3	4

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502	MW-A2	MW-A2	MW-A2	MW-B1	MW-B1	MW-B2	MW-B2
Sample Depth():															
Date Collected:			09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05	10/01/03	09/30/04	12/08/05	10/01/03	09/24/04	09/29/03	09/27/04
Sample Name:	PAL	Units	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502	GW-012-QW	GW-080-QW	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF
SVOC TICS															
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L													
1 (2H)-Isoquinolinone	- -	µg/L													
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L													
1,2-Cyclohexanedione	- -	µg/L		**8 JN**											
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L													
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L													
1,8-Naphthalic anhydride	- -	µg/L													
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L													
13-Docosenamide, (Z)-	- -	µg/L			7 UJ										
17-Pentatriacontene	- -	µg/L													
1-Docosene	- -	µg/L													
1-Hexadecanol, 2-methyl-	- -	µg/L													
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L													
1-Undecene	- -	µg/L													
2 (3H)-Benzothiazolone	- -	µg/L												**87 NJ**	**58 NJ**
2,2'-Azo-bis-isobutyronitrile	- -	µg/L												**2.7 NJ**	
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L													
2-Pentanol, 2,3-dimethyl-	- -	µg/L													
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L		**44 JN**		**51 JN**		**58 NJ**			**59 NJ**				
2-Pentenal, (E)-	- -	µg/L													
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L													**2.3 NJ**
3-Buten-2-one, 3-methyl-	- -	µg/L													
3-Hexanol, 4-methyl-	- -	µg/L													
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L													
9-Octadecenamide, (Z)-	- -	µg/L	**4.2 NJ**												
Benzenamine, 3-methyl-	- -	µg/L													
Benzenamine, N,N-diethyl-	- -	µg/L													
Benzene, 1,2,3-trimethyl-	- -	µg/L													
Benzene, 1,2,4-trimethyl-	- -	µg/L													
Benzene, 1,3-dimethyl-	- -	µg/L													
Benzene, 1-ethyl-3-methyl-	- -	µg/L													
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L													
Benzene, propyl-	- -	µg/L													
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L													
Benzenemethanol, α,α-dimethyl-	- -	µg/L													

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502	MW-A2	MW-A2	MW-A2	MW-B1	MW-B1	MW-B2	MW-B2
Sample Depth():															
Date Collected:			09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05	10/01/03	09/30/04	12/08/05	10/01/03	09/24/04	09/29/03	09/27/04
Sample Name:	PAL	Units	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502	GW-012-QW	GW-080-QW	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF
Benzenesulfonamide, N-butyl-	- -	µg/L												**2.2 NJ**	
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L													
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L													**4.2 NJ**
Benzoic acid, p-tert-butyl-	- -	µg/L												**9.2 NJ**	
Benzothiazole	- -	µg/L													
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L													
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L													
Cyclohexanol	- -	µg/L													
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L													
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L													
Cyclopentasiloxane, decamethyl-	- -	µg/L													
Diethyltoluamide	- -	µg/L												**3.8 NJ**	
Diphenyl ether	- -	µg/L												**2.4 NJ**	
Di-sec-butyl ether	- -	µg/L													
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L													
Dodecanoic acid	- -	µg/L													
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L													
Formamide, N,N-dibutyl-	- -	µg/L													
Hexadecanoic acid	- -	µg/L													
Hexanoic Acid, 2-Ethyl-	- -	µg/L													
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L													
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L													
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L													
Hydroquinone	- -	µg/L													
Indane	- -	µg/L													
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L													
Methylated Phenol	- -	µg/L													
Morpholine, 4-Acetyl-	- -	µg/L													
Naphthalene, 1-methyl-	- -	µg/L													
Nonacosanol	- -	µg/L													

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502	MW-A2	MW-A2	MW-A2	MW-B1	MW-B1	MW-B2	MW-B2
Sample Depth():															
Date Collected:			09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05	10/01/03	09/30/04	12/08/05	10/01/03	09/24/04	09/29/03	09/27/04
Sample Name:	PAL	Units	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502	GW-012-QW	GW-080-QW	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L													
Octadecanoic acid, butyl ester	- -	µg/L													
Octasulfur	- -	µg/L													**4.2 NJ**
Oleic Acid	- -	µg/L		**9 JN**											
Oleic acid, eicosyl ester	- -	µg/L		**9 JN**											
Organic acid	- -	µg/L													
Organic ester	- -	µg/L													
Phenol, 2-(phenylmethyl)-	- -	µg/L													
Phenol, 2,2'-methylenebis-	- -	µg/L													
Phenol, 2,4'-isopropylidenedi-	- -	µg/L													
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L													
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L													
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L													
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L												**27 NJ**	**19 NJ**
Phenol, 4,4'-methylenebis-	- -	µg/L													
Phenol, M-Tert-Butyl-	- -	µg/L												**2.3 NJ**	
Phenol, p-tert-butyl-	- -	µg/L													
Phosphoric acid, triphenyl ester	- -	µg/L													
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L													
Propylene Glycol	- -	µg/L		**1 JN**											
Pyridine, 2-methyl-	- -	µg/L													
saturated carboxylic acid isomer	- -	µg/L													
Substituted Benzene	- -	µg/L													
Substituted Benzene 1	- -	µg/L													
Substituted Benzene 2	- -	µg/L													
Substituted Benzene 3	- -	µg/L													
Tetradecanamide	- -	µg/L													
Tetradecanoic acid	- -	µg/L													
Triethyl phosphate	- -	µg/L													
Tri-n-butylphosphate	- -	µg/L													
Unknown TICs (SVOCs) - occurences	- -	(Count)	7	7		1		3	2		14	2	1	20	8

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-C1	MW-C1	MW-C1	MW-C2	MW-C2	MW-C2	MW-C2	MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8
Sample Depth():																
Date Collected:			09/30/03	09/28/04	12/07/05	09/30/03	09/27/04	12/06/05	03/13/07	10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04
Sample Name:	PAL	Units	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF	MW-C2	MW-C2	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF
SVOC TICS																
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L														
1 (2H)-Isoquinolinone	- -	µg/L														
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L														
1,2-Cyclohexanedione	- -	µg/L														
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L														
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L														
1,8-Naphthalic anhydride	- -	µg/L														
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L					**3.3 NJ**									
13-Docosenamide, (Z)-	- -	µg/L								8.5 UJ						7.3 UJ
17-Pentatriacontene	- -	µg/L														
1-Docosene	- -	µg/L														
1-Hexadecanol, 2-methyl-	- -	µg/L														
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L									**13 NJ**					
1-Undecene	- -	µg/L									**9 NJ**					
2 (3H)-Benzothiazolone	- -	µg/L				**50 NJ**	**58 NJ**	**36 NJ**							**120 NJ**	**80 NJ**
2,2'-Azo-bis-isobutyronitrile	- -	µg/L														
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L						**1 NJ**								
2-Pentanol, 2,3-dimethyl-	- -	µg/L														
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L			**56 NJ**			**49 NJ**			**18 NJ**					
2-Pentenal, (E)-	- -	µg/L														
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L					**2.4 NJ**									**2.6 NJ**
3-Buten-2-one, 3-methyl-	- -	µg/L														
3-Hexanol, 4-methyl-	- -	µg/L														
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L														
9-Octadecenamide, (Z)-	- -	µg/L		4.2 UJ										4.8 UJ		
Benzenamine, 3-methyl-	- -	µg/L														
Benzenamine, N,N-diethyl-	- -	µg/L														
Benzene, 1,2,3-trimethyl-	- -	µg/L														
Benzene, 1,2,4-trimethyl-	- -	µg/L														
Benzene, 1,3-dimethyl-	- -	µg/L														
Benzene, 1-ethyl-3-methyl-	- -	µg/L														
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L														
Benzene, propyl-	- -	µg/L														
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L			**1 NJ**											
Benzenemethanol, α,α-dimethyl-	- -	µg/L						**4 NJ**								

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-C1	MW-C1	MW-C1	MW-C2	MW-C2	MW-C2	MW-C2	MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8
Sample Depth():																
Date Collected:			09/30/03	09/28/04	12/07/05	09/30/03	09/27/04	12/06/05	03/13/07	10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04
Sample Name:	PAL	Units	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF	MW-C2	MW-C2	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF
Benzenesulfonamide, N-butyl-	- -	µg/L														
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L					**5.6 NJ**									**7.1 NJ**
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L					**4.2 NJ**									**5.7 NJ**
Benzoic acid, p-tert-butyl-	- -	µg/L				**4.3 NJ**		**3 NJ**							**8.3 NJ**	
Benzothiazole	- -	µg/L														
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L														
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L														
Cyclohexanol	- -	µg/L														
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L														
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L														
Cyclopentasiloxane, decamethyl-	- -	µg/L														
Diethyltoluamide	- -	µg/L														
Diphenyl ether	- -	µg/L														
Di-sec-butyl ether	- -	µg/L														
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L														
Dodecanoic acid	- -	µg/L														
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L														
Formamide, N,N-dibutyl-	- -	µg/L														
Hexadecanoic acid	- -	µg/L									**4 NJ**					
Hexanoic Acid, 2-Ethyl-	- -	µg/L														
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L														
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L						**2 NJ**								
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L														
Hydroquinone	- -	µg/L														
Indane	- -	µg/L														
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L														
Methylated Phenol	- -	µg/L														
Morpholine, 4-Acetyl-	- -	µg/L													**13 NJ**	
Naphthalene, 1-methyl-	- -	µg/L														
Nonacosanol	- -	µg/L														

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-C1	MW-C1	MW-C1	MW-C2	MW-C2	MW-C2	MW-C2	MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8
Sample Depth():																
Date Collected:			09/30/03	09/28/04	12/07/05	09/30/03	09/27/04	12/06/05	03/13/07	10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04
Sample Name:	PAL	Units	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF	MW-C2	MW-C2	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L											**9.6 NJ**			
Octadecanoic acid, butyl ester	- -	µg/L	**16 NJ**													
Octasulfur	- -	µg/L					**3.3 NJ**									**12 NJ**
Oleic Acid	- -	µg/L						**1 NJ**								
Oleic acid, eicosyl ester	- -	µg/L			**5 NJ**											
Organic acid	- -	µg/L														
Organic ester	- -	µg/L														
Phenol, 2-(phenylmethyl)-	- -	µg/L														
Phenol, 2,2'-methylenebis-	- -	µg/L														
Phenol, 2,4'-isopropylidenedi-	- -	µg/L														
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L														
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L														
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L														
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L				**10 NJ**	**12 NJ**	**4 NJ**								**14 NJ**
Phenol, 4,4'-methylenebis-	- -	µg/L														
Phenol, M-Tert-Butyl-	- -	µg/L														
Phenol, p-tert-butyl-	- -	µg/L													**2.7 NJ**	
Phosphoric acid, triphenyl ester	- -	µg/L														
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L														
Propylene Glycol	- -	µg/L														
Pyridine, 2-methyl-	- -	µg/L														
saturated carboxylic acid isomer	- -	µg/L														
Substituted Benzene	- -	µg/L														
Substituted Benzene 1	- -	µg/L														
Substituted Benzene 2	- -	µg/L														
Substituted Benzene 3	- -	µg/L														
Tetradecanamide	- -	µg/L														
Tetradecanoic acid	- -	µg/L														
Triethyl phosphate	- -	µg/L														
Tri-n-butylphosphate	- -	µg/L														
Unknown TICs (SVOCs) - occurences	- -	(Count)	3	2	6	10	2	12		1	16	2	1	1	14	10

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	SEA-601 10/02/03 GW-017-LF	SEA-601 09/28/04 GW-060-LF	SEA-602A 10/03/03 GW-022-LF	SEA-602A 09/28/04 GW-062-LF	SEA-602a 12/07/05 SEA-602a	SEA-602A 03/13/07 SEA-602A	SEA-602B 10/03/03 GW-023-LF	SEA-602B 10/01/04 GW-061-LF	SEA-603 10/03/03 GW-021-LF	SEA-603 10/01/04 GW-064-LF	SEA-603 10/01/04 GW-FD-13	SEA-603 12/06/05 SEA-603	SEA-604 10/04/03 GW-027-LF
SVOC TICS															
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L										**6.6 NJ**	**6.2 NJ**		
1 (2H)-Isoquinolinone	- -	µg/L													
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L													
1,2-Cyclohexanedione	- -	µg/L													
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L													
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L													
1,8-Naphthalic anhydride	- -	µg/L										**4.9 NJ**	**4.8 NJ**		
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L													
13-Docosenamide, (Z)-	- -	µg/L				**6.7 NJ**				6.3 UJ					
17-Pentatriacontene	- -	µg/L													
1-Docosene	- -	µg/L													
1-Hexadecanol, 2-methyl-	- -	µg/L													
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L													
1-Undecene	- -	µg/L													
2 (3H)-Benzothiazolone	- -	µg/L	**9.6 NJ**	**11 NJ**	**25 NJ**	**36 NJ**	**27 NJ**				**330 NJ**			**98 NJ**	**68 NJ**
2,2'-Azo-bis-isobutyronitrile	- -	µg/L									**2.8 NJ**				
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L													
2-Pentanol, 2,3-dimethyl-	- -	µg/L													
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L					**55 NJ**							**34 NJ**	
2-Pentenal, (E)-	- -	µg/L													
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L										**5.8 NJ**	**5.2 NJ**		
3-Buten-2-one, 3-methyl-	- -	µg/L													
3-Hexanol, 4-methyl-	- -	µg/L													
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L													
9-Octadecenamide, (Z)-	- -	µg/L													
Benzenamine, 3-methyl-	- -	µg/L													
Benzenamine, N,N-diethyl-	- -	µg/L													
Benzene, 1,2,3-trimethyl-	- -	µg/L													
Benzene, 1,2,4-trimethyl-	- -	µg/L												**3 NJ**	
Benzene, 1,3-dimethyl-	- -	µg/L													
Benzene, 1-ethyl-3-methyl-	- -	µg/L													
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L													
Benzene, propyl-	- -	µg/L													
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L													
Benzenemethanol, α,α-dimethyl-	- -	µg/L					**1 NJ**							**5 NJ**	

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	SEA-601 10/02/03 GW-017-LF	SEA-601 09/28/04 GW-060-LF	SEA-602A 10/03/03 GW-022-LF	SEA-602A 09/28/04 GW-062-LF	SEA-602a 12/07/05 SEA-602a	SEA-602A 03/13/07 SEA-602A	SEA-602B 10/03/03 GW-023-LF	SEA-602B 10/01/04 GW-061-LF	SEA-603 10/03/03 GW-021-LF	SEA-603 10/01/04 GW-064-LF	SEA-603 10/01/04 GW-FD-13	SEA-603 12/06/05 SEA-603	SEA-604 10/04/03 GW-027-LF
Benzenesulfonamide, N-butyl-	- -	µg/L													**2.7 NJ**
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L				**2.1 NJ**							**19 NJ**		
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L										**13 NJ**	**12 NJ**		
Benzoic acid, p-tert-butyl-	- -	µg/L									**10 NJ**	**7.4 NJ**	**9.6 NJ**	**13 NJ**	**8.5 NJ**
Benzothiazole	- -	µg/L													
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L													
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L													
Cyclohexanol	- -	µg/L													
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L													
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L													
Cyclopentasiloxane, decamethyl-	- -	µg/L													
Diethyltoluamide	- -	µg/L					**1 NJ**				**3.4 NJ**	**3.8 NJ**	**3.4 NJ**		**3.7 NJ**
Diphenyl ether	- -	µg/L													
Di-sec-butyl ether	- -	µg/L													
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L													
Dodecanoic acid	- -	µg/L													
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L													
Formamide, N,N-dibutyl-	- -	µg/L													
Hexadecanoic acid	- -	µg/L												**3 NJ**	
Hexanoic Acid, 2-Ethyl-	- -	µg/L													
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L													
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L													
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L													
Hydroquinone	- -	µg/L									**38 NJ**				
Indane	- -	µg/L													
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L									**5.6 NJ**				
Methylated Phenol	- -	µg/L													
Morpholine, 4-Acetyl-	- -	µg/L									**14 NJD**				
Naphthalene, 1-methyl-	- -	µg/L									**3.5 NJ**				
Nonacosanol	- -	µg/L													

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-601	SEA-601	SEA-602A	SEA-602A	SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604
Sample Depth():															
Date Collected:			10/02/03	09/28/04	10/03/03	09/28/04	12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03
Sample Name:	PAL	Units	GW-017-LF	GW-060-LF	GW-022-LF	GW-062-LF	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L													
Octadecanoic acid, butyl ester	- -	µg/L													
Octasulfur	- -	µg/L													
Oleic Acid	- -	µg/L													
Oleic acid, eicosyl ester	- -	µg/L													
Organic acid	- -	µg/L													
Organic ester	- -	µg/L													
Phenol, 2-(phenylmethyl)-	- -	µg/L										**35 NJ**	**38 NJ**		
Phenol, 2,2'-methylenebis-	- -	µg/L													
Phenol, 2,4'-isopropylidenedi-	- -	µg/L									**3.2 NJ**			**3 NJ**	
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L													
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L													
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L					**1 NJ**							**4 NJ**	
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L	**3.4 NJ**	**5.6 NJ**	**5.3 NJ**	**8.8 NJ**	**4 NJ**				**95 NJ**	**93 NJ**	**91 NJ**	**46 NJ**	**14 NJ**
Phenol, 4,4'-methylenebis-	- -	µg/L													
Phenol, M-Tert-Butyl-	- -	µg/L													
Phenol, p-tert-butyl-	- -	µg/L					**1 NJ**				**11 NJ**	**8.2 NJ**	**7.2 NJ**	**4 NJ**	
Phosphoric acid, triphenyl ester	- -	µg/L													
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L													
Propylene Glycol	- -	µg/L													
Pyridine, 2-methyl-	- -	µg/L													
saturated carboxylic acid isomer	- -	µg/L													
Substituted Benzene	- -	µg/L													
Substituted Benzene 1	- -	µg/L													
Substituted Benzene 2	- -	µg/L													
Substituted Benzene 3	- -	µg/L													
Tetradecanamide	- -	µg/L													
Tetradecanoic acid	- -	µg/L													
Triethyl phosphate	- -	µg/L										**6 NJ**			
Tri-n-butylphosphate	- -	µg/L									**3.3 NJ**				
Unknown TICs (SVOCs) - occurences	- -	(Count)	1	2	5	1	10		2		27	20	20	9	18

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-604	SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():															
Date Collected:			09/30/04	10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-067-LF	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
SVOC TICS															
.alpha., .alpha.'-Dihydroxy-m-diisopropylbenzene	- -	µg/L													
1 (2H)-Isoquinolinone	- -	µg/L													
1,2,4-Trithiolane, 3,5-dimethyl-	- -	µg/L													
1,2-Cyclohexanedione	- -	µg/L													
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-	- -	µg/L							**1 NJ**						
1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-	- -	µg/L													**3 NJ**
1,8-Naphthalic anhydride	- -	µg/L													
1,9-Diazacyclotetradecane-2,9-dione	- -	µg/L													
13-Docosenamide, (Z)-	- -	µg/L						6.4 UJ							
17-Pentatriacontene	- -	µg/L													
1-Docosene	- -	µg/L													
1-Hexadecanol, 2-methyl-	- -	µg/L													
1-Octanol, 5,7,7-trimethyl-2-(1,3,3-trimethylbutyl)-	- -	µg/L													
1-Undecene	- -	µg/L													
2 (3H)-Benzothiazolone	- -	µg/L	**59 NJ**	**28 NJ**	**45 NJ**	**32 NJ**	**39 NJ**	**52 NJ**	**11 NJ**		**7.2 NJ**	**140 NJ**	**150 NJ**	**30 NJ**	**230 NJ**
2,2'-Azo-bis-isobutyronitrile	- -	µg/L													
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethyl)-	- -	µg/L							**1 NJ**						
2-Pentanol, 2,3-dimethyl-	- -	µg/L				**1 NJ**									
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/L				**53 NJ**			**54 NJ**						**41 NJ**
2-Pentenal, (E)-	- -	µg/L													
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	- -	µg/L	**4.1 NJ**												
3-Buten-2-one, 3-methyl-	- -	µg/L													
3-Hexanol, 4-methyl-	- -	µg/L													
6,10,14-Hexadecatrien-1-ol, 3,7,11,15-tetramethyl-	- -	µg/L													
9-Octadecenamide, (Z)-	- -	µg/L													
Benzenamine, 3-methyl-	- -	µg/L													
Benzenamine, N,N-diethyl-	- -	µg/L													
Benzene, 1,2,3-trimethyl-	- -	µg/L													
Benzene, 1,2,4-trimethyl-	- -	µg/L													
Benzene, 1,3-dimethyl-	- -	µg/L													
Benzene, 1-ethyl-3-methyl-	- -	µg/L													
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L													
Benzene, propyl-	- -	µg/L													
Benzenemethanol, alpha-(aminomethyl)-4-hydroxy…	- -	µg/L													
Benzenemethanol, α,α-dimethyl-	- -	µg/L													

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-604	SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():															
Date Collected:			09/30/04	10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-067-LF	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
Benzenesulfonamide, N-butyl-	- -	µg/L													
Benzenesulfonamide, N-ethyl-2-methyl-	- -	µg/L						**3.2 NJ**							
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L	**4.5 NJ**												
Benzoic acid, p-tert-butyl-	- -	µg/L													
Benzothiazole	- -	µg/L										**2.6 NJ**	**2.3 NJ**		
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L				**2 NJ**									
Butane, 2,3-dimethyl-2-nitro-	- -	µg/L													
Cyclohexanol	- -	µg/L				**1 NJ**									
Cyclohexanol, 3,3,5-trimethyl-	- -	µg/L				**2 NJ**									
Cyclohexanone, 3,3,5-trimethyl-	- -	µg/L				**3 NJ**									
Cyclopentasiloxane, decamethyl-	- -	µg/L													**3 NJ**
Diethyltoluamide	- -	µg/L	**2.4 NJ**												
Diphenyl ether	- -	µg/L													
Di-sec-butyl ether	- -	µg/L													**3 NJ**
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L													
Dodecanoic acid	- -	µg/L													
Ethanol, 2-butoxy-, phosphate (3:1)	- -	µg/L													
Formamide, N,N-dibutyl-	- -	µg/L				**1 NJ**									
Hexadecanoic acid	- -	µg/L													
Hexanoic Acid, 2-Ethyl-	- -	µg/L													
Hexanoic acid, 3,5,5-trimethyl-	- -	µg/L													
Hexanoic acid, 3,5,5-trimethyl-, 1,2,3-propanetri…	- -	µg/L													
Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-	- -	µg/L													**4 NJ**
Hydroquinone	- -	µg/L													
Indane	- -	µg/L													
Lycopodan-5-One, 12-Hydroxy-	- -	µg/L													
Methylated Phenol	- -	µg/L													
Morpholine, 4-Acetyl-	- -	µg/L													
Naphthalene, 1-methyl-	- -	µg/L													
Nonacosanol	- -	µg/L													

TABLE 4-6
GROUNDWATER RESULTS FOR SVOC TICs (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-604	SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():															
Date Collected:			09/30/04	10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-067-LF	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
Octadecanoic acid, 2-methylpropyl ester	- -	µg/L													
Octadecanoic acid, butyl ester	- -	µg/L													
Octasulfur	- -	µg/L												**7.3 NJ**	
Oleic Acid	- -	µg/L													
Oleic acid, eicosyl ester	- -	µg/L													
Organic acid	- -	µg/L													
Organic ester	- -	µg/L													
Phenol, 2-(phenylmethyl)-	- -	µg/L													
Phenol, 2,2'-methylenebis-	- -	µg/L													
Phenol, 2,4'-isopropylidenedi-	- -	µg/L													
Phenol, 2-[(4-hydroxyphenyl)methyl]-	- -	µg/L													
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L							**1 NJ**						
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L													
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L	**9.7 NJ**	**8 NJ**	**18 NJ**	**2 NJ**	**23 NJ**	**27 NJ**	**3 NJ**			**15 NJ**	**16 NJ**	**8.9 NJ**	
Phenol, 4,4'-methylenebis-	- -	µg/L													
Phenol, M-Tert-Butyl-	- -	µg/L													
Phenol, p-tert-butyl-	- -	µg/L													**3 NJ**
Phosphoric acid, triphenyl ester	- -	µg/L													
Propanedioic acid, hexyl-, diethyl ester	- -	µg/L													
Propylene Glycol	- -	µg/L													
Pyridine, 2-methyl-	- -	µg/L													
saturated carboxylic acid isomer	- -	µg/L													**5 J**
Substituted Benzene	- -	µg/L													
Substituted Benzene 1	- -	µg/L													
Substituted Benzene 2	- -	µg/L													
Substituted Benzene 3	- -	µg/L													
Tetradecanamide	- -	µg/L			**6.5 NJ**										
Tetradecanoic acid	- -	µg/L							**1 NJ**						
Triethyl phosphate	- -	µg/L													
Tri-n-butylphosphate	- -	µg/L													
Unknown TICs (SVOCs) - occurences	- -	(Count)	11	4	5	9	3	1	6	2	3	3	5	1	1

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B	GNP-705B
Sample Depth():															
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05	03/13/07
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B	GNP-705B
Pesticides															
4,4'-DDD	2.8	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
4,4'-DDE	2	µg/L	0.0053 U	0.005 UJ	**0.0051 J**	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
4,4'-DDT	2	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Aldrin	0.04	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
alpha-BHC	0.11	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
alpha-Chlordane	1.9	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
beta-BHC	0.37	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Delta-BHC	0.37	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.1 U	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Dieldrin	0.042	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Endosulfan I	220	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Endosulfan II	220	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Endosulfan Sulfate	220	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Endrin	2	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Endrin Aldehyde	2	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Endrin Ketone	2	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Gamma-BHC	0.2	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	**0.008 J**	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Gamma-Chlordane	1.9	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Heptachlor	0.15	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Heptachlor Epoxide	0.074	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Methoxychlor	40	µg/L	0.0053 U	0.005 UJ	0.005 UJ	NA	0.0052 UJ	NA	NA	0.005 U	0.0058 U	0.005 U	NA	0.005 U	NA
Toxaphene	0.61	µg/L	0.27 U	0.25 UJ	0.25 UJ	NA	0.26 UJ	NA	NA	0.25 U	0.29 U	0.25 U	NA	0.25 U	NA
PCBs															
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	0.21 U	0.2 U	0.2 U	NA	0.21 U	NA	NA	0.2 U	0.23 U	0.2 U	NA	0.2 U	NA
Aroclor-1221	0.068	µg/L	0.21 U	0.2 U	0.2 U	NA	0.21 U	NA	NA	0.2 U	0.23 U	0.2 U	NA	0.2 U	NA
Aroclor-1232	0.068	µg/L	0.21 U	0.2 U	0.2 U	NA	0.21 U	NA	NA	0.2 U	0.23 U	0.2 U	NA	0.2 U	NA
Aroclor-1242	0.34	µg/L	0.21 U	0.2 U	0.2 U	NA	0.21 U	NA	NA	0.2 U	0.23 U	0.2 U	NA	0.2 U	NA
Aroclor-1248	0.34	µg/L	0.21 U	0.2 U	0.2 U	NA	0.21 U	NA	NA	0.2 U	0.23 U	0.2 U	NA	0.2 U	NA
Aroclor-1254	0.34	µg/L	0.21 U	0.2 U	0.2 U	NA	0.21 U	NA	NA	0.2 U	0.23 U	**0.58**	NA	0.2 U	NA
Aroclor-1260	0.34	µg/L	0.21 U	0.2 U	0.2 U	NA	0.21 U	NA	NA	0.2 U	0.23 U	0.2 U	NA	0.2 U	NA
Total PCBs	- -	µg/L	ND	ND	ND	NA	ND	NA	NA	ND	ND	**0.58**	NA	ND	NA

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI
Sample Depth():														
Date Collected:			11/29/05	11/29/05	03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09	11/24/09	11/24/09
Sample Name:	PAL	Units	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI	GW-208B-UI
Pesticides														
4,4'-DDD	2.8	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	**R [0.00282 J]**	0.000526 U	0.000532 U
4,4'-DDE	2	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	**R [0.00135 J]**	0.000526 U	0.000532 U
4,4'-DDT	2	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Aldrin	0.04	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	**0.000857 J**	0.000532 U
alpha-BHC	0.11	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	**0.000988**
alpha-Chlordane	1.9	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	**0.00508 J [0.00922 J]**	0.000526 U	**0.000892**
beta-BHC	0.37	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	**0.00278 J**	0.000532 U
Delta-BHC	0.37	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 UJ	0.01 UJ	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Dieldrin	0.042	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	**0.00177 J**	0.000532 U
Endosulfan I	220	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Endosulfan II	220	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Endosulfan Sulfate	220	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	**0.0005 UJ [0.107 J]**	0.000526 U	0.000532 U
Endrin	2	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Endrin Aldehyde	2	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 UJ [0.000532 U]	0.000526 U	0.000532 U
Endrin Ketone	2	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Gamma-BHC	0.2	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Gamma-Chlordane	1.9	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Heptachlor	0.15	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Heptachlor Epoxide	0.074	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Methoxychlor	40	µg/L	0.005 UJ	0.005 UJ	NA	0.0062 U	NA	0.0056 UJ	0.01 U	0.01 U	NA	0.0005 U [0.000532 U]	0.000526 U	0.000532 U
Toxaphene	0.61	µg/L	0.25 UJ	0.25 UJ	NA	0.31 U	NA	0.28 UJ	1 U	1 U	NA	0.025 U [0.0266 U]	0.0263 U	0.0266 U
PCBs														
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.02 U [0.021 U]	0.021 U	0.021 U
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.02 U [0.021 U]	0.021 U	0.021 U
Aroclor-1016	2.6	µg/L	0.2 UJ	0.2 UJ	NA	0.25 U	NA	0.22 UJ	0.21 U	0.2 U	NA	0.02 U [0.021 U]	0.021 U	0.021 U
Aroclor-1221	0.068	µg/L	0.2 UJ	0.2 UJ	NA	0.25 U	NA	0.22 UJ	0.21 U	0.2 U	NA	0.02 U [0.021 U]	0.021 U	0.021 U
Aroclor-1232	0.068	µg/L	0.2 UJ	0.2 UJ	NA	0.25 U	NA	0.22 UJ	0.21 U	0.2 U	NA	0.02 U [0.021 U]	0.021 U	0.021 U
Aroclor-1242	0.34	µg/L	0.2 UJ	0.2 UJ	NA	0.25 U	NA	0.22 UJ	0.21 U	0.2 U	NA	**0.3 [0.258]**	0.021 U	0.021 U
Aroclor-1248	0.34	µg/L	0.2 UJ	0.2 UJ	NA	0.25 U	NA	0.22 UJ	0.21 U	0.2 U	NA	0.02 U [0.021 U]	0.021 U	0.021 U
Aroclor-1254	0.34	µg/L	0.2 UJ	0.2 UJ	NA	0.25 U	NA	0.22 UJ	0.21 U	0.2 U	NA	**0.132 [0.13]**	0.021 U	0.021 U
Aroclor-1260	0.34	µg/L	0.2 UJ	0.2 UJ	NA	0.25 U	NA	0.22 UJ	0.21 U	0.2 U	NA	0.02 U [0.021 U]	0.021 U	0.021 U
Total PCBs	- -	µg/L	ND	ND	NA	ND	NA	ND	ND	ND	NA	NA	NA	NA

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A	MW-106A	MW-106B	MW-106B	MW-106B	MW-106C	MW-106C	MW-108A	MW-108A
Sample Depth():															
Date Collected:			11/24/09	10/01/03	09/30/04	10/01/03	09/30/04	12/02/05	09/28/04	09/28/04	12/02/05	09/28/04	12/02/05	10/01/03	09/22/04
Sample Name:	PAL	Units	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B	GW-077-DF	MW-106C	GW-010-LF	GW-046-LF
Pesticides															
4,4'-DDD	2.8	µg/L	**0.0119 J**	0.005 U	0.005 U	0.005 U	0.005 U	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	2	µg/L	0.0005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDT	2	µg/L	R	0.005 U	0.005 U	0.005 U	0.005 U	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
Aldrin	0.04	µg/L	0.0005 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
alpha-BHC	0.11	µg/L	0.0005 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
alpha-Chlordane	1.9	µg/L	**0.00491 J**	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
beta-BHC	0.37	µg/L	0.0005 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
Delta-BHC	0.37	µg/L	0.0005 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
Dieldrin	0.042	µg/L	0.0005 U	0.005 U	0.005 U	**0.0083 J**	**0.0072**	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	220	µg/L	0.0005 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
Endosulfan II	220	µg/L	0.0005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	220	µg/L	0.0005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	2	µg/L	R	0.005 U	0.005 U	0.005 U	0.005 U	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	2	µg/L	0.0005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	2	µg/L	0.0005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0054 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.2	µg/L	R	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
Gamma-Chlordane	1.9	µg/L	0.0005 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
Heptachlor	0.15	µg/L	0.0005 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.074	µg/L	0.0005 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0054 U	0.0025 U	0.0025 U	0.0052 U	0.0025 U	0.005 U	0.0025 U	0.0025 U
Methoxychlor	40	µg/L	0.0005 U	0.025 U	0.025 U	0.025 U	0.025 U	0.0054 U	0.025 U	0.025 U	0.0052 U	0.025 U	0.005 U	0.025 U	0.025 U
Toxaphene	0.61	µg/L	0.025 U	0.25 U	0.25 U	0.25 U	0.25 U	0.27 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U	0.25 U	0.25 U
PCBs															
Aroclor 1262	- -	µg/L	0.08 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	0.08 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	0.08 U	0.05 U	0.05 U	0.05 U	0.05 U	0.22 U	0.05 U	0.05 U	0.21 U	0.05 U	0.2 U	0.05 U	0.05 U
Aroclor-1221	0.068	µg/L	0.08 U	0.1 U	0.1 U	0.1 U	0.1 U	0.22 U	0.1 U	0.1 U	0.21 U	0.1 U	0.2 U	0.1 U	0.1 U
Aroclor-1232	0.068	µg/L	0.08 U	0.05 U	0.05 U	0.05 U	0.05 U	0.22 U	0.05 U	0.05 U	0.21 U	0.05 U	0.2 U	0.05 U	0.05 U
Aroclor-1242	0.34	µg/L	0.08 U	0.05 U	0.05 U	0.05 U	0.05 U	0.22 U	0.05 U	0.05 U	0.21 U	0.05 U	0.2 U	0.05 U	0.05 U
Aroclor-1248	0.34	µg/L	0.08 U	0.05 U	0.05 U	0.05 U	0.05 U	0.22 U	0.05 U	0.05 U	0.21 U	0.05 U	0.2 U	0.05 U	0.05 U
Aroclor-1254	0.34	µg/L	**4.28**	0.05 U	0.05 U	0.05 U	0.05 U	0.22 U	0.05 U	0.05 U	0.21 U	0.05 U	0.2 U	0.05 U	0.05 U
Aroclor-1260	0.34	µg/L	0.08 U	0.05 U	0.05 U	0.05 U	0.05 U	0.22 U	0.05 U	0.05 U	0.21 U	0.05 U	0.2 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A	MW-109A	MW-109A	MW-109AA	MW-109AA	MW-109AA	MW-109B	MW-109B
Sample Depth():															
Date Collected:			10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03	09/23/04	03/14/07	09/30/03	09/23/04	09/23/04	09/21/04	09/21/04
Sample Name:	PAL	Units	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF	GW-047-LF	MW-109A	GW-003-LF	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01
Pesticides															
4,4'-DDD	2.8	µg/L	0.005 U	0.0056 U	0.005 U	**0.0038 J**	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
4,4'-DDE	2	µg/L	0.005 U	0.0056 U	0.005 U	0.005 U	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
4,4'-DDT	2	µg/L	0.005 U	0.0056 U	0.005 U	0.005 U	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
Aldrin	0.04	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
alpha-BHC	0.11	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
alpha-Chlordane	1.9	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
beta-BHC	0.37	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
Delta-BHC	0.37	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
Dieldrin	0.042	µg/L	0.005 U	0.0056 U	0.005 U	0.005 U	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
Endosulfan I	220	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
Endosulfan II	220	µg/L	0.005 U	0.0056 U	0.005 U	0.005 U	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
Endosulfan Sulfate	220	µg/L	0.005 U	0.0056 U	0.005 U	**0.0082 J**	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
Endrin	2	µg/L	0.005 U	0.0056 U	0.005 U	0.005 U	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
Endrin Aldehyde	2	µg/L	0.005 U	0.0056 U	0.005 U	0.005 U	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
Endrin Ketone	2	µg/L	0.005 U	0.0056 U	0.005 U	0.005 U	NA	0.005 U	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	NA
Gamma-BHC	0.2	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
Gamma-Chlordane	1.9	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
Heptachlor	0.15	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
Heptachlor Epoxide	0.074	µg/L	0.0025 U	0.0056 U	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA
Methoxychlor	40	µg/L	0.025 U	0.0056 U	0.025 U	0.025 U	NA	0.025 U	0.025 U	NA	0.025 U	0.025 U	0.025 U	0.025 U	NA
Toxaphene	0.61	µg/L	0.25 U	0.28 U	0.25 U	0.25 U	NA	0.25 U	0.25 U	NA	0.25 U	0.25 U	0.25 U	0.25 U	NA
PCBs															
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	0.05 U	0.22 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	NA
Aroclor-1221	0.068	µg/L	0.1 U	0.22 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	NA
Aroclor-1232	0.068	µg/L	0.05 U	0.22 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	NA
Aroclor-1242	0.34	µg/L	0.05 U	0.22 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	NA
Aroclor-1248	0.34	µg/L	0.05 U	0.22 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	NA
Aroclor-1254	0.34	µg/L	0.05 U	0.22 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	NA
Aroclor-1260	0.34	µg/L	0.05 U	0.22 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	NA
Total PCBs	- -	µg/L	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	NA

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109C	MW-109C	MW-110A	MW-110A	MW-110B	MW-110B	MW-110B	MW-110B	MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA
Sample Depth():															
Date Collected:			09/21/04	03/14/07	09/30/03	09/22/04	09/30/03	09/30/03	09/22/04	03/14/07	09/23/04	03/14/07	10/02/03	09/24/04	10/02/03
Sample Name:	PAL	Units	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02	GW-005-WT	GW-044-WT	MW-110B	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT
Pesticides															
4,4'-DDD	2.8	µg/L	0.005 U	NA	0.005 U	0.005 U	**0.0056**	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
4,4'-DDE	2	µg/L	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
4,4'-DDT	2	µg/L	0.005 U	NA	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
Aldrin	0.04	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	0.11	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	1.9	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
beta-BHC	0.37	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
Delta-BHC	0.37	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.042	µg/L	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
Endosulfan I	220	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
Endosulfan II	220	µg/L	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	220	µg/L	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
Endrin	2	µg/L	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	2	µg/L	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
Endrin Ketone	2	µg/L	0.005 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA	0.005 U	NA	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.2	µg/L	0.0025 U	NA	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
Gamma-Chlordane	1.9	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
Heptachlor	0.15	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.074	µg/L	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	NA	0.0025 U	NA	0.0025 U	0.0025 U	0.0025 U
Methoxychlor	40	µg/L	0.025 U	NA	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	NA	0.025 U	NA	0.025 U	0.025 U	0.025 U
Toxaphene	0.61	µg/L	0.25 U	NA	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	NA	0.25 U	NA	0.25 U	0.25 U	0.25 U
PCBs															
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	0.05 U	NA	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.068	µg/L	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.068	µg/L	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	0.05 U	NA	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.34	µg/L	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	0.05 U	NA	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.34	µg/L	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	0.05 U	NA	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.34	µg/L	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	0.05 U	NA	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.34	µg/L	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	0.05 U	NA	0.05 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	ND	NA	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-111AA	MW-111B	MW-111C	MW-112A	MW-112A	MW-112A	MW-112AA	MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C
Sample Depth():															
Date Collected:			09/24/04	09/24/04	09/20/04	10/02/03	09/27/04	11/30/05	10/03/03	09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05
Sample Name:	PAL	Units	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP	GW-055-NP	MW-112A	GW-020-NP	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C
Pesticides															
4,4'-DDD	2.8	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
4,4'-DDE	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
4,4'-DDT	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
Aldrin	0.04	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 UJ	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
alpha-BHC	0.11	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
alpha-Chlordane	1.9	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
beta-BHC	0.37	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	**0.0026**	0.0025 U	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
Delta-BHC	0.37	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
Dieldrin	0.042	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
Endosulfan I	220	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
Endosulfan II	220	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
Endosulfan Sulfate	220	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
Endrin	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
Endrin Aldehyde	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
Endrin Ketone	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U
Gamma-BHC	0.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 UJ	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
Gamma-Chlordane	1.9	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
Heptachlor	0.15	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 UJ	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
Heptachlor Epoxide	0.074	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0053 U	0.0025 U	0.005 U
Methoxychlor	40	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.0053 U	0.025 U	0.025 U	0.005 U	0.025 U	0.0053 U	0.025 U	0.005 U
Toxaphene	0.61	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.27 U	0.25 U	0.25 U	0.25 U	0.25 U	0.27 U	0.25 U	0.25 U
PCBs															
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.2 U	0.05 U	0.21 U	0.05 U	0.2 U
Aroclor-1221	0.068	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.21 U	0.1 U	0.1 U	0.2 U	0.1 U	0.21 U	0.1 U	0.2 U
Aroclor-1232	0.068	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.2 U	0.05 U	0.21 U	0.05 U	0.2 U
Aroclor-1242	0.34	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.2 U	0.05 U	0.21 U	0.05 U	0.2 U
Aroclor-1248	0.34	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.2 U	0.05 U	0.21 U	0.05 U	0.2 U
Aroclor-1254	0.34	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.2 U	0.05 U	0.21 U	0.05 U	0.2 U
Aroclor-1260	0.34	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.2 U	0.05 U	0.21 U	0.05 U	0.2 U
Total PCBs	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112C	MW-502	MW-A2	MW-A2	MW-A2	MW-B1	MW-B1	MW-B2	MW-B2	MW-C1	MW-C1	MW-C1	MW-C2
Sample Depth():															
Date Collected:			03/14/07	12/08/05	10/01/03	09/30/04	12/08/05	10/01/03	09/24/04	09/29/03	09/27/04	09/30/03	09/28/04	12/07/05	09/30/03
Sample Name:	PAL	Units	MW-112C	MW-502	GW-012-QW	GW-080-QW	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF
Pesticides															
4,4'-DDD	2.8	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 UJ	0.005 U	**0.0067 J**	0.005 U	0.0059 UJ	0.005 U
4,4'-DDE	2	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.0059 UJ	0.005 U
4,4'-DDT	2	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.0059 UJ	0.005 U
Aldrin	0.04	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	**0.0038 J**	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
alpha-BHC	0.11	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
alpha-Chlordane	1.9	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
beta-BHC	0.37	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	R	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
Delta-BHC	0.37	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
Dieldrin	0.042	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0059 UJ	0.005 U
Endosulfan I	220	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
Endosulfan II	220	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.0059 UJ	0.005 U
Endosulfan Sulfate	220	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.0059 UJ	0.005 U
Endrin	2	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0059 UJ	0.005 U
Endrin Aldehyde	2	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.0059 UJ	0.005 U
Endrin Ketone	2	µg/L	NA	0.0052 U	0.005 U	0.005 U	0.0063 UJ	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.0059 UJ	0.005 U
Gamma-BHC	0.2	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
Gamma-Chlordane	1.9	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
Heptachlor	0.15	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
Heptachlor Epoxide	0.074	µg/L	NA	0.0052 U	0.0025 U	0.0025 U	0.0063 UJ	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0025 U	0.0059 UJ	0.0025 U
Methoxychlor	40	µg/L	NA	0.0052 U	0.025 U	0.025 U	0.0063 UJ	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U	0.025 U	0.0059 UJ	0.025 U
Toxaphene	0.61	µg/L	NA	0.26 U	0.25 U	0.25 U	0.32 UJ	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.29 UJ	0.25 U
PCBs															
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	NA	0.21 U	0.05 U	0.05 U	0.25 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.24 U	0.05 U
Aroclor-1221	0.068	µg/L	NA	0.21 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.24 U	0.1 U
Aroclor-1232	0.068	µg/L	NA	0.21 U	0.05 U	0.05 U	0.25 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.24 U	0.05 U
Aroclor-1242	0.34	µg/L	NA	0.21 U	0.05 U	0.05 U	0.25 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.24 U	0.05 U
Aroclor-1248	0.34	µg/L	NA	0.21 U	0.05 U	0.05 U	0.25 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.24 U	0.05 U
Aroclor-1254	0.34	µg/L	NA	0.21 U	0.05 U	0.05 U	0.25 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.24 U	0.05 U
Aroclor-1260	0.34	µg/L	NA	0.21 U	0.05 U	0.05 U	0.25 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.24 U	0.05 U
Total PCBs	- -	µg/L	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	MW-C2 09/27/04 GW-071-LF	MW-C2 12/06/05 MW-C2	MW-C2 03/13/07 MW-C2	MW-EA-1 10/01/04 GW-075-WT	MW-EA-1 12/09/05 MW-EAI	MW-EA-3 10/01/04 GW-076-WT	P-7 10/02/03 GW-014-LF	P-7 09/28/04 GW-059-LF	P-8 10/02/03 GW-018-LF	P-8 09/30/04 GW-063-LF	SEA-601 10/02/03 GW-017-LF	SEA-601 09/28/04 GW-060-LF
Pesticides														
4,4'-DDD	2.8	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	2	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDT	2	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Aldrin	0.04	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	0.11	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	1.9	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
beta-BHC	0.37	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	R	0.0025 U	0.0025 U	0.0025 U
Delta-BHC	0.37	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.042	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	220	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Endosulfan II	220	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	220	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	2	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	2	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	2	µg/L	0.005 U	0.0056 U	NA	0.005 U	0.0067 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.2	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Gamma-Chlordane	1.9	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor	0.15	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.074	µg/L	0.0025 U	0.0056 U	NA	0.0025 U	0.0067 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Methoxychlor	40	µg/L	0.025 U	0.0056 U	NA	0.025 U	0.0067 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toxaphene	0.61	µg/L	0.25 U	0.28 U	NA	0.25 U	0.33 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
PCBs														
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	0.05 U	0.22 U	NA	0.05 U	0.27 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.068	µg/L	0.1 U	0.22 U	NA	0.1 U	0.27 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.068	µg/L	0.05 U	0.22 U	NA	0.05 U	0.27 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.34	µg/L	0.05 U	0.22 U	NA	0.05 U	0.27 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.34	µg/L	0.05 U	0.22 U	NA	0.05 U	0.27 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.34	µg/L	0.05 U	0.22 U	NA	0.05 U	0.27 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.34	µg/L	0.05 U	0.22 U	NA	0.05 U	0.27 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth(): / Date Collected: / Sample Name:	PAL	Units	SEA-602A 10/03/03 GW-022-LF	SEA-602A 09/28/04 GW-062-LF	SEA-602a 12/07/05 SEA-602a	SEA-602A 03/13/07 SEA-602A	SEA-602B 10/03/03 GW-023-LF	SEA-602B 10/01/04 GW-061-LF	SEA-603 10/03/03 GW-021-LF	SEA-603 10/01/04 GW-064-LF	SEA-603 10/01/04 GW-FD-13	SEA-603 12/06/05 SEA-603	SEA-604 10/04/03 GW-027-LF	SEA-604 09/30/04 GW-067-LF
Pesticides														
4,4'-DDD	2.8	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	R	0.005 U	0.005 U	0.005 UJ	0.005 U	**0.005 J**
4,4'-DDE	2	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	**0.0056 J**	0.005 U	0.005 U
4,4'-DDT	2	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
Aldrin	0.04	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	**0.006 J**	0.0025 U	0.0025 U
alpha-BHC	0.11	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	**0.0035 J**	0.0025 U	0.0025 U	0.005 UJ	0.0025 U	0.0025 U
alpha-Chlordane	1.9	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.005 UJ	0.0025 U	0.0025 U
beta-BHC	0.37	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.005 UJ	R	0.0025 U
Delta-BHC	0.37	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.005 UJ	0.0025 U	0.0025 U
Dieldrin	0.042	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
Endosulfan I	220	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.005 UJ	0.0025 U	0.0025 U
Endosulfan II	220	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
Endosulfan Sulfate	220	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
Endrin	2	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
Endrin Aldehyde	2	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
Endrin Ketone	2	µg/L	0.005 U	0.005 U	0.005 UJ	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
Gamma-BHC	0.2	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	**0.016 J**	0.0025 U	0.0025 U
Gamma-Chlordane	1.9	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.005 UJ	0.0025 U	0.0025 U
Heptachlor	0.15	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.005 UJ	**0.0046 J**	0.0025 U
Heptachlor Epoxide	0.074	µg/L	0.0025 U	0.0025 U	0.005 UJ	NA	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.005 UJ	0.0025 U	0.0025 U
Methoxychlor	40	µg/L	0.025 U	0.025 U	0.005 UJ	NA	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.005 UJ	0.025 U	0.025 U
Toxaphene	0.61	µg/L	0.25 U	0.25 U	0.25 UJ	NA	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U
PCBs														
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	0.05 U	0.05 U	0.2 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 UJ	0.05 U	0.05 U
Aroclor-1221	0.068	µg/L	0.1 U	0.1 U	0.2 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 UJ	0.1 U	0.1 U
Aroclor-1232	0.068	µg/L	0.05 U	0.05 U	0.2 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 UJ	0.05 U	0.05 U
Aroclor-1242	0.34	µg/L	0.05 U	0.05 U	0.2 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.33 J**	0.05 U	0.05 U
Aroclor-1248	0.34	µg/L	0.05 U	0.05 U	0.2 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 UJ	**0.18 J**	0.05 U
Aroclor-1254	0.34	µg/L	0.05 U	0.05 U	0.2 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 UJ	0.05 U	0.05 U
Aroclor-1260	0.34	µg/L	0.05 U	0.05 U	0.2 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 UJ	0.05 U	0.05 U
Total PCBs	- -	µg/L	ND	ND	ND	NA	ND	ND	ND	ND	ND	**0.33 J**	**0.18 J**	ND

TABLE 4-7
GROUNDWATER RESULTS FOR PCBs AND PESTICIDES (ug/L)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():														
Date Collected:			10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
Pesticides														
4,4'-DDD	2.8	µg/L	0.005 U	R	0.005 U	0.005 U	R	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
4,4'-DDE	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
4,4'-DDT	2	µg/L	0.005 U	**0.0038 J**	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Aldrin	0.04	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
alpha-BHC	0.11	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
alpha-Chlordane	1.9	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
beta-BHC	0.37	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
Delta-BHC	0.37	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 UJ
Dieldrin	0.042	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Endosulfan I	220	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
Endosulfan II	220	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Endosulfan Sulfate	220	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Endrin	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Endrin Aldehyde	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Endrin Ketone	2	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0053 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Gamma-BHC	0.2	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
Gamma-Chlordane	1.9	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
Heptachlor	0.15	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
Heptachlor Epoxide	0.074	µg/L	0.0025 U	0.0025 U	0.005 U	0.0025 U	0.0025 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.01 U
Methoxychlor	40	µg/L	0.025 U	0.025 U	0.005 U	0.025 U	0.025 U	0.0053 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.01 U
Toxaphene	0.61	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
PCBs														
Aroclor 1262	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	2.6	µg/L	0.05 U	0.05 U	0.2 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U
Aroclor-1221	0.068	µg/L	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.21 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.21 U
Aroclor-1232	0.068	µg/L	0.05 U	0.05 U	0.2 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U
Aroclor-1242	0.34	µg/L	0.05 U	0.05 U	0.2 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U
Aroclor-1248	0.34	µg/L	0.05 U	0.05 U	0.2 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U
Aroclor-1254	0.34	µg/L	0.05 U	0.05 U	0.2 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U
Aroclor-1260	0.34	µg/L	0.05 U	0.05 U	0.2 U	0.05 U	0.05 U	0.21 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.21 U
Total PCBs	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B
Sample Depth():														
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B
Metals and Cyanide														
Aluminum	50	µg/L	**1,700**	**28**	**32**	**260**	**32 J**	50 U	50 U	**240 J**	**340 J**	**80 J**	50 U	**95 J**
Antimony	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**0.82**	0.5 U
Arsenic	0.45	µg/L	**2.1**	**120**	**110**	**190**	**0.55**	**0.18 J**	**0.24 J**	**0.78**	**0.88**	**1.3**	**1**	**2.4**
Barium	2,000	µg/L	**260**	**670**	**630**	**340**	**400**	**370**	**390**	**24**	**26**	**700**	**690**	**30**
Beryllium	4	µg/L	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U
Cadmium	5	µg/L	**0.12**	0.1 U	0.1 U	0.1 U	**0.32**	**0.31**	**0.32**	**0.1**	**0.13**	**0.31**	**0.19**	**0.12**
Calcium	- -	µg/L	**35,000**	**63,000**	**50,000**	**27,000 J**	**61,000**	**49,000 J**	**49,000 J**	**15,000**	**15,000**	**100,000**	**74,000 J**	**42,000**
Chromium	100	µg/L	**8.3**	**4.6**	**4.6**	**5.3 J**	**2.8**	**2.2 J**	**2.2 J**	**0.65**	**0.84**	**7.7**	**7 J**	**1.7**
Cobalt	11	µg/L	**3.8**	**3.4**	**3.3**	**6.7 E**	**0.84**	**0.46 E**	**0.48 E**	**2**	**2.1**	**2.6**	**2.6 E**	**0.65**
Copper	1,000	µg/L	**8.1**	**1**	**1.2**	**3.1**	**4.6**	**5.3**	**5.2**	3 U	3 U	**4.6**	**3.2**	3 U
Cyanide	200	µg/L	5 U	5 U	5 U	NA	5 U	NA	NA	5 U	5 U	5 U	NA	5 U
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	**3,800**	**49,000**	**49,000**	**25,000**	**59,000**	**52,000**	**53,000**	**1,200**	**1,300**	**77,000**	**70,000**	**1,600**
Lead	15	µg/L	**2 J**	**0.16 J**	**0.62 J**	**1.4**	**5.1**	**4.3**	**4.5**	**1.3**	**1.1**	**13**	**8.1**	**0.24**
Magnesium	- -	µg/L	**7,700 J**	**23,000 J**	**22,000 J**	**13,000**	**5,200 J**	**4,900**	**4,800**	**5,100 J**	**5,100 J**	**14,000 J**	**12,000**	**9,400 J**
Manganese	50	µg/L	**1,100**	**1,900**	**1,800**	**930**	**610**	**720**	**770**	**2,800**	**2,800**	**540**	**480**	**640**
Mercury	0.57	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	730	µg/L	**11**	**14**	**14**	**16**	**4**	**2.4**	**2.3**	2.5 U	2.4 U	**14**	**8.9**	**3.4**
Potassium	- -	µg/L	**5,600**	**29,000**	**27,000**	**25,000**	**4,700 J**	**3,300**	**3,400**	**1,900 J**	**2,000 J**	**15,000 J**	**15,000**	**6,400 J**
Selenium	50	µg/L	**0.85**	**18**	**17**	**3.8**	2 U	1 U	1 U	2 U	2 U	**2.3**	1 U	2 U
Silver	100	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.12**
Sodium	- -	µg/L	**46,000**	**130,000**	**130,000**	**86,000**	**21,000 J**	**17,000**	**17,000**	**16,000 J**	**16,000 J**	**30,000 J**	**29,000**	**49,000 J**
Thallium	2	µg/L	**0.13**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Vanadium	260	µg/L	**4.8**	**3.1**	**2.9**	**3.7 J**	**4.1**	**3.6 J**	**3.9 J**	**0.65**	**0.77**	**7.6**	**7.6 J**	**0.74**
Zinc	5,000	µg/L	7.8 U	2.5 U	3.9 U	**7.9**	**42**	**72**	**78**	4 U	4.4 U	**18**	**13**	2 U

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B
Sample Depth():														
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B
Metals and Cyanide, Dissolved														
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Sample Depth():													
Date Collected:			03/13/07	11/29/05	11/29/05	03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09
Sample Name:	PAL	Units	GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Metals and Cyanide													
Aluminum	50	µg/L	50 U	**43 J**	**130 J**	50 U	**22 J**	50 U	**38**	**260**	**68**	**110**	**130 [144]**
Antimony	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.62**	0.5 U	0.5 U	**2.1 [2.3]**
Arsenic	0.45	µg/L	**0.32 J**	**5**	**3**	**3.6**	**31**	**70**	**3.2**	**4.6**	**8.4**	**7.3**	**1.5 [1.7]**
Barium	2,000	µg/L	**40**	**30**	**120**	**46**	**93**	**110**	**21**	**47**	**75**	**55**	**479.5 [478.9]**
Beryllium	4	µg/L	0.2 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	**0.18**	0.1 U	0.2 U	0.5 U [0.5 U]
Cadmium	5	µg/L	**0.1**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**27**	**11**	**29**	**0.43 J [0.6]**
Calcium	- -	µg/L	**45,000 J**	**13,000**	**32,000**	**13,000 J**	**24,000**	**24,000 J**	**11,000**	**13,000 J**	**16,000 J**	**14,000 J**	**74,400 [66,500]**
Chromium	100	µg/L	**0.53 J**	**0.65**	**1.2**	**0.95 J**	0.5 U	0.5 U	**0.74**	**0.87**	**5.6**	**2.4 J**	**3 [3]**
Cobalt	11	µg/L	**2.2 E**	**0.12**	**1.1**	**0.2 E**	**0.18**	0.2 U	0.1 U	**11**	**33**	**21 E**	**1.7 [1.2]**
Copper	1,000	µg/L	1 U	3 U	3 U	1 U	3 U	1 U	1 U	**2**	**1.8**	**27**	**9 [9]**
Cyanide	200	µg/L	NA	5 U	5 U	NA	5 U	NA	5 U	5 UJ	5 UJ	NA	5 U [5 U]
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**202,000 [182,000]**
Iron	300	µg/L	**210**	**6,200**	**29,000**	**12,000**	**16,000**	**17,000**	**1,600**	**1,500**	**9,300**	**6,800**	**74,000 [81,000]**
Lead	15	µg/L	0.5 U	0.1 U	**1.2**	0.5 U	**0.2**	**0.56**	**0.38 J**	**0.2**	**1.2**	**8.3**	**22 J [33 J]**
Magnesium	- -	µg/L	**13,000**	**2,500 J**	**5,300 J**	**2,300**	**6,200 J**	**7,300**	**2,200 J**	**2,400**	**2,800**	**2,900**	**3,970 [3,800]**
Manganese	50	µg/L	**1,200**	**130**	**690**	**720**	**3,300**	**4,000**	**240**	**210**	**1,700**	**1,500**	**1,382 [1,075]**
Mercury	0.57	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.05 U [0.05 U]
Nickel	730	µg/L	**4**	1.3 U	2 U	**0.75**	1.2 U	**0.92**	0.51 U	**29**	**78**	**78**	**3.9 [3.5]**
Potassium	- -	µg/L	**5,200**	**3,000 J**	**3,400 J**	**2,800**	**3,200 J**	**3,700**	**2,900**	**2,900 J**	**2,600 J**	**2,600**	**2,860 [2,750]**
Selenium	50	µg/L	1 U	2 U	2 U	1 U	2 U	1 U	**0.66**	0.5 U	**0.84**	1 U	5 U [5 U]
Silver	100	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U [0.5 U]
Sodium	- -	µg/L	**45,000**	**30,000 J**	**32,000 J**	**31,000**	**20,000 J**	**22,000**	**38,000**	**44,000**	**19,000**	**30,000**	**23,800 [22,700]**
Thallium	2	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.15**	0.1 U	0.1 U	0.2 U [0.2 U]
Vanadium	260	µg/L	**1.2 J**	**0.88**	**1.5**	**4.2 J**	0.5 U	**2.6 J**	**1.2**	**1 J**	**0.89 J**	1 UJ	5 U [5 U]
Zinc	5,000	µg/L	**5.4**	2.1 U	5.8 U	**6.6**	2 U	5 U	2.9 U	**640**	**4,100**	**3,100**	**506 J [850 J]**

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Sample Depth():													
Date Collected:			03/13/07	11/29/05	11/29/05	03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09
Sample Name:	PAL	Units	GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI
Metals and Cyanide, Dissolved													
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.032 J**
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.00096 J**
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.0008**
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.4603**
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0005 U
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0005 U
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**69.8**
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.002**
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.0012**
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.0008 J**
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**74.8**
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.001 U
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3.51**
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.185**
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00005 U
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.0023**
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.88**
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.005 U
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0005 U
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**21.9**
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0002 U
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.005 U
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.43**

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A	MW-106A	MW-106B	MW-106B	MW-106B	MW-106C
Sample Depth():														
Date Collected:			11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03	09/30/04	12/02/05	09/28/04	09/28/04	12/02/05	09/28/04
Sample Name:	PAL	Units	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B	GW-077-DF
Metals and Cyanide														
Aluminum	50	µg/L	**68**	**43.4 J**	**114**	26 U	**13,200**	26 U	16 UJ	**14 J**	7 UJ	7 UJ	**120 J**	7 UJ
Antimony	6	µg/L	1 U	**0.65 J**	**5.7**	2 U	2 UJ	2 U	2 UJ	0.5 U	2 UJ	2 UJ	0.5 U	2 UJ
Arsenic	0.45	µg/L	**1.1**	**2.4**	**1.2**	**0.084 J**	**0.07 J**	**0.427**	0.408 UJ	**0.57**	**2.74 J**	**0.89 J**	**1.5**	**0.64**
Barium	2,000	µg/L	**870.6**	**859.3**	**295.3**	200 U	**240**	200 U	200 U	**45**	200 U	200 U	**58**	200 U
Beryllium	4	µg/L	0.5 U	0.5 U	0.5 U	0.2 U	0.49 UJ	0.2 U	0.3 UJ	0.1 U	0.2 UJ	0.2 UJ	0.1 U	0.2 UJ
Cadmium	5	µg/L	0.5 U	0.5 U	**4.3**	5 U	**0.65 J**	0.2 U	0.3 UJ	0.1 U	0.3 UJ	0.3 UJ	**0.17**	0.3 UJ
Calcium	- -	µg/L	**66,000**	**112,000**	**30,800**	**12,300**	**96,300**	**41,500**	**54,900**	**44,000**	**69,500 J**	**67,700 J**	**44,000**	**103,000 J**
Chromium	100	µg/L	**1**	**0.6 J**	**8**	0.6 U	**13.4**	0.6 U	0.4 UJ	0.5 U	0.4 UJ	0.4 UJ	**1.5**	0.4 UJ
Cobalt	11	µg/L	**1.2**	**1.4**	**7.6**	50 U	50 U	0.2 U	50 U	**0.36**	50 U	50 U	**0.52**	50 U
Copper	1,000	µg/L	**4**	**2**	**69**	25 U	25 U	0.7 U	25 U	3 U	25 U	25 U	**4.7**	25 U
Cyanide	200	µg/L	5 U	5 U	5 U	3 UJ	10 U	**15.5**	10 U	5 U	2 UJ	**2.4 J**	5 U	**7 J**
Hardness	- -	µg/L	**187,000**	**360,000**	**88,300**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	**6,030**	**3,310**	**21,900**	4 U	**16,100**	100 U	**601**	**770**	100 U	100 U	**1,000**	100 U
Lead	15	µg/L	**7**	**48**	**28**	15 U	**79.3**	**0.98 J**	3 U	**0.34**	3 U	3 U	**3.6**	3 U
Magnesium	- -	µg/L	**5,390**	**19,700**	**2,730**	5,000 U	**6,960**	**6,600**	**9,010**	**6,200 J**	**11,600**	**11,400**	**6,300 J**	**16,700**
Manganese	50	µg/L	**966**	**462.9**	**1,084**	15 U	**598**	2 U	15 U	5 U	**23**	**20.5**	**28**	15 U
Mercury	0.57	µg/L	0.05 U	0.05 U	**0.032 J**	0.14 U	0.3 U	0.14 U	0.28 U	0.2 U	0.28 U	0.28 U	0.2 U	0.27 U
Nickel	730	µg/L	**7.3**	**4.3**	**115.1**	40 U	40 U	0.6 U	40 U	2.1 U	40 U	40 U	2.5 U	40 U
Potassium	- -	µg/L	**3,380**	**2,630**	**1,600**	5,000 U	5,000 U	**6,120**	**6,180**	**6,100 J**	**5,550**	**5,440**	**7,000 J**	**5,790**
Selenium	50	µg/L	5 U	5 U	5 U	3 U	5 U	3 U	5 U	**2.1**	5 U	5 U	2 U	5 U
Silver	100	µg/L	0.5 U	0.5 U	**1.5**	0.4 UJ	10 U	0.4 UJ	10 U	0.1 U	10 U	10 U	0.1 U	10 U
Sodium	- -	µg/L	**36,600**	**37,800**	**23,800**	**38,100**	**6,060**	**39,600**	**29,000**	**32,000 J**	**16,700**	**16,000**	**24,000 J**	**14,400**
Thallium	2	µg/L	0.2 U	0.2 U	0.2 U	2 U	**4.4 J**	**2.6 J**	**3.4 J**	0.1 U	2 UJ	2 UJ	0.1 U	2 UJ
Vanadium	260	µg/L	5 U	5 U	**2.5 J**	50 U	**20.1**	0.4 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	**0.72**	0.5 UJ
Zinc	5,000	µg/L	**39**	**65**	**827**	**107**	**170**	20 U	20 U	4.3 U	20 U	20 U	4.7 U	20 U

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GW-207B-UI	GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A	MW-106A	MW-106B	MW-106B	MW-106B	MW-106C
Sample Depth():														
Date Collected:			11/24/09	11/24/09	11/24/09	10/01/03	09/30/04	10/01/03	09/30/04	12/02/05	09/28/04	09/28/04	12/02/05	09/28/04
Sample Name:	PAL	Units	GW-207B-UI	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B	GW-077-DF
Metals and Cyanide, Dissolved														
Aluminum	0.05	mg/L	0.05 U	0.05 U	**0.036 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	**0.00057 J**	**0.0006 J**	**0.0055**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	**0.0008**	**0.0018**	**0.0008**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	**0.84**	**0.8919**	**0.2743**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	0.0005 U	0.0005 U	0.0005 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	0.0005 U	0.0005 U	**0.00049 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	**66.7**	**109**	**29.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	**0.0009 J**	**0.0009 J**	**0.005**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	**0.0012**	**0.0012**	**0.0075**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	**0.01**	**0.0008 J**	**0.009**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	**5.42**	**3.05**	**19.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	0.001 U	0.001 U	**0.003**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	**4.75**	**17.4**	**2.55**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	**0.949**	**0.4042**	**1.058**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	0.00005 U	0.00005 U	0.00005 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	**0.0071**	**0.0036**	**0.1121**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	**3.56**	**2.75**	**1.72**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	0.005 U	0.005 U	0.005 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	0.0005 U	0.0005 U	0.0005 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	**33.8**	**36.7**	**22.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	0.0002 U	0.0002 U	0.0002 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	0.005 U	0.005 U	0.005 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	**0.021**	**0.036**	**0.748**	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A	MW-109A	MW-109A	MW-109AA
Sample Depth():														
Date Collected:			12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03	09/23/04	03/14/07	09/30/03
Sample Name:	PAL	Units	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF	GW-047-LF	MW-109A	GW-003-LF
Metals and Cyanide														
Aluminum	50	µg/L	10 UJ	200 U	**75.6**	200 U	**54**	**8.4 J**	**29.2 J**	50 U	200 U	**225**	**110**	200 U
Antimony	6	µg/L	0.5 U	2 U	2 UJ	2 U	0.5 U	2 UJ	2 UJ	0.5 U	2 U	2 UJ	0.5 U	2 U
Arsenic	0.45	µg/L	**0.71**	**3.29**	**2.05**	**7.48**	**1.8**	0.061 UJ	**2.6**	**1**	**18.8**	**11.6**	**21**	**1.82**
Barium	2,000	µg/L	**47**	200 U	200 U	**43.4 J**	**22**	200 U	200 U	**90**	200 U	200 U	**28**	200 U
Beryllium	4	µg/L	0.1 U	0.2 U	0.2 UJ	0.2 U	0.1 U	0.2 UJ	0.2 UJ	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U
Cadmium	5	µg/L	0.1 U	0.2 U	**0.72 J**	0.2 U	0.1 U	0.2 UJ	0.2 UJ	0.1 U	5 U	**3.6**	0.1 U	0.2 U
Calcium	- -	µg/L	**46,000**	**16,300**	**15,900**	**25,100**	**15,000**	**27,200**	**50,500**	**73,000 J**	**18,700**	**17,800**	**18,000 J**	**16,300**
Chromium	100	µg/L	0.5 U	10 U	2.1 UJ	0.6 U	**0.55**	0.8 UJ	0.5 UJ	0.5 U	0.6 U	0.5 UJ	0.5 U	10 U
Cobalt	11	µg/L	**0.42**	50 U	50 U	50 U	**0.44**	50 U	50 U	0.2 U	**3.2 J**	50 U	**3 E**	50 U
Copper	1,000	µg/L	3 U	0.7 U	25 U	0.7 U	1 U	25 U	25 U	**1.3**	0.7 U	25 U	**1.2**	25 U
Cyanide	200	µg/L	5 U	3 UJ	3 UJ	3 UJ	5 U	3 UJ	3 UJ	NA	3 UJ	3 UJ	NA	3 UJ
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	**790**	**3,750**	3,070 U	**1,730**	**940**	100 U	**181**	**390**	**16,900**	**16,300**	**21,000**	**921**
Lead	15	µg/L	0.1 U	**1.2 J**	3 U	**0.86 J**	**0.27 J**	3 U	3 U	0.5 U	0.7 U	3 U	0.5 U	**0.81 J**
Magnesium	- -	µg/L	**6,800 J**	5,000 U	5,000 U	5,000 U	**2,200 J**	5,000 U	**7,330 J**	**210**	5,000 U	5,000 U	**4,600**	5,000 U
Manganese	50	µg/L	**14**	**105**	**101**	**141**	**71**	**659**	15 U	5 U	**860**	**984**	**1,000**	**112**
Mercury	0.57	µg/L	0.2 U	0.14 U	0.28 U	0.15 U	0.2 U	0.29 U	0.29 U	0.2 U	0.14 U	0.28 U	0.2 U	0.14 U
Nickel	730	µg/L	2.8 U	0.6 U	40 U	40 U	1.2 U	40 U	40 U	**9.7**	0.6 U	40 U	**1.8**	40 U
Potassium	- -	µg/L	**6,200 J**	5,000 U	5,000 U	5,000 U	**2,500**	5,000 U	5,000 U	**4,900**	5,000 U	5,000 U	**3,000**	5,000 U
Selenium	50	µg/L	2 U	3 U	5 U	3 U	**0.54**	5 U	5 U	1 U	3 U	5 U	1 U	3 U
Silver	100	µg/L	0.1 U	**0.6 J**	10 U	0.4 UJ	0.1 U	10 U	10 U	0.1 U	**3.6 J**	10 U	0.1 U	0.4 UJ
Sodium	- -	µg/L	**23,000 J**	**28,700**	**30,300**	**28,100**	**19,000**	**22,200**	**23,300**	**18,000**	**22,700**	**22,300**	**21,000**	**26,000**
Thallium	2	µg/L	0.1 U	2 U	3 UJ	2 U	0.1 U	3 UJ	3 UJ	0.1 U	2 U	3 UJ	0.1 U	2 U
Vanadium	260	µg/L	0.5 U	50 U	**4**	50 U	**1.6**	0.4 UJ	0.41 UJ	**1.1 J**	0.4 U	1 UJ	1 UJ	50 U
Zinc	5,000	µg/L	2 U	20 U	20 U	20 U	9 U	20 U	20 U	5 U	20 U	20 U	**7.1**	20 U

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A	MW-109A	MW-109A	MW-109AA
Sample Depth():														
Date Collected:			12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03	09/23/04	03/14/07	09/30/03
Sample Name:	PAL	Units	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF	GW-047-LF	MW-109A	GW-003-LF
Metals and Cyanide, Dissolved														
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B	MW-110B	MW-110B	MW-110B
Sample Depth():														
Date Collected:			09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03	09/30/03	09/22/04	03/14/07
Sample Name:	PAL	Units	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02	GW-005-WT	GW-044-WT	MW-110B
Metals and Cyanide														
Aluminum	50	µg/L	**68.1**	**63**	**12.8 J**	NA	6 UJ	50 U	26 U	**8.9 J**	26 U	200 U	**18.5 J**	NA
Antimony	6	µg/L	2 UJ	2 UJ	2 UJ	NA	2 UJ	0.5 U	2 U	2 UJ	2 U	2 U	2 UJ	NA
Arsenic	0.45	µg/L	**6 J**	**1.06 J**	0.155 UJ	NA	0.867 U	**1.3**	**0.042 J**	0.074 UJ	**0.104**	**0.09 J**	0.139 UJ	**0.44 J**
Barium	2,000	µg/L	200 U	200 U	200 U	NA	200 U	**34**	200 U	200 U	200 U	200 U	200 U	NA
Beryllium	4	µg/L	0.2 UJ	0.2 UJ	0.2 UJ	NA	0.2 UJ	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 UJ	NA
Cadmium	5	µg/L	**0.45 J**	**0.39 J**	0.2 UJ	NA	0.2 UJ	0.1 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 UJ	NA
Calcium	- -	µg/L	**14,400**	**14,500**	**32,000**	NA	**21,200**	**21,000 J**	**34,600**	**30,000**	**38,500**	**38,400**	**38,100**	NA
Chromium	100	µg/L	2.1 UJ	0.86 UJ	0.5 UJ	NA	0.5 UJ	0.5 U	0.6 U	0.5 UJ	0.6 U	0.6 U	0.5 UJ	NA
Cobalt	11	µg/L	50 U	50 U	50 U	NA	50 U	0.2 U	**0.5 J**	50 U	0.2 U	50 U	50 U	NA
Copper	1,000	µg/L	25 U	25 U	25 U	NA	25 U	1 U	25 U	25 U	0.7 U	0.7 U	25 U	NA
Cyanide	200	µg/L	3 UJ	3 UJ	3 UJ	NA	3 UJ	NA	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ	NA
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	6,130 U	1,330 U	100 U	NA	**510**	**620**	100 U	100 U	100 U	100 U	100 U	NA
Lead	15	µg/L	3 U	3 U	3 U	NA	3 U	0.5 U	0.7 U	3 U	**1.3 J**	**1 J**	3 U	NA
Magnesium	- -	µg/L	5,000 U	5,000 U	**6,660 J**	NA	**5,680 J**	**5,600**	**6,090**	**5,800 J**	**9,100**	**9,010**	**9,250 J**	NA
Manganese	50	µg/L	**117**	**103**	**403**	NA	**98.6**	**99**	15 U	15 U	15 U	15 U	15 U	NA
Mercury	0.57	µg/L	0.28 U	0.27 U	0.27 U	NA	0.28 U	0.2 U	0.13 U	0.27 U	0.14 U	0.14 U	0.27 U	NA
Nickel	730	µg/L	40 U	40 U	40 U	NA	40 U	**0.64**	40 U	40 U	40 U	40 U	40 U	NA
Potassium	- -	µg/L	5,000 U	5,000 U	5,000 U	NA	5,000 U	**3,900**	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	NA
Selenium	50	µg/L	5 U	5 U	5 U	NA	5 U	1 U	3 U	5 U	3 U	3 U	5 U	NA
Silver	100	µg/L	10 U	10 U	10 U	NA	10 U	0.1 U	0.4 UJ	10 U	0.4 UJ	0.4 UJ	10 U	NA
Sodium	- -	µg/L	**23,800**	**23,900**	**20,300**	NA	**12,100**	**13,000**	**31,700**	**35,400**	**34,900**	**34,500**	**36,700**	NA
Thallium	2	µg/L	3 UJ	3 UJ	3 UJ	NA	3 UJ	0.1 U	2 U	3 UJ	**2.5 J**	2 U	3 UJ	NA
Vanadium	260	µg/L	2.7 U	2.5 U	0.4 UJ	NA	0.4 UJ	1 UJ	0.4 U	0.4 UJ	0.4 U	0.4 U	0.4 UJ	NA
Zinc	5,000	µg/L	20 U	20 U	20 U	NA	20 U	5 U	20 U	20 U	20 U	2 U	20 U	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B	MW-110B	MW-110B	MW-110B
Sample Depth():														
Date Collected:			09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03	09/30/03	09/22/04	03/14/07
Sample Name:	PAL	Units	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02	GW-005-WT	GW-044-WT	MW-110B
Metals and Cyanide, Dissolved														
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C	MW-112A	MW-112A	MW-112A
Sample Depth():													
Date Collected:			09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04	10/02/03	09/27/04	11/30/05
Sample Name:	PAL	Units	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP	GW-055-NP	MW-112A
Metals and Cyanide													
Aluminum	50	µg/L	**8.5 J**	NA	200 U	7 UJ	26 U	7 UJ	**2,770**	**181**	26 U	7 UJ	**11 J**
Antimony	6	µg/L	2 UJ	NA	2 U	2 UJ	2 U	2 UJ	2 UJ	2 UJ	2 U	2 UJ	0.5 U
Arsenic	0.45	µg/L	0.146 UJ	**0.8**	**0.129**	0.09 UJ	**0.075 J**	0.168 UJ	**1.04**	0.373 U	**1.73**	**0.36**	**3.1**
Barium	2,000	µg/L	200 U	NA	200 U	200 U	200 U	200 U	200 U	200 U	**182 J**	200 U	**450**
Beryllium	4	µg/L	0.2 UJ	NA	0.2 U	0.23 UJ	0.2 U	0.22 UJ	0.55 UJ	0.2 UJ	0.2 U	0.2 UJ	0.1 U
Cadmium	5	µg/L	0.2 UJ	NA	0.2 U	0.3 UJ	0.2 U	0.3 UJ	0.3 UJ	0.2 UJ	0.2 U	0.3 UJ	**0.15**
Calcium	- -	µg/L	**36,800**	NA	**28,700**	**32,300 J**	**18,400**	**18,700 J**	**32,200 J**	**33,100**	**52,000**	**18,600 J**	**93,000**
Chromium	100	µg/L	0.5 UJ	NA	0.6 U	0.4 UJ	0.6 U	0.4 UJ	**7.6 J**	0.74 UJ	0.6 U	0.4 UJ	0.5 U
Cobalt	11	µg/L	50 U	NA	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**2.3**
Copper	1,000	µg/L	25 U	NA	0.7 U	25 U	0.7 U	25 U	25 U	25 U	25 U	25 U	3 U
Cyanide	200	µg/L	3 UJ	NA	3 UJ	2 UJ	**4.3 J**	**2.4 J**	2 UJ	3 UJ	3 UJ	**3.1 J**	5 U
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	100 U	NA	**186**	100 U	**116**	308 U	4,820 U	**362**	**685 J**	474 U	**2,600**
Lead	15	µg/L	3 U	NA	**2.6 J**	3 U	**0.92 J**	3 U	**5.8**	3 U	**0.72 J**	3 U	**0.18**
Magnesium	- -	µg/L	**8,730 J**	NA	**7,790**	**9,220**	5,000 U	5,000 U	**9,480**	**8,030 J**	**6,950**	5,000 U	**11,000 J**
Manganese	50	µg/L	15 U	NA	**65.8**	**88.9**	**60.5**	**53.3**	**247**	15 U	**78 J**	**197**	**74**
Mercury	0.57	µg/L	0.27 U	NA	0.14 U	0.28 U	0.14 U	0.28 U	0.3 U	0.28 U	0.15 U	0.28 U	0.2 U
Nickel	730	µg/L	40 U	NA	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	**14**
Potassium	- -	µg/L	5,000 U	NA	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	**5,700 J**
Selenium	50	µg/L	5 U	NA	3 U	5 U	3 U	5 U	5 U	5 U	3 UJ	5 U	2 U
Silver	100	µg/L	10 U	NA	0.4 UJ	10 U	0.4 UJ	10 U	10 U	10 U	0.4 UJ	10 U	0.1 U
Sodium	- -	µg/L	**36,900**	NA	**35,600**	**37,600**	**32,200**	**33,100**	**33,100**	**45,800**	**101,000 J**	**92,500**	**240,000 J**
Thallium	2	µg/L	3 UJ	NA	2 U	**2.2 J**	2 U	**2.1 J**	**2.7 J**	3 UJ	2 U	2 UJ	0.1 U
Vanadium	260	µg/L	0.4 UJ	NA	0.4 U	0.5 UJ	0.4 U	0.5 UJ	5.7 U	0.49 UJ	0.4 U	0.5 UJ	**2.5**
Zinc	5,000	µg/L	20 U	NA	20 U	**21.9**	20 U	20 U	**58.8**	20 U	2 U	20 U	3.3 U

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C	MW-112A	MW-112A	MW-112A
Sample Depth():													
Date Collected:			09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04	10/02/03	09/27/04	11/30/05
Sample Name:	PAL	Units	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP	GW-055-NP	MW-112A
Metals and Cyanide, Dissolved													
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112AA	MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502	MW-A2	MW-A2
Sample Depth():													
Date Collected:			10/03/03	09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05	10/01/03	09/30/04
Sample Name:	PAL	Units	GW-020-NP	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502	GW-012-QW	GW-080-QW
Metals and Cyanide													
Aluminum	50	µg/L	26 U	7 UJ	**150 J**	7 UJ	**190 J**	**19.1 J**	**130 J**	50 U	**17**	**28.9 J**	16 UJ
Antimony	6	µg/L	2 U	2 UJ	0.5 U	2 UJ	0.5 U	2 UJ	0.5 U	0.5 U	0.5 U	2 U	2 UJ
Arsenic	0.45	µg/L	**2.08**	**1.97**	**0.68**	0.13 UJ	**1.2**	0.926 U	**1.8**	**0.63**	**0.2**	**0.157**	0.191 UJ
Barium	2,000	µg/L	**36.4 J**	200 U	**110**	200 U	**120**	200 U	**43**	**61**	**75**	200 U	200 U
Beryllium	4	µg/L	0.2 U	0.21 UJ	**0.24**	0.21 UJ	0.1 U	0.2 UJ	0.1 U	0.2 U	0.1 U	5 U	0.3 UJ
Cadmium	5	µg/L	**0.49 J**	**1.2 J**	**6.4**	0.3 UJ	**0.17**	0.2 UJ	0.1 U	0.1 U	0.1 U	**5.7**	**2.7**
Calcium	- -	µg/L	**15,300**	**15,800 J**	**10,000**	**101,000 J**	**67,000**	**47,100**	**77,000**	**88,000 J**	**25,000**	**14,900**	**21,500**
Chromium	100	µg/L	0.6 U	0.62 UJ	**1.5**	0.4 UJ	**0.71**	0.5 UJ	0.5 U	**1.1 J**	0.5 U	0.6 U	0.4 UJ
Cobalt	11	µg/L	50 U	50 U	**10**	50 U	**3.2**	50 U	**0.52**	0.2 U	**0.15**	50 U	50 U
Copper	1,000	µg/L	25 U	25 U	**44**	25 U	**3.7**	25 U	3 U	1 U	1 U	25 U	25 U
Cyanide	200	µg/L	3 UJ	2 UJ	5 U	2 UJ	5 U	3 UJ	5 U	NA	5 U	3 UJ	10 UJ
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	**3,100 J**	3,260 U	**680**	100 U	**1,400**	100 U	**1,400**	**420**	**450**	4 U	100 U
Lead	15	µg/L	0.7 U	3 U	**0.24**	3 U	**1.2**	3 U	**0.21**	0.5 U	**0.17 J**	15 U	3 U
Magnesium	- -	µg/L	5,000 U	5,000 U	**1,700 J**	**24,200**	**12,000 J**	**10,800 J**	**12,000 J**	**960**	**6,200 J**	5,000 U	5,000 U
Manganese	50	µg/L	**99.3 J**	**116**	**270**	**2,380**	**2,700**	**24.3**	**62**	**8.1**	5 U	**18.1**	15 U
Mercury	0.57	µg/L	0.13 U	0.29 U	0.2 U	0.28 U	0.2 U	0.29 U	0.2 U	0.2 U	0.2 U	0.14 U	0.28 U
Nickel	730	µg/L	40 U	40 U	**52**	40 U	**7.4**	40 U	**3.5**	**3.7**	1 U	40 U	40 U
Potassium	- -	µg/L	5,000 U	5,000 U	**2,200 J**	5,000 U	**3,700 J**	5,000 U	**4,900 J**	**3,600**	**3,600**	5,000 U	5,000 U
Selenium	50	µg/L	3 UJ	5 U	2 U	5 U	2 U	**5.4**	2 U	1 U	**0.98**	3 U	5 U
Silver	100	µg/L	10 UJ	10 U	**0.21**	10 U	**0.25**	10 U	0.1 U	0.1 U	0.1 U	0.4 UJ	10 U
Sodium	- -	µg/L	**25,300 J**	**32,300**	**7,400 J**	**103,000**	**95,000 J**	**29,700**	**31,000 J**	**18,000**	**38,000**	**39,700**	**45,700**
Thallium	2	µg/L	2 U	2 UJ	0.1 U	2 UJ	0.1 U	3 UJ	0.1 U	0.1 U	0.1 U	2 U	**2.3 J**
Vanadium	260	µg/L	50 U	0.5 UJ	0.5 U	0.5 UJ	**2.1**	0.4 UJ	**1.2**	**1.3 J**	**0.74**	50 U	**0.54 J**
Zinc	5,000	µg/L	**28.3**	**31.9**	**790**	20 U	6.4 U	20 U	2.4 U	5 U	2 U	**228**	**135**

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112AA	MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502	MW-A2	MW-A2
Sample Depth():													
Date Collected:			10/03/03	09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05	10/01/03	09/30/04
Sample Name:	PAL	Units	GW-020-NP	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502	GW-012-QW	GW-080-QW
Metals and Cyanide, Dissolved													
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-A2	MW-B1	MW-B1	MW-B2	MW-B2	MW-C1	MW-C1	MW-C1	MW-C2	MW-C2	MW-C2	MW-C2
Sample Depth():														
Date Collected:			12/08/05	10/01/03	09/24/04	09/29/03	09/27/04	09/30/03	09/28/04	12/07/05	09/30/03	09/27/04	12/06/05	03/13/07
Sample Name:	PAL	Units	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF	MW-C2	MW-C2
Metals and Cyanide														
Aluminum	50	µg/L	**65**	26 U	**7,280**	200 U	7 UJ	**50.8 J**	**231 J**	**21**	**77.4 J**	7 UJ	**26**	50 U
Antimony	6	µg/L	0.5 U	2 U	2 UJ	2 U	2.1 UJ	2 U	2 UJ	0.5 U	2 U	2 UJ	**0.73**	0.5 U
Arsenic	0.45	µg/L	**0.41**	**0.467**	**2.63**	**88.1**	**52.3**	**15.8**	**10.4**	**13**	**24.4**	**18.5**	**19**	**26**
Barium	2,000	µg/L	**84**	200 U	**206**	**280**	200 U	200 U	200 U	**72**	200 U	200 U	**100**	**110**
Beryllium	4	µg/L	0.1 U	0.2 U	1.2 U	0.2 U	0.21 UJ	0.2 U	0.23 UJ	0.1 U	0.2 U	0.2 UJ	0.1 U	0.2 U
Cadmium	5	µg/L	**5.9**	0.2 U	0.3 UJ	5 U	0.3 UJ	5 U	0.3 UJ	0.1 U	5 U	0.3 UJ	**0.11**	0.1 U
Calcium	- -	µg/L	**18,000**	**36,900**	**40,000 J**	**25,200**	**17,900 J**	**15,700**	**20,200 J**	**22,000**	**25,800**	**25,200 J**	**26,000**	**23,000 J**
Chromium	100	µg/L	0.5 U	0.6 U	**9.3 J**	10 U	**3 J**	0.6 U	0.4 UJ	0.5 U	0.6 U	**1.7 J**	**1.5**	**2 J**
Cobalt	11	µg/L	**0.24**	50 U	50 U	50 U	50 U	50 U	50 U	**5.6**	50 U	50 U	**0.79**	**0.83 E**
Copper	1,000	µg/L	**1.4**	25 U	**26.9**	25 U	25 U	0.7 U	25 U	1 U	0.7 U	25 U	**1.4**	1 U
Cyanide	200	µg/L	5 U	3 UJ	2 UJ	3 UJ	**2.7 J**	3 UJ	**2.3 J**	5 U	3 UJ	**2.4 J**	5 U	NA
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	**340**	100 U	**10,700**	**27,600**	**18,500**	**13,800**	**14,900**	**14,000**	**28,000**	**26,200**	**25,000**	**29,000**
Lead	15	µg/L	**0.34 J**	15 U	**3.9**	0.7 U	3 U	**0.85 J**	3 U	**0.4 J**	0.7 U	3 U	**1.1 J**	**1**
Magnesium	- -	µg/L	**3,500 J**	**7,230**	**11,900**	**13,200**	**8,930**	5,000 U	**5,000**	**4,300 J**	**7,400**	**6,910**	**6,400 J**	**6,600**
Manganese	50	µg/L	**7.1**	**17.4**	**315**	**620**	**407**	**1,620**	**1,820**	**1,500**	**663**	**716**	**870**	**640**
Mercury	0.57	µg/L	0.2 U	0.15 U	0.29 U	0.15 U	0.28 U	0.14 U	0.28 U	0.2 U	0.14 U	0.28 U	0.2 U	0.2 U
Nickel	730	µg/L	**15**	40 U	40 U	40 U	40 U	40 U	40 U	1.5 U	40 U	40 U	**11**	**5.4**
Potassium	- -	µg/L	**2,100**	5,000 U	**5,950**	**33,500**	**22,400**	5,000 U	5,000 U	**1,700**	**13,900**	**13,000**	**9,200**	**12,000**
Selenium	50	µg/L	**0.79**	3 U	5 U	3 U	5 U	3 U	5 U	**0.99**	3 U	5 U	**3.4**	**2.3**
Silver	100	µg/L	0.1 U	0.4 UJ	10 U	**6.3 J**	10 U	**2.9 J**	10 U	0.1 U	**6 J**	10 U	0.1 U	0.1 U
Sodium	- -	µg/L	**32,000**	**47,500**	**50,600**	**107,000**	**67,200**	**20,800**	**23,200**	**21,000**	**59,700**	**58,700**	**37,000**	**48,000**
Thallium	2	µg/L	0.1 U	**2.1 J**	**7.8 J**	**2.3 J**	2 UJ	2 U	2 UJ	0.1 U	2 U	2 UJ	0.1 U	0.1 U
Vanadium	260	µg/L	**1.8**	50 U	**18.7**	50 U	2.1 UJ	0.4 U	0.83 UJ	**0.57**	50 U	1.8 UJ	**1.7**	**2.5 J**
Zinc	5,000	µg/L	**180**	20 U	**31.9**	20 U	20 U	20 U	20 U	2.9 U	20 U	20 U	12 U	**9**

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-A2	MW-B1	MW-B1	MW-B2	MW-B2	MW-C1	MW-C1	MW-C1	MW-C2	MW-C2	MW-C2	MW-C2
Sample Depth():														
Date Collected:			12/08/05	10/01/03	09/24/04	09/29/03	09/27/04	09/30/03	09/28/04	12/07/05	09/30/03	09/27/04	12/06/05	03/13/07
Sample Name:	PAL	Units	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF	MW-C2	MW-C2
Metals and Cyanide, Dissolved														
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8	SEA-601	SEA-601	SEA-602A	SEA-602A
Sample Depth():													
Date Collected:			10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04	10/02/03	09/28/04	10/03/03	09/28/04
Sample Name:	PAL	Units	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF	GW-017-LF	GW-060-LF	GW-022-LF	GW-062-LF
Metals and Cyanide													
Aluminum	50	µg/L	16 UJ	**16**	16 UJ	26 U	7 UJ	**42.7 J**	16 UJ	200 U	7 UJ	200 U	**255 J**
Antimony	6	µg/L	2 UJ	0.5 U	2 UJ	2 U	2 UJ	2 U	2 UJ	2 U	2 UJ	2 U	2 UJ
Arsenic	0.45	µg/L	0.077 UJ	**0.42**	**1.11 J**	**7.22**	**14.3**	**76.2**	**92.3 J**	**11.8**	**16.6**	**62.5**	**97.2**
Barium	2,000	µg/L	200 U	**87**	200 U	**41.3 J**	200 U	**346**	**226**	**87.3 J**	200 U	**144 J**	200 U
Beryllium	4	µg/L	0.3 UJ	0.1 U	0.3 UJ	0.2 U	0.2 UJ	0.2 U	0.3 UJ	0.2 U	0.2 UJ	0.2 U	0.2 UJ
Cadmium	5	µg/L	0.3 UJ	0.1 U	0.3 UJ	0.2 U	0.3 UJ	5 U	0.3 UJ	**0.22 J**	0.3 UJ	**0.6 J**	0.3 UJ
Calcium	- -	µg/L	**42,200**	**36,000**	**136,000**	**59,200**	**58,800 J**	**44,100**	**37,200**	**30,700**	**43,000 J**	**36,600**	**32,200 J**
Chromium	100	µg/L	0.4 UJ	0.5 U	0.4 UJ	0.6 U	0.4 UJ	0.6 U	**1.2 J**	0.6 U	0.4 UJ	0.6 U	0.52 UJ
Cobalt	11	µg/L	50 U	**0.23**	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Copper	1,000	µg/L	25 U	1 U	25 U	0.7 U	25 U	0.7 U	25 U	0.7 U	25 U	0.7 U	25 U
Cyanide	200	µg/L	10 U	5 U	10 U	3 UJ	2 UJ	3 UJ	10 U	3 UJ	**2.2 J**	3 UJ	**2.8 J**
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	100 U	**740**	**303**	**1,790 J**	1,870 U	**49,600**	**32,900**	**14,200 J**	**19,700**	**34,500 J**	**33,100**
Lead	15	µg/L	3 U	**0.22 J**	3 U	0.7 U	3 U	**1 J**	3 U	0.7 U	3 U	0.7 U	3 U
Magnesium	- -	µg/L	**8,720**	**7,100 J**	**17,500**	**8,340**	**9,240**	**11,500**	**10,900**	5,000 U	**6,610**	**8,280**	**8,010**
Manganese	50	µg/L	15 U	5 U	**595**	**295 J**	**396**	**692**	**1,120**	**517 J**	**480**	**1,310**	**828**
Mercury	0.57	µg/L	0.29 U	0.2 U	0.3 U	0.13 U	0.3 U	0.14 U	0.28 U	0.14 U	0.31 U	0.14 U	0.33 U
Nickel	730	µg/L	40 U	2.2 U	40 U	0.6 U	40 U	40 U	40 U	0.6 U	40 U	0.6 U	40 U
Potassium	- -	µg/L	5,000 U	**3,600**	**9,180**	**8,630**	**8,390**	**19,900**	**17,000**	**7,370**	**7,210**	**8,570**	**9,240**
Selenium	50	µg/L	5 U	**0.92**	5 U	3 UJ	5 U	3 U	5 U	3 UJ	5 U	3 UJ	5 U
Silver	100	µg/L	10 U	0.1 U	10 U	0.4 UJ	10 U	**10.2 J**	10 U	10 UJ	10 U	10 UJ	10 U
Sodium	- -	µg/L	**50,100**	**54,000**	**11,500**	**23,100 J**	**21,400**	**76,000**	**74,400**	**27,100 J**	**33,100**	**29,300 J**	**32,800**
Thallium	2	µg/L	**2.6 J**	0.1 U	**3.8 J**	**2.2 J**	2 UJ	2 U	**4.6 J**	2 U	2 UJ	2 U	2 UJ
Vanadium	260	µg/L	0.5 UJ	**0.97**	0.5 UJ	50 U	0.5 UJ	0.4 U	**1.6 J**	0.4 U	0.56 UJ	0.4 U	1.6 UJ
Zinc	5,000	µg/L	20 U	5.1 U	20 U	2 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8	SEA-601	SEA-601	SEA-602A	SEA-602A
Sample Depth():													
Date Collected:			10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04	10/02/03	09/28/04	10/03/03	09/28/04
Sample Name:	PAL	Units	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF	GW-017-LF	GW-060-LF	GW-022-LF	GW-062-LF
Metals and Cyanide, Dissolved													
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604	SEA-604
Sample Depth():												
Date Collected:			12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03	09/30/04
Sample Name:	PAL	Units	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF	GW-067-LF
Metals and Cyanide												
Aluminum	50	µg/L	**140**	**130**	200 U	16 UJ	200 U	16 UJ	16 UJ	**96**	200 U	**88.9 J**
Antimony	6	µg/L	0.5 U	0.5 U	2 U	2 UJ	2 U	2 UJ	2 UJ	**0.59**	2 U	2 UJ
Arsenic	0.45	µg/L	**83**	**120**	**20.5**	**24.9 J**	**26.4**	**19.5 J**	**14.3 J**	**34**	**64.2**	**102 J**
Barium	2,000	µg/L	**73**	**170**	**63.8 J**	200 U	**519**	**470**	**478**	**480**	**337**	**204**
Beryllium	4	µg/L	0.1 U	0.2 U	0.2 U	0.3 UJ	0.2 U	0.3 UJ	0.3 UJ	0.1 U	0.2 U	0.3 UJ
Cadmium	5	µg/L	0.1 U	0.1 U	**0.38 J**	0.3 UJ	**1.4 J**	0.3 UJ	0.3 UJ	0.1 U	**0.48 J**	0.3 UJ
Calcium	- -	µg/L	**31,000**	**36,000 J**	**35,200**	**32,100**	**91,800**	**74,100**	**75,400**	**75,000**	**65,000**	**38,400**
Chromium	100	µg/L	**0.51**	**1.7 J**	0.6 U	0.4 UJ	10 U	**4.3**	**4.4**	**5.6**	0.6 U	0.4 UJ
Cobalt	11	µg/L	**1.1**	**1.8 E**	50 U	50 U	50 U	50 U	50 U	**3.1**	50 U	50 U
Copper	1,000	µg/L	1 U	**49**	0.7 U	25 U	0.7 U	25 U	25 U	**1.5**	0.7 U	25 U
Cyanide	200	µg/L	5 U	NA	3 UJ	10 U	3 UJ	10 U	10 U	5 U	3 UJ	R
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	**31,000**	**43,000**	**21,000 J**	**19,000**	**63,700 J**	**54,400**	**55,400**	**58,000**	**18,200 J**	**29,100**
Lead	15	µg/L	**0.4 J**	**0.55**	0.7 U	3 U	0.7 U	3 U	3 U	**1.5 J**	0.7 U	3 U
Magnesium	- -	µg/L	**5,700 J**	**9,600**	**6,450**	**6,070**	**17,800**	**14,100**	**14,400**	**13,000 J**	**16,000**	**13,800**
Manganese	50	µg/L	**740**	**820**	**1,130**	**1,070**	**813**	**566**	**582**	**480**	**5,840**	**3,280**
Mercury	0.57	µg/L	0.2 U	0.2 U	0.14 U	0.29 U	0.14 U	0.26 U	0.32 U	0.2 U	0.14 U	0.3 U
Nickel	730	µg/L	2.6 U	**5.7**	0.6 U	40 U	40 U	40 U	40 U	**16**	40 U	40 U
Potassium	- -	µg/L	**5,700**	**14,000**	5,000 U	5,000 U	**25,700**	**23,800**	**24,600**	**20,000**	**22,600**	**14,600**
Selenium	50	µg/L	**2.4**	**2.1**	3 UJ	5 U	3 UJ	5 U	5 U	**9.2**	3 UJ	5 U
Silver	100	µg/L	0.1 U	0.1 U	10 UJ	10 U	**13.7 J**	10 U	10 U	0.1 U	10 UJ	10 U
Sodium	- -	µg/L	**29,000**	**49,000**	**23,200 J**	**25,600**	**80,900 J**	**87,300**	**89,800**	**73,000**	**95,400 J**	**63,300**
Thallium	2	µg/L	0.1 U	0.1 U	10 U	**3.8 J**	10 U	**8.9 J**	**8.1 J**	0.1 U	2 U	**2.9 J**
Vanadium	260	µg/L	**0.97**	**3.1 J**	0.4 U	0.5 UJ	50 U	**4.9**	**4.9**	**5.7**	50 U	**0.99 J**
Zinc	5,000	µg/L	2.7 U	**5.9**	20 U	20 U	20 U	20 U	20 U	7.2 U	20 U	20 U

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604	SEA-604
Sample Depth():												
Date Collected:			12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03	09/30/04
Sample Name:	PAL	Units	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF	GW-067-LF
Metals and Cyanide, Dissolved												
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():														
Date Collected:			10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
Metals and Cyanide														
Aluminum	50	µg/L	200 U	**21.3 J**	**210**	200 U	**28.4 J**	**55**	200 U	16 UJ	200 U	200 U	**160**	**92**
Antimony	6	µg/L	2 U	2 UJ	0.5 U	2 U	2 UJ	**0.8**	2 U	2 UJ	2 U	2 U	2 UJ	0.5 U
Arsenic	0.45	µg/L	**8.47**	**1.83 J**	**4.5**	**0.31**	**0.2 J**	**0.5**	**2**	**0.436 J**	**1.49**	**1.64**	**3.72 J**	**2.6**
Barium	2,000	µg/L	200 U	200 U	**91**	**263**	**311**	**270**	200 U	200 U	**203**	200 U	200 U	**190**
Beryllium	4	µg/L	0.2 U	0.3 UJ	0.1 U	0.2 U	0.3 UJ	0.1 U	0.2 U	0.3 UJ	0.2 U	0.2 U	0.3 UJ	0.1 U
Cadmium	5	µg/L	**0.32 J**	0.3 UJ	0.1 U	**0.61 J**	0.3 UJ	0.1 U	0.2 U	0.3 UJ	**0.67 J**	**0.66 J**	0.3 UJ	0.1 U
Calcium	- -	µg/L	**24,400**	**22,600**	**24,000**	**57,300**	**59,900**	**62,000**	**30,700**	**24,700**	**37,200**	**36,400**	**26,400**	**30,000 J**
Chromium	100	µg/L	0.6 U	**0.46 J**	**1.5**	0.6 U	**0.61 J**	**1.3**	0.6 U	**0.58 J**	0.6 U	0.6 U	**1 J**	**2.3**
Cobalt	11	µg/L	50 U	50 U	**0.51**	50 U	50 U	**0.49**	50 U	50 U	50 U	0.2 U	50 U	**0.77**
Copper	1,000	µg/L	25 U	25 U	**1.2**	0.7 U	25 U	1 U	25 U	25 U	25 U	0.7 U	25 U	1 U
Cyanide	200	µg/L	3 UJ	10 U	5 U	3 UJ	10 U	5 U	3 UJ	10 U	3 UJ	3 UJ	10 U	5 UJ
Hardness	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	µg/L	**20,000 J**	**18,000**	**21,000**	**30,900 J**	**36,300**	**31,000**	**1,980 J**	**3,460**	**40,200 J**	**39,400 J**	**29,900**	**48,000**
Lead	15	µg/L	0.7 U	3 U	**1 J**	0.7 U	3 U	**0.26 J**	0.7 U	3 U	0.7 U	0.7 U	3 U	**0.28**
Magnesium	- -	µg/L	5,000 U	5,000 U	**3,900 J**	**11,300**	**12,500**	**10,000 J**	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	**3,100**
Manganese	50	µg/L	**390 J**	**320**	**290**	**754**	**858**	**520**	**203 J**	**290**	**1,480**	**1,460**	**933**	**940**
Mercury	0.57	µg/L	0.14 U	0.3 U	0.2 U	0.13 U	0.29 U	0.2 U	0.14 U	0.29 U	0.13 U	0.13 U	0.28 U	0.2 U
Nickel	730	µg/L	40 U	40 U	2.4 U	40 U	40 U	2.7 U	40 U	40 U	0.6 U	0.6 U	40 U	**2.1**
Potassium	- -	µg/L	5,000 U	5,000 U	**3,700**	**6,470**	**6,280**	**5,400**	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	**3,100 J**
Selenium	50	µg/L	3 UJ	5 U	**1.2**	3 UJ	5 U	**1.6**	3 UJ	5 U	3 UJ	3 UJ	5 U	**1.1**
Silver	100	µg/L	10 UJ	10 U	0.1 U	10 UJ	10 U	0.1 U	10 UJ	10 U	10 UJ	10 UJ	10 U	0.1 U
Sodium	- -	µg/L	**25,000 J**	**34,700**	**26,000**	**27,600 J**	**29,300**	**26,000**	**27,000 J**	**27,200**	**36,700 J**	**35,900 J**	**36,600**	**22,000**
Thallium	2	µg/L	10 U	**4.2 J**	0.1 U	10 U	**5.6 J**	0.1 U	2 U	2 UJ	10 U	10 U	**5.8 J**	0.1 U
Vanadium	260	µg/L	50 U	0.5 UJ	**1.5**	50 U	**1.5 J**	**1.7**	50 U	0.5 UJ	0.4 U	0.4 U	**1.8 J**	**2.2 J**
Zinc	5,000	µg/L	20 U	20 U	8.2 U	20 U	20 U	2 U	20 U	20 U	20 U	20 U	**29.4**	14 U

TABLE 4-8
GROUNDWATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():														
Date Collected:			10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
Metals and Cyanide, Dissolved														
Aluminum	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	0.006	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.00045	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00057	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.73	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.1	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.26	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GLF-700a	GLF-704	GLF-704	GLF-704	GLF-706	GLF-706	GLF-706	GLF-706a	GLF-706a	GNP-705	GNP-705	GNP-705B
Sample Depth():														
Date Collected:			12/06/05	12/06/05	12/06/05	03/13/07	11/29/05	03/13/07	03/13/07	11/29/05	11/29/05	11/28/05	03/13/07	12/01/05
Sample Name:	PAL	Units	GLF-700a	DUP-2	GLF-704	GLF-704	GLF-706	FD-031307	GLF-706	DUP-1	GLF-706a	GNP-705	GNP-705	GNP-705B
Water Parameters														
Chloride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cumulative volume purged	- -	L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Drawdown	- -	ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	µS/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumping Rate	- -	ml/min	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Purge Time	- -	mins	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI
Sample Depth():														
Date Collected:			03/13/07	11/29/05	11/29/05	03/12/07	12/01/05	03/12/07	12/08/05	01/10/06	01/10/06	03/14/07	11/24/09	11/24/09
Sample Name:	PAL	Units	GNP-705B	GNP-707	GNP-708	GNP-708	GNP-708A	GNP-708A	GUI-701	GUI-702	GUI-703	GUI-703	GW-201-UI	GW-207B-UI
Water Parameters														
Chloride	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cumulative volume purged	- -	L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Drawdown	- -	ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	µS/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumping Rate	- -	ml/min	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Purge Time	- -	mins	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			GW-208B-UI	GW-224A-UI	GZ-4-1	GZ-4-1	MW-106A	MW-106A	MW-106A	MW-106B	MW-106B	MW-106B	MW-106C
Sample Depth():													
Date Collected:			11/24/09	11/24/09	10/01/03	09/30/04	10/01/03	09/30/04	12/02/05	09/28/04	09/28/04	12/02/05	09/28/04
Sample Name:	PAL	Units	GW-208B-UI	GW-224A-UI	GW-013-QW	GW-079-QW	GW-009-DF	GW-074-DF	MW-106A	GW-078-DF	GW-FD-12	MW-106B	GW-077-DF
Water Parameters													
Chloride	- -	µg/L	NA	NA	**62,000**	**82,000**	**73,000**	**52,000**	NA	**25,000**	**25,000**	NA	**22,000**
Cumulative volume purged	- -	L	NA	NA	11.8	20	20	13	NA	17.2	NA	NA	10
Dissolved oxygen	- -	µg/L	NA	NA	**3,140**	**3,490**	**540**	**250**	NA	**730**	NA	NA	**2,430**
Drawdown	- -	ft	NA	NA	0	0.11	0.01	0.03	NA	0.02	NA	NA	-0.02
Field pH	- -	s.u.	NA	NA	5.48	6.66	6.06	6.18	NA	6.31	NA	NA	6.39
Field Specific Conductance	- -	µS/cm	NA	NA	NA	326	NA	515	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	NA	NA	347	NA	491	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	NA	NA	0	1.68	0.07	1.38	NA	0.22	NA	NA	0.15
ORP/Eh	- -	mv	NA	NA	283	104	195	82.4	NA	281	NA	NA	281
Pumping Rate	- -	ml/min	NA	NA	360	315	240	190	NA	235	NA	NA	145
Purge Time	- -	mins	NA	NA	40	78	85	70	NA	65	NA	NA	60
Temperature	- -	°C	NA	NA	14.1	NA	17	14.8	NA	13.3	NA	NA	14.4

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-106C	MW-108A	MW-108A	MW-108AA	MW-108AA	MW-108B	MW-108C	MW-108C	MW-109A	MW-109A	MW-109A
Sample Depth():													
Date Collected:			12/02/05	10/01/03	09/22/04	10/01/03	12/07/05	09/21/04	09/22/04	03/14/07	09/29/03	09/23/04	03/14/07
Sample Name:	PAL	Units	MW-106C	GW-010-LF	GW-046-LF	GW-011-LF	MW-108AA	GW-043-LF	GW-058-LF	MW-108C	GW-001-LF	GW-047-LF	MW-109A
Water Parameters													
Chloride	- -	µg/L	NA	**45,000**	**53,000**	**48,000**	NA	**46,000**	**46,000**	NA	**34,000**	**33,000**	NA
Cumulative volume purged	- -	L	NA	19	16.1	19	NA	6.95	16	NA	17.6	29.1	NA
Dissolved oxygen	- -	µg/L	NA	**310**	**1,140**	**490**	NA	**2,950**	**1,720**	NA	**4,060**	**210**	NA
Drawdown	- -	ft	NA	0.04	0.04	0	NA	0.04	0.06	NA	0.19	0.15	NA
Field pH	- -	s.u.	NA	6.13	5.78	6.06	NA	5.95	6.9	NA	6.99	6.75	NA
Field Specific Conductance	- -	µS/cm	NA	NA	NA	NA	NA	321	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	NA	260	NA	330	NA	NA	NA	NA	296	NA	NA
Field turbidity	- -	NTU	NA	3.81	1.3	0	NA	0.95	1.73	NA	3.55	11	NA
ORP/Eh	- -	mv	NA	-53	R	1.7	NA	R	R	NA	-129	R	NA
Pumping Rate	- -	ml/min	NA	250	270	280	NA	95	250	NA	150	NA	NA
Purge Time	- -	mins	NA	50	61	45	NA	77	65	NA	128	120	NA
Temperature	- -	°C	NA	16.7	14.8	19.8	NA	16.9	13.4	NA	15.4	15.7	NA

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-109AA	MW-109AA	MW-109AA	MW-109B	MW-109B	MW-109C	MW-109C	MW-110A	MW-110A	MW-110B	MW-110B
Sample Depth():													
Date Collected:			09/30/03	09/23/04	09/23/04	09/21/04	09/21/04	09/21/04	03/14/07	09/30/03	09/22/04	09/30/03	09/30/03
Sample Name:	PAL	Units	GW-003-LF	GW-048-LF	GW-FD-11	GW-042-LF	GW-DUP-01	GW-041-LF	MW-109C	GW-004-WT	GW-045-WT	GW-FD02	GW-005-WT
Water Parameters													
Chloride	- -	µg/L	**49,000**	**44,000**	**44,000**	**39,000**	NA	**16,000**	NA	**66,000**	**65,000**	**69,000**	**70,000**
Cumulative volume purged	- -	L	10	19.2	NA	20	NA	17	NA	20	13.1	NA	15
Dissolved oxygen	- -	µg/L	**420**	**310**	NA	**460**	NA	**460**	NA	**4,230**	**5,190**	NA	**2,270**
Drawdown	- -	ft	0.02	0.04	NA	0.08	NA	1.69	NA	0.03	0.01	NA	0.02
Field pH	- -	s.u.	6.11	6.05	NA	6.46	NA	7.9	NA	5.96	5.7	NA	6.22
Field Specific Conductance	- -	µS/cm	NA	NA	NA	341	NA	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	256	NA	NA	NA	NA	NA	NA	413	NA	NA	456
Field turbidity	- -	NTU	0	0.2	NA	0.68	NA	0	NA	0	0.55	NA	1.83
ORP/Eh	- -	mv	-32.5	R	NA	R	NA	-162	NA	187	R	NA	187
Pumping Rate	- -	ml/min	220	300	NA	300	NA	195	NA	300	330	NA	270
Purge Time	- -	mins	45	65	NA	95	NA	90	NA	60	35	NA	55
Temperature	- -	°C	20.7	21.3	NA	15.6	NA	15.8	NA	14.2	15	NA	14

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-110B	MW-110B	MW-110C	MW-110C	MW-111A	MW-111A	MW-111AA	MW-111AA	MW-111B	MW-111C	MW-112A
Sample Depth():													
Date Collected:			09/22/04	03/14/07	09/23/04	03/14/07	10/02/03	09/24/04	10/02/03	09/24/04	09/24/04	09/20/04	10/02/03
Sample Name:	PAL	Units	GW-044-WT	MW-110B	GW-053-WT	MW-110C	GW-016-WT	GW-051-WT	GW-015-WT	GW-052-WT	GW-050-WT	GW-057-WT	GW-019-NP
Water Parameters													
Chloride	- -	µg/L	**79,000**	NA	**78,000**	NA	**70,000**	**90,000**	**48,000**	**65,000**	**63,000**	**90,000**	**240,000**
Cumulative volume purged	- -	L	21.2	NA	16.6	NA	25	21.6	19	11.7	12.4	18	19
Dissolved oxygen	- -	µg/L	**4,030**	NA	**2,060**	NA	**1,260**	**990**	**390**	**470**	**2,290**	**5,750**	**620**
Drawdown	- -	ft	0.02	NA	0.09	NA	0.01	0.01	0.03	0.03	0	0.15	0.01
Field pH	- -	s.u.	6.18	NA	4.86	NA	6.2	6.11	5.88	5.73	6.36	5.94	6.05
Field Specific Conductance	- -	µS/cm	494	NA	NA	NA	NA	NA	NA	NA	407	NA	NA
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	410	NA	300	NA	NA	NA	884
Field turbidity	- -	NTU	0.65	NA	0.17	NA	3.54	2.8	0.09	2.1	65	4.8	3.71
ORP/Eh	- -	mv	R	NA	R	NA	194	120	180	180	84.8	R	226
Pumping Rate	- -	ml/min	320	NA	105	NA	250	300	270	260	290	290	240
Purge Time	- -	mins	117	NA	170	NA	90	79	55	57	49	60	65
Temperature	- -	°C	NA	NA	NA	NA	13.6	NA	15.1	NA	NA	13.8	12.9

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-112A	MW-112A	MW-112AA	MW-112AA	MW-112AA	MW-112B	MW-112B	MW-112C	MW-112C	MW-112C	MW-502
Sample Depth():													
Date Collected:			09/27/04	11/30/05	10/03/03	09/27/04	11/30/05	09/27/04	11/30/05	09/22/04	11/30/05	03/14/07	12/08/05
Sample Name:	PAL	Units	GW-055-NP	MW-112A	GW-020-NP	GW-056-NP	MW-112AA	GW-054-NP	MW-112B	GW-049-NP	MW-112C	MW-112C	MW-502
Water Parameters													
Chloride	- -	µg/L	**150,000**	NA	**44,000**	**51,000**	NA	**340,000**	NA	**65,000**	NA	NA	NA
Cumulative volume purged	- -	L	22.8	NA	13.5	10.4	NA	8.02	NA	18	NA	NA	NA
Dissolved oxygen	- -	µg/L	**280**	NA	**300**	**240**	NA	**600**	NA	**1,050**	NA	NA	NA
Drawdown	- -	ft	0.02	NA	0	0.03	NA	0.18	NA	0.05	NA	NA	NA
Field pH	- -	s.u.	6.13	NA	6.4	6.11	NA	5.98	NA	6.43	NA	NA	NA
Field Specific Conductance	- -	µS/cm	704	NA	NA	NA	NA	1,770	NA	488	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	NA	NA	311	NA	NA	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	3.7	NA	0.1	2.9	NA	6.1	NA	0.54	NA	NA	NA
ORP/Eh	- -	mv	78.3	NA	30.2	1.5	NA	102	NA	R	NA	NA	NA
Pumping Rate	- -	ml/min	265	NA	310	320	NA	120	NA	265	NA	NA	NA
Purge Time	- -	mins	87	NA	45	45	NA	82	NA	85	NA	NA	NA
Temperature	- -	°C	NA	NA	19.1	NA	NA	15.5	NA	NA	NA	NA	NA

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-A2	MW-A2	MW-A2	MW-B1	MW-B1	MW-B2	MW-B2	MW-C1	MW-C1	MW-C1	MW-C2	MW-C2
Sample Depth():														
Date Collected:			10/01/03	09/30/04	12/08/05	10/01/03	09/24/04	09/29/03	09/27/04	09/30/03	09/28/04	12/07/05	09/30/03	09/27/04
Sample Name:	PAL	Units	GW-012-QW	GW-080-QW	MW-A2	GW-008-LF	GW-065-LF	GW-002-LF	GW-066-LF	GW-007-LF	GW-070-LF	MW-C1	GW-006-LF	GW-071-LF
Water Parameters														
Chloride	- -	µg/L	**74,000**	**89,000**	NA	**130,000**	**120,000**	**130,000**	**78,000**	**24,000**	**49,000**	NA	**74,000**	**80,000**
Cumulative volume purged	- -	L	2.4	5	NA	4	11	6	13	17	10	NA	5	4
Dissolved oxygen	- -	µg/L	**3,150**	**3,650**	NA	**1,920**	**4,650**	**610**	**640**	**350**	**280**	NA	**700**	**660**
Drawdown	- -	ft	0	0	NA	0.07	0.83	0	0	0.11	0	NA	0.02	0.01
Field pH	- -	s.u.	5.52	5.99	NA	6.3	6.35	6.77	6.76	6.47	6.01	NA	6.01	6.12
Field Specific Conductance	- -	µS/cm	NA	392	NA	NA	546	NA	836	NA	288	NA	NA	673
Field Specific Conductance	- -	umhos/cm	382	NA	NA	618	NA	1,370	NA	304	NA	NA	850	NA
Field turbidity	- -	NTU	0.43	2.21	NA	2.24	113	0.65	0.13	21.6	21.2	NA	1.02	1.66
ORP/Eh	- -	mv	247	98.9	NA	266	241	-89.4	-86.2	-18.2	-6.4	NA	-59.3	-56
Pumping Rate	- -	ml/min	80	145	NA	75	70	120	120	130	125	NA	102	125
Purge Time	- -	mins	30	45	NA	55	130	53	100	134	100	NA	42	30
Temperature	- -	°C	14.4	NA	NA	14.2	NA	15.5	14.7	12	NA	NA	16.4	16.3

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			MW-C2	MW-C2	MW-EA-1	MW-EA-1	MW-EA-3	P-7	P-7	P-8	P-8	SEA-601	SEA-601	SEA-602A
Sample Depth():														
Date Collected:			12/06/05	03/13/07	10/01/04	12/09/05	10/01/04	10/02/03	09/28/04	10/02/03	09/30/04	10/02/03	09/28/04	10/03/03
Sample Name:	PAL	Units	MW-C2	MW-C2	GW-075-WT	MW-EAI	GW-076-WT	GW-014-LF	GW-059-LF	GW-018-LF	GW-063-LF	GW-017-LF	GW-060-LF	GW-022-LF
Water Parameters														
Chloride	- -	µg/L	NA	NA	**140,000**	NA	**17,000**	**28,000**	**26,000**	**89,000**	**110,000**	**37,000**	**54,000**	**46,000**
Cumulative volume purged	- -	L	NA	NA	12	NA	5	16.6	9.5	14.3	15	19.5	13.1	22.5
Dissolved oxygen	- -	µg/L	NA	NA	**7,600**	NA	**3,710**	**410**	**370**	**660**	**380**	**680**	**280**	**580**
Drawdown	- -	ft	NA	NA	0	NA	5.44	0	0.02	0	0.09	0.01	-0.13	0.01
Field pH	- -	s.u.	NA	NA	5.89	NA	6.63	5.8	6.17	6.54	6.41	6.45	6.12	6.52
Field Specific Conductance	- -	µS/cm	NA	NA	602	NA	803	NA	492	NA	916	NA	531	NA
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	NA	552	NA	1,200	NA	472	NA	543
Field turbidity	- -	NTU	NA	NA	1.49	NA	1.78	0	0.65	1.22	3	3.25	2.2	4.47
ORP/Eh	- -	mv	NA	NA	R	NA	R	80.4	40.1	-72.1	-74.8	-13.7	-30.5	-96.2
Pumping Rate	- -	ml/min	NA	NA	185	NA	60	310	250	248	310	325	280	300
Purge Time	- -	mins	NA	NA	60	NA	70	60	70	55	53	60	60	75
Temperature	- -	°C	NA	NA	NA	NA	NA	12.4	NA	15	14.8	11.7	NA	14.9

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-602A	SEA-602a	SEA-602A	SEA-602B	SEA-602B	SEA-603	SEA-603	SEA-603	SEA-603	SEA-604	SEA-604
Sample Depth():													
Date Collected:			09/28/04	12/07/05	03/13/07	10/03/03	10/01/04	10/03/03	10/01/04	10/01/04	12/06/05	10/04/03	09/30/04
Sample Name:	PAL	Units	GW-062-LF	SEA-602a	SEA-602A	GW-023-LF	GW-061-LF	GW-021-LF	GW-064-LF	GW-FD-13	SEA-603	GW-027-LF	GW-067-LF
Water Parameters													
Chloride	- -	µg/L	**54,000**	NA	NA	**41,000**	**49,000**	**100,000**	**130,000**	**130,000**	NA	**98,000**	**89,000**
Cumulative volume purged	- -	L	20.7	NA	NA	26	17.5	28	12.5	NA	NA	38	26.5
Dissolved oxygen	- -	µg/L	**430**	NA	NA	**410**	**450**	**1,410**	**320**	NA	NA	**4,740**	**400**
Drawdown	- -	ft	-0.05	NA	NA	0.01	0.03	0	0.01	NA	NA	0.02	0.01
Field pH	- -	s.u.	6.4	NA	NA	6.48	6.39	6.28	6.24	NA	NA	6.58	6.58
Field Specific Conductance	- -	µS/cm	530	NA	NA	NA	421	NA	1,400	NA	NA	NA	797
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	421	NA	1,500	NA	NA	NA	1,060	NA
Field turbidity	- -	NTU	26	NA	NA	6.82	8.9	2.26	4.8	NA	NA	4.1	5.9
ORP/Eh	- -	mv	-61.6	NA	NA	-81.7	-44.5	-82.2	-68.8	NA	NA	-103	-83
Pumping Rate	- -	ml/min	340	NA	NA	260	280	250	330	NA	NA	270	310
Purge Time	- -	mins	66	NA	NA	70	75	80	46	NA	NA	107	86
Temperature	- -	°C	NA	NA	NA	12.7	NA	14.8	NA	NA	NA	13.5	13.4

TABLE 4-9
GROUNDWATER RESULTS FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SEA-608
Sample Depth():														
Date Collected:			10/04/03	09/30/04	12/07/05	10/04/03	09/30/04	12/05/05	10/03/03	10/01/04	10/03/03	10/03/03	10/01/04	01/10/06
Sample Name:	PAL	Units	GW-028-LF	GW-068-LF	SEA-605	GW-024-NP	GW-069-NP	SEA-606	GW-025-UI	GW-072-UI	GW-FD03	GW-026-UI	GW-073-UI	SEA-608
Water Parameters														
Chloride	- -	µg/L	**46,000**	**71,000**	NA	**48,000**	**63,000**	NA	**51,000**	**59,000**	**58,000**	**57,000**	**65,000**	NA
Cumulative volume purged	- -	L	29.3	8.85	NA	19	10.1	NA	26.2	17.1	NA	33.8	15.8	NA
Dissolved oxygen	- -	µg/L	**450**	**600**	NA	**490**	**420**	NA	**410**	**290**	NA	**260**	**360**	NA
Drawdown	- -	ft	0	0.02	NA	0.01	-0.01	NA	0.01	0.01	NA	0	0.04	NA
Field pH	- -	s.u.	6.43	6.19	NA	6.44	6.31	NA	6.7	6.49	NA	6.38	6.18	NA
Field Specific Conductance	- -	µS/cm	NA	434	NA	NA	691	NA	NA	320	NA	NA	484	NA
Field Specific Conductance	- -	umhos/cm	470	NA	NA	783	NA	NA	399	NA	NA	705	NA	NA
Field turbidity	- -	NTU	2.82	2.6	NA	2.11	1.8	NA	3.15	5.6	NA	2.31	9.1	NA
ORP/Eh	- -	mv	-28.6	-37.4	NA	-34	-47.6	NA	7.8	-15.9	NA	-31.1	-41.2	NA
Pumping Rate	- -	ml/min	310	270	NA	275	300	NA	307	330	NA	295	290	NA
Purge Time	- -	mins	95	40	NA	65	40	NA	85	64	NA	110	58	NA
Temperature	- -	°C	11.1	15.4	NA	13.2	NA	NA	13.2	NA	NA	13.3	NA	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LLF-002	LLF-003	LLF-004	LNP-007	LNP-008	LOU-001	LQW-009	LQW-010	LQW-011	LQW-012	LQW-012
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	11/30/05	12/01/05	12/02/05	11/30/05	12/02/05
Sample Name:	PAL	Units	LLF-002(0-1)	LLF-003(0-1)	LLF-004(0-1)	LNP-007(0-1)	LNP-008(0-1)	LOU-001(0-1)	LQW-009 (0-1)	LQW-010 (0-1)	LQW-011	LQW-012 (0-1)	LQW-012B
% Solids	- -	%	58.1	67.5	76.2	69.5	82.7 [81.6]	71	65.6 [63.7]	52.9	66.6	43.1	43.1
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,1,2,2-Tetrachloroethane	590	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,1,2-Trichloroethane	1,100	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,1-Dichloroethane	3,400	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,1-Dichloroethene	25,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,2,4-Trichlorobenzene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,2-Dibromoethane	34	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,2-Dichlorobenzene	200,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,2-Dichloroethane	450	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,2-Dichloropropane	930	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,3-Dichlorobenzene	- -	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,4-Dichlorobenzene	2,600	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	**1.8 J**	NA	3.7 UJ
2-Hexanone	- -	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
4-Methyl-2-pentanone	530,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Acetone	6,100,000	µg/kg	NA	NA	NA	NA	NA	NA	**2.7 J [3 J]**	**10 JTB**	**10 J**	NA	**21 J**
Benzene	1,100	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Bromodichloromethane	280	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Bromoform	61,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Bromomethane	790	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Carbon disulfide	67,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Carbon tetrachloride	250	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Chlorobenzene	31,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Chloroethane	- -	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Chloroform	300	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Chloromethane	12,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
cis-1,2-Dichloroethene	78,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
cis-1,3-Dichloropropene	1,700	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Cyclohexane	720,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Cyclohexane, methyl-	- -	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Dibromochloromethane	700	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Dichlorodifluoromethane	19,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Ethylbenzene	5,700	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Isopropylbenzene	27,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Methyl acetate	7,800,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Methyl tert butyl ether	39,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Methylene chloride	11,000	µg/kg	NA	NA	NA	NA	NA	NA	5.3 U [5.7 U]	7.2 UJ	5.8 U	NA	9.4 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	NA	NA	NA	NA	NA	NA	5.3 U [5.7 U]	7.2 UJ	5.8 U	NA	9.4 U
Tetrachloroethene	450	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Toluene	500,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
trans-1,2-Dichloroethene	11,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
trans-1,3-Dichloropropene	1,700	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Trichloroethene	2,800	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Trichlorofluoromethane	80,000	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Vinyl Chloride	20	µg/kg	NA	NA	NA	NA	NA	NA	2.1 U [2.3 U]	2.9 UJ	2.3 U	NA	3.7 U
Xylene (Total)	60,000	µg/kg	NA	NA	NA	NA	NA	NA	6.3 U [6.8 U]	8.6 UJ	6.9 U	NA	11 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-013	LQW-014	LQW-015	LQW-015	LQW-016	LQW-016	LQW-017	LQW-017	LQW-018	LQW-018	LUI-005
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	
Date Collected:			12/01/05	12/01/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	12/08/05
Sample Name:	PAL	Units	LQW-013 (0-1)	LQW-014 (0-1)	LQW-015 (0-1)	LQW-015B	LQW-016 (0-1)	LQW-016B	LQW-017 (0-1)	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005
% Solids	- -	%	65.4	81.8	84.3	84.3	74.9	74.9	78.9	78.9	87.5	87.5	87.7
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,1,2,2-Tetrachloroethane	590	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,1,2-Trichloroethane	1,100	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,1-Dichloroethane	3,400	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,1-Dichloroethene	25,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,2,4-Trichlorobenzene	20,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,2-Dibromo-3-chloropropane	5.6	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,2-Dibromoethane	34	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,2-Dichlorobenzene	200,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,2-Dichloroethane	450	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,2-Dichloropropane	930	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,3-Dichlorobenzene	- -	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,4-Dichlorobenzene	2,600	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
2-Hexanone	- -	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
4-Methyl-2-pentanone	530,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Acetone	6,100,000	µg/kg	5.7 UJ	**6.3 JTB**	NA	4.2 UJ	NA	5.3 UJ	NA	4.1 UJ	NA	**1 J**	NA
Benzene	1,100	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Bromodichloromethane	280	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Bromoform	61,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Bromomethane	790	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Carbon disulfide	67,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Carbon tetrachloride	250	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Chlorobenzene	31,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Chloroethane	- -	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 U	NA	1.7 UJ	NA
Chloroform	300	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Chloromethane	12,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 U	NA	1.7 UJ	NA
cis-1,2-Dichloroethene	78,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
cis-1,3-Dichloropropene	1,700	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Cyclohexane	720,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Cyclohexane, methyl-	- -	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Dibromochloromethane	700	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Dichlorodifluoromethane	19,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Ethylbenzene	5,700	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Isopropylbenzene	27,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Methyl acetate	7,800,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Methyl tert butyl ether	39,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 U	NA	1.7 UJ	NA
Methylene chloride	11,000	µg/kg	5.7 U	4.2 U	NA	4.2 U	NA	5.3 U	NA	4.1 UJ	NA	4.1 UJ	NA
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	5.7 U	4.2 U	NA	4.2 U	NA	5.3 U	NA	4.1 UJ	NA	4.1 UJ	NA
Tetrachloroethene	450	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Toluene	500,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
trans-1,2-Dichloroethene	11,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
trans-1,3-Dichloropropene	1,700	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Trichloroethene	2,800	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Trichlorofluoromethane	80,000	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 UJ	NA	1.7 UJ	NA
Vinyl Chloride	20	µg/kg	2.3 U	1.7 U	NA	1.7 U	NA	2.1 U	NA	1.6 U	NA	1.7 UJ	NA
Xylene (Total)	60,000	µg/kg	6.8 U	5 U	NA	5 U	NA	6.4 U	NA	4.9 UJ	NA	5 UJ	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LUI-006	SEA-601	SEA-601	SEA-601	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-602B
Sample Depth (Feet):				4 - 6	8 - 10	14 - 16	10 - 12	14 - 16	18 - 20	24 - 26	30 - 32
Date Collected:			12/08/05	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03
Sample Name:	PAL	Units	LUI-006	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF	SSO-SPT5-15-LF	SSO-SPT5-20-LF	SSO-SPT5-25-LF	SSO-SPT5-30-LF
% Solids	- -	%	70	NA	NA	NA	NA	NA	NA	NA	NA
VOC											
1,1,1-Trichloroethane	900,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	590	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	3,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	25,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	5.6	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	34	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	450	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	930	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	2,600	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	530,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	6,100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	280	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	61,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	790	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	67,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	250	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	12,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	78,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	720,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane, methyl-	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	19,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	5,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	27,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	7,800,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether	39,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	11,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	450	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	500,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	11,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	2,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	80,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	20	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (Total)	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-603	SEA-603	SEA-603	SEA-604	SEA-604	SEA-604	SEA-605	SEA-605	SEA-605
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	8 - 10	14 - 16	5 - 7	9 - 11	15 - 17
Date Collected:			09/21/03	09/21/03	09/21/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03
Sample Name:	PAL	Units	SSO-SPT2-5-LF	SSO-SPT2-10-LF	SSO-SPT2-15-LF	SSO-SPT3-5-LF	SSO-SPT3-10-LF	SSO-SPT3-15-LF	SSO-SPT4-5-LF	SSO-SPT4-10-LF	SSO-SPT4-15-LF
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC											
1,1,1-Trichloroethane	900,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	590	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	3,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	25,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	5.6	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	34	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	450	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	930	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	2,600	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	530,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	6,100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	280	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	61,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	790	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	67,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	250	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	12,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	78,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	720,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane, methyl-	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	19,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	5,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	27,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	7,800,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether	39,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	11,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	450	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	500,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	11,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	2,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	80,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	20	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (Total)	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	10 - 12	14 - 16	4 - 6	8 - 10	14 - 16
Date Collected:			09/21/03	09/21/03	09/21/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03
Sample Name:	PAL	Units	SSO-SPT8-5-NP	SSO-SPT8-10-NP	SSO-SPT8-15-NP	SSO-SPT6-5-UI	SSO-SPT6-10-UI	SSO-SPT6-15-UI	SSO-SPT7-5-UI	SSO-SPT7-10-UI	SSO-SPT7-15-UI
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC											
1,1,1-Trichloroethane	900,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	590	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	3,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	25,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	5.6	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	34	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	450	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	930	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	2,600	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	530,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	6,100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	280	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	61,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	790	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	67,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	250	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	12,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	78,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	720,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane, methyl-	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	19,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	5,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	27,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	7,800,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether	39,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	11,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	450	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	500,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	11,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	2,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	80,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	20	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (Total)	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/18/03	08/18/03	08/18/03	08/18/03	08/18/03	08/19/03	08/19/03	08/19/03	08/19/03	08/20/03	08/20/03
Sample Name:	PAL	Units	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
1,1,2,2-Tetrachloroethane	590	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
1,1,2-Trichloroethane	1,100	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
1,1-Dichloroethane	3,400	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
1,1-Dichloroethene	25,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	**5 J**	13 U	13 U	12 U	10 U
1,2,4-Trichlorobenzene	20,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
1,2-Dibromoethane	34	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
1,2-Dichlorobenzene	200,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
1,2-Dichloroethane	450	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
1,2-Dichloropropane	930	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
1,3-Dichlorobenzene	- -	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
1,4-Dichlorobenzene	2,600	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	**6 J**	12 U	10 U
2-Hexanone	- -	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
4-Methyl-2-pentanone	530,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
Acetone	6,100,000	µg/kg	**79 EB**	**130 EB**	**51 EB**	**30 EB [33 EB]**	**15 EB**	51 U	27 U	11 U	69 U	12 U	13 U
Benzene	1,100	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Bromodichloromethane	280	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Bromoform	61,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Bromomethane	790	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Carbon disulfide	67,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Carbon tetrachloride	250	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Chlorobenzene	31,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
Chloroethane	- -	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Chloroform	300	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Chloromethane	12,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
cis-1,2-Dichloroethene	78,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
cis-1,3-Dichloropropene	1,700	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Cyclohexane	720,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Cyclohexane, methyl-	- -	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Dibromochloromethane	700	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Dichlorodifluoromethane	19,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Ethylbenzene	5,700	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
Isopropylbenzene	27,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
Methyl acetate	7,800,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Methyl tert butyl ether	39,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Methylene chloride	11,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
Tetrachloroethene	450	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	**15**	12 U	10 U
Toluene	500,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U
trans-1,2-Dichloroethene	11,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
trans-1,3-Dichloropropene	1,700	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Trichloroethene	2,800	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Trichlorofluoromethane	80,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	**5 J**	13 U	12 U	10 U
Vinyl Chloride	20	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 U	13 U	12 U	10 U
Xylene (Total)	60,000	µg/kg	14 U	13 U	9 U	8 U [10 U]	12 U	10 U	14 U	13 UJ	13 U	12 U	10 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-012-UI	SO-013-UI	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/20/03	08/20/03	08/20/03	08/20/03	08/20/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03
Sample Name:	PAL	Units	SO-012-UI	SO-013-UI	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,1,2,2-Tetrachloroethane	590	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,1,2-Trichloroethane	1,100	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,1-Dichloroethane	3,400	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,1-Dichloroethene	25,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,2,4-Trichlorobenzene	20,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,2-Dibromoethane	34	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,2-Dichlorobenzene	200,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,2-Dichloroethane	450	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,2-Dichloropropane	930	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,3-Dichlorobenzene	- -	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,4-Dichlorobenzene	2,600	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	9 U	12 U	**12**	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
2-Hexanone	- -	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
4-Methyl-2-pentanone	530,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Acetone	6,100,000	µg/kg	9 U	12 U	48 U	36 U	17 U	18 U	12 U	7 U	37 U	8 U	43 U
Benzene	1,100	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Bromodichloromethane	280	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Bromoform	61,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Bromomethane	790	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Carbon disulfide	67,000	µg/kg	9 U	**5 JTB**	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Carbon tetrachloride	250	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Chlorobenzene	31,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Chloroethane	- -	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Chloroform	300	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Chloromethane	12,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
cis-1,2-Dichloroethene	78,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
cis-1,3-Dichloropropene	1,700	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Cyclohexane	720,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Cyclohexane, methyl-	- -	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Dibromochloromethane	700	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Dichlorodifluoromethane	19,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Ethylbenzene	5,700	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Isopropylbenzene	27,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Methyl acetate	7,800,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Methyl tert butyl ether	39,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Methylene chloride	11,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Tetrachloroethene	450	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Toluene	500,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
trans-1,2-Dichloroethene	11,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
trans-1,3-Dichloropropene	1,700	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Trichloroethene	2,800	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Trichlorofluoromethane	80,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Vinyl Chloride	20	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U
Xylene (Total)	60,000	µg/kg	9 U	12 U	10 U	14 U	8 U	11 U	9 U	7 U	12 U	8 U	12 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-022-LF	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/21/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/28/03	09/05/03
Sample Name:	PAL	Units	SO-FD-03	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,1,2,2-Tetrachloroethane	590	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,1,2-Trichloroethane	1,100	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,1-Dichloroethane	3,400	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,1-Dichloroethene	25,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,2,4-Trichlorobenzene	20,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 UJ	11 U	11 U	12 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,2-Dibromoethane	34	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,2-Dichlorobenzene	200,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,2-Dichloroethane	450	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,2-Dichloropropane	930	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,3-Dichlorobenzene	- -	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,4-Dichlorobenzene	2,600	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	**14**	11 U	12 U
2-Hexanone	- -	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	**5 J**
4-Methyl-2-pentanone	530,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Acetone	6,100,000	µg/kg	45 U	50 U	45 U	35 U	26 U	17 U	90 U	49 U	**170**	25 U	12 U
Benzene	1,100	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Bromodichloromethane	280	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Bromoform	61,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Bromomethane	790	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Carbon disulfide	67,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Carbon tetrachloride	250	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Chlorobenzene	31,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Chloroethane	- -	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Chloroform	300	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Chloromethane	12,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
cis-1,2-Dichloroethene	78,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
cis-1,3-Dichloropropene	1,700	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Cyclohexane	720,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Cyclohexane, methyl-	- -	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Dibromochloromethane	700	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Dichlorodifluoromethane	19,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Ethylbenzene	5,700	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Isopropylbenzene	27,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Methyl acetate	7,800,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Methyl tert butyl ether	39,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Methylene chloride	11,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Tetrachloroethene	450	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Toluene	500,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
trans-1,2-Dichloroethene	11,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
trans-1,3-Dichloropropene	1,700	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Trichloroethene	2,800	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Trichlorofluoromethane	80,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Vinyl Chloride	20	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U
Xylene (Total)	60,000	µg/kg	12 U	12 U	11 U	10 U	14 U	12 U	19 U	16 U	11 U	11 U	12 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-033-NP	SO-034-NP	SO-034-NP	SO-035-NP	SO-035-NP	SO-036-NP	SO-036-NP	SO-036-NP	SO-037-NP	SO-037-NP	SO-041-LF
Sample Depth (Feet):			1 - 5	0 - 1	6 - 10	0 - 1	5 - 9	0 - 1	1 - 5	1 - 5	0 - 1	5 - 9	0 - 1
Date Collected:			09/05/03	09/05/03	09/05/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/09/04
Sample Name:	PAL	Units	SO-W14-NP	SO-034-NP	SO-W13-NP	SO-035-NP	SO-W15-NP	SO-036-NP	SSO-FD01	SSO-01-NP	SO-037-NP	SO-W16-NP	SO-041-LF
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,1,2,2-Tetrachloroethane	590	µg/kg	10 UJ	10 U	13 UJ	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,1,2-Trichloroethane	1,100	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,1-Dichloroethane	3,400	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,1-Dichloroethene	25,000	µg/kg	10 U	10 U	**3 J**	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,2,4-Trichlorobenzene	20,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,2-Dibromoethane	34	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,2-Dichlorobenzene	200,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,2-Dichloroethane	450	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,2-Dichloropropane	930	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,3-Dichlorobenzene	- -	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,4-Dichlorobenzene	2,600	µg/kg	10 U	10 U	**8 J**	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	**18**	10 U	**96 J**	10 U	**17**	10 U	**22 J**	**55 J**	10 U	**3 J**	13 U
2-Hexanone	- -	µg/kg	10 UJ	10 U	13 UJ	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
4-Methyl-2-pentanone	530,000	µg/kg	10 UJ	10 U	13 UJ	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Acetone	6,100,000	µg/kg	**53**	10 U	**150**	10 U	**55**	10 U	58 U	**120**	10 U	11 U	31 U
Benzene	1,100	µg/kg	**1 J**	10 U	**310 J**	10 U	**1 J**	10 U	9 U	11 U	10 U	10 U	13 U
Bromodichloromethane	280	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Bromoform	61,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Bromomethane	790	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Carbon disulfide	67,000	µg/kg	**4 J**	10 U	**8 J**	10 U	**27**	10 U	9 U	11 U	10 U	**1 J**	13 U
Carbon tetrachloride	250	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Chlorobenzene	31,000	µg/kg	10 UJ	10 U	**18 J**	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Chloroethane	- -	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Chloroform	300	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Chloromethane	12,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
cis-1,2-Dichloroethene	78,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	**1 J**	10 U	10 U	13 U
cis-1,3-Dichloropropene	1,700	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Cyclohexane	720,000	µg/kg	10 U	10 U	**350 J**	10 U	10 U	10 U	9 U	**3 J**	10 U	10 U	13 U
Cyclohexane, methyl-	- -	µg/kg	10 U	10 U	**80 J**	10 U	10 U	10 U	9 U	**2 J**	10 U	10 U	13 U
Dibromochloromethane	700	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Dichlorodifluoromethane	19,000	µg/kg	**3 J**	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Ethylbenzene	5,700	µg/kg	10 UJ	10 U	**20 J**	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Isopropylbenzene	27,000	µg/kg	10 U	10 U	**29**	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Methyl acetate	7,800,000	µg/kg	**8 J**	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Methyl tert butyl ether	39,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Methylene chloride	11,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	16 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	10 UJ	10 U	13 UJ	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Tetrachloroethene	450	µg/kg	10 UJ	10 U	13 UJ	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Toluene	500,000	µg/kg	1 UJ	10 U	**64 J**	10 U	**2 J**	10 U	9 U	**1 J**	10 U	10 U	**2 J**
trans-1,2-Dichloroethene	11,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
trans-1,3-Dichloropropene	1,700	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Trichloroethene	2,800	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Trichlorofluoromethane	80,000	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Vinyl Chloride	20	µg/kg	10 U	10 U	13 U	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U
Xylene (Total)	60,000	µg/kg	10 UJ	10 U	**180 J**	10 U	10 U	10 U	9 U	11 U	10 U	10 U	13 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP	SO-051-NP	SO-052-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/09/04	09/09/04	09/10/04	09/10/04	09/09/04	09/09/04	09/09/04	09/09/04	09/08/04	09/08/04	09/08/04
Sample Name:	PAL	Units	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP	SO-051-NP	SO-052-NP
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
1,1,2,2-Tetrachloroethane	590	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
1,1,2-Trichloroethane	1,100	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
1,1-Dichloroethane	3,400	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
1,1-Dichloroethene	25,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
1,2,4-Trichlorobenzene	20,000	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
1,2-Dibromoethane	34	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
1,2-Dichlorobenzene	200,000	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
1,2-Dichloroethane	450	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
1,2-Dichloropropane	930	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
1,3-Dichlorobenzene	- -	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
1,4-Dichlorobenzene	2,600	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	**7 J**	7 U	9 U	15 U	1,300 U
2-Hexanone	- -	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 UJ	15 UJ	1,300 U
4-Methyl-2-pentanone	530,000	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
Acetone	6,100,000	µg/kg	**74**	**33 J**	**93**	**110**	**97 J [120]**	9 U	**100**	7 U	11 U	79 U	1,300 U
Benzene	1,100	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Bromodichloromethane	280	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Bromoform	61,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Bromomethane	790	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
Carbon disulfide	67,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
Carbon tetrachloride	250	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Chlorobenzene	31,000	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
Chloroethane	- -	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
Chloroform	300	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
Chloromethane	12,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
cis-1,2-Dichloroethene	78,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
cis-1,3-Dichloropropene	1,700	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Cyclohexane	720,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Cyclohexane, methyl-	- -	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	16 U	15 U	1,300 U
Dibromochloromethane	700	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Dichlorodifluoromethane	19,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
Ethylbenzene	5,700	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
Isopropylbenzene	27,000	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
Methyl acetate	7,800,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	**1,100 J**
Methyl tert butyl ether	39,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
Methylene chloride	11,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	15 U	10 U	9 U	15 U	**360 JTB**
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
Tetrachloroethene	450	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	15 U	1,300 U
Toluene	500,000	µg/kg	**1 J**	**2 J**	12 U	14 UJ	**1 J [3 J]**	**1 J**	**1 J**	7 U	**3 J**	15 U	1,300 U
trans-1,2-Dichloroethene	11,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
trans-1,3-Dichloropropene	1,700	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Trichloroethene	2,800	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 UJ	9 U	7 U	9 U	15 U	1,300 U
Trichlorofluoromethane	80,000	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	**2 J**	15 U	1,300 U
Vinyl Chloride	20	µg/kg	9 U	14 U	12 U	14 U	12 U [12 U]	8 U	9 U	7 U	9 U	15 U	1,300 U
Xylene (Total)	60,000	µg/kg	9 U	14 U	12 U	14 UJ	12 U [12 UJ]	8 UJ	9 UJ	7 U	9 U	**2 J**	1,300 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-061-WT	SO-062-WT
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/08/04	09/08/04	09/08/04	09/09/04	09/08/04	09/09/04	09/08/04	09/09/04	11/27/04	09/09/04
Sample Name:	PAL	Units	SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-091-WT	SO-062-WT
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,1,2,2-Tetrachloroethane	590	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
1,1,2-Trichloroethane	1,100	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,1-Dichloroethane	3,400	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
1,1-Dichloroethene	25,000	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
1,2,4-Trichlorobenzene	20,000	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,2-Dibromoethane	34	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,2-Dichlorobenzene	200,000	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,2-Dichloroethane	450	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
1,2-Dichloropropane	930	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,3-Dichlorobenzene	- -	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,4-Dichlorobenzene	2,600	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	**33 J**	7 U	10 U	NA	14 U	8 U
2-Hexanone	- -	µg/kg	13 UJ	9 UJ	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 UJ	NA	14 U	8 U
4-Methyl-2-pentanone	530,000	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Acetone	6,100,000	µg/kg	46 U	**62**	13 UJ	16 UJ [15 UJ]	**34 J**	**410 J**	7 U	10 U	NA	14 U	8 U
Benzene	1,100	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Bromodichloromethane	280	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Bromoform	61,000	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Bromomethane	790	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
Carbon disulfide	67,000	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
Carbon tetrachloride	250	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Chlorobenzene	31,000	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Chloroethane	- -	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
Chloroform	300	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
Chloromethane	12,000	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
cis-1,2-Dichloroethene	78,000	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
cis-1,3-Dichloropropene	1,700	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Cyclohexane	720,000	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Cyclohexane, methyl-	- -	µg/kg	13 U	9 U	16 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Dibromochloromethane	700	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Dichlorodifluoromethane	19,000	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 U	7 U	10 U	NA	14 U	8 U
Ethylbenzene	5,700	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Isopropylbenzene	27,000	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Methyl acetate	7,800,000	µg/kg	13 U	**8 J**	13 UJ	**5 J [6 J]**	12 U	**12 J**	7 U	10 U	NA	14 U	8 U
Methyl tert butyl ether	39,000	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
Methylene chloride	11,000	µg/kg	13 U	17 U	13 UJ	25 U [15 U]	12 U	11 U	7 U	36 U	NA	22 U	8 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Tetrachloroethene	450	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Toluene	500,000	µg/kg	**2 J**	9 U	**2 J**	16 UJ [15 UJ]	**2 J**	**2 J**	**1 J**	10 U	NA	14 U	**1 J**
trans-1,2-Dichloroethene	11,000	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
trans-1,3-Dichloropropene	1,700	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Trichloroethene	2,800	µg/kg	13 U	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U
Trichlorofluoromethane	80,000	µg/kg	13 U	9 U	**3 J**	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
Vinyl Chloride	20	µg/kg	13 U	9 U	13 UJ	16 U [15 U]	12 U	11 U	7 U	10 U	NA	14 U	8 U
Xylene (Total)	60,000	µg/kg	13 UJ	9 U	13 UJ	16 UJ [15 UJ]	12 U	11 UJ	7 U	10 U	NA	14 U	8 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-062-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			11/27/04	09/09/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/10/04
Sample Name:	PAL	Units	SO-092-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
1,1,2,2-Tetrachloroethane	590	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
1,1,2-Trichloroethane	1,100	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
1,1-Dichloroethane	3,400	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
1,1-Dichloroethene	25,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
1,2,4-Trichlorobenzene	20,000	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
1,2-Dibromo-3-chloropropane	5.6	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
1,2-Dibromoethane	34	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
1,2-Dichlorobenzene	200,000	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
1,2-Dichloroethane	450	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
1,2-Dichloropropane	930	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
1,3-Dichlorobenzene	- -	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
1,4-Dichlorobenzene	2,600	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
2-Hexanone	- -	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
4-Methyl-2-pentanone	530,000	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
Acetone	6,100,000	µg/kg	NA	9 U	31 U	10 UJ	9 UJ	23 UJ	11 UJ	62 UJ	41 U	29 UJ	14 U
Benzene	1,100	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Bromodichloromethane	280	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Bromoform	61,000	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Bromomethane	790	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
Carbon disulfide	67,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
Carbon tetrachloride	250	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Chlorobenzene	31,000	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
Chloroethane	- -	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
Chloroform	300	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
Chloromethane	12,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
cis-1,2-Dichloroethene	78,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
cis-1,3-Dichloropropene	1,700	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Cyclohexane	720,000	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Cyclohexane, methyl-	- -	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Dibromochloromethane	700	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Dichlorodifluoromethane	19,000	µg/kg	NA	9 U	12 U	10 UJ	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Ethylbenzene	5,700	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
Isopropylbenzene	27,000	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
Methyl acetate	7,800,000	µg/kg	NA	9 U	12 U	10 U	9 U	**2 J**	11 U	**7 J**	9 U	**3 J**	10 U
Methyl tert butyl ether	39,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
Methylene chloride	11,000	µg/kg	NA	9 U	12 U	18 U	9 U	8 U	11 U	29 U	9 U	21 U	10 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
Tetrachloroethene	450	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
Toluene	500,000	µg/kg	NA	**1 J**	**1 J**	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ
trans-1,2-Dichloroethene	11,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
trans-1,3-Dichloropropene	1,700	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Trichloroethene	2,800	µg/kg	NA	9 U	12 U	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 U	10 UJ	10 U
Trichlorofluoromethane	80,000	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
Vinyl Chloride	20	µg/kg	NA	9 U	12 U	10 U	9 U	8 U	11 U	18 U	9 U	10 U	10 U
Xylene (Total)	60,000	µg/kg	NA	9 U	12 UJ	10 U	9 UJ	8 UJ	11 UJ	18 UJ	9 UJ	10 UJ	10 UJ

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04
Sample Name:	PAL	Units	SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,1,2,2-Tetrachloroethane	590	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,1,2-Trichloroethane	1,100	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,1-Dichloroethane	3,400	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,1-Dichloroethene	25,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,2,4-Trichlorobenzene	20,000	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,2-Dibromoethane	34	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,2-Dichlorobenzene	200,000	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,2-Dichloroethane	450	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,2-Dichloropropane	930	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,3-Dichlorobenzene	- -	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,4-Dichlorobenzene	2,600	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
2-Hexanone	- -	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
4-Methyl-2-pentanone	530,000	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Acetone	6,100,000	µg/kg	11 U	9 U	11 U	13 U [12 U]	6 U	19 UJ	12 U	9 U	8 U	7 U	**64**
Benzene	1,100	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Bromodichloromethane	280	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Bromoform	61,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Bromomethane	790	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Carbon disulfide	67,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Carbon tetrachloride	250	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Chlorobenzene	31,000	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Chloroethane	- -	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Chloroform	300	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Chloromethane	12,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
cis-1,2-Dichloroethene	78,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
cis-1,3-Dichloropropene	1,700	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Cyclohexane	720,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Cyclohexane, methyl-	- -	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Dibromochloromethane	700	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Dichlorodifluoromethane	19,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Ethylbenzene	5,700	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Isopropylbenzene	27,000	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Methyl acetate	7,800,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Methyl tert butyl ether	39,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Methylene chloride	11,000	µg/kg	10 U	9 U	27 U	10 U [11 U]	11 U	11 UJ	19 U	9 U	8 U	13 U	8 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Tetrachloroethene	450	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Toluene	500,000	µg/kg	10 UJ	**0.9 J**	11 U	10 U [10 U]	6 U	**1 J**	11 U	9 U	8 U	7 U	**1 J**
trans-1,2-Dichloroethene	11,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
trans-1,3-Dichloropropene	1,700	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Trichloroethene	2,800	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Trichlorofluoromethane	80,000	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Vinyl Chloride	20	µg/kg	10 U	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U
Xylene (Total)	60,000	µg/kg	10 UJ	9 U	11 U	10 U [10 U]	6 U	10 UJ	11 U	9 U	8 U	7 U	8 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-084-UI	SO-084-UI	SO-085-UI	SO-085-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP	SO-101-NP	SO-101-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	2 - 7	0 - 1	2 - 9
Date Collected:			09/09/04	11/27/04	09/09/04	11/27/04	09/09/04	09/09/04	09/10/04	11/01/06	11/01/06	11/01/06
Sample Name:	PAL	Units	SO-084-UI	SO-089-UI	SO-085-UI	SO-090-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP (2-7')	SO-101-NP (0-1')	SO-101-NP (2-9')
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC												
1,1,1-Trichloroethane	900,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
1,1,2,2-Tetrachloroethane	590	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
1,1,2-Trichloroethane	1,100	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
1,1-Dichloroethane	3,400	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
1,1-Dichloroethene	25,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
1,2,4-Trichlorobenzene	20,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
1,2-Dibromoethane	34	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
1,2-Dichlorobenzene	200,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
1,2-Dichloroethane	450	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
1,2-Dichloropropane	930	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
1,3-Dichlorobenzene	- -	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
1,4-Dichlorobenzene	2,600	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
2-Hexanone	- -	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
4-Methyl-2-pentanone	530,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
Acetone	6,100,000	µg/kg	NA	10 U	NA	11 U [12 U]	6 U	13 U	18 U	18 UJ	3.2 UJ	10 UJ
Benzene	1,100	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Bromodichloromethane	280	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Bromoform	61,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
Bromomethane	790	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Carbon disulfide	67,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Carbon tetrachloride	250	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Chlorobenzene	31,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
Chloroethane	- -	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Chloroform	300	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Chloromethane	12,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
cis-1,2-Dichloroethene	78,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
cis-1,3-Dichloropropene	1,700	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
Cyclohexane	720,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Cyclohexane, methyl-	- -	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	4 U	3.2 U	4 U
Dibromochloromethane	700	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
Dichlorodifluoromethane	19,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Ethylbenzene	5,700	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.8 U
Isopropylbenzene	27,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	4 UJ	3.2 U	4 U
Methyl acetate	7,800,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
Methyl tert butyl ether	39,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Methylene chloride	11,000	µg/kg	NA	23 U	NA	22 U [25 U]	9 U	15 U	10 U	4 U	3.2 U	4 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
Tetrachloroethene	450	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Toluene	500,000	µg/kg	NA	10 U	NA	11 U [10 U]	**0.8 J**	**1 J**	9 U	1.6 U	1.3 U	1.6 U
trans-1,2-Dichloroethene	11,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
trans-1,3-Dichloropropene	1,700	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 UJ	1.3 U	1.6 U
Trichloroethene	2,800	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Trichlorofluoromethane	80,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Vinyl Chloride	20	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	1.6 U	1.3 U	1.6 U
Xylene (Total)	60,000	µg/kg	NA	10 U	NA	11 U [10 U]	6 U	9 U	9 U	4.8 U	3.8 U	5.3 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-102-NP	SO-102-NP	SO-103-NP	SO-104-NP	SO-105-NP	SO-106-NP	SO-107-NP	SO-107-NP
Sample Depth (Feet):			0 - 1	2 - 8.5	2 - 7	2 - 3.4	2 - 3.4	2 - 5	0 - 1	2 - 10
Date Collected:			10/31/06	10/31/06	11/01/06	11/02/06	11/02/06	11/02/06	11/02/06	11/02/06
Sample Name:	PAL	Units	SO-102-NP (0-1')	SO-102-NP (2-8.5')	SO-103-NP (2-7')	SO-104-NP (2-3.4')	SO-105-NP (2-3.4')	SO-106-NP (2-5')	SO-107-NP (0-1')	SO-107-NP (2-10')
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA
VOC										
1,1,1-Trichloroethane	900,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,1,2,2-Tetrachloroethane	590	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,1,2-Trichloroethane	1,100	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,1-Dichloroethane	3,400	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,1-Dichloroethene	25,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,2,4-Trichlorobenzene	20,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,2-Dibromoethane	34	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,2-Dichlorobenzene	200,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,2-Dichloroethane	450	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,2-Dichloropropane	930	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,3-Dichlorobenzene	- -	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,4-Dichlorobenzene	2,600	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
2-Hexanone	- -	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
4-Methyl-2-pentanone	530,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Acetone	6,100,000	µg/kg	9.9 UJ	1,400 UJ	11 UJ	2.8 UJ	1,600 UJ	6.6 UJ	3.7 UJ	6.7 UJ
Benzene	1,100	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Bromodichloromethane	280	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Bromoform	61,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Bromomethane	790	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Carbon disulfide	67,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Carbon tetrachloride	250	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Chlorobenzene	31,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Chloroethane	- -	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Chloroform	300	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Chloromethane	12,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
cis-1,2-Dichloroethene	78,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
cis-1,3-Dichloropropene	1,700	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Cyclohexane	720,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Cyclohexane, methyl-	- -	µg/kg	3.7 U	250 U	4 U	2.8 U	280 U	3.6 U	3.7 U	3.7 U
Dibromochloromethane	700	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Dichlorodifluoromethane	19,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Ethylbenzene	5,700	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Isopropylbenzene	27,000	µg/kg	3.7 U	250 U	4 U	2.8 U	280 U	3.6 U	3.7 U	3.7 U
Methyl acetate	7,800,000	µg/kg	1.5 U	820 U	1.6 U	1.1 U	1,200 U	1.4 U	1.5 U	1.5 U
Methyl tert butyl ether	39,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Methylene chloride	11,000	µg/kg	3.7 U	250 U	4 U	2.8 U	280 U	3.6 U	3.7 U	3.7 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Tetrachloroethene	450	µg/kg	1.5 U	100 U	**2.3**	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Toluene	500,000	µg/kg	1.5 U	**13,000**	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
trans-1,2-Dichloroethene	11,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
trans-1,3-Dichloropropene	1,700	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Trichloroethene	2,800	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Trichlorofluoromethane	80,000	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Vinyl Chloride	20	µg/kg	1.5 U	100 U	1.6 U	1.1 U	110 U	1.4 U	1.5 U	1.5 U
Xylene (Total)	60,000	µg/kg	4.4 U	**440**	4.8 U	3.4 U	340 U	4.3 U	4.4 U	4.4 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-108-NP	SO-200-U1	SO-200-U1	SO-200-UI	SO-200-UI	SO-201-UI	SO-201-UI	SO-203-U1	SO-203-UI	SO-204-UI
Sample Depth (Feet):			3 - 8	0 - 1	5 - 6	0 - 1	5 - 6	4 - 6	4 - 6	0 - 1	5 - 7	2 - 4
Date Collected:			11/02/06	11/18/09	11/18/09	11/18/09	11/18/09	11/18/09	11/24/09	11/18/09	11/18/09	11/19/09
Sample Name:	PAL	Units	SO-108-NP (3-8')	SO-200-U1-0-1'	SO-200-U1-5-6'	SO-200-UI (0-1')	SO-200-UI (5-6')	SO-201-UI (4-6')	SO-201-UI-4-6'	SO-203-U1-0-1'	SO-203-UI (5-7')	SO-204-UI (2-4')
% Solids	- -	%	NA	NA	NA	56.4	79.8	85.2	NA	NA	77.3	55.3
VOC												
1,1,1-Trichloroethane	900,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,1,2,2-Tetrachloroethane	590	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,1,2-Trichloroethane	1,100	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,1-Dichloroethane	3,400	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,1-Dichloroethene	25,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,2,4-Trichlorobenzene	20,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,2-Dibromoethane	34	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,2-Dichlorobenzene	200,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	**1.7 J**	NA	NA	3.54 U	3.14 U
1,2-Dichloroethane	450	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,2-Dichloropropane	930	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,3-Dichlorobenzene	- -	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
1,4-Dichlorobenzene	2,600	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	**10**	NA	NA	3.54 U	3.14 U
1,4-Dioxane	44,000	µg/kg	NA	R	R	NA	NA	R	NA	NA	R	R
2-Butanone	2,800,000	µg/kg	1.8 U [2.4 U]	NA	NA	8.59 U	**4.56**	**20.5**	NA	NA	8.86 U	7.85 U
2-Hexanone	- -	µg/kg	1.8 U [2.4 U]	NA	NA	8.59 U	3.85 U	6.19 U	NA	NA	8.86 U	7.85 U
4-Methyl-2-pentanone	530,000	µg/kg	1.8 U [2.4 U]	NA	NA	8.59 U	3.85 U	6.19 U	NA	NA	8.86 U	7.85 U
Acetone	6,100,000	µg/kg	4.5 UJ [15 UJ]	NA	NA	**41.3 J**	**24.9**	**56.3**	NA	NA	8.86 U	**10.9**
Benzene	1,100	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Bromodichloromethane	280	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Bromoform	61,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Bromomethane	790	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Carbon disulfide	67,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	**1.24 J**	**26.3**	NA	NA	3.54 U	3.14 U
Carbon tetrachloride	250	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Chlorobenzene	31,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	**6.6**	NA	NA	3.54 U	3.14 U
Chloroethane	- -	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Chloroform	300	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Chloromethane	12,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
cis-1,2-Dichloroethene	78,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
cis-1,3-Dichloropropene	1,700	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Cyclohexane	720,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Cyclohexane, methyl-	- -	µg/kg	4.5 U [6 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Dibromochloromethane	700	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Dichlorodifluoromethane	19,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Ethylbenzene	5,700	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	**1.75 J**	NA	NA	3.54 U	3.14 U
Isopropylbenzene	27,000	µg/kg	4.5 U [6 U]	NA	NA	3.44 U	1.54 U	**5.17**	NA	NA	3.54 U	3.14 U
Methyl acetate	7,800,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	**2.38**	**57.9**	NA	NA	3.54 U	3.14 U
Methyl tert butyl ether	39,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Methylene chloride	11,000	µg/kg	4.5 U [6 U]	NA	NA	**4 J**	3.85 U	6.19 U	NA	NA	8.86 U	7.85 U
o-Xylene	60,000	µg/kg	NA	NA	NA	3.44 U	1.54 U	**2.9**	NA	NA	3.54 U	3.14 U
p/m-Xylene	- -	µg/kg	NA	NA	NA	6.87 U	3.08 U	**8.36**	NA	NA	7.09 U	6.28 U
Styrene	13,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Tetrachloroethene	450	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Toluene	500,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	**12.2**	NA	NA	3.54 U	3.14 U
trans-1,2-Dichloroethene	11,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
trans-1,3-Dichloropropene	1,700	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Trichloroethene	2,800	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	**2.81**	NA	NA	3.54 U	3.14 U
Trichlorofluoromethane	80,000	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Vinyl Chloride	20	µg/kg	1.8 U [2.4 U]	NA	NA	3.44 U	1.54 U	2.48 U	NA	NA	3.54 U	3.14 U
Xylene (Total)	60,000	µg/kg	5.4 U [7.2 U]	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-205-U1	SO-205-UI	SO-206-UI	SO-207B-UI	SO-207B-UI	SO-208B-UI	SO-208B-UI	SO-209-UI	SO-210B-UI
Sample Depth (Feet):			3 - 4.5	2 - 4	2 - 3	1 - 2	2 - 3	0 - 1	1 - 5	0 - 1	1.25 - 4
Date Collected:			11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/20/09	11/20/09
Sample Name:	PAL	Units	SO-205-U1-3-4.5	SO-205-UI (2-4')	SO-206-UI (2-3')	SO-207B-UI (1-2')	SO-207B-UI (2-3')	SO-208B-UI (0-1')	SO-208B-UI (1-5')	SO-209-UI (0-1')	SO-210B-UI (1.25-4')
% Solids	- -	%	NA	61.3	81.4	75.3	81.5	82.1	79.1	77.9	90.9
VOC											
1,1,1-Trichloroethane	900,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,1,2,2-Tetrachloroethane	590	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,1,2-Trichloroethane	1,100	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,1-Dichloroethane	3,400	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,1-Dichloroethene	25,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,2,4-Trichlorobenzene	20,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,2-Dibromoethane	34	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,2-Dichlorobenzene	200,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,2-Dichloroethane	450	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,2-Dichloropropane	930	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,3-Dichlorobenzene	- -	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,4-Dichlorobenzene	2,600	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
1,4-Dioxane	44,000	µg/kg	NA	R	R	R	R	R	R	R	R
2-Butanone	2,800,000	µg/kg	NA	8.19 U	6.17 U	6.56 U	4.82 U	5.42 U	6.03 UJ	5.54 U	5.03 U
2-Hexanone	- -	µg/kg	NA	8.19 U	6.17 U	6.56 U	4.82 U	5.42 U	6.03 UJ	5.54 U	5.03 U
4-Methyl-2-pentanone	530,000	µg/kg	NA	8.19 U	6.17 U	6.56 U	4.82 U	5.42 U	6.03 UJ	5.54 U	5.03 U
Acetone	6,100,000	µg/kg	NA	8.19 U	6.17 U	6.56 U	4.82 U	5.42 U	**2.85 J**	**3.09 J**	5.03 U
Benzene	1,100	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	**13.5 J**	2.22 U	2.01 U
Bromodichloromethane	280	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Bromoform	61,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Bromomethane	790	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Carbon disulfide	67,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Carbon tetrachloride	250	µg/kg	NA	3.28 U	**1.44 J**	2.62 U	1.93 U	2.17 U	2.41 UJ	**6.02**	2.01 U
Chlorobenzene	31,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Chloroethane	- -	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Chloroform	300	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Chloromethane	12,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
cis-1,2-Dichloroethene	78,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
cis-1,3-Dichloropropene	1,700	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Cyclohexane	720,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Cyclohexane, methyl-	- -	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Dibromochloromethane	700	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Dichlorodifluoromethane	19,000	µg/kg	NA	**20.9**	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Ethylbenzene	5,700	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Isopropylbenzene	27,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Methyl acetate	7,800,000	µg/kg	NA	3.28 U	2.47 U	**3.63**	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Methyl tert butyl ether	39,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Methylene chloride	11,000	µg/kg	NA	8.19 U	6.17 U	6.56 U	4.82 U	5.42 U	6.03 UJ	5.54 U	5.03 U
o-Xylene	60,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
p/m-Xylene	- -	µg/kg	NA	6.55 U	4.93 U	5.25 U	3.85 U	4.33 U	4.82 UJ	4.43 U	4.02 U
Styrene	13,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Tetrachloroethene	450	µg/kg	NA	3.28 U	2.47 U	**5.07**	1.93 U	**2.12 J**	**7.94 J**	2.22 U	2.01 U
Toluene	500,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	**2.21 J**	2.22 U	2.01 U
trans-1,2-Dichloroethene	11,000	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
trans-1,3-Dichloropropene	1,700	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Trichloroethene	2,800	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Trichlorofluoromethane	80,000	µg/kg	NA	**5.6**	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Vinyl Chloride	20	µg/kg	NA	3.28 U	2.47 U	2.62 U	1.93 U	2.17 U	2.41 UJ	2.22 U	2.01 U
Xylene (Total)	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-211-UI	SO-212-UI	SO-213-U1	SO-214-U1	SO-215-U1	SO-216-U1	SO-217-UI	SO-218-UI	SO-219-UI
Sample Depth (Feet):			0 - 1	1 - 4.5	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	1 - 5	1 - 5
Date Collected:			11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/23/09	11/23/09
Sample Name:	PAL	Units	SO-211-UI (0-1')	SO-212-UI (1-4.5')	SO-213-U1-0-1'	SO-214-U1-0-1'	SO-215-U1-0-1'	SO-216-U1-0-1'	SO-217-UI (0-1')	SO-218-UI-1-5'	SO-219-UI-1-5'
% Solids	- -	%	68.9	61.8 [64.1]	NA	NA	NA	NA	64.3	74.1	82.5
VOC											
1,1,1-Trichloroethane	900,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,1,2,2-Tetrachloroethane	590	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,1,2-Trichloroethane	1,100	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,1-Dichloroethane	3,400	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,1-Dichloroethene	25,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,2,4-Trichlorobenzene	20,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	2.44 UJ	2.24 U
1,2-Dibromoethane	34	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	2.44 UJ	2.24 U
1,2-Dichlorobenzene	200,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,2-Dichloroethane	450	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,2-Dichloropropane	930	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,3-Dichlorobenzene	- -	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,4-Dichlorobenzene	2,600	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
1,4-Dioxane	44,000	µg/kg	R	R [R]	NA	NA	NA	NA	R	R	R
2-Butanone	2,800,000	µg/kg	5.93 U	5.64 U [6.94 U]	NA	NA	NA	NA	6.84 U	584 U	5.59 U
2-Hexanone	- -	µg/kg	5.93 U	5.64 U [6.94 U]	NA	NA	NA	NA	6.84 U	584 U	5.59 U
4-Methyl-2-pentanone	530,000	µg/kg	5.93 U	5.64 U [6.94 U]	NA	NA	NA	NA	6.84 U	584 U	5.59 U
Acetone	6,100,000	µg/kg	**22**	**12.2 J [6.94 UJ]**	NA	NA	NA	NA	6.84 U	584 UJ	**4.98 J**
Benzene	1,100	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Bromodichloromethane	280	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Bromoform	61,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Bromomethane	790	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Carbon disulfide	67,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Carbon tetrachloride	250	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Chlorobenzene	31,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Chloroethane	- -	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Chloroform	300	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Chloromethane	12,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
cis-1,2-Dichloroethene	78,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
cis-1,3-Dichloropropene	1,700	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Cyclohexane	720,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Cyclohexane, methyl-	- -	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Dibromochloromethane	700	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Dichlorodifluoromethane	19,000	µg/kg	2.37 U	**2.26 U [1.54 J]**	NA	NA	NA	NA	2.74 U	234 UJ	2.24 U
Ethylbenzene	5,700	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Isopropylbenzene	27,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Methyl acetate	7,800,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Methyl tert butyl ether	39,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Methylene chloride	11,000	µg/kg	5.93 U	5.64 U [6.94 U]	NA	NA	NA	NA	6.84 U	584 U	5.59 U
o-Xylene	60,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
p/m-Xylene	- -	µg/kg	4.74 U	4.51 U [5.55 U]	NA	NA	NA	NA	5.48 U	467 U	4.47 U
Styrene	13,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Tetrachloroethene	450	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Toluene	500,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
trans-1,2-Dichloroethene	11,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
trans-1,3-Dichloropropene	1,700	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Trichloroethene	2,800	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Trichlorofluoromethane	80,000	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	234 U	2.24 U
Vinyl Chloride	20	µg/kg	2.37 U	2.26 U [2.78 U]	NA	NA	NA	NA	2.74 U	2.44 UJ	2.24 U
Xylene (Total)	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-220-UI	SO-222-UI	SO-223F-UI	SO-223F-UI	SO-224A-UI	SO-225A-UI	SO-225A-UI	SO-226A-UI	SO-227B-UI
Sample Depth (Feet):			1 - 4.5	1 - 3	0 - 1	11 - 12	1 - 5	0 - 1	1.5 - 5	6 - 8	1 - 5
Date Collected:			11/23/09	11/23/09	11/24/09	11/23/09	11/23/09	11/24/09	11/24/09	11/24/09	11/24/09
Sample Name:	PAL	Units	SO-220-UI-1-4.5'	SO-222-UI-1-3'	SO-223F-UI-0-1'	SO-223F-UI-11-12'	SO-224A-UI-1-5'	SO-225A-UI-0-1'	SO-225A-UI-1.5-5'	SO-226A-UI-6-8'	SO-227B-UI-1-5'
% Solids	- -	%	76.4	81.1	77.4	91.1	53.1	89.5 [90.3]	64.8	43	88.1
VOC											
1,1,1-Trichloroethane	900,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,1,2,2-Tetrachloroethane	590	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,1,2-Trichloroethane	1,100	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,1-Dichloroethane	3,400	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,1-Dichloroethene	25,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,2,4-Trichlorobenzene	20,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**4.26**	2.2 UJ [2.08 U]	290 U	4.57 U	1.96 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	2.83 UJ	4.57 U	1.96 U
1,2-Dibromoethane	34	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	2.83 UJ	4.57 U	1.96 U
1,2-Dichlorobenzene	200,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**5.5**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,2-Dichloroethane	450	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,2-Dichloropropane	930	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,3-Dichlorobenzene	- -	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,4-Dichlorobenzene	2,600	µg/kg	2.41 U	2.12 U	1.57 U	**1.25 J**	**1,250**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
1,4-Dioxane	44,000	µg/kg	R	R	R	R	R	R [R]	R	R	R
2-Butanone	2,800,000	µg/kg	6.03 U	5.3 U	3.93 U	5.44 U	**525 J**	5.49 U [5.2 U]	724 U	**274**	4.91 U
2-Hexanone	- -	µg/kg	6.03 U	5.3 U	3.93 U	5.44 U	7.41 U	5.49 U [5.2 U]	724 UJ	11.4 U	4.91 U
4-Methyl-2-pentanone	530,000	µg/kg	6.03 U	5.3 U	3.93 U	5.44 U	7.41 U	5.49 U [5.2 U]	724 UJ	11.4 U	4.91 U
Acetone	6,100,000	µg/kg	**26.7 J**	5.3 UJ	**32.9 J**	**11.6 J**	**1,980 J**	**5.77 J [5.2 UJ]**	724 UJ	**1,110 J**	4.91 UJ
Benzene	1,100	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**13**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Bromodichloromethane	280	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Bromoform	61,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Bromomethane	790	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Carbon disulfide	67,000	µg/kg	2.41 U	2.12 U	1.57 U	**1.79 J**	**50**	2.2 U [2.08 U]	290 U	**12.4**	1.96 U
Carbon tetrachloride	250	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Chlorobenzene	31,000	µg/kg	2.41 U	2.12 U	1.57 U	**8.74**	**127**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Chloroethane	- -	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Chloroform	300	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Chloromethane	12,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
cis-1,2-Dichloroethene	78,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**1.96 J**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
cis-1,3-Dichloropropene	1,700	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Cyclohexane	720,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**44.3**	2.2 U [2.08 U]	290 U	**25**	1.96 U
Cyclohexane, methyl-	- -	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**229 J**	2.2 U [2.08 U]	290 U	**84.7**	1.96 U
Dibromochloromethane	700	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Dichlorodifluoromethane	19,000	µg/kg	2.41 U	**3.43**	1.57 U	2.18 U	2.96 UJ	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Ethylbenzene	5,700	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**2.6 J**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Isopropylbenzene	27,000	µg/kg	2.41 U	2.12 U	1.57 U	**1.23 J**	**64.6**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Methyl acetate	7,800,000	µg/kg	2.41 U	2.12 U	**8.25 J**	2.18 U	**545**	**2.11 J [2.08 UJ]**	**250 J**	**1,110**	1.96 U
Methyl tert butyl ether	39,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Methylene chloride	11,000	µg/kg	6.03 U	**3.73 J**	3.93 U	5.44 U	7.41 U	5.49 U [5.2 U]	724 U	11.4 U	4.91 U
o-Xylene	60,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**12.5**	2.2 U [2.08 U]	290 U	**8.5**	1.96 U
p/m-Xylene	- -	µg/kg	4.82 U	4.24 U	3.15 U	4.36 U	**29.8**	4.39 U [4.16 U]	580 U	9.14 U	3.93 U
Styrene	13,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**2.32 J**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Tetrachloroethene	450	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**3.9**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Toluene	500,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**10.7**	2.2 U [2.08 U]	**354**	**608**	1.96 U
trans-1,2-Dichloroethene	11,000	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
trans-1,3-Dichloropropene	1,700	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Trichloroethene	2,800	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	**5.04**	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Trichlorofluoromethane	80,000	µg/kg	2.41 U	**1.14 J**	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	290 U	4.57 U	1.96 U
Vinyl Chloride	20	µg/kg	2.41 U	2.12 U	1.57 U	2.18 U	2.96 U	2.2 U [2.08 U]	2.83 UJ	4.57 U	1.96 U
Xylene (Total)	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-228-UI	SO-W05-DF	SO-W05-DF	SO-W06-DF	SO-W06-DF	SO-W06-DF	SO-W07-DF	SO-W07x-DF	SO-W08-DF	SO-W08-DF	SO-W09-DF
Sample Depth (Feet):			12 - 14	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			11/24/09	08/26/03	09/20/03	08/26/03	08/27/03	09/20/03	08/26/03	09/20/03	08/26/03	09/20/03	08/26/03
Sample Name:	PAL	Units	SO-228-UI-12-14'	SO-W05-DF	SO-W05-DFb	SO-W06-DF	SO-FD04	SO-W06-DFb	SO-W07-DF	SO-W07x-DF	SO-W08-DF	SO-W08-DFb	SO-W09-DF
% Solids	- -	%	90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC													
1,1,1-Trichloroethane	900,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
1,1,2,2-Tetrachloroethane	590	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
1,1,2-Trichloroethane	1,100	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
1,1-Dichloroethane	3,400	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
1,1-Dichloroethene	25,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
1,2,4-Trichlorobenzene	20,000	µg/kg	1.56 U	10 UJ	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
1,2-Dibromoethane	34	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
1,2-Dichlorobenzene	200,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
1,2-Dichloroethane	450	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
1,2-Dichloropropane	930	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
1,3-Dichlorobenzene	- -	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
1,4-Dichlorobenzene	2,600	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
1,4-Dioxane	44,000	µg/kg	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	3.9 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
2-Hexanone	- -	µg/kg	3.9 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
4-Methyl-2-pentanone	530,000	µg/kg	3.9 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
Acetone	6,100,000	µg/kg	**13.4 J**	10 U	NA	11 U	10 U	NA	26 U	NA	32 U	NA	19 U
Benzene	1,100	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Bromodichloromethane	280	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Bromoform	61,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Bromomethane	790	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Carbon disulfide	67,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Carbon tetrachloride	250	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Chlorobenzene	31,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
Chloroethane	- -	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Chloroform	300	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Chloromethane	12,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
cis-1,2-Dichloroethene	78,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
cis-1,3-Dichloropropene	1,700	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Cyclohexane	720,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Cyclohexane, methyl-	- -	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Dibromochloromethane	700	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Dichlorodifluoromethane	19,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Ethylbenzene	5,700	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
Isopropylbenzene	27,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
Methyl acetate	7,800,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Methyl tert butyl ether	39,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Methylene chloride	11,000	µg/kg	3.9 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
o-Xylene	60,000	µg/kg	1.56 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	3.12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
Tetrachloroethene	450	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
Toluene	500,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U
trans-1,2-Dichloroethene	11,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
trans-1,3-Dichloropropene	1,700	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Trichloroethene	2,800	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Trichlorofluoromethane	80,000	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Vinyl Chloride	20	µg/kg	1.56 U	10 U	NA	11 U	10 U	NA	12 U	NA	11 U	NA	9 U
Xylene (Total)	60,000	µg/kg	NA	10 U	NA	11 U	10 U	NA	12 U	NA	11 UJ	NA	9 U

TABLE 4-11
SOIL RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W09-DF	SO-W10-DF	SO-W10-DF	SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W09-DFb	SO-W10-DF	SO-W10-DFb	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
% Solids	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC														
1,1,1-Trichloroethane	900,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
1,1,2,2-Tetrachloroethane	590	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	13 U	13 U	14 UJ	11 U	13 U
1,1,2-Trichloro-1,2,2-trifluoroethane	940,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
1,1,2-Trichloroethane	1,100	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
1,1-Dichloroethane	3,400	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
1,1-Dichloroethene	25,000	µg/kg	NA	**4 J**	NA	14 U	NA	**4 J**	NA	13 U	13 U	14 U	11 U	13 U
1,2,4-Trichlorobenzene	20,000	µg/kg	NA	10 UJ	NA	14 U	NA	10 U	NA	13 U	13 U	14 UJ	**11**	13 U
1,2-Dibromo-3-chloropropane	5.6	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 UJ	11 U	13 U
1,2-Dibromoethane	34	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 UJ	11 U	13 U
1,2-Dichlorobenzene	200,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 UJ	11 U	13 U
1,2-Dichloroethane	450	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
1,2-Dichloropropane	930	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
1,3-Dichlorobenzene	- -	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 UJ	11 U	13 U
1,4-Dichlorobenzene	2,600	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 UJ	**75**	**3 J**
1,4-Dioxane	44,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2,800,000	µg/kg	NA	10 U	NA	14 U	NA	**11 J**	NA	13 U	13 U	14 U	**44**	13 U
2-Hexanone	- -	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	13 U	13 U	14 UJ	11 U	13 U
4-Methyl-2-pentanone	530,000	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	13 U	13 U	14 UJ	11 U	13 U
Acetone	6,100,000	µg/kg	NA	10 U	NA	41 U	NA	**270 J**	NA	**10 J**	**9 J**	14 U	**130**	**30**
Benzene	1,100	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	**2 J**	13 U	14 U	11 U	13 U
Bromodichloromethane	280	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Bromoform	61,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Bromomethane	790	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Carbon disulfide	67,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Carbon tetrachloride	250	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	**4 J**	14 U	11 U	13 U
Chlorobenzene	31,000	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	13 U	13 U	14 UJ	**5 J**	**3 J**
Chloroethane	- -	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Chloroform	300	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Chloromethane	12,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
cis-1,2-Dichloroethene	78,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
cis-1,3-Dichloropropene	1,700	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Cyclohexane	720,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	**2 J**	13 U
Cyclohexane, methyl-	- -	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	**4 J**	13 U
Dibromochloromethane	700	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Dichlorodifluoromethane	19,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Ethylbenzene	5,700	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	13 U	13 U	14 UJ	**1 J**	13 U
Isopropylbenzene	27,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 UJ	**6 J**	13 U
Methyl acetate	7,800,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Methyl tert butyl ether	39,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Methylene chloride	11,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
o-Xylene	60,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p/m-Xylene	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	13,000	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	13 U	13 U	14 UJ	11 U	13 U
Tetrachloroethene	450	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	**25**	**3 J**	**3 J**	11 U	13 U
Toluene	500,000	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	**1 J**	**2 J**	14 UJ	10 U	13 U
trans-1,2-Dichloroethene	11,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
trans-1,3-Dichloropropene	1,700	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Trichloroethene	2,800	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Trichlorofluoromethane	80,000	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Vinyl Chloride	20	µg/kg	NA	10 U	NA	14 U	NA	10 U	NA	13 U	13 U	14 U	11 U	13 U
Xylene (Total)	60,000	µg/kg	NA	10 U	NA	14 UJ	NA	10 U	NA	13 U	13 U	14 UJ	**15**	13 U

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LLF-002	LLF-003	LLF-004	LNP-007	LNP-008	LOU-001	LQW-009	LQW-010	LQW-011	LQW-012	LQW-012	LQW-013
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	11/30/05	12/01/05	12/02/05	11/30/05	12/02/05	12/01/05
Sample Name:	PAL	Units	LLF-002(0-1)	LLF-003(0-1)	LLF-004(0-1)	LNP-007(0-1)	LNP-008(0-1)	LOU-001(0-1)	LQW-009 (0-1)	LQW-010 (0-1)	LQW-011	LQW-012 (0-1)	LQW-012B	LQW-013 (0-1)
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg												
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg												
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg												
2,3-Dihydro-1-methylindene	- -	µg/kg												
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg												
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg												
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg												
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg												
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												
Benzene, 1-ethyl-3-methyl-	- -	µg/kg												
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg												
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg												
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg												
Cyclotetrasiloxane, octamethyl-	- -	µg/kg												
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg												
Hexane	- -	µg/kg							**15 NJ [14 NJ]**					
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg												
Naphthalene, 1,5-dimethyl-	- -	µg/kg												
Naphthalene, 1-ethyl-	- -	µg/kg												
Naphthalene, 1-methyl-	- -	µg/kg												
Naphthalene, 2,3-dimethyl-	- -	µg/kg												
Naphthalene, 2,6-dimethyl-	- -	µg/kg												
Naphthalene, decahydro-, trans-	- -	µg/kg												
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg												
Straight-chain Alkane	- -	µg/kg												
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)							1 [1]	1	1		1	1

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-014	LQW-015	LQW-015	LQW-016	LQW-016	LQW-017	LQW-017	LQW-018	LQW-018	LUI-005	LUI-006
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1		
Date Collected:			12/01/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	12/08/05	12/08/05
Sample Name:	PAL	Units	LQW-014 (0-1)	LQW-015 (0-1)	LQW-015B	LQW-016 (0-1)	LQW-016B	LQW-017 (0-1)	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005	LUI-006
VOC TICS													
1,3,5-Trimethylbenzene	- -	µg/kg											
1,3-Octadiene	- -	µg/kg											
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg											
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg											
2,3-Dihydro-1-methylindene	- -	µg/kg											
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg											
3-Carene	- -	µg/kg											
3-Octanone	- -	µg/kg											
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg											
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg											
Benzene, 1,2,3-trimethyl-	- -	µg/kg											
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg											
Benzene, 1-ethyl-2-methyl-	- -	µg/kg											
Benzene, 1-ethyl-3-methyl-	- -	µg/kg											
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg											
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg											
beta-Pinene	- -	µg/kg	**3 NJ**										
Branched alkane	- -	µg/kg											
Camphene	- -	µg/kg											
Cyclic alkane	- -	µg/kg											
Cyclotetrasiloxane, octamethyl-	- -	µg/kg											
Decane	- -	µg/kg											
Decane, 4-methyl-	- -	µg/kg											
Diethylpropion Hydrochloride	- -	µg/kg											
Dimethyl sulfide	- -	µg/kg							**3 NJ**				
Ethene, 1-chloro-1-fluoro-	- -	µg/kg											
Ethyl Acetate	- -	µg/kg											
Hexamethylcyclotrisiloxane	- -	µg/kg											
Hexane	- -	µg/kg											
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg											
Naphthalene, 1,5-dimethyl-	- -	µg/kg											
Naphthalene, 1-ethyl-	- -	µg/kg											
Naphthalene, 1-methyl-	- -	µg/kg											
Naphthalene, 2,3-dimethyl-	- -	µg/kg											
Naphthalene, 2,6-dimethyl-	- -	µg/kg											
Naphthalene, decahydro-, trans-	- -	µg/kg											
Naphthalene, decahydro-2-methyl-	- -	µg/kg											
n-Hexane	- -	µg/kg											
Silanol, trimethyl-	- -	µg/kg											
Straight-chain Alkane	- -	µg/kg											
Undecane	- -	µg/kg											
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1		1		1		1		1		

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-601	SEA-601	SEA-601	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-603	SEA-603
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	10 - 12	14 - 16	18 - 20	24 - 26	30 - 32	4 - 6	8 - 10
Date Collected:			09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/21/03	09/21/03
Sample Name:	PAL	Units	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF	SSO-SPT5-15-LF	SSO-SPT5-20-LF	SSO-SPT5-25-LF	SSO-SPT5-30-LF	SSO-SPT2-5-LF	SSO-SPT2-10-LF
VOC TICS												
1,3,5-Trimethylbenzene	- -	µg/kg										
1,3-Octadiene	- -	µg/kg										
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg										
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg										
3-Carene	- -	µg/kg										
3-Octanone	- -	µg/kg										
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg										
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg										
Benzene, 1,2,3-trimethyl-	- -	µg/kg										
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg										
Benzene, 1-ethyl-2-methyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg										
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg										
beta-Pinene	- -	µg/kg										
Branched alkane	- -	µg/kg										
Camphene	- -	µg/kg										
Cyclic alkane	- -	µg/kg										
Cyclotetrasiloxane, octamethyl-	- -	µg/kg										
Decane	- -	µg/kg										
Decane, 4-methyl-	- -	µg/kg										
Diethylpropion Hydrochloride	- -	µg/kg										
Dimethyl sulfide	- -	µg/kg										
Ethene, 1-chloro-1-fluoro-	- -	µg/kg										
Ethyl Acetate	- -	µg/kg										
Hexamethylcyclotrisiloxane	- -	µg/kg										
Hexane	- -	µg/kg										
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg										
Naphthalene, 1,5-dimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-2-methyl-	- -	µg/kg										
n-Hexane	- -	µg/kg										
Silanol, trimethyl-	- -	µg/kg										
Straight-chain Alkane	- -	µg/kg										
Undecane	- -	µg/kg										
Unknown TICs (VOCs) - number of occurences	- -	(Count)										

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-603	SEA-604	SEA-604	SEA-604	SEA-605	SEA-605	SEA-605	SEA-606	SEA-606	SEA-606
Sample Depth (Feet):			14 - 16	4 - 6	8 - 10	14 - 16	5 - 7	9 - 11	15 - 17	4 - 6	8 - 10	14 - 16
Date Collected:			09/21/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03	09/21/03	09/21/03	09/21/03
Sample Name:	PAL	Units	SSO-SPT2-15-LF	SSO-SPT3-5-LF	SSO-SPT3-10-LF	SSO-SPT3-15-LF	SSO-SPT4-5-LF	SSO-SPT4-10-LF	SSO-SPT4-15-LF	SSO-SPT8-5-NP	SSO-SPT8-10-NP	SSO-SPT8-15-NP
VOC TICS												
1,3,5-Trimethylbenzene	- -	µg/kg										
1,3-Octadiene	- -	µg/kg										
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg										
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg										
3-Carene	- -	µg/kg										
3-Octanone	- -	µg/kg										
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg										
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg										
Benzene, 1,2,3-trimethyl-	- -	µg/kg										
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg										
Benzene, 1-ethyl-2-methyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg										
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg										
beta-Pinene	- -	µg/kg										
Branched alkane	- -	µg/kg										
Camphene	- -	µg/kg										
Cyclic alkane	- -	µg/kg										
Cyclotetrasiloxane, octamethyl-	- -	µg/kg										
Decane	- -	µg/kg										
Decane, 4-methyl-	- -	µg/kg										
Diethylpropion Hydrochloride	- -	µg/kg										
Dimethyl sulfide	- -	µg/kg										
Ethene, 1-chloro-1-fluoro-	- -	µg/kg										
Ethyl Acetate	- -	µg/kg										
Hexamethylcyclotrisiloxane	- -	µg/kg										
Hexane	- -	µg/kg										
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg										
Naphthalene, 1,5-dimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-2-methyl-	- -	µg/kg										
n-Hexane	- -	µg/kg										
Silanol, trimethyl-	- -	µg/kg										
Straight-chain Alkane	- -	µg/kg										
Undecane	- -	µg/kg										
Unknown TICs (VOCs) - number of occurences	- -	(Count)										

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	SEA-607	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG
Sample Depth (Feet):			4 - 6	10 - 12	14 - 16	4 - 6	8 - 10	14 - 16	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	08/18/03	08/18/03	08/18/03	08/18/03	08/18/03
Sample Name:			SSO-SPT6-5-UI	SSO-SPT6-10-UI	SSO-SPT6-15-UI	SSO-SPT7-5-UI	SSO-SPT7-10-UI	SSO-SPT7-15-UI	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG
VOC TICS													
1,3,5-Trimethylbenzene	- -	µg/kg											
1,3-Octadiene	- -	µg/kg											
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg											
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg											
2,3-Dihydro-1-methylindene	- -	µg/kg											
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg											
3-Carene	- -	µg/kg											
3-Octanone	- -	µg/kg											
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg											
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg											
Benzene, 1,2,3-trimethyl-	- -	µg/kg											
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg											
Benzene, 1-ethyl-2-methyl-	- -	µg/kg											
Benzene, 1-ethyl-3-methyl-	- -	µg/kg											
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg											
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg											
beta-Pinene	- -	µg/kg											
Branched alkane	- -	µg/kg											
Camphene	- -	µg/kg											
Cyclic alkane	- -	µg/kg											
Cyclotetrasiloxane, octamethyl-	- -	µg/kg							**180 NJ**	**240 NJ**	**160 NJ**		**180 NJ**
Decane	- -	µg/kg											
Decane, 4-methyl-	- -	µg/kg											
Diethylpropion Hydrochloride	- -	µg/kg											
Dimethyl sulfide	- -	µg/kg											
Ethene, 1-chloro-1-fluoro-	- -	µg/kg											
Ethyl Acetate	- -	µg/kg											
Hexamethylcyclotrisiloxane	- -	µg/kg							**14 NJ**	**24 NJ**	**17 NJ**	**21 NJ [33 NJ]**	**18 NJ**
Hexane	- -	µg/kg											
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg											
Naphthalene, 1,5-dimethyl-	- -	µg/kg											
Naphthalene, 1-ethyl-	- -	µg/kg											
Naphthalene, 1-methyl-	- -	µg/kg											
Naphthalene, 2,3-dimethyl-	- -	µg/kg											
Naphthalene, 2,6-dimethyl-	- -	µg/kg											
Naphthalene, decahydro-, trans-	- -	µg/kg											
Naphthalene, decahydro-2-methyl-	- -	µg/kg											
n-Hexane	- -	µg/kg											
Silanol, trimethyl-	- -	µg/kg											
Straight-chain Alkane	- -	µg/kg											
Undecane	- -	µg/kg											
Unknown TICs (VOCs) - number of occurences	- -	(Count)							1	4	5	2 [2]	1

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI	SO-013-UI	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/19/03	08/19/03	08/19/03	08/19/03	08/20/03	08/20/03	08/20/03	08/20/03	08/20/03	08/20/03	08/20/03	08/21/03
Sample Name:	PAL	Units	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI	SO-013-UI	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg												
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg												
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg												
2,3-Dihydro-1-methylindene	- -	µg/kg												
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg			**7 NJ**								**74 NJ**	
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg												
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg												
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg												
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												
Benzene, 1-ethyl-3-methyl-	- -	µg/kg												
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg												
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg												
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg												
Cyclotetrasiloxane, octamethyl-	- -	µg/kg	**250 NJ**	**170 NJ**		**320 NJ**	**310 NJ**	**100 NJ**	**170 NJ**	**200 NJ**	**240 NJ**	**240 NJ**		**130 NJ**
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg	**42 NJ**	**29 NJ**	**21 NJ**	**51 NJ**		**29 NJ**		**59 NJ**	**39 NJ**	**77 NJ**	**42 NJ**	
Hexane	- -	µg/kg												
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg												
Naphthalene, 1,5-dimethyl-	- -	µg/kg												
Naphthalene, 1-ethyl-	- -	µg/kg												
Naphthalene, 1-methyl-	- -	µg/kg												
Naphthalene, 2,3-dimethyl-	- -	µg/kg												
Naphthalene, 2,6-dimethyl-	- -	µg/kg												
Naphthalene, decahydro-, trans-	- -	µg/kg												
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg												
Straight-chain Alkane	- -	µg/kg												
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	2	6	1	2		1		2		1	1

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF	SO-022-LF	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03
Sample Name:	PAL	Units	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF	SO-FD-03	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg												
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg												
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg												
2,3-Dihydro-1-methylindene	- -	µg/kg												
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg												
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg												
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg												
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg												
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												
Benzene, 1-ethyl-3-methyl-	- -	µg/kg												
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg												
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg												
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg												
Cyclotetrasiloxane, octamethyl-	- -	µg/kg				**88 NJ**		**190 NJ**	**54 NJ**		**74 NJ**	**150 NJ**		**150 NJ**
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg		**24 NJ**	**50 NJ**	**28 NJ**	**30 NJ**	**50 NJ**	**7 NJ**	**15 NJ**		**18 NJ**	**90 NJ**	
Hexane	- -	µg/kg												
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg												
Naphthalene, 1,5-dimethyl-	- -	µg/kg												
Naphthalene, 1-ethyl-	- -	µg/kg												
Naphthalene, 1-methyl-	- -	µg/kg												
Naphthalene, 2,3-dimethyl-	- -	µg/kg												
Naphthalene, 2,6-dimethyl-	- -	µg/kg												
Naphthalene, decahydro-, trans-	- -	µg/kg												
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg												
Straight-chain Alkane	- -	µg/kg												
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)	2	1	1	1	1			1	1		3	1

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-033-NP	SO-034-NP	SO-034-NP	SO-035-NP	SO-035-NP	SO-036-NP	SO-036-NP	SO-036-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	1 - 5	0 - 1	6 - 10	0 - 1	5 - 9	0 - 1	1 - 5	1 - 5
Date Collected:			08/22/03	08/22/03	08/28/03	09/05/03	09/05/03	09/05/03	09/05/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03
Sample Name:	PAL	Units	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-W14-NP	SO-034-NP	SO-W13-NP	SO-035-NP	SO-W15-NP	SO-036-NP	SSO-FD01	SSO-01-NP
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg							**520 NJ**					
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg												
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg												
2,3-Dihydro-1-methylindene	- -	µg/kg												
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg												
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg												
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg												
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg												
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												
Benzene, 1-ethyl-3-methyl-	- -	µg/kg							**390 NJ**					
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg												
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg							**280 J**					
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg				**74 J**			**440 J**					
Cyclotetrasiloxane, octamethyl-	- -	µg/kg		**150 NJ**			**11 NJ**							**92 NJ**
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg	**29 NJ**	**32 NJ**	**47 NJ**									
Hexane	- -	µg/kg												
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg												
Naphthalene, 1,5-dimethyl-	- -	µg/kg												
Naphthalene, 1-ethyl-	- -	µg/kg												
Naphthalene, 1-methyl-	- -	µg/kg												
Naphthalene, 2,3-dimethyl-	- -	µg/kg												
Naphthalene, 2,6-dimethyl-	- -	µg/kg												
Naphthalene, decahydro-, trans-	- -	µg/kg							**270 NJ**		**6 NJ**			
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg						**5 NJ**						
Straight-chain Alkane	- -	µg/kg				**1,000 J**			**310 J**					
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)	2		1	2		1	24		1	1	1	2

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-037-NP	SO-037-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP
Sample Depth (Feet):			0 - 1	5 - 9	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/06/03	09/06/03	09/09/04	09/09/04	09/09/04	09/10/04	09/10/04	09/09/04	09/09/04	09/09/04	09/09/04	09/08/04
Sample Name:	PAL	Units	SO-037-NP	SO-W16-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg												
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg												
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg												
2,3-Dihydro-1-methylindene	- -	µg/kg												
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg												
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg												
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg												
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg												
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												**12 J**
Benzene, 1-ethyl-3-methyl-	- -	µg/kg												
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg												
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg												**8 J**
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg												
Cyclotetrasiloxane, octamethyl-	- -	µg/kg	**9 NJ**											
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg												
Hexane	- -	µg/kg						**25 NJ**						
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg												
Naphthalene, 1,5-dimethyl-	- -	µg/kg												
Naphthalene, 1-ethyl-	- -	µg/kg												
Naphthalene, 1-methyl-	- -	µg/kg												**9 NJ**
Naphthalene, 2,3-dimethyl-	- -	µg/kg												
Naphthalene, 2,6-dimethyl-	- -	µg/kg												
Naphthalene, decahydro-, trans-	- -	µg/kg												
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg		**7 NJ**										
Straight-chain Alkane	- -	µg/kg												**8 J**
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	1		1		1	3			1		6

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-051-NP	SO-052-NP	SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-061-WT
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/09/04	09/08/04	09/09/04	09/08/04	09/09/04	11/27/04
Sample Name:	PAL	Units	SO-051-NP	SO-052-NP	SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-091-WT
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg												
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg	**46 NJ**											
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg	**100 NJ**											
2,3-Dihydro-1-methylindene	- -	µg/kg	**58 NJ**											
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg												
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg	**74 NJ**											
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg	**56 NJ**											
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg	**80 NJ**											
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												
Benzene, 1-ethyl-3-methyl-	- -	µg/kg												
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg	**42 NJ**											
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg												
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg												
Cyclotetrasiloxane, octamethyl-	- -	µg/kg												
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg												
Hexane	- -	µg/kg			24 UJ	9 UJ				16 UJ				
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg	**59 NJ**											
Naphthalene, 1,5-dimethyl-	- -	µg/kg	**70 NJ**											
Naphthalene, 1-ethyl-	- -	µg/kg	**110 NJ**											
Naphthalene, 1-methyl-	- -	µg/kg	**550 NJ**											
Naphthalene, 2,3-dimethyl-	- -	µg/kg	**140 NJ**											
Naphthalene, 2,6-dimethyl-	- -	µg/kg	**180 NJ**											
Naphthalene, decahydro-, trans-	- -	µg/kg												
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg						**10 NJ [9 NJ]**						
Straight-chain Alkane	- -	µg/kg	**96 J**							**8 J**				
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)	13	1	2	1	9			6		3		1

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-062-WT	SO-062-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/09/04	11/27/04	09/09/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/10/04
Sample Name:	PAL	Units	SO-062-WT	SO-092-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg												
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg												
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg												
2,3-Dihydro-1-methylindene	- -	µg/kg												
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg												
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg												
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg												
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg												
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												
Benzene, 1-ethyl-3-methyl-	- -	µg/kg												
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg												
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg												
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg												
Cyclotetrasiloxane, octamethyl-	- -	µg/kg												
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg												
Hexane	- -	µg/kg					14 UJ			13 UJ				
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg												
Naphthalene, 1,5-dimethyl-	- -	µg/kg												
Naphthalene, 1-ethyl-	- -	µg/kg												
Naphthalene, 1-methyl-	- -	µg/kg												
Naphthalene, 2,3-dimethyl-	- -	µg/kg												
Naphthalene, 2,6-dimethyl-	- -	µg/kg												
Naphthalene, decahydro-, trans-	- -	µg/kg												
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg					**8 NJ**	**6 NJ**	**5 NJ**	**7 NJ**	**13 NJ**		**5 NJ**	
Straight-chain Alkane	- -	µg/kg												
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)	2			1		1				2		1

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI	SO-084-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/09/04
Sample Name:	PAL	Units	SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI	SO-084-UI
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg												
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg												
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg												
2,3-Dihydro-1-methylindene	- -	µg/kg												
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg												
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg												
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg												
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg												
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												
Benzene, 1-ethyl-3-methyl-	- -	µg/kg												
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg												
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg												
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg												
Cyclotetrasiloxane, octamethyl-	- -	µg/kg												
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg												
Hexane	- -	µg/kg												
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg												
Naphthalene, 1,5-dimethyl-	- -	µg/kg												
Naphthalene, 1-ethyl-	- -	µg/kg												
Naphthalene, 1-methyl-	- -	µg/kg												
Naphthalene, 2,3-dimethyl-	- -	µg/kg												
Naphthalene, 2,6-dimethyl-	- -	µg/kg												
Naphthalene, decahydro-, trans-	- -	µg/kg												
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg									**7 NJ**			
Straight-chain Alkane	- -	µg/kg												
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)	3		3	3	1	1	2	1		1	1	

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-084-UI	SO-085-UI	SO-085-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP	SO-101-NP	SO-101-NP	SO-102-NP	SO-102-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	2 - 7	0 - 1	2 - 9	0 - 1	2 - 8.5
Date Collected:			11/27/04	09/09/04	11/27/04	09/09/04	09/09/04	09/10/04	11/01/06	11/01/06	11/01/06	10/31/06	10/31/06
Sample Name:	PAL	Units	SO-089-UI	SO-085-UI	SO-090-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP (2-7')	SO-101-NP (0-1')	SO-101-NP (2-9')	SO-102-NP (0-1')	SO-102-NP (2-8.5')
VOC TICS													
1,3,5-Trimethylbenzene	- -	µg/kg											
1,3-Octadiene	- -	µg/kg											
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg											
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg											
2,3-Dihydro-1-methylindene	- -	µg/kg											
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg											
3-Carene	- -	µg/kg											
3-Octanone	- -	µg/kg											
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg											
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg											
Benzene, 1,2,3-trimethyl-	- -	µg/kg											
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg											
Benzene, 1-ethyl-2-methyl-	- -	µg/kg											
Benzene, 1-ethyl-3-methyl-	- -	µg/kg											
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg											
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg				**5 NJ**							
beta-Pinene	- -	µg/kg											
Branched alkane	- -	µg/kg											
Camphene	- -	µg/kg											
Cyclic alkane	- -	µg/kg											
Cyclotetrasiloxane, octamethyl-	- -	µg/kg											
Decane	- -	µg/kg											**7 JN**
Decane, 4-methyl-	- -	µg/kg											**10 JN**
Diethylpropion Hydrochloride	- -	µg/kg											
Dimethyl sulfide	- -	µg/kg											
Ethene, 1-chloro-1-fluoro-	- -	µg/kg											
Ethyl Acetate	- -	µg/kg											
Hexamethylcyclotrisiloxane	- -	µg/kg											
Hexane	- -	µg/kg											
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg											
Naphthalene, 1,5-dimethyl-	- -	µg/kg											
Naphthalene, 1-ethyl-	- -	µg/kg											
Naphthalene, 1-methyl-	- -	µg/kg											
Naphthalene, 2,3-dimethyl-	- -	µg/kg											
Naphthalene, 2,6-dimethyl-	- -	µg/kg											
Naphthalene, decahydro-, trans-	- -	µg/kg											
Naphthalene, decahydro-2-methyl-	- -	µg/kg											
n-Hexane	- -	µg/kg											
Silanol, trimethyl-	- -	µg/kg	10 UJ		6 UJ								
Straight-chain Alkane	- -	µg/kg											
Undecane	- -	µg/kg											**19 JN**
Unknown TICs (VOCs) - number of occurences	- -	(Count)					1						

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-103-NP	SO-104-NP	SO-105-NP	SO-106-NP	SO-107-NP	SO-107-NP	SO-108-NP	SO-200-U1	SO-200-U1	SO-200-UI
Sample Depth (Feet):			2 - 7	2 - 3.4	2 - 3.4	2 - 5	0 - 1	2 - 10	3 - 8	0 - 1	5 - 6	0 - 1
Date Collected:			11/01/06	11/02/06	11/02/06	11/02/06	11/02/06	11/02/06	11/02/06	11/18/09	11/18/09	11/18/09
Sample Name:	PAL	Units	SO-103-NP (2-7')	SO-104-NP (2-3.4')	SO-105-NP (2-3.4')	SO-106-NP (2-5')	SO-107-NP (0-1')	SO-107-NP (2-10')	SO-108-NP (3-8')	SO-200-U1-0-1'	SO-200-U1-5-6'	SO-200-UI (0-1')
VOC TICS												
1,3,5-Trimethylbenzene	- -	µg/kg										
1,3-Octadiene	- -	µg/kg										
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg										
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg										
3-Carene	- -	µg/kg										
3-Octanone	- -	µg/kg										
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg										
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg										
Benzene, 1,2,3-trimethyl-	- -	µg/kg										
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg										
Benzene, 1-ethyl-2-methyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg										
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg										
beta-Pinene	- -	µg/kg										
Branched alkane	- -	µg/kg										
Camphene	- -	µg/kg										
Cyclic alkane	- -	µg/kg										
Cyclotetrasiloxane, octamethyl-	- -	µg/kg										
Decane	- -	µg/kg										
Decane, 4-methyl-	- -	µg/kg										
Diethylpropion Hydrochloride	- -	µg/kg			**16 JN**							
Dimethyl sulfide	- -	µg/kg										
Ethene, 1-chloro-1-fluoro-	- -	µg/kg										
Ethyl Acetate	- -	µg/kg			8 UJ							
Hexamethylcyclotrisiloxane	- -	µg/kg										
Hexane	- -	µg/kg										
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg										
Naphthalene, 1,5-dimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-2-methyl-	- -	µg/kg										
n-Hexane	- -	µg/kg										
Silanol, trimethyl-	- -	µg/kg										
Straight-chain Alkane	- -	µg/kg										
Undecane	- -	µg/kg										
Unknown TICs (VOCs) - number of occurences	- -	(Count)										

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-200-UI	SO-201-UI	SO-201-UI	SO-203-U1	SO-203-UI	SO-204-UI	SO-205-U1	SO-205-UI	SO-206-UI	SO-207B-UI
Sample Depth (Feet):			5 - 6	4 - 6	4 - 6	0 - 1	5 - 7	2 - 4	3 - 4.5	2 - 4	2 - 3	1 - 2
Date Collected:			11/18/09	11/18/09	11/24/09	11/18/09	11/18/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09
Sample Name:	PAL	Units	SO-200-UI (5-6')	SO-201-UI (4-6')	SO-201-UI-4-6'	SO-203-U1-0-1'	SO-203-UI (5-7')	SO-204-UI (2-4')	SO-205-U1-3-4.5	SO-205-UI (2-4')	SO-206-UI (2-3')	SO-207B-UI (1-2')
VOC TICS												
1,3,5-Trimethylbenzene	- -	µg/kg										
1,3-Octadiene	- -	µg/kg										
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg										
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg										
3-Carene	- -	µg/kg										
3-Octanone	- -	µg/kg										
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg										
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg										
Benzene, 1,2,3-trimethyl-	- -	µg/kg										
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg										
Benzene, 1-ethyl-2-methyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg										
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg										
beta-Pinene	- -	µg/kg										
Branched alkane	- -	µg/kg										
Camphene	- -	µg/kg										
Cyclic alkane	- -	µg/kg										
Cyclotetrasiloxane, octamethyl-	- -	µg/kg										
Decane	- -	µg/kg										
Decane, 4-methyl-	- -	µg/kg										
Diethylpropion Hydrochloride	- -	µg/kg										
Dimethyl sulfide	- -	µg/kg										
Ethene, 1-chloro-1-fluoro-	- -	µg/kg										
Ethyl Acetate	- -	µg/kg										
Hexamethylcyclotrisiloxane	- -	µg/kg										
Hexane	- -	µg/kg										
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg										
Naphthalene, 1,5-dimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-2-methyl-	- -	µg/kg										
n-Hexane	- -	µg/kg										
Silanol, trimethyl-	- -	µg/kg										
Straight-chain Alkane	- -	µg/kg										
Undecane	- -	µg/kg										
Unknown TICs (VOCs) - number of occurences	- -	(Count)										

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-207B-UI	SO-208B-UI	SO-208B-UI	SO-209-UI	SO-210B-UI	SO-211-UI	SO-212-UI	SO-213-U1	SO-214-U1	SO-215-U1
Sample Depth (Feet):			2 - 3	0 - 1	1 - 5	0 - 1	1.25 - 4	0 - 1	1 - 4.5	0 - 1	0 - 1	0 - 1
Date Collected:			11/19/09	11/19/09	11/19/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09
Sample Name:	PAL	Units	SO-207B-UI (2-3')	SO-208B-UI (0-1')	SO-208B-UI (1-5')	SO-209-UI (0-1')	SO-210B-UI (1.25-4')	SO-211-UI (0-1')	SO-212-UI (1-4.5')	SO-213-U1-0-1'	SO-214-U1-0-1'	SO-215-U1-0-1'
VOC TICS												
1,3,5-Trimethylbenzene	- -	µg/kg										
1,3-Octadiene	- -	µg/kg										
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg										
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg										
3-Carene	- -	µg/kg										
3-Octanone	- -	µg/kg										
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg										
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg										
Benzene, 1,2,3-trimethyl-	- -	µg/kg										
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg										
Benzene, 1-ethyl-2-methyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg										
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg										
beta-Pinene	- -	µg/kg										
Branched alkane	- -	µg/kg										
Camphene	- -	µg/kg										
Cyclic alkane	- -	µg/kg										
Cyclotetrasiloxane, octamethyl-	- -	µg/kg										
Decane	- -	µg/kg										
Decane, 4-methyl-	- -	µg/kg										
Diethylpropion Hydrochloride	- -	µg/kg										
Dimethyl sulfide	- -	µg/kg										
Ethene, 1-chloro-1-fluoro-	- -	µg/kg										
Ethyl Acetate	- -	µg/kg										
Hexamethylcyclotrisiloxane	- -	µg/kg										
Hexane	- -	µg/kg										
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg										
Naphthalene, 1,5-dimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-2-methyl-	- -	µg/kg										
n-Hexane	- -	µg/kg		**2.58 JN**								
Silanol, trimethyl-	- -	µg/kg										
Straight-chain Alkane	- -	µg/kg										
Undecane	- -	µg/kg										
Unknown TICs (VOCs) - number of occurences	- -	(Count)										

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-216-U1	SO-217-UI	SO-218-UI	SO-219-UI	SO-220-UI	SO-222-UI	SO-223F-UI	SO-223F-UI	SO-224A-UI	SO-225A-UI
Sample Depth (Feet):			0 - 1	0 - 1	1 - 5	1 - 5	1 - 4.5	1 - 3	0 - 1	11 - 12	1 - 5	0 - 1
Date Collected:			11/20/09	11/20/09	11/23/09	11/23/09	11/23/09	11/23/09	11/24/09	11/23/09	11/23/09	11/24/09
Sample Name:	PAL	Units	SO-216-U1-0-1'	SO-217-UI (0-1')	SO-218-UI-1-5'	SO-219-UI-1-5'	SO-220-UI-1-4.5'	SO-222-UI-1-3'	SO-223F-UI-0-1'	SO-223F-UI-11-12'	SO-224A-UI-1-5'	SO-225A-UI-0-1'
VOC TICS												
1,3,5-Trimethylbenzene	- -	µg/kg										
1,3-Octadiene	- -	µg/kg										
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg										
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg										
3-Carene	- -	µg/kg										
3-Octanone	- -	µg/kg										
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg										
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg										
Benzene, 1,2,3-trimethyl-	- -	µg/kg										
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg										
Benzene, 1-ethyl-2-methyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg										
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg										
beta-Pinene	- -	µg/kg										
Branched alkane	- -	µg/kg										
Camphene	- -	µg/kg										
Cyclic alkane	- -	µg/kg										
Cyclotetrasiloxane, octamethyl-	- -	µg/kg										
Decane	- -	µg/kg										
Decane, 4-methyl-	- -	µg/kg										
Diethylpropion Hydrochloride	- -	µg/kg										
Dimethyl sulfide	- -	µg/kg										
Ethene, 1-chloro-1-fluoro-	- -	µg/kg										
Ethyl Acetate	- -	µg/kg										
Hexamethylcyclotrisiloxane	- -	µg/kg										
Hexane	- -	µg/kg										
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg										
Naphthalene, 1,5-dimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-2-methyl-	- -	µg/kg										
n-Hexane	- -	µg/kg					**1.28 JN**					
Silanol, trimethyl-	- -	µg/kg										
Straight-chain Alkane	- -	µg/kg										
Undecane	- -	µg/kg										
Unknown TICs (VOCs) - number of occurences	- -	(Count)										

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-225A-UI	SO-226A-UI	SO-227B-UI	SO-228-UI	SO-W05-DF	SO-W05-DF	SO-W06-DF	SO-W06-DF	SO-W06-DF	SO-W07-DF	SO-W07x-DF	SO-W08-DF
Sample Depth (Feet):			1.5 - 5	6 - 8	1 - 5	12 - 14	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			11/24/09	11/24/09	11/24/09	11/24/09	08/26/03	09/20/03	08/26/03	08/27/03	09/20/03	08/26/03	09/20/03	08/26/03
Sample Name:	PAL	Units	SO-225A-UI-1.5-5'	SO-226A-UI-6-8'	SO-227B-UI-1-5'	SO-228-UI-12-14'	SO-W05-DF	SO-W05-DFb	SO-W06-DF	SO-FD04	SO-W06-DFb	SO-W07-DF	SO-W07x-DF	SO-W08-DF
VOC TICS														
1,3,5-Trimethylbenzene	- -	µg/kg												
1,3-Octadiene	- -	µg/kg												
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg												
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg												
2,3-Dihydro-1-methylindene	- -	µg/kg												
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg												
3-Carene	- -	µg/kg												
3-Octanone	- -	µg/kg								**11 NJ**				
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg												
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg												
Benzene, 1,2,3-trimethyl-	- -	µg/kg												
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg												
Benzene, 1-ethyl-2-methyl-	- -	µg/kg												
Benzene, 1-ethyl-3-methyl-	- -	µg/kg												
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg												
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg												
beta-Pinene	- -	µg/kg												
Branched alkane	- -	µg/kg												
Camphene	- -	µg/kg												
Cyclic alkane	- -	µg/kg												
Cyclotetrasiloxane, octamethyl-	- -	µg/kg					**23 NJ**		**24 NJ**					
Decane	- -	µg/kg												
Decane, 4-methyl-	- -	µg/kg												
Diethylpropion Hydrochloride	- -	µg/kg												
Dimethyl sulfide	- -	µg/kg												
Ethene, 1-chloro-1-fluoro-	- -	µg/kg												
Ethyl Acetate	- -	µg/kg												
Hexamethylcyclotrisiloxane	- -	µg/kg					**6 NJ**							**10 NJ**
Hexane	- -	µg/kg												
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg												
Naphthalene, 1,5-dimethyl-	- -	µg/kg												
Naphthalene, 1-ethyl-	- -	µg/kg												
Naphthalene, 1-methyl-	- -	µg/kg												
Naphthalene, 2,3-dimethyl-	- -	µg/kg												
Naphthalene, 2,6-dimethyl-	- -	µg/kg												
Naphthalene, decahydro-, trans-	- -	µg/kg												
Naphthalene, decahydro-2-methyl-	- -	µg/kg												
n-Hexane	- -	µg/kg												
Silanol, trimethyl-	- -	µg/kg												
Straight-chain Alkane	- -	µg/kg												
Undecane	- -	µg/kg												
Unknown TICs (VOCs) - number of occurences	- -	(Count)								1		4		6

TABLE 4-12
SOIL RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W08-DF	SO-W09-DF	SO-W09-DF	SO-W10-DF	SO-W10-DF	SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			09/20/03	08/26/03	09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W08-DFb	SO-W09-DF	SO-W09-DFb	SO-W10-DF	SO-W10-DFb	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
VOC TICS																
1,3,5-Trimethylbenzene	- -	µg/kg														
1,3-Octadiene	- -	µg/kg								**26 NJ**						
1H-Indene, 2,3-dihydro-1,6-dimethyl-	- -	µg/kg														
1H-Indene, 2,3-dihydro-4,7-dimethyl-	- -	µg/kg														
2,3-Dihydro-1-methylindene	- -	µg/kg														
2H-Inden-2-one, 1,4,5,6,7,7A	- -	µg/kg													**86 NJ**	
3-Carene	- -	µg/kg								**14 NJ**						
3-Octanone	- -	µg/kg										**48 NJ**				
Benzene, (1-methyl-1-propenyl)-	- -	µg/kg														
Benzene, 1,2,3,4-tetramethyl-	- -	µg/kg														
Benzene, 1,2,3-trimethyl-	- -	µg/kg													**200 NJ**	
Benzene, 1,2,4,5-tetramethyl-	- -	µg/kg														
Benzene, 1-ethyl-2-methyl-	- -	µg/kg													**900 NJ**	
Benzene, 1-ethyl-3-methyl-	- -	µg/kg														
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/kg														
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/kg														
beta-Pinene	- -	µg/kg														
Branched alkane	- -	µg/kg													**86 J**	
Camphene	- -	µg/kg								**20 NJ**						
Cyclic alkane	- -	µg/kg													**78 J**	
Cyclotetrasiloxane, octamethyl-	- -	µg/kg		**180 NJ**				**540 NJ**				**390 NJ**			**820 NJ**	
Decane	- -	µg/kg														
Decane, 4-methyl-	- -	µg/kg														
Diethylpropion Hydrochloride	- -	µg/kg														
Dimethyl sulfide	- -	µg/kg														
Ethene, 1-chloro-1-fluoro-	- -	µg/kg														
Ethyl Acetate	- -	µg/kg														
Hexamethylcyclotrisiloxane	- -	µg/kg		**27 NJ**				**94 NJ**		**52 NJ**		**110 NJ**	**99 NJ**	**69 NJ**		
Hexane	- -	µg/kg														
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/kg														
Naphthalene, 1,5-dimethyl-	- -	µg/kg														
Naphthalene, 1-ethyl-	- -	µg/kg														
Naphthalene, 1-methyl-	- -	µg/kg														
Naphthalene, 2,3-dimethyl-	- -	µg/kg														
Naphthalene, 2,6-dimethyl-	- -	µg/kg														
Naphthalene, decahydro-, trans-	- -	µg/kg														
Naphthalene, decahydro-2-methyl-	- -	µg/kg													**50 NJ**	
n-Hexane	- -	µg/kg														
Silanol, trimethyl-	- -	µg/kg														
Straight-chain Alkane	- -	µg/kg											**32 J**			
Undecane	- -	µg/kg														
Unknown TICs (VOCs) - number of occurences	- -	(Count)				2		2		7		1	1	2	15	2

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LLF-002 0 - 1 12/01/05 LLF-002(0-1)	LLF-003 0 - 1 12/01/05 LLF-003(0-1)	LLF-004 0 - 1 12/01/05 LLF-004(0-1)	LNP-007 0 - 1 12/01/05 LNP-007(0-1)	LNP-008 0 - 1 12/01/05 LNP-008(0-1)	LOU-001 0 - 1 12/01/05 LOU-001(0-1)	LQW-009 0 - 1 11/30/05 LQW-009 (0-1)	LQW-010 0 - 1 12/01/05 LQW-010 (0-1)	LQW-011 0 - 1 12/02/05 LQW-011	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B
SVOC													
1,1'-Biphenyl	800	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	**140 J**	**160 J**	NA
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2,4,5-Trichlorophenol	4,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2,4,6-Trichlorophenol	4,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2,4-Dichlorophenol	18,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2,4-Dimethylphenol	120,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2,4-Dinitrophenol	12,000	µg/kg	NA	NA	NA	NA	NA	NA	R [R]	R	R	R	NA
2,4-Dinitrotoluene	900	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2,6-Dinitrotoluene	6,100	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2-Chloronaphthalene	630,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2-Chlorophenol	39,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2-Methylphenol	310,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2-Nitroaniline	18,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
2-Nitrophenol	7,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
3,3'-Dichlorobenzidine	1,100	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
3-Nitroaniline	18,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
4,6-Dinitro-2-methylphenol	610	µg/kg	NA	NA	NA	NA	NA	NA	210 UJ [210 UJ]	260 UJ	200 UJ	310 UJ	NA
4-Bromophenyl-phenylether	- -	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
4-Chloro-3-methylphenol	- -	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
4-Chloroaniline	2,400	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
4-Chlorophenyl-phenylether	- -	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
4-Methylphenol	31,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
4-Nitroaniline	24,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
4-Nitrophenol	7,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Acetophenone	780,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Atrazine	2,100	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Benzaldehyde	780,000	µg/kg	NA	NA	NA	NA	NA	NA	**2,000 [2,000]**	**3,300**	**2,000**	**3,400**	NA
bis(2-Chloroethoxy)methane	18,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
bis(2-Chloroethyl)ether	190	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	**590**	200 U	310 U	NA
Butyl benzyl phthalate	260,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Caprolactam	3,100,000	µg/kg	NA	NA	NA	NA	NA	NA	**210 UJ [2,500 J]**	260 U	200 U	310 U	NA
Carbazole	- -	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	**180 J**	**210**	**170 J**	NA
Dibenzofuran	- -	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	**160 J**	**170 J**	NA
Diethylphthalate	100,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Dimethyl phthalate	200,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Di-N-Butyl phthalate	200,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Di-N-Octyl phthalate	- -	µg/kg	NA	NA	NA	NA	NA	NA	520 U [520 U]	660 U	500 U	780 U	NA
Hexachlorobenzene	300	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Hexachlorobutadiene	300	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Hexachlorocyclopentadiene	10,000	µg/kg	NA	NA	NA	NA	NA	NA	R [R]	R	R	R	NA
Hexachloroethane	6,100	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Isophorone	510,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Nitrobenzene	4,400	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
N-Nitroso-di-N-propylamine	69	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
N-Nitrosodiphenylamine	99,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA
Pentachlorophenol	3,000	µg/kg	NA	NA	NA	NA	NA	NA	R [R]	R	R	R	NA
Phenol	30,000	µg/kg	NA	NA	NA	NA	NA	NA	210 U [210 U]	260 U	200 U	310 U	NA

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-013	LQW-014	LQW-015	LQW-015	LQW-016	LQW-016	LQW-017	LQW-017	LQW-018	LQW-018	LUI-005
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	
Date Collected:			12/01/05	12/01/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	12/08/05
Sample Name:	PAL	Units	LQW-013 (0-1)	LQW-014 (0-1)	LQW-015 (0-1)	LQW-015B	LQW-016 (0-1)	LQW-016B	LQW-017 (0-1)	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005
SVOC													
1,1'-Biphenyl	800	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2,4,5-Trichlorophenol	4,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2,4,6-Trichlorophenol	4,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2,4-Dichlorophenol	18,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2,4-Dimethylphenol	120,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2,4-Dinitrophenol	12,000	µg/kg	R	R	R	NA	R	NA	R	NA	R	NA	NA
2,4-Dinitrotoluene	900	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2,6-Dinitrotoluene	6,100	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2-Chloronaphthalene	630,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2-Chlorophenol	39,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2-Methylphenol	310,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2-Nitroaniline	18,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
2-Nitrophenol	7,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
3,3'-Dichlorobenzidine	1,100	µg/kg	210 U	160 U	170 U	NA	180 U	NA	R	NA	160 U	NA	NA
3-Nitroaniline	18,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
4,6-Dinitro-2-methylphenol	610	µg/kg	210 UJ	160 UJ	170 UJ	NA	180 UJ	NA	170 UJ	NA	160 UJ	NA	NA
4-Bromophenyl-phenylether	- -	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
4-Chloro-3-methylphenol	- -	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
4-Chloroaniline	2,400	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 UJ	NA	160 U	NA	NA
4-Chlorophenyl-phenylether	- -	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
4-Methylphenol	31,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
4-Nitroaniline	24,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
4-Nitrophenol	7,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Acetophenone	780,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Atrazine	2,100	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Benzaldehyde	780,000	µg/kg	**2,300**	**1,400**	**520**	NA	**1,200**	NA	**1,300 J**	NA	**200 J**	NA	NA
bis(2-Chloroethoxy)methane	18,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
bis(2-Chloroethyl)ether	190	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**310**	**220**	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Butyl benzyl phthalate	260,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Caprolactam	3,100,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Carbazole	- -	µg/kg	**120 J**	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Dibenzofuran	- -	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Diethylphthalate	100,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Dimethyl phthalate	200,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Di-N-Butyl phthalate	200,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Di-N-Octyl phthalate	- -	µg/kg	520 U	410 U	420 U	NA	460 U	NA	420 U	NA	390 U	NA	NA
Hexachlorobenzene	300	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Hexachlorobutadiene	300	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Hexachlorocyclopentadiene	10,000	µg/kg	R	R	R	NA	R	NA	R	NA	390 U	NA	NA
Hexachloroethane	6,100	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Isophorone	510,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Nitrobenzene	4,400	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
N-Nitroso-di-N-propylamine	69	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
N-Nitrosodiphenylamine	99,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA
Pentachlorophenol	3,000	µg/kg	R	R	R	NA	R	NA	1,700 UJ	NA	1,600 UJ	NA	NA
Phenol	30,000	µg/kg	210 U	160 U	170 U	NA	180 U	NA	170 U	NA	160 U	NA	NA

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LUI-006	SEA-601	SEA-601	SEA-601	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-602B
Sample Depth (Feet):				4 - 6	8 - 10	14 - 16	10 - 12	14 - 16	18 - 20	24 - 26	30 - 32
Date Collected:			12/08/05	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03
Sample Name:	PAL	Units	LUI-006	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF	SSO-SPT5-15-LF	SSO-SPT5-20-LF	SSO-SPT5-25-LF	SSO-SPT5-30-LF
SVOC											
1,1'-Biphenyl	800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	4,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	4,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	120,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	12,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	900	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	6,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	630,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	39,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	310,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	7,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	610	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	2,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	24,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	7,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	780,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	2,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	780,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	190	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	260,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	3,100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-N-Butyl phthalate	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-N-Octyl phthalate	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	10,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	6,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	510,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	4,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-N-propylamine	69	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	99,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	3,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	30,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-603	SEA-603	SEA-603	SEA-604	SEA-604	SEA-604	SEA-605	SEA-605	SEA-605
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	8 - 10	14 - 16	5 - 7	9 - 11	15 - 17
Date Collected:			09/21/03	09/21/03	09/21/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03
Sample Name:	PAL	Units	SSO-SPT2-5-LF	SSO-SPT2-10-LF	SSO-SPT2-15-LF	SSO-SPT3-5-LF	SSO-SPT3-10-LF	SSO-SPT3-15-LF	SSO-SPT4-5-LF	SSO-SPT4-10-LF	SSO-SPT4-15-LF
SVOC											
1,1'-Biphenyl	800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	4,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	4,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	120,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	12,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	900	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	6,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	630,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	39,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	310,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	7,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	610	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	2,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	24,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	7,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	780,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	2,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	780,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	190	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	260,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	3,100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-N-Butyl phthalate	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-N-Octyl phthalate	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	10,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	6,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	510,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	4,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-N-propylamine	69	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	99,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	3,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	30,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	10 - 12	14 - 16	4 - 6	8 - 10	14 - 16
Date Collected:			09/21/03	09/21/03	09/21/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03
Sample Name:	PAL	Units	SSO-SPT8-5-NP	SSO-SPT8-10-NP	SSO-SPT8-15-NP	SSO-SPT6-5-UI	SSO-SPT6-10-UI	SSO-SPT6-15-UI	SSO-SPT7-5-UI	SSO-SPT7-10-UI	SSO-SPT7-15-UI
SVOC											
1,1'-Biphenyl	800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	4,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	4,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	120,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	12,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	900	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	6,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	630,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	39,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	310,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	7,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	1,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	610	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	2,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	24,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	7,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	780,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	2,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	780,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	18,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	190	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	260,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	3,100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	100,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-N-Butyl phthalate	200,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-N-Octyl phthalate	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	300	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	10,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	6,100	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	510,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	4,400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-N-propylamine	69	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	99,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	3,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	30,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI	SO-013-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/18/03	08/18/03	08/18/03	08/18/03	08/18/03	08/19/03	08/19/03	08/19/03	08/19/03	08/20/03	08/20/03	08/20/03	08/20/03
Sample Name:	PAL	Units	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI	SO-013-UI
SVOC															
1,1'-Biphenyl	800	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	**60 J**	460 U	420 U	**27 J**	380 U	390 U	380 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
2,4,5-Trichlorophenol	4,000	µg/kg	1,000 U	1,000 U	930 U	940 U [980 U]	1,100 U	910 U	1,100 U	1,100 U	1,100 U	1,300 U	960 U	970 U	950 U
2,4,6-Trichlorophenol	4,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
2,4-Dichlorophenol	18,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
2,4-Dimethylphenol	120,000	µg/kg	410 UJ	410 UJ	370 U	380 U [390 UJ]	420 U	360 UJ	430 UJ	460 U	420 U	510 U	380 U	390 U	380 U
2,4-Dinitrophenol	12,000	µg/kg	1,000 U	1,000 U	930 U	940 U [980 U]	1,100 U	910 U	1,100 U	1,100 U	1,100 U	1,300 U	960 U	970 U	950 U
2,4-Dinitrotoluene	900	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
2,6-Dinitrotoluene	6,100	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
2-Chloronaphthalene	630,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
2-Chlorophenol	39,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
2-Methylphenol	310,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
2-Nitroaniline	18,000	µg/kg	1,000 U	1,000 U	930 U	940 U [980 U]	1,100 U	910 U	1,100 U	1,100 U	1,100 U	1,300 U	960 U	970 U	950 U
2-Nitrophenol	7,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
3,3'-Dichlorobenzidine	1,100	µg/kg	410 UJ	410 UJ	370 U	380 U [390 U]	420 U	360 UJ	3,400 U	460 U	420 U	510 U	380 U	390 U	380 U
3-Nitroaniline	18,000	µg/kg	1,000 U	1,000 U	930 U	940 U [980 U]	1,100 U	910 U	1,100 U	1,100 U	1,100 U	1,300 U	960 U	970 U	950 U
4,6-Dinitro-2-methylphenol	610	µg/kg	1,000 U	1,000 U	930 U	940 U [980 U]	1,100 U	910 U	1,100 U	1,100 U	1,100 U	1,300 U	960 U	970 U	950 U
4-Bromophenyl-phenylether	- -	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
4-Chloro-3-methylphenol	- -	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
4-Chloroaniline	2,400	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
4-Chlorophenyl-phenylether	- -	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
4-Methylphenol	31,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
4-Nitroaniline	24,000	µg/kg	1,000 U	1,000 U	930 U	940 U [980 U]	1,100 U	910 U	1,100 U	1,100 U	1,100 U	1,300 U	960 U	970 U	950 U
4-Nitrophenol	7,000	µg/kg	1,000 U	1,000 U	930 U	940 U [980 U]	1,100 U	910 U	1,100 U	1,100 U	1,100 U	1,300 U	960 U	970 U	950 U
Acetophenone	780,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Atrazine	2,100	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Benzaldehyde	780,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	**100 J**	**67 J**	380 U	390 U	380 U
bis(2-Chloroethoxy)methane	18,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
bis(2-Chloroethyl)ether	190	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	410 UJ	410 UJ	370 U	**460 UJ [1,600 J]**	520 U	**1,700**	**13,000**	**2,200**	**820**	640 U	610 U	390 U	380 U
Butyl benzyl phthalate	260,000	µg/kg	410 UJ	410 UJ	370 U	**64 J [390 U]**	420 U	**39 J**	3,400 U	**220 J**	**120 J**	510 U	**49 J**	**38 J**	380 U
Caprolactam	3,100,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Carbazole	- -	µg/kg	410 U	410 U	**64 J**	**55 J [49 J]**	**120 J**	360 U	**110 J**	**200 J**	**110 J**	**120 J**	**53 J**	**24 J**	380 U
Dibenzofuran	- -	µg/kg	410 U	410 U	370 U	380 U [390 U]	**65 J**	360 U	**99 J**	**83 J**	**45 J**	**67 J**	380 U	390 U	380 U
Diethylphthalate	100,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Dimethyl phthalate	200,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Di-N-Butyl phthalate	200,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	**47 J**	390 U	380 U
Di-N-Octyl phthalate	- -	µg/kg	410 UJ	410 UJ	370 U	**540 [390 U]**	420 U	**470 J**	3,400 U	460 UJ	420 U	510 UJ	380 U	390 U	380 U
Hexachlorobenzene	300	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Hexachlorobutadiene	300	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Hexachlorocyclopentadiene	10,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Hexachloroethane	6,100	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Isophorone	510,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Nitrobenzene	4,400	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
N-Nitroso-di-N-propylamine	69	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
N-Nitrosodiphenylamine	99,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U
Pentachlorophenol	3,000	µg/kg	1,000 U	1,000 U	930 U	940 U [980 U]	1,100 U	910 U	1,100 U	1,100 U	1,100 U	1,300 U	960 U	970 U	950 U
Phenol	30,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	430 U	460 U	420 U	510 U	380 U	390 U	380 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF	SO-022-LF	SO-023-LF	SO-024-LF	SO-025-LF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/20/03	08/20/03	08/20/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/22/03	08/22/03	08/22/03
Sample Name:	PAL	Units	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF	SO-FD-03	SO-023-LF	SO-024-LF	SO-025-LF
SVOC															
1,1'-Biphenyl	800	µg/kg	**35 J**	**110 J**	340 U	410 U	340 U	350 U	**49 J**	390 U	430 U	420 U	390 U	740 U	380 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
2,4,5-Trichlorophenol	4,000	µg/kg	970 U	1,100 U	870 U	1,000 U	860 U	890 U	1,000 U	970 U	1,100 U	1,100 U	990 U	1,900 U	960 U
2,4,6-Trichlorophenol	4,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
2,4-Dichlorophenol	18,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
2,4-Dimethylphenol	120,000	µg/kg	380 U	430 U	340 U	410 UJ	340 UJ	350 UJ	410 UJ	390 UJ	430 UJ	420 UJ	390 UJ	740 U	380 UJ
2,4-Dinitrophenol	12,000	µg/kg	970 U	1,100 U	870 U	1,000 U	860 U	890 U	1,000 U	970 U	1,100 U	1,100 U	990 U	1,900 U	960 U
2,4-Dinitrotoluene	900	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
2,6-Dinitrotoluene	6,100	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
2-Chloronaphthalene	630,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
2-Chlorophenol	39,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
2-Methylphenol	310,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
2-Nitroaniline	18,000	µg/kg	970 U	1,100 U	870 U	1,000 U	860 U	890 U	1,000 U	970 U	1,100 U	1,100 U	990 U	1,900 U	960 U
2-Nitrophenol	7,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
3,3'-Dichlorobenzidine	1,100	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
3-Nitroaniline	18,000	µg/kg	970 U	1,100 U	870 U	1,000 U	860 U	890 U	1,000 U	970 U	1,100 U	1,100 U	990 U	1,900 U	960 U
4,6-Dinitro-2-methylphenol	610	µg/kg	970 U	1,100 U	870 U	1,000 U	860 U	890 U	1,000 U	970 U	1,100 U	1,100 U	990 U	1,900 U	960 U
4-Bromophenyl-phenylether	- -	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
4-Chloro-3-methylphenol	- -	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
4-Chloroaniline	2,400	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
4-Chlorophenyl-phenylether	- -	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
4-Methylphenol	31,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
4-Nitroaniline	24,000	µg/kg	970 U	1,100 U	870 U	1,000 U	860 U	890 U	1,000 U	970 U	1,100 U	1,100 U	990 U	1,900 U	960 U
4-Nitrophenol	7,000	µg/kg	970 U	1,100 U	870 U	1,000 U	860 U	890 U	1,000 U	970 U	1,100 U	1,100 U	990 U	1,900 U	960 U
Acetophenone	780,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Atrazine	2,100	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Benzaldehyde	780,000	µg/kg	**21 J**	430 U	340 U	410 U	340 U	350 U	**110 J**	390 U	430 U	420 U	390 U	740 U	380 U
bis(2-Chloroethoxy)methane	18,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
bis(2-Chloroethyl)ether	190	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**18,000**	430 U	340 U	**800**	430 U	**5,100**	410 U	**4,000**	**2,400 J**	470 UJ	**2,300**	740 U	**5,600**
Butyl benzyl phthalate	260,000	µg/kg	**49 J**	430 U	340 U	**65 J**	340 U	**36 J**	**44 J**	390 U	430 U	420 U	**150 J**	740 U	380 U
Caprolactam	3,100,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Carbazole	- -	µg/kg	**350 J**	**990**	340 U	**90 J**	340 U	**150 J**	**440**	**180 J**	**140 J**	**150 J**	**150 J**	**340 J**	**110 J**
Dibenzofuran	- -	µg/kg	**240 J**	**1,100**	340 U	410 U	340 U	**51 J**	**390 J**	**110 J**	**75 J**	**55 J**	**65 J**	**120 J**	**45 J**
Diethylphthalate	100,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Dimethyl phthalate	200,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Di-N-Butyl phthalate	200,000	µg/kg	**23 J**	430 U	340 U	410 U	**37 J**	350 U	410 U	390 U	430 U	420 U	390 U	**740 J**	380 U
Di-N-Octyl phthalate	- -	µg/kg	380 U	430 U	340 U	410 U	340 U	**50 J**	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Hexachlorobenzene	300	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Hexachlorobutadiene	300	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Hexachlorocyclopentadiene	10,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Hexachloroethane	6,100	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Isophorone	510,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Nitrobenzene	4,400	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
N-Nitroso-di-N-propylamine	69	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
N-Nitrosodiphenylamine	99,000	µg/kg	380 U	430 U	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U
Pentachlorophenol	3,000	µg/kg	970 U	1,100 U	870 U	1,000 U	860 U	890 U	1,000 UJ	970 U	1,100 U	1,100 U	990 U	1,900 UJ	960 U
Phenol	30,000	µg/kg	380 U	**9 J**	340 U	410 U	340 U	350 U	410 U	390 U	430 U	420 U	390 U	740 U	380 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-033-NP	SO-034-NP	SO-034-NP	SO-035-NP	SO-035-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	1 - 5	0 - 1	6 - 10	0 - 1	5 - 9
Date Collected:			08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/28/03	09/05/03	09/05/03	09/05/03	09/05/03	09/06/03	09/06/03
Sample Name:	PAL	Units	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-W14-NP	SO-034-NP	SO-W13-NP	SO-035-NP	SO-W15-NP
SVOC														
1,1'-Biphenyl	800	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	**50 J**	4,200 U	390 U	**120 J**
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
2,4,5-Trichlorophenol	4,000	µg/kg	1,100 U	900 U	1,500 U	1,200 U	1,100 U	2,100 UJ	980 U	970 U	940 UJ	11,000 U	970 U	990 U
2,4,6-Trichlorophenol	4,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
2,4-Dichlorophenol	18,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
2,4-Dimethylphenol	120,000	µg/kg	440 UJ	360 UJ	590 UJ	500 UJ	450 UJ	830 UJ	390 UJ	390 UJ	370 UJ	4,200 U	390 U	**80 J**
2,4-Dinitrophenol	12,000	µg/kg	1,100 U	900 U	1,500 U	1,200 U	1,100 U	2,100 UJ	980 U	970 U	940 UJ	11,000 U	970 U	990 U
2,4-Dinitrotoluene	900	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
2,6-Dinitrotoluene	6,100	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
2-Chloronaphthalene	630,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
2-Chlorophenol	39,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
2-Methylphenol	310,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
2-Nitroaniline	18,000	µg/kg	1,100 U	900 U	1,500 U	1,200 U	1,100 U	2,100 UJ	980 U	970 U	940 UJ	11,000 U	970 U	990 U
2-Nitrophenol	7,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
3,3'-Dichlorobenzidine	1,100	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 UJ	390 U	370 U	4,200 U	390 U	390 UJ
3-Nitroaniline	18,000	µg/kg	1,100 U	900 U	1,500 U	1,200 U	1,100 U	2,100 UJ	980 U	970 U	940 UJ	11,000 U	970 U	990 U
4,6-Dinitro-2-methylphenol	610	µg/kg	1,100 U	900 U	1,500 U	1,200 U	1,100 U	2,100 UJ	980 U	970 U	940 U	11,000 U	970 U	990 UJ
4-Bromophenyl-phenylether	- -	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 U	4,200 U	390 U	390 UJ
4-Chloro-3-methylphenol	- -	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
4-Chloroaniline	2,400	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
4-Chlorophenyl-phenylether	- -	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
4-Methylphenol	31,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	**88 J**
4-Nitroaniline	24,000	µg/kg	1,100 U	900 U	1,500 U	1,200 U	1,100 U	2,100 UJ	980 U	970 U	940 UJ	11,000 U	970 U	990 U
4-Nitrophenol	7,000	µg/kg	1,100 U	900 U	1,500 U	1,200 U	1,100 U	2,100 UJ	980 U	970 U	940 UJ	11,000 U	970 U	990 U
Acetophenone	780,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
Atrazine	2,100	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 U	4,200 U	390 U	390 UJ
Benzaldehyde	780,000	µg/kg	440 U	360 U	**64 J**	500 U	**65 J**	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
bis(2-Chloroethoxy)methane	18,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
bis(2-Chloroethyl)ether	190	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**1,000**	410 U	590 U	500 U	620 U	1,600 UJ	**6,300**	**720**	**250 J**	**1,300,000**	**870**	**840**
Butyl benzyl phthalate	260,000	µg/kg	**67 J**	**1,100**	**73 J**	500 U	**50 J**	**170 J**	**190 J**	390 U	370 U	**9,200**	**81 J**	390 UJ
Caprolactam	3,100,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
Carbazole	- -	µg/kg	**120 J**	**180 J**	**130 J**	**96 J**	**130 J**	**180 J**	**260 J**	**150 J**	**710**	4,200 U	**46 J**	**940**
Dibenzofuran	- -	µg/kg	440 U	**69 J**	590 U	500 U	450 U	830 UJ	**160 J**	**56 J**	**500 J**	4,200 U	390 U	**670**
Diethylphthalate	100,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
Dimethyl phthalate	200,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
Di-N-Butyl phthalate	200,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	**48 J**	390 U	370 U	**11,000**	**52 J**	**48 J**
Di-N-Octyl phthalate	- -	µg/kg	440 U	**40 J**	590 U	500 U	450 U	830 UJ	**56 J**	**100 J**	370 UJ	**270,000 J**	390 U	390 UJ
Hexachlorobenzene	300	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 U	4,200 U	390 U	390 UJ
Hexachlorobutadiene	300	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
Hexachlorocyclopentadiene	10,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
Hexachloroethane	6,100	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
Isophorone	510,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
Nitrobenzene	4,400	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
N-Nitroso-di-N-propylamine	69	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U
N-Nitrosodiphenylamine	99,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 U	**4,100 J**	390 U	390 UJ
Pentachlorophenol	3,000	µg/kg	1,100 U	900 U	1,500 U	1,200 U	1,100 U	2,100 UJ	980 UJ	970 UJ	940 UJ	11,000 UJ	970 UJ	990 UJ
Phenol	30,000	µg/kg	440 U	360 U	590 U	500 U	450 U	830 UJ	390 U	390 U	370 UJ	4,200 U	390 U	390 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-036-NP	SO-036-NP	SO-036-NP	SO-037-NP	SO-037-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF
Sample Depth (Feet):			0 - 1	1 - 5	1 - 5	0 - 1	5 - 9	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/09/04	09/09/04	09/09/04	09/10/04	09/10/04	09/09/04
Sample Name:	PAL	Units	SO-036-NP	SSO-FD01	SSO-01-NP	SO-037-NP	SO-W16-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF
SVOC													
1,1'-Biphenyl	800	µg/kg	350 U	390 U	380 U	**67 J**	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 UJ	510 UJ	420 U	470 U	430 UJ [860 UJ]
2,4,5-Trichlorophenol	4,000	µg/kg	890 U	970 U	960 U	920 U	880 U	1,200 UJ	970 U	1,300 UJ	1,000 U	1,200 U	1,100 U [2,200 U]
2,4,6-Trichlorophenol	4,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2,4-Dichlorophenol	18,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2,4-Dimethylphenol	120,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2,4-Dinitrophenol	12,000	µg/kg	890 U	970 U	960 U	920 U	880 U	1,200 UJ	970 UJ	1,300 UJ	1,000 U	1,200 U	1,100 UJ [2,200 UJ]
2,4-Dinitrotoluene	900	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2,6-Dinitrotoluene	6,100	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2-Chloronaphthalene	630,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2-Chlorophenol	39,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2-Methylphenol	310,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
2-Nitroaniline	18,000	µg/kg	890 U	970 U	960 U	920 U	880 U	1,200 UJ	970 U	1,300 UJ	1,000 U	1,200 U	1,100 U [2,200 U]
2-Nitrophenol	7,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
3,3'-Dichlorobenzidine	1,100	µg/kg	350 UJ	390 U	380 U	370 U	350 U	470 U	380 U	510 U	420 UJ	470 UJ	430 U [430 U]
3-Nitroaniline	18,000	µg/kg	890 U	970 U	960 U	920 U	880 U	1,200 UJ	970 U	1,300 UJ	1,000 UJ	1,200 UJ	1,100 U [2,200 U]
4,6-Dinitro-2-methylphenol	610	µg/kg	890 U	970 U	960 U	920 U	880 U	1,200 UJ	970 U	1,300 UJ	1,000 U	1,200 U	1,100 U [1,100 UJ]
4-Bromophenyl-phenylether	- -	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [430 UJ]
4-Chloro-3-methylphenol	- -	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
4-Chloroaniline	2,400	µg/kg	350 U	390 U	380 U	370 U	350 U	**1,200 J**	380 U	**720 J**	420 UJ	470 UJ	**430 UJ [1,500 J]**
4-Chlorophenyl-phenylether	- -	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
4-Methylphenol	31,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
4-Nitroaniline	24,000	µg/kg	890 U	970 U	960 U	920 U	880 U	1,200 UJ	970 U	1,300 UJ	1,000 UJ	1,200 UJ	1,100 U [2,200 U]
4-Nitrophenol	7,000	µg/kg	890 U	970 U	960 U	920 U	880 U	1,200 UJ	970 U	1,300 UJ	1,000 UJ	1,200 UJ	1,100 U [2,200 U]
Acetophenone	780,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
Atrazine	2,100	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [430 UJ]
Benzaldehyde	780,000	µg/kg	350 U	390 U	380 U	370 U	350 U	**74 J**	**82 J**	**90 J**	**190 J**	**210 J**	430 UJ [860 UJ]
bis(2-Chloroethoxy)methane	18,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
bis(2-Chloroethyl)ether	190	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	350 U	**390 J**	**1,700 J**	**470**	**85 J**	**2,300 J**	**370 J**	**2,300 J**	560 U	**4,100 J**	**1,900 J [930 J]**
Butyl benzyl phthalate	260,000	µg/kg	**64 J**	390 U	380 U	**87 J**	350 U	**69 J**	380 U	**88 J**	420 U	**48 J**	**43 J [57 J]**
Caprolactam	3,100,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
Carbazole	- -	µg/kg	350 U	390 U	380 U	**1,600**	**200 J**	**200 J**	**200 J**	**290 J**	**200 J**	**170 J**	**130 J [260 J]**
Dibenzofuran	- -	µg/kg	350 U	390 U	380 U	**760**	**110 J**	**95 J**	**96 J**	**60 J**	**68 J**	470 U	**45 J [68 J]**
Diethylphthalate	100,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
Dimethyl phthalate	200,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	**110 J**	510 UJ	420 U	470 U	430 U [860 U]
Di-N-Butyl phthalate	200,000	µg/kg	**110 J**	390 U	380 U	**69 J**	350 U	470 UJ	**64 J**	**59 J**	420 U	470 U	**47 J [430 UJ]**
Di-N-Octyl phthalate	- -	µg/kg	350 U	390 U	**98 J**	370 U	350 U	**1,300**	380 U	510 U	420 U	470 U	**430 U [190 J]**
Hexachlorobenzene	300	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [430 UJ]
Hexachlorobutadiene	300	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
Hexachlorocyclopentadiene	10,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
Hexachloroethane	6,100	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
Isophorone	510,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
Nitrobenzene	4,400	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
N-Nitroso-di-N-propylamine	69	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]
N-Nitrosodiphenylamine	99,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 UJ	470 UJ	430 U [430 UJ]
Pentachlorophenol	3,000	µg/kg	890 UJ	970 UJ	960 UJ	920 UJ	880 UJ	1,200 UJ	970 UJ	1,300 UJ	1,000 U	1,200 U	1,100 UJ [1,100 UJ]
Phenol	30,000	µg/kg	350 U	390 U	380 U	370 U	350 U	470 UJ	380 U	510 UJ	420 U	470 U	430 U [860 U]

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-047-DF 0 - 1 09/09/04 SO-047-DF	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP	SO-057-NP 0 - 1 09/09/04 SO-057-NP
SVOC													
1,1'-Biphenyl	800	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	**40 J [390 U]**	400 UJ
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	350 UJ	800 UJ	400 UJ	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
2,4,5-Trichlorophenol	4,000	µg/kg	870 UJ	2,000 U	1,000 U	1,000 U	1,400 U	1,000 U	1,100 UJ	940 U	960 U	970 U [990 U]	1,000 UJ
2,4,6-Trichlorophenol	4,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
2,4-Dichlorophenol	18,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
2,4-Dimethylphenol	120,000	µg/kg	350 UJ	800 U	400 U	410 UJ	540 UJ	400 UJ	450 UJ	370 UJ	380 U	380 U [390 U]	400 UJ
2,4-Dinitrophenol	12,000	µg/kg	870 UJ	2,000 UJ	1,000 UJ	1,000 UJ	1,400 UJ	1,000 UJ	1,100 UJ	940 UJ	960 UJ	970 UJ [990 UJ]	1,000 UJ
2,4-Dinitrotoluene	900	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
2,6-Dinitrotoluene	6,100	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 UJ	380 U [390 UJ]	400 UJ
2-Chloronaphthalene	630,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
2-Chlorophenol	39,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
2-Methylphenol	310,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
2-Nitroaniline	18,000	µg/kg	870 UJ	2,000 U	1,000 U	1,000 U	1,400 U	1,000 U	1,100 UJ	940 U	960 U	970 U [990 U]	1,000 UJ
2-Nitrophenol	7,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
3,3'-Dichlorobenzidine	1,100	µg/kg	350 U	400 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 UJ	380 U [390 UJ]	400 U
3-Nitroaniline	18,000	µg/kg	870 UJ	2,000 U	1,000 U	1,000 U	1,400 U	1,000 U	1,100 UJ	940 U	960 UJ	970 U [990 UJ]	1,000 UJ
4,6-Dinitro-2-methylphenol	610	µg/kg	870 U	1,000 UJ	1,000 U	1,000 U	1,400 U	1,000 U	1,100 UJ	940 U	960 U	970 U [990 U]	1,000 UJ
4-Bromophenyl-phenylether	- -	µg/kg	350 U	400 UJ	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
4-Chloro-3-methylphenol	- -	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 UJ	380 U [390 UJ]	400 UJ
4-Chloroaniline	2,400	µg/kg	**550 J**	800 U	400 U	410 U	540 U	**900 J**	**340 J**	370 U	380 UJ	**1,400 J [390 UJ]**	**2,400 J**
4-Chlorophenyl-phenylether	- -	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
4-Methylphenol	31,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
4-Nitroaniline	24,000	µg/kg	870 UJ	2,000 U	1,000 U	1,000 U	1,400 U	1,000 U	1,100 UJ	940 U	960 UJ	970 U [990 UJ]	1,000 UJ
4-Nitrophenol	7,000	µg/kg	870 UJ	2,000 U	1,000 U	1,000 U	1,400 U	1,000 U	1,100 UJ	940 U	960 UJ	970 U [990 UJ]	1,000 UJ
Acetophenone	780,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Atrazine	2,100	µg/kg	350 U	400 UJ	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Benzaldehyde	780,000	µg/kg	350 UJ	800 UJ	400 UJ	**51 J**	540 U	**71 J**	**63 J**	**41 J**	**51 J**	**59 J [40 J]**	400 UJ
bis(2-Chloroethoxy)methane	18,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
bis(2-Chloroethyl)ether	190	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**4,800 J**	**500 J**	**1,400 J**	**1,300 J**	**1,100 J**	**1,500 J**	**1,100 J**	**560 J**	**1,200 J**	**1,000 J [870 J]**	**2,400 J**
Butyl benzyl phthalate	260,000	µg/kg	350 U	400 U	400 U	**230 J**	**430 J**	400 U	**170 J**	**130 J**	**79 J**	**170 J [160 J]**	**100 J**
Caprolactam	3,100,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 UJ	380 U [390 UJ]	400 UJ
Carbazole	- -	µg/kg	**230 J**	**170 J**	**70 J**	**260 J**	**420 J**	**240 J**	**250 J**	**350 J**	**190 J**	**380 [280 J]**	**270 J**
Dibenzofuran	- -	µg/kg	**98 J**	**60 J**	400 U	**80 J**	**110 J**	**79 J**	**81 J**	**110 J**	**57 J**	**140 J [97 J]**	**77 J**
Diethylphthalate	100,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Dimethyl phthalate	200,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Di-N-Butyl phthalate	200,000	µg/kg	**96 J**	**46 J**	400 U	**72 J**	**100 J**	**78 J**	**74 J**	**59 J**	**73 J**	**75 J [70 J]**	**47 J**
Di-N-Octyl phthalate	- -	µg/kg	**190 J**	400 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 U
Hexachlorobenzene	300	µg/kg	350 U	400 UJ	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Hexachlorobutadiene	300	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Hexachlorocyclopentadiene	10,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Hexachloroethane	6,100	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Isophorone	510,000	µg/kg	350 UJ	800 U	400 U	410 U	**100 J**	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
Nitrobenzene	4,400	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
N-Nitroso-di-N-propylamine	69	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 U	380 U [390 U]	400 UJ
N-Nitrosodiphenylamine	99,000	µg/kg	350 U	400 UJ	400 U	410 U	540 U	400 U	450 UJ	370 U	380 UJ	380 U [390 UJ]	400 UJ
Pentachlorophenol	3,000	µg/kg	870 UJ	1,000 UJ	1,000 UJ	1,000 U	1,400 U	1,000 U	1,100 UJ	940 U	960 U	970 U [990 U]	1,000 UJ
Phenol	30,000	µg/kg	350 UJ	800 U	400 U	410 U	540 U	400 U	450 UJ	370 U	380 UJ	380 U [390 U]	400 UJ

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-061-WT	SO-062-WT	SO-062-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/09/04	09/08/04	09/09/04	11/27/04	09/09/04	11/27/04	09/09/04	09/08/04	09/08/04	09/08/04
Sample Name:	PAL	Units	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-091-WT	SO-062-WT	SO-092-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR
SVOC													
1,1'-Biphenyl	800	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2,4,5-Trichlorophenol	4,000	µg/kg	1,200 U	940 U	860 U	990 U	NA	NA	1,000 U [1,000 U]	930 U	1,200 UJ	1,100 U	960 U
2,4,6-Trichlorophenol	4,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2,4-Dichlorophenol	18,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2,4-Dimethylphenol	120,000	µg/kg	470 UJ	380 U	340 U	390 U	NA	NA	400 UJ [400 UJ]	370 U	460 UJ	430 UJ	380 U
2,4-Dinitrophenol	12,000	µg/kg	1,200 UJ	940 UJ	860 UJ	990 UJ	NA	NA	1,000 UJ [1,000 UJ]	930 UJ	1,200 UJ	1,100 UJ	960 UJ
2,4-Dinitrotoluene	900	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2,6-Dinitrotoluene	6,100	µg/kg	470 U	380 U	340 UJ	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2-Chloronaphthalene	630,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2-Chlorophenol	39,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2-Methylphenol	310,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
2-Nitroaniline	18,000	µg/kg	1,200 U	940 U	860 U	990 U	NA	NA	1,000 U [1,000 U]	930 U	1,200 UJ	1,100 U	960 U
2-Nitrophenol	7,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
3,3'-Dichlorobenzidine	1,100	µg/kg	470 U	380 U	340 UJ	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
3-Nitroaniline	18,000	µg/kg	1,200 U	940 U	860 UJ	990 U	NA	NA	1,000 U [1,000 U]	930 U	1,200 UJ	1,100 U	960 U
4,6-Dinitro-2-methylphenol	610	µg/kg	1,200 U	940 U	860 U	990 U	NA	NA	1,000 U [1,000 U]	930 U	1,200 UJ	1,100 U	960 U
4-Bromophenyl-phenylether	- -	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
4-Chloro-3-methylphenol	- -	µg/kg	470 U	380 U	340 UJ	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
4-Chloroaniline	2,400	µg/kg	470 U	380 U	340 UJ	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	**280 J**
4-Chlorophenyl-phenylether	- -	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
4-Methylphenol	31,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
4-Nitroaniline	24,000	µg/kg	1,200 U	940 U	860 UJ	990 U	NA	NA	1,000 U [1,000 U]	930 U	1,200 UJ	1,100 U	960 U
4-Nitrophenol	7,000	µg/kg	1,200 U	940 U	860 UJ	990 U	NA	NA	1,000 UJ [1,000 UJ]	930 U	1,200 UJ	1,100 U	960 U
Acetophenone	780,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	**42 J**
Atrazine	2,100	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Benzaldehyde	780,000	µg/kg	**95 J**	380 UJ	340 U	390 UJ	NA	NA	400 U [400 U]	370 UJ	460 UJ	**46 J**	**100 J**
bis(2-Chloroethoxy)methane	18,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
bis(2-Chloroethyl)ether	190	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**1,000 J**	**70 J**	**120 J**	**950 J**	NA	NA	**84 JEB [89 JEB]**	**97 J**	**2,300 J**	**970 J**	**640 J**
Butyl benzyl phthalate	260,000	µg/kg	**200 J**	380 U	340 UJ	390 U	NA	NA	400 U [400 U]	370 U	**82 J**	**100 J**	**130 J**
Caprolactam	3,100,000	µg/kg	470 U	380 U	340 UJ	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Carbazole	- -	µg/kg	**350 J**	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	**280 J**	**250 J**	**220 J**
Dibenzofuran	- -	µg/kg	**96 J**	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	**82 J**	**93 J**	**84 J**
Diethylphthalate	100,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Dimethyl phthalate	200,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Di-N-Butyl phthalate	200,000	µg/kg	**83 J**	380 U	340 U	**57 J**	NA	NA	400 U [400 U]	**64 J**	**71 J**	**88 J**	**60 J**
Di-N-Octyl phthalate	- -	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Hexachlorobenzene	300	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Hexachlorobutadiene	300	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Hexachlorocyclopentadiene	10,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Hexachloroethane	6,100	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Isophorone	510,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Nitrobenzene	4,400	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
N-Nitroso-di-N-propylamine	69	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 UJ [400 UJ]	370 U	460 UJ	430 U	380 U
N-Nitrosodiphenylamine	99,000	µg/kg	470 U	380 U	340 UJ	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U
Pentachlorophenol	3,000	µg/kg	1,200 U	940 UJ	860 U	990 UJ	NA	NA	1,000 U [1,000 U]	930 UJ	1,200 UJ	1,100 U	960 U
Phenol	30,000	µg/kg	470 U	380 U	340 U	390 U	NA	NA	400 U [400 U]	370 U	460 UJ	430 U	380 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-067-BR 0 - 1 09/08/04 SO-067-BR	SO-068-BR 0 - 1 09/08/04 SO-068-BR	SO-069-BR 0 - 1 09/08/04 SO-069-BR	SO-070-BR 0 - 1 09/08/04 SO-070-BR	SO-071-BR 0 - 1 09/08/04 SO-071-BR	SO-072-MF 0 - 1 09/10/04 SO-072-MF	SO-073-MF 0 - 1 09/10/04 SO-073-MF	SO-074-MF 0 - 1 09/10/04 SO-074-MF	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI
SVOC													
1,1'-Biphenyl	800	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	**130 J**	370 U	390 U	380 U [380 U]	370 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
2,4,5-Trichlorophenol	4,000	µg/kg	970 U	1,300 U	1,300 U	860 U	900 U	1,200 U	980 U	930 U	980 U	940 U [950 U]	920 U
2,4,6-Trichlorophenol	4,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
2,4-Dichlorophenol	18,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
2,4-Dimethylphenol	120,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
2,4-Dinitrophenol	12,000	µg/kg	970 UJ	1,300 UJ	1,300 UJ	860 UJ	900 UJ	1,200 UJ	980 UJ	930 U	980 U	940 U [950 U]	920 U
2,4-Dinitrotoluene	900	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
2,6-Dinitrotoluene	6,100	µg/kg	390 U	510 U	500 U	340 UJ	360 U	480 UJ	390 UJ	370 U	390 U	380 U [380 U]	370 U
2-Chloronaphthalene	630,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
2-Chlorophenol	39,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
2-Methylphenol	310,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
2-Nitroaniline	18,000	µg/kg	970 U	1,300 U	1,300 U	860 U	900 U	1,200 U	980 U	930 U	980 U	940 U [950 U]	920 U
2-Nitrophenol	7,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
3,3'-Dichlorobenzidine	1,100	µg/kg	390 U	510 U	500 U	340 UJ	360 U	480 UJ	390 UJ	370 UJ	390 UJ	380 UJ [380 UJ]	370 UJ
3-Nitroaniline	18,000	µg/kg	970 U	1,300 U	1,300 U	860 UJ	900 U	1,200 UJ	980 UJ	930 UJ	980 UJ	940 UJ [950 UJ]	920 UJ
4,6-Dinitro-2-methylphenol	610	µg/kg	970 U	1,300 U	1,300 U	860 U	900 U	1,200 U	980 U	930 U	980 U	940 U [950 U]	920 U
4-Bromophenyl-phenylether	- -	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
4-Chloro-3-methylphenol	- -	µg/kg	390 U	510 U	500 U	340 UJ	360 U	480 UJ	390 UJ	370 U	390 U	380 U [380 U]	370 U
4-Chloroaniline	2,400	µg/kg	**230 J**	**310 J**	**330 J**	**85 J**	**430 J**	480 UJ	390 UJ	370 UJ	390 UJ	380 UJ [380 UJ]	370 UJ
4-Chlorophenyl-phenylether	- -	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
4-Methylphenol	31,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
4-Nitroaniline	24,000	µg/kg	970 U	1,300 U	1,300 U	860 UJ	900 U	1,200 UJ	980 UJ	930 UJ	980 UJ	940 UJ [950 UJ]	920 UJ
4-Nitrophenol	7,000	µg/kg	970 U	1,300 U	1,300 U	860 UJ	900 U	1,200 UJ	980 UJ	930 UJ	980 UJ	940 UJ [950 UJ]	920 UJ
Acetophenone	780,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	**70 J [380 U]**	370 U
Atrazine	2,100	µg/kg	380 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Benzaldehyde	780,000	µg/kg	**67 J**	510 U	**79 J**	340 U	360 U	**200 J**	**170 J**	**150 J**	**170 J**	**190 J [160 J]**	**180 J**
bis(2-Chloroethoxy)methane	18,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
bis(2-Chloroethyl)ether	190	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**620 J**	**650 J**	**800 J**	**340 J**	**9,000**	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Butyl benzyl phthalate	260,000	µg/kg	**86 J**	**110 J**	**130 J**	340 UJ	**63 J**	480 UJ	390 UJ	370 U	390 U	380 U [380 U]	370 U
Caprolactam	3,100,000	µg/kg	390 U	510 U	500 U	340 UJ	360 U	480 UJ	390 UJ	370 U	390 U	380 U [380 U]	370 U
Carbazole	- -	µg/kg	**280 J**	**180 J**	**330 J**	**110 J**	**150 J**	**310 J**	**550**	**140 J**	390 U	**56 J [86 J]**	370 U
Dibenzofuran	- -	µg/kg	**95 J**	**69 J**	**80 J**	**82 J**	**77 J**	**140 J**	**440**	**78 J**	390 U	380 U [380 U]	370 U
Diethylphthalate	100,000	µg/kg	390 U	510 U	**460 J**	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Dimethyl phthalate	200,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Di-N-Butyl phthalate	200,000	µg/kg	**53 J**	**52 J**	**79 J**	340 U	**41 J**	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Di-N-Octyl phthalate	- -	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Hexachlorobenzene	300	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Hexachlorobutadiene	300	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Hexachlorocyclopentadiene	10,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Hexachloroethane	6,100	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Isophorone	510,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
Nitrobenzene	4,400	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
N-Nitroso-di-N-propylamine	69	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U
N-Nitrosodiphenylamine	99,000	µg/kg	390 U	510 U	500 U	340 UJ	360 U	480 UJ	390 UJ	370 UJ	390 UJ	380 UJ [380 UJ]	370 UJ
Pentachlorophenol	3,000	µg/kg	970 U	1,300 U	1,300 U	860 U	900 U	1,200 U	980 U	930 U	980 U	940 U [950 U]	920 U
Phenol	30,000	µg/kg	390 U	510 U	500 U	340 U	360 U	480 U	390 U	370 U	390 U	380 U [380 U]	370 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI	SO-084-UI	SO-084-UI	SO-085-UI	SO-085-UI	SO-086-UI	SO-087-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/09/04	11/27/04	09/09/04	11/27/04	09/09/04	09/09/04
Sample Name:	PAL	Units	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI	SO-084-UI	SO-089-UI	SO-085-UI	SO-090-UI	SO-086-UI	SO-087-UI
SVOC														
1,1'-Biphenyl	800	µg/kg	**46 J**	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 UJ	NA	360 UJ	NA	370 UJ	350 U
2,4,5-Trichlorophenol	4,000	µg/kg	900 U	880 U	900 U	970 U	880 U	940 U	900 U	NA	910 U	NA	940 U	890 U
2,4,6-Trichlorophenol	4,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
2,4-Dichlorophenol	18,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
2,4-Dimethylphenol	120,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
2,4-Dinitrophenol	12,000	µg/kg	900 U	880 U	900 U	970 U	880 U	940 U	900 UJ	NA	910 UJ	NA	940 UJ	890 UJ
2,4-Dinitrotoluene	900	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
2,6-Dinitrotoluene	6,100	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
2-Chloronaphthalene	630,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
2-Chlorophenol	39,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
2-Methylphenol	310,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
2-Nitroaniline	18,000	µg/kg	900 U	880 U	900 U	970 U	880 U	940 U	900 U	NA	910 U	NA	940 U	890 U
2-Nitrophenol	7,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
3,3'-Dichlorobenzidine	1,100	µg/kg	360 UJ	350 UJ	360 UJ	380 UJ	350 UJ	370 UJ	360 U	NA	360 U	NA	370 U	350 U
3-Nitroaniline	18,000	µg/kg	900 UJ	880 UJ	900 UJ	970 UJ	880 UJ	940 UJ	900 U	NA	910 U	NA	940 U	890 U
4,6-Dinitro-2-methylphenol	610	µg/kg	900 U	880 U	900 U	970 U	880 U	940 U	900 U	NA	910 U	NA	940 U	890 U
4-Bromophenyl-phenylether	- -	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
4-Chloro-3-methylphenol	- -	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
4-Chloroaniline	2,400	µg/kg	360 UJ	350 UJ	360 UJ	380 UJ	350 UJ	370 UJ	360 U	NA	360 U	NA	370 UJ	350 U
4-Chlorophenyl-phenylether	- -	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
4-Methylphenol	31,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
4-Nitroaniline	24,000	µg/kg	900 UJ	880 UJ	900 UJ	970 UJ	880 UJ	940 UJ	900 U	NA	910 U	NA	940 U	890 U
4-Nitrophenol	7,000	µg/kg	900 UJ	880 UJ	900 UJ	970 UJ	880 UJ	940 UJ	900 U	NA	910 U	NA	940 U	890 U
Acetophenone	780,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	**860 J**	350 U
Atrazine	2,100	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
Benzaldehyde	780,000	µg/kg	**180 J**	**160 J**	**140 J**	**180 J**	**140 J**	**190 J**	360 UJ	NA	360 UJ	NA	180 UJ	350 UJ
bis(2-Chloroethoxy)methane	18,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
bis(2-Chloroethyl)ether	190	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**1,300 J**	350 U	**8,600 J**	380 U	350 U	370 U	**630 J**	NA	**210 J**	NA	**260,000 J**	**130 J**
Butyl benzyl phthalate	260,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
Caprolactam	3,100,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
Carbazole	- -	µg/kg	**240 J**	**41 J**	**250 J**	**74 J**	350 U	**150 J**	360 U	NA	360 U	NA	370 U	350 U
Dibenzofuran	- -	µg/kg	**160 J**	350 U	**100 J**	380 U	350 U	**110 J**	360 U	NA	360 U	NA	370 U	350 U
Diethylphthalate	100,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
Dimethyl phthalate	200,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
Di-N-Butyl phthalate	200,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	**59 J**	NA	**61 J**	NA	**110 J**	**71 J**
Di-N-Octyl phthalate	- -	µg/kg	360 U	350 U	**690**	380 U	350 U	370 U	360 U	NA	360 U	NA	**14,000 J**	350 U
Hexachlorobenzene	300	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
Hexachlorobutadiene	300	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
Hexachlorocyclopentadiene	10,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 U	350 U
Hexachloroethane	6,100	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
Isophorone	510,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
Nitrobenzene	4,400	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
N-Nitroso-di-N-propylamine	69	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	370 UJ	350 U
N-Nitrosodiphenylamine	99,000	µg/kg	360 UJ	350 UJ	360 UJ	380 UJ	350 UJ	370 UJ	360 U	NA	360 U	NA	370 U	350 U
Pentachlorophenol	3,000	µg/kg	900 U	880 U	900 U	970 U	880 U	940 U	900 UJ	NA	910 UJ	NA	940 UJ	890 UJ
Phenol	30,000	µg/kg	360 U	350 U	360 U	380 U	350 U	370 U	360 U	NA	360 U	NA	**120 J**	350 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-088-UI	SO-100-NP	SO-101-NP	SO-101-NP	SO-102-NP	SO-102-NP	SO-103-NP	SO-104-NP	SO-105-NP
Sample Depth (Feet):			0 - 1	2 - 7	0 - 1	2 - 9	0 - 1	2 - 8.5	2 - 7	2 - 3.4	2 - 3.4
Date Collected:			09/10/04	11/01/06	11/01/06	11/01/06	10/31/06	10/31/06	11/01/06	11/02/06	11/02/06
Sample Name:	PAL	Units	SO-088-UI	SO-100-NP (2-7')	SO-101-NP (0-1')	SO-101-NP (2-9')	SO-102-NP (0-1')	SO-102-NP (2-8.5')	SO-103-NP (2-7')	SO-104-NP (2-3.4')	SO-105-NP (2-3.4')
SVOC											
1,1'-Biphenyl	800	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	**120 J**
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2,4,5-Trichlorophenol	4,000	µg/kg	950 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2,4,6-Trichlorophenol	4,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2,4-Dichlorophenol	18,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2,4-Dimethylphenol	120,000	µg/kg	380 U	170 UJ	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2,4-Dinitrophenol	12,000	µg/kg	950 U	680 UJ	560 UJ	560 UJ	590 UJ	620 UJ	560 UJ	590 UJ	590 UJ
2,4-Dinitrotoluene	900	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2,6-Dinitrotoluene	6,100	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2-Chloronaphthalene	630,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2-Chlorophenol	39,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2-Methylphenol	310,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2-Nitroaniline	18,000	µg/kg	950 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
2-Nitrophenol	7,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
3,3'-Dichlorobenzidine	1,100	µg/kg	380 UJ	170 UJ	140 U	140 U	150 U	160 U	140 U	150 U	150 U
3-Nitroaniline	18,000	µg/kg	950 UJ	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
4,6-Dinitro-2-methylphenol	610	µg/kg	950 U	680 U	560 U	560 U	590 U	620 U	560 U	590 U	590 U
4-Bromophenyl-phenylether	- -	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
4-Chloro-3-methylphenol	- -	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
4-Chloroaniline	2,400	µg/kg	380 UJ	170 UJ	140 U	140 U	150 U	160 U	140 U	150 U	150 U
4-Chlorophenyl-phenylether	- -	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
4-Methylphenol	31,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	**120 J**
4-Nitroaniline	24,000	µg/kg	950 UJ	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
4-Nitrophenol	7,000	µg/kg	950 UJ	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Acetophenone	780,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	**80 JEB**
Atrazine	2,100	µg/kg	380 U	R	R	R	R	R	R	R	R
Benzaldehyde	780,000	µg/kg	**170 J**	170 UJ	140 UJ	140 UJ	150 UJ	160 UJ	140 UJ	150 UJ	**540 J**
bis(2-Chloroethoxy)methane	18,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
bis(2-Chloroethyl)ether	190	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	430 U	170 U	**81 JEB**	**350 EB**	150 U	**480 EB**	140 U	150 U	**540 EB**
Butyl benzyl phthalate	260,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Caprolactam	3,100,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Carbazole	- -	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	**2,000**
Dibenzofuran	- -	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	**920**
Diethylphthalate	100,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Dimethyl phthalate	200,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Di-N-Butyl phthalate	200,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Di-N-Octyl phthalate	- -	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Hexachlorobenzene	300	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Hexachlorobutadiene	300	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Hexachlorocyclopentadiene	10,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Hexachloroethane	6,100	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Isophorone	510,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Nitrobenzene	4,400	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
N-Nitroso-di-N-propylamine	69	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
N-Nitrosodiphenylamine	99,000	µg/kg	380 UJ	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Pentachlorophenol	3,000	µg/kg	950 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U
Phenol	30,000	µg/kg	380 U	170 U	140 U	140 U	150 U	160 U	140 U	150 U	150 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-106-NP	SO-107-NP	SO-107-NP	SO-108-NP	SO-200-U1	SO-200-U1	SO-200-UI	SO-200-UI	SO-201-UI
Sample Depth (Feet):			2 - 5	0 - 1	2 - 10	3 - 8	0 - 1	5 - 6	0 - 1	5 - 6	4 - 6
Date Collected:			11/02/06	11/02/06	11/02/06	11/02/06	11/18/09	11/18/09	11/18/09	11/18/09	11/18/09
Sample Name:	PAL	Units	SO-106-NP (2-5')	SO-107-NP (0-1')	SO-107-NP (2-10')	SO-108-NP (3-8')	SO-200-U1-0-1'	SO-200-U1-5-6'	SO-200-UI (0-1')	SO-200-UI (5-6')	SO-201-UI (4-6')
SVOC											
1,1'-Biphenyl	800	µg/kg	150 U	140 U	150 U	**110 J [160 U]**	NA	NA	233 U	168 U	147 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2,4,5-Trichlorophenol	4,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2,4,6-Trichlorophenol	4,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2,4-Dichlorophenol	18,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2,4-Dimethylphenol	120,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2,4-Dinitrophenol	12,000	µg/kg	590 UJ	570 UJ	600 UJ	600 UJ [630 UJ]	NA	NA	931 UJ	671 UJ	589 UJ
2,4-Dinitrotoluene	900	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2,6-Dinitrotoluene	6,100	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2-Chloronaphthalene	630,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2-Chlorophenol	39,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2-Methylphenol	310,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2-Nitroaniline	18,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
2-Nitrophenol	7,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
3,3'-Dichlorobenzidine	1,100	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
3-Nitroaniline	18,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
4,6-Dinitro-2-methylphenol	610	µg/kg	590 U	570 U	600 U	600 U [630 U]	NA	NA	931 U	671 U	589 U
4-Bromophenyl-phenylether	- -	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
4-Chloro-3-methylphenol	- -	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
4-Chloroaniline	2,400	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
4-Chlorophenyl-phenylether	- -	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
4-Methylphenol	31,000	µg/kg	150 U	140 U	150 U	**81 J [160 U]**	NA	NA	233 U	168 U	147 U
4-Nitroaniline	24,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
4-Nitrophenol	7,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	465 U	336 U	294 U
Acetophenone	780,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	**100 J**
Atrazine	2,100	µg/kg	R	R	R	R [R]	NA	NA	233 U	168 U	147 U
Benzaldehyde	780,000	µg/kg	150 UJ	**77 J**	150 UJ	**150 UJ [150 J]**	NA	NA	**330 J**	R	R
bis(2-Chloroethoxy)methane	18,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
bis(2-Chloroethyl)ether	190	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	150 U	**130 JEB**	150 U	**150 JEB [350 JEB]**	NA	NA	**679**	168 U	**36,100**
Butyl benzyl phthalate	260,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	**315 EB**
Caprolactam	3,100,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
Carbazole	- -	µg/kg	150 U	140 U	150 U	**1,200 [1,300]**	NA	NA	**344**	168 U	**188**
Dibenzofuran	- -	µg/kg	150 U	140 U	150 U	**790 J [390 J]**	NA	NA	**116 J**	168 U	**174**
Diethylphthalate	100,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
Dimethyl phthalate	200,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
Di-N-Butyl phthalate	200,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	**2,440**
Di-N-Octyl phthalate	- -	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	**957**
Hexachlorobenzene	300	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
Hexachlorobutadiene	300	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
Hexachlorocyclopentadiene	10,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
Hexachloroethane	6,100	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
Isophorone	510,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
Nitrobenzene	4,400	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
N-Nitroso-di-N-propylamine	69	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U
N-Nitrosodiphenylamine	99,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	**315**
Pentachlorophenol	3,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	931 U	671 U	589 U
Phenol	30,000	µg/kg	150 U	140 U	150 U	150 U [160 U]	NA	NA	233 U	168 U	147 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')	SO-207B-UI 2 - 3 11/19/09 SO-207B-UI (2-3')
SVOC											
1,1'-Biphenyl	800	µg/kg	NA	NA	164 U	**338**	NA	**340**	**144 J**	178 U	158 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2,4,5-Trichlorophenol	4,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2,4,6-Trichlorophenol	4,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2,4-Dichlorophenol	18,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2,4-Dimethylphenol	120,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2,4-Dinitrophenol	12,000	µg/kg	NA	NA	658 UJ	953 UJ	NA	861 UJ	684 UJ	712 UJ	632 UJ
2,4-Dinitrotoluene	900	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2,6-Dinitrotoluene	6,100	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2-Chloronaphthalene	630,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2-Chlorophenol	39,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2-Methylphenol	310,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2-Nitroaniline	18,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
2-Nitrophenol	7,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
3,3'-Dichlorobenzidine	1,100	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
3-Nitroaniline	18,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
4,6-Dinitro-2-methylphenol	610	µg/kg	NA	NA	658 U	953 U	NA	861 U	684 U	712 U	632 U
4-Bromophenyl-phenylether	- -	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
4-Chloro-3-methylphenol	- -	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
4-Chloroaniline	2,400	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
4-Chlorophenyl-phenylether	- -	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
4-Methylphenol	31,000	µg/kg	NA	NA	164 U	**395**	NA	**146 J**	**133 J**	178 U	158 U
4-Nitroaniline	24,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
4-Nitrophenol	7,000	µg/kg	NA	NA	329 U	476 U	NA	430 U	342 U	356 U	316 U
Acetophenone	780,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	**188**	178 U	158 U
Atrazine	2,100	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Benzaldehyde	780,000	µg/kg	NA	NA	R	**219 J**	NA	**146 J**	**164 J**	R	R
bis(2-Chloroethoxy)methane	18,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
bis(2-Chloroethyl)ether	190	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	NA	NA	**270**	238 U	NA	215 U	**577,000**	**1,640**	**14,800**
Butyl benzyl phthalate	260,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Caprolactam	3,100,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Carbazole	- -	µg/kg	NA	NA	164 U	**376**	NA	**284**	**99.2 J**	**125 J**	**82.1 J**
Dibenzofuran	- -	µg/kg	NA	NA	164 U	**591**	NA	**418**	171 U	178 U	158 U
Diethylphthalate	100,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Dimethyl phthalate	200,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Di-N-Butyl phthalate	200,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Di-N-Octyl phthalate	- -	µg/kg	NA	NA	164 U	238 U	NA	215 U	**61,200**	178 U	**55,700**
Hexachlorobenzene	300	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Hexachlorobutadiene	300	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Hexachlorocyclopentadiene	10,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Hexachloroethane	6,100	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Isophorone	510,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Nitrobenzene	4,400	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
N-Nitroso-di-N-propylamine	69	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
N-Nitrosodiphenylamine	99,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U
Pentachlorophenol	3,000	µg/kg	NA	NA	658 U	953 U	NA	861 U	684 U	712 U	632 U
Phenol	30,000	µg/kg	NA	NA	164 U	238 U	NA	215 U	171 U	178 U	158 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-208B-UI	SO-208B-UI	SO-209-UI	SO-210B-UI	SO-211-UI	SO-212-UI	SO-213-U1	SO-214-U1	SO-215-U1
Sample Depth (Feet):			0 - 1	1 - 5	0 - 1	1.25 - 4	0 - 1	1 - 4.5	0 - 1	0 - 1	0 - 1
Date Collected:			11/19/09	11/19/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09
Sample Name:	PAL	Units	SO-208B-UI (0-1')	SO-208B-UI (1-5')	SO-209-UI (0-1')	SO-210B-UI (1.25-4')	SO-211-UI (0-1')	SO-212-UI (1-4.5')	SO-213-U1-0-1'	SO-214-U1-0-1'	SO-215-U1-0-1'
SVOC											
1,1'-Biphenyl	800	µg/kg	156 U	176 U	167 U	139 U	197 U	**197 J [245]**	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2,4,5-Trichlorophenol	4,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2,4,6-Trichlorophenol	4,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2,4-Dichlorophenol	18,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2,4-Dimethylphenol	120,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2,4-Dinitrophenol	12,000	µg/kg	624 UJ	704 UJ	668 UJ	558 UJ	789 UJ	837 UJ [802 UJ]	NA	NA	NA
2,4-Dinitrotoluene	900	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2,6-Dinitrotoluene	6,100	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2-Chloronaphthalene	630,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2-Chlorophenol	39,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2-Methylphenol	310,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2-Nitroaniline	18,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
2-Nitrophenol	7,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
3,3'-Dichlorobenzidine	1,100	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
3-Nitroaniline	18,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
4,6-Dinitro-2-methylphenol	610	µg/kg	624 U	704 U	668 U	558 U	789 U	837 U [802 U]	NA	NA	NA
4-Bromophenyl-phenylether	- -	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
4-Chloro-3-methylphenol	- -	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
4-Chloroaniline	2,400	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
4-Chlorophenyl-phenylether	- -	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
4-Methylphenol	31,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
4-Nitroaniline	24,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
4-Nitrophenol	7,000	µg/kg	312 U	352 U	334 U	279 U	394 U	419 U [401 U]	NA	NA	NA
Acetophenone	780,000	µg/kg	156 U	176 U	**93.5 J**	139 U	197 U	209 U [200 U]	NA	NA	NA
Atrazine	2,100	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Benzaldehyde	780,000	µg/kg	**200 J**	**166 J**	**124 J**	R	**209 J**	**130 J [R]**	NA	NA	NA
bis(2-Chloroethoxy)methane	18,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
bis(2-Chloroethyl)ether	190	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**352**	**289**	**60,700**	139 U	**398**	209 U [200 U]	NA	NA	NA
Butyl benzyl phthalate	260,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Caprolactam	3,100,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Carbazole	- -	µg/kg	156 U	176 U	**180**	139 U	**359**	**209 U [120 J]**	NA	NA	NA
Dibenzofuran	- -	µg/kg	156 U	176 U	**240**	139 U	**189 J**	**163 J [212]**	NA	NA	NA
Diethylphthalate	100,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Dimethyl phthalate	200,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Di-N-Butyl phthalate	200,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Di-N-Octyl phthalate	- -	µg/kg	156 U	176 U	**1,920**	139 U	197 U	209 U [200 U]	NA	NA	NA
Hexachlorobenzene	300	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Hexachlorobutadiene	300	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Hexachlorocyclopentadiene	10,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Hexachloroethane	6,100	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Isophorone	510,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Nitrobenzene	4,400	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
N-Nitroso-di-N-propylamine	69	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
N-Nitrosodiphenylamine	99,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA
Pentachlorophenol	3,000	µg/kg	624 U	704 U	668 U	558 U	789 U	837 U [802 U]	NA	NA	NA
Phenol	30,000	µg/kg	156 U	176 U	167 U	139 U	197 U	209 U [200 U]	NA	NA	NA

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-216-U1	SO-217-UI	SO-218-UI	SO-219-UI	SO-220-UI	SO-222-UI	SO-223F-UI	SO-223F-UI	SO-224A-UI
Sample Depth (Feet):			0 - 1	0 - 1	1 - 5	1 - 5	1 - 4.5	1 - 3	0 - 1	11 - 12	1 - 5
Date Collected:			11/20/09	11/20/09	11/23/09	11/23/09	11/23/09	11/23/09	11/24/09	11/23/09	11/23/09
Sample Name:	PAL	Units	SO-216-U1-0-1'	SO-217-UI (0-1')	SO-218-UI-1-5'	SO-219-UI-1-5'	SO-220-UI-1-4.5'	SO-222-UI-1-3'	SO-223F-UI-0-1'	SO-223F-UI-11-12'	SO-224A-UI-1-5'
SVOC											
1,1'-Biphenyl	800	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2,4,5-Trichlorophenol	4,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2,4,6-Trichlorophenol	4,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2,4-Dichlorophenol	18,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2,4-Dimethylphenol	120,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2,4-Dinitrophenol	12,000	µg/kg	NA	851 UJ	736 UJ	638 UJ	676 UJ	645 UJ	711 UJ	550 UJ	9,980 UJ
2,4-Dinitrotoluene	900	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2,6-Dinitrotoluene	6,100	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2-Chloronaphthalene	630,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2-Chlorophenol	39,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2-Methylphenol	310,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2-Nitroaniline	18,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
2-Nitrophenol	7,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
3,3'-Dichlorobenzidine	1,100	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
3-Nitroaniline	18,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
4,6-Dinitro-2-methylphenol	610	µg/kg	NA	851 U	736 U	638 U	676 U	645 U	711 U	550 U	9,980 U
4-Bromophenyl-phenylether	- -	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
4-Chloro-3-methylphenol	- -	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
4-Chloroaniline	2,400	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
4-Chlorophenyl-phenylether	- -	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
4-Methylphenol	31,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
4-Nitroaniline	24,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
4-Nitrophenol	7,000	µg/kg	NA	426 U	368 U	319 U	338 U	322 U	355 U	275 U	4,990 U
Acetophenone	780,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Atrazine	2,100	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Benzaldehyde	780,000	µg/kg	NA	**230 J**	184 UJ	**207 J**	**139 J**	161 UJ	**163 J**	138 UJ	2,490 UJ
bis(2-Chloroethoxy)methane	18,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
bis(2-Chloroethyl)ether	190	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	NA	**557**	184 U	159 U	**84.6 J**	161 U	**2,110 J**	**168**	**138,000**
Butyl benzyl phthalate	260,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Caprolactam	3,100,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Carbazole	- -	µg/kg	NA	**255**	184 U	**118 J**	**145 J**	161 U	178 U	138 U	2,490 U
Dibenzofuran	- -	µg/kg	NA	**136 J**	184 U	**95.7 J**	**118 J**	161 U	178 U	138 U	2,490 U
Diethylphthalate	100,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	**2,890**
Dimethyl phthalate	200,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Di-N-Butyl phthalate	200,000	µg/kg	NA	**111 J**	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Di-N-Octyl phthalate	- -	µg/kg	NA	**145 J**	184 U	159 U	169 U	161 U	178 U	138 U	**2,000 J**
Hexachlorobenzene	300	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Hexachlorobutadiene	300	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Hexachlorocyclopentadiene	10,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 UJ	138 U	2,490 U
Hexachloroethane	6,100	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Isophorone	510,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
Nitrobenzene	4,400	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
N-Nitroso-di-N-propylamine	69	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	2,490 U
N-Nitrosodiphenylamine	99,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	178 U	138 U	**1,600 J**
Pentachlorophenol	3,000	µg/kg	NA	851 U	736 U	638 U	676 U	645 U	711 U	550 U	9,980 U
Phenol	30,000	µg/kg	NA	213 U	184 U	159 U	169 U	161 U	**647 J**	138 U	**3,790**

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-225A-UI 0 - 1 11/24/09 SO-225A-UI-0-1'	SO-225A-UI 1.5 - 5 11/24/09 SO-225A-UI-1.5-5'	SO-226A-UI 6 - 8 11/24/09 SO-226A-UI-6-8'	SO-227B-UI 1 - 5 11/24/09 SO-227B-UI-1-5'	SO-228-UI 12 - 14 11/24/09 SO-228-UI-12-14'	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04
SVOC											
1,1'-Biphenyl	800	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2,4,5-Trichlorophenol	4,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	850 U	NA	850 UJ
2,4,6-Trichlorophenol	4,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2,4-Dichlorophenol	18,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2,4-Dimethylphenol	120,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2,4-Dinitrophenol	12,000	µg/kg	3,060 UJ [591 UJ]	4,250 UJ	6,050 UJ	584 UJ	597 UJ	NA	850 U	NA	850 UJ
2,4-Dinitrotoluene	900	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2,6-Dinitrotoluene	6,100	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2-Chloronaphthalene	630,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2-Chlorophenol	39,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2-Methylphenol	310,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
2-Nitroaniline	18,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	850 U	NA	850 UJ
2-Nitrophenol	7,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
3,3'-Dichlorobenzidine	1,100	µg/kg	764 U [148 U]	R	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
3-Nitroaniline	18,000	µg/kg	764 U [148 U]	1,060 UJ	1,510 U	146 U	149 U	NA	850 U	NA	850 UJ
4,6-Dinitro-2-methylphenol	610	µg/kg	3,060 U [591 U]	4,250 U	6,050 U	584 U	597 U	NA	850 U	NA	850 UJ
4-Bromophenyl-phenylether	- -	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
4-Chloro-3-methylphenol	- -	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
4-Chloroaniline	2,400	µg/kg	764 U [148 U]	R	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
4-Chlorophenyl-phenylether	- -	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
4-Methylphenol	31,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
4-Nitroaniline	24,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	850 U	NA	850 UJ
4-Nitrophenol	7,000	µg/kg	1,530 U [295 U]	2,120 U	3,020 U	292 U	299 U	NA	850 U	NA	850 UJ
Acetophenone	780,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Atrazine	2,100	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Benzaldehyde	780,000	µg/kg	**764 UJ [73.8 J]**	1,060 UJ	1,510 UJ	146 UJ	149 UJ	NA	340 U	NA	340 UJ
bis(2-Chloroethoxy)methane	18,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
bis(2-Chloroethyl)ether	190	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	**5,660 [360 J]**	1,060 U	1,510 U	146 U	**361**	NA	**2,000**	NA	**1,500 J**
Butyl benzyl phthalate	260,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Caprolactam	3,100,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Carbazole	- -	µg/kg	764 U [148 U]	1,060 U	1,510 U	**120 J**	149 U	NA	**150 J**	NA	340 UJ
Dibenzofuran	- -	µg/kg	764 U [148 U]	1,060 U	1,510 U	**122 J**	149 U	NA	**45 J**	NA	340 UJ
Diethylphthalate	100,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Dimethyl phthalate	200,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	**36 J**	NA	340 UJ
Di-N-Butyl phthalate	200,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	**34 J**	NA	**230 J**
Di-N-Octyl phthalate	- -	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	**1,000**	NA	**40 J**
Hexachlorobenzene	300	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Hexachlorobutadiene	300	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Hexachlorocyclopentadiene	10,000	µg/kg	764 UJ [148 UJ]	R	1,510 UJ	146 UJ	149 UJ	NA	340 U	NA	340 UJ
Hexachloroethane	6,100	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Isophorone	510,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Nitrobenzene	4,400	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
N-Nitroso-di-N-propylamine	69	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
N-Nitrosodiphenylamine	99,000	µg/kg	764 U [148 U]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ
Pentachlorophenol	3,000	µg/kg	3,060 U [591 U]	4,250 U	6,050 U	584 U	597 U	NA	850 U	NA	850 UJ
Phenol	30,000	µg/kg	764 U [148 UJ]	1,060 U	1,510 U	146 U	149 U	NA	340 U	NA	340 UJ

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth (Feet): / Date Collected: / Sample Name:	PAL	Units	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF	SO-W10-DF 0 - 1 09/20/03 SO-W10-DFb
SVOC											
1,1'-Biphenyl	800	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2,4,5-Trichlorophenol	4,000	µg/kg	980 U	NA	1,000 U	NA	970 U	NA	960 U	NA	980 U
2,4,6-Trichlorophenol	4,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2,4-Dichlorophenol	18,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2,4-Dimethylphenol	120,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2,4-Dinitrophenol	12,000	µg/kg	980 U	NA	1,000 U	NA	970 U	NA	960 U	NA	980 U
2,4-Dinitrotoluene	900	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2,6-Dinitrotoluene	6,100	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2-Chloronaphthalene	630,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2-Chlorophenol	39,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2-Methylphenol	310,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
2-Nitroaniline	18,000	µg/kg	980 U	NA	1,000 U	NA	970 U	NA	960 U	NA	980 U
2-Nitrophenol	7,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
3,3'-Dichlorobenzidine	1,100	µg/kg	390 U	NA	410 U	NA	1,500 U	NA	380 U	NA	390 U
3-Nitroaniline	18,000	µg/kg	980 U	NA	1,000 U	NA	970 U	NA	960 U	NA	980 U
4,6-Dinitro-2-methylphenol	610	µg/kg	980 U	NA	1,000 U	NA	970 U	NA	960 U	NA	980 U
4-Bromophenyl-phenylether	- -	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
4-Chloro-3-methylphenol	- -	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
4-Chloroaniline	2,400	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
4-Chlorophenyl-phenylether	- -	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
4-Methylphenol	31,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
4-Nitroaniline	24,000	µg/kg	**53 J**	NA	1,000 U	NA	970 U	NA	960 U	NA	980 U
4-Nitrophenol	7,000	µg/kg	980 U	NA	1,000 U	NA	970 U	NA	960 U	NA	980 U
Acetophenone	780,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Atrazine	2,100	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Benzaldehyde	780,000	µg/kg	**44 J**	NA	410 U	NA	380 U	NA	380 U	NA	390 U
bis(2-Chloroethoxy)methane	18,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
bis(2-Chloroethyl)ether	190	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	900 U	NA	410 U	NA	1,500 U	NA	380 U	NA	390 U
Butyl benzyl phthalate	260,000	µg/kg	**48 J**	NA	410 U	NA	1,500 U	NA	380 U	NA	390 U
Caprolactam	3,100,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Carbazole	- -	µg/kg	390 U	NA	410 U	NA	**100 J**	NA	380 U	NA	390 U
Dibenzofuran	- -	µg/kg	390 U	NA	410 U	NA	**84 J**	NA	380 U	NA	390 U
Diethylphthalate	100,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Dimethyl phthalate	200,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Di-N-Butyl phthalate	200,000	µg/kg	**440**	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Di-N-Octyl phthalate	- -	µg/kg	390 U	NA	410 U	NA	1,500 U	NA	380 U	NA	390 U
Hexachlorobenzene	300	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Hexachlorobutadiene	300	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Hexachlorocyclopentadiene	10,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Hexachloroethane	6,100	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Isophorone	510,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Nitrobenzene	4,400	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
N-Nitroso-di-N-propylamine	69	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
N-Nitrosodiphenylamine	99,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U
Pentachlorophenol	3,000	µg/kg	980 U	NA	1,000 U	NA	970 U	NA	960 U	NA	980 U
Phenol	30,000	µg/kg	390 U	NA	410 U	NA	380 U	NA	380 U	NA	390 U

TABLE 4-13
SOIL RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
SVOC											
1,1'-Biphenyl	800	µg/kg	NA	**46 J**	NA	430 U	400 U	410 U	410 U	**98 J**	470 U
2,2'-oxybis(1-Chloropropane)	3,500	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
2,4,5-Trichlorophenol	4,000	µg/kg	NA	1,000 U	NA	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	1,200 U
2,4,6-Trichlorophenol	4,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
2,4-Dichlorophenol	18,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
2,4-Dimethylphenol	120,000	µg/kg	NA	410 U	NA	430 U	400 UJ	410 UJ	410 UJ	420 UJ	470 UJ
2,4-Dinitrophenol	12,000	µg/kg	NA	1,000 U	NA	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	1,200 U
2,4-Dinitrotoluene	900	µg/kg	NA	410 U	NA	430 UJ	400 U	410 U	410 U	420 U	470 U
2,6-Dinitrotoluene	6,100	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
2-Chloronaphthalene	630,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
2-Chlorophenol	39,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
2-Methylphenol	310,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
2-Nitroaniline	18,000	µg/kg	NA	1,000 U	NA	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	1,200 U
2-Nitrophenol	7,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
3,3'-Dichlorobenzidine	1,100	µg/kg	NA	410 U	NA	3,500 U	400 UJ	410 U	410 U	420 U	470 UJ
3-Nitroaniline	18,000	µg/kg	NA	1,000 U	NA	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	1,200 U
4,6-Dinitro-2-methylphenol	610	µg/kg	NA	1,000 U	NA	1,100 UJ	1,000 U	1,000 U	1,000 U	1,100 U	1,200 U
4-Bromophenyl-phenylether	- -	µg/kg	NA	410 U	NA	430 UJ	400 U	410 U	410 U	420 U	470 U
4-Chloro-3-methylphenol	- -	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
4-Chloroaniline	2,400	µg/kg	NA	410 U	NA	430 U	400 UJ	410 UJ	410 UJ	420 UJ	470 UJ
4-Chlorophenyl-phenylether	- -	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
4-Methylphenol	31,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	**59 J**
4-Nitroaniline	24,000	µg/kg	NA	1,000 U	NA	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	1,200 U
4-Nitrophenol	7,000	µg/kg	NA	1,000 U	NA	1,100 U	1,000 UJ	1,000 UJ	1,000 UJ	1,100 UJ	1,200 UJ
Acetophenone	780,000	µg/kg	NA	410 U	NA	430 U	400 U	**80 J**	410 U	420 U	**53 J**
Atrazine	2,100	µg/kg	NA	410 U	NA	430 UJ	400 UJ	410 U	410 U	420 U	470 UJ
Benzaldehyde	780,000	µg/kg	NA	**120 J**	NA	430 U	400 U	**61 J**	**48 J**	420 U	470 U
bis(2-Chloroethoxy)methane	18,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
bis(2-Chloroethyl)ether	190	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg	NA	410 U	NA	**12,000**	400 U	**28,000**	**230,000**	**25,000**	**30,000 J**
Butyl benzyl phthalate	260,000	µg/kg	NA	410 U	NA	3,500 U	400 U	**140 J**	**170 J**	420 U	**290 J**
Caprolactam	3,100,000	µg/kg	NA	410 U	NA	430 U	400 UJ	410 UJ	410 UJ	420 UJ	470 UJ
Carbazole	- -	µg/kg	NA	**86 J**	NA	**71 J**	400 U	410 U	**71 J**	**180 J**	**130 J**
Dibenzofuran	- -	µg/kg	NA	**45 J**	NA	430 U	400 U	410 U	**61 J**	**120 J**	**96 J**
Diethylphthalate	100,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	**560 J**
Dimethyl phthalate	200,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
Di-N-Butyl phthalate	200,000	µg/kg	NA	410 U	NA	430 UJ	400 U	**63 J**	**46 J**	**160 J**	**390 J**
Di-N-Octyl phthalate	- -	µg/kg	NA	410 U	NA	**510 J**	400 U	**2,400 J**	**27,000 J**	**600**	**2,900 J**
Hexachlorobenzene	300	µg/kg	NA	410 U	NA	430 UJ	400 U	410 U	410 U	420 U	470 U
Hexachlorobutadiene	300	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
Hexachlorocyclopentadiene	10,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
Hexachloroethane	6,100	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
Isophorone	510,000	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
Nitrobenzene	4,400	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	**530 J**
N-Nitroso-di-N-propylamine	69	µg/kg	NA	410 U	NA	430 U	400 U	410 U	410 U	420 U	470 U
N-Nitrosodiphenylamine	99,000	µg/kg	NA	410 U	NA	430 UJ	400 U	410 U	410 U	**1,800**	470 U
Pentachlorophenol	3,000	µg/kg	NA	1,000 U	NA	1,100 UJ	1,000 U	1,000 U	1,000 U	1,100 U	1,200 U
Phenol	30,000	µg/kg	NA	410 U	NA	430 U	400 U	**120 J**	410 U	420 U	470 U

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth (Feet): / Date Collected: / Sample Name:	PAL	Units	LLF-002 0 - 1 12/01/05 LLF-002(0-1)	LLF-003 0 - 1 12/01/05 LLF-003(0-1)	LLF-004 0 - 1 12/01/05 LLF-004(0-1)	LNP-007 0 - 1 12/01/05 LNP-007(0-1)	LNP-008 0 - 1 12/01/05 LNP-008(0-1)	LOU-001 0 - 1 12/01/05 LOU-001(0-1)	LQW-009 0 - 1 11/30/05 LQW-009 (0-1)	LQW-010 0 - 1 12/01/05 LQW-010 (0-1)	LQW-011 0 - 1 12/02/05 LQW-011	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B
SVOC SIM													
2-Methylnaphthalene	31,000	µg/kg	NA	NA	NA	NA	NA	NA	**330 [290]**	**310**	**470**	**450**	NA
Acenaphthene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	**82 [79]**	**130**	**160**	**120**	NA
Acenaphthylene	23,000	µg/kg	NA	NA	NA	NA	NA	NA	**520 [490]**	**920**	**1,000**	**980**	NA
Anthracene	35,000	µg/kg	NA	NA	NA	NA	NA	NA	**510 [510]**	**860**	**1,000**	**950**	NA
Benzo(a)pyrene	15	µg/kg	NA	NA	NA	NA	NA	NA	**1,200 [1,200]**	**1,900**	**2,400**	**2,400**	NA
Benzo(b)fluoranthene	150	µg/kg	NA	NA	NA	NA	NA	NA	**1,600 [1,600]**	**2,800**	**3,100**	**3,500**	NA
Benzo(g,h,i)perylene	800	µg/kg	NA	NA	NA	NA	NA	NA	**960 [900]**	**1,700**	**2,000**	**2,000**	NA
Benzo(k)fluoranthene	1,500	µg/kg	NA	NA	NA	NA	NA	NA	**560 [530]**	**950**	**1,100**	**1,200**	NA
Benzo[a]anthracene	150	µg/kg	NA	NA	NA	NA	NA	NA	**1,200 [1,200]**	**1,900**	**2,500**	**2,400**	NA
Chrysene	400	µg/kg	NA	NA	NA	NA	NA	NA	**1,100 [1,100]**	**1,800**	**2,200**	**2,200**	NA
Dibenz[a,h]anthracene	15	µg/kg	NA	NA	NA	NA	NA	NA	**160 [150]**	**280**	**320**	**340**	NA
Fluoranthene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	**2,000 [2,000]**	**3,100**	**3,700**	**3,500**	NA
Fluorene	28,000	µg/kg	NA	NA	NA	NA	NA	NA	**110 [110]**	**190**	**220**	**200**	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	NA	NA	NA	NA	NA	NA	**940 [890]**	**1,700**	**1,900**	**2,000**	NA
Naphthalene	3,900	µg/kg	NA	NA	NA	NA	NA	NA	**520 [460]**	**510**	**810**	**640**	NA
Phenanthrene	40,000	µg/kg	NA	NA	NA	NA	NA	NA	**1,100 [1,100]**	**1,800**	**2,200**	**1,800**	NA
Pyrene	13,000	µg/kg	NA	NA	NA	NA	NA	NA	**2,000 [2,000]**	**3,200**	**3,800**	**3,800**	NA
Total PAH SIM	- -	µg/kg	NA	NA	NA	NA	NA	NA	**14,900 [14,600]**	**24,100**	**28,900**	**28,500**	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-013	LQW-014	LQW-015	LQW-015	LQW-016	LQW-016	LQW-017	LQW-017	LQW-018	LQW-018	LUI-005
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	
Date Collected:			12/01/05	12/01/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	12/08/05
Sample Name:	PAL	Units	LQW-013 (0-1)	LQW-014 (0-1)	LQW-015 (0-1)	LQW-015B	LQW-016 (0-1)	LQW-016B	LQW-017 (0-1)	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005
SVOC SIM													
2-Methylnaphthalene	31,000	µg/kg	**160**	**72**	8.3 U	NA	**70**	NA	8.5 U	NA	7.9 U	NA	NA
Acenaphthene	20,000	µg/kg	**100**	**50**	8.3 U	NA	**28**	NA	8.5 U	NA	7.9 U	NA	NA
Acenaphthylene	23,000	µg/kg	**450**	**220**	**22**	NA	**150**	NA	8.5 U	NA	**14**	NA	NA
Anthracene	35,000	µg/kg	**540**	**450**	**20**	NA	**170**	NA	8.5 U	NA	**18**	NA	NA
Benzo(a)pyrene	15	µg/kg	**1,400**	**730**	**76**	NA	**520**	NA	**20**	NA	**83**	NA	NA
Benzo(b)fluoranthene	150	µg/kg	**1,700**	**920**	**110**	NA	**640**	NA	**32**	NA	**120**	NA	NA
Benzo(g,h,i)perylene	800	µg/kg	**990**	**520**	**56**	NA	**360**	NA	**20**	NA	**76**	NA	NA
Benzo(k)fluoranthene	1,500	µg/kg	**600**	**320**	**38**	NA	**220**	NA	**10**	NA	**37**	NA	NA
Benzo[a]anthracene	150	µg/kg	**1,400**	**770**	**74**	NA	**530**	NA	**16**	NA	**71**	NA	NA
Chrysene	400	µg/kg	**1,200**	**680**	**67**	NA	**460**	NA	**20**	NA	**74**	NA	NA
Dibenz[a,h]anthracene	15	µg/kg	**160**	**81**	**10**	NA	**58**	NA	8.5 U	NA	**14**	NA	NA
Fluoranthene	20,000	µg/kg	**2,300**	**1,300**	**120**	NA	**880**	NA	**44**	NA	**130**	NA	NA
Fluorene	28,000	µg/kg	**130**	**72**	8.3 U	NA	**38**	NA	8.5 U	NA	7.9 U	NA	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	**960**	**510**	**54**	NA	**350**	NA	**16**	NA	**60**	NA	NA
Naphthalene	3,900	µg/kg	**270**	**110**	8.3 U	NA	**100**	NA	8.5 U	NA	7.9 U	NA	NA
Phenanthrene	40,000	µg/kg	**1,300**	**740**	**33**	NA	**410**	NA	**18**	NA	**61**	NA	NA
Pyrene	13,000	µg/kg	**2,300**	**1,300**	**120**	NA	**900**	NA	**36**	NA	**110**	NA	NA
Total PAH SIM	- -	µg/kg	**16,000**	**8,850**	**800**	NA	**5,880**	NA	**232**	NA	**868**	NA	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LUI-006	SEA-601	SEA-601	SEA-601	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-602B
Sample Depth (Feet):				4 - 6	8 - 10	14 - 16	10 - 12	14 - 16	18 - 20	24 - 26	30 - 32
Date Collected:			12/08/05	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03
Sample Name:	PAL	Units	LUI-006	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF	SSO-SPT5-15-LF	SSO-SPT5-20-LF	SSO-SPT5-25-LF	SSO-SPT5-30-LF
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	23,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	35,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	15	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	1,500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	15	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	28,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	3,900	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	40,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	13,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PAH SIM	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-603	SEA-603	SEA-603	SEA-604	SEA-604	SEA-604	SEA-605	SEA-605	SEA-605
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	8 - 10	14 - 16	5 - 7	9 - 11	15 - 17
Date Collected:			09/21/03	09/21/03	09/21/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03
Sample Name:	PAL	Units	SSO-SPT2-5-LF	SSO-SPT2-10-LF	SSO-SPT2-15-LF	SSO-SPT3-5-LF	SSO-SPT3-10-LF	SSO-SPT3-15-LF	SSO-SPT4-5-LF	SSO-SPT4-10-LF	SSO-SPT4-15-LF
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	23,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	35,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	15	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	1,500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	15	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	28,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	3,900	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	40,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	13,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PAH SIM	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	10 - 12	14 - 16	4 - 6	8 - 10	14 - 16
Date Collected:			09/21/03	09/21/03	09/21/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03
Sample Name:	PAL	Units	SSO-SPT8-5-NP	SSO-SPT8-10-NP	SSO-SPT8-15-NP	SSO-SPT6-5-UI	SSO-SPT6-10-UI	SSO-SPT6-15-UI	SSO-SPT7-5-UI	SSO-SPT7-10-UI	SSO-SPT7-15-UI
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	23,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	35,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	15	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	1,500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	400	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	15	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	20,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	28,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	3,900	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	40,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	13,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PAH SIM	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI	SO-013-UI	SO-014-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/18/03	08/18/03	08/18/03	08/18/03	08/18/03	08/19/03	08/19/03	08/19/03	08/19/03	08/20/03	08/20/03	08/20/03	08/20/03	08/20/03
Sample Name:	PAL	Units	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI	SO-013-UI	SO-014-UI
SVOC SIM																
2-Methylnaphthalene	31,000	µg/kg	410 U	410 U	370 U	380 U [390 U]	420 U	360 U	**180 J**	**84 J**	**68 J**	**82 J**	380 U	390 U	380 U	**130 J**
Acenaphthene	20,000	µg/kg	410 U	410 U	**52 J**	**44 J [54 J]**	**80 J**	360 U	**120 J**	**150 J**	**68 J**	**98 J**	380 U	390 U	380 U	**290 J**
Acenaphthylene	23,000	µg/kg	410 U	410 U	**50 J**	**74 J [42 J]**	**56 J**	360 U	**74 J**	**130 J**	**120 J**	**170 J**	**59 J**	390 U	380 U	**99 J**
Anthracene	35,000	µg/kg	**56 J**	**54 J**	**150 J**	**170 J [200 J]**	**180 J**	**96 J**	**400 J**	**380 J**	**240 J**	**350 J**	**110 J**	**58 J**	380 U	**660**
Benzo(a)pyrene	15	µg/kg	**290 J**	**330 J**	**660**	**960 [940]**	**760**	**480 J**	**1,500 J**	**2,000 J**	**1,500**	**1,600**	**670**	**310 J**	**210 J**	**2,300**
Benzo(b)fluoranthene	150	µg/kg	**350 J**	**410 J**	**970**	**1,500 [1,100]**	**1,400**	**540 J**	**2,000 J**	**3,400 J**	**2,300**	**3,400**	**1,100**	**450**	**290 J**	**2,800**
Benzo(g,h,i)perylene	800	µg/kg	**260 J**	**380 J**	**320 J**	**540 J [1,000]**	**440 J**	**510 J**	**1,300 J**	**1,500 J**	**1,100 J**	**2,000**	**520 J**	**250 J**	**170 J**	**1,600**
Benzo(k)fluoranthene	1,500	µg/kg	**140 J**	**160 J**	**370 J**	**540 [380 J]**	**480**	**230 J**	**540 J**	**1,100 J**	**770**	**900 J**	**450**	**180 J**	**130 J**	**1,100**
Benzo[a]anthracene	150	µg/kg	**270 J**	**290 J**	**600**	**880 [840]**	**770**	**430 J**	**1,700 J**	**1,600**	**1,100**	**1,600**	**560**	**260 J**	**180 J**	**2,300**
Chrysene	400	µg/kg	**280 J**	**340 J**	**620**	**950 [970]**	**820**	**470 J**	**1,400 J**	**2,100**	**1,400**	**2,000**	**670**	**400**	**250 J**	**2,500**
Dibenz[a,h]anthracene	15	µg/kg	**58 J**	**86 J**	**95 J**	**150 J [250 J]**	**130 J**	**120 J**	3,400 U	**410 J**	**310 J**	**520 J**	**140 J**	**69 J**	**47 J**	**430**
Fluoranthene	20,000	µg/kg	**330 J**	**330 J**	**980 J**	**1,200 J [840]**	**1,400 J**	**430**	**1,300**	**2,300 J**	**1,500 J**	**1,800 J**	**690 J**	**560 J**	**360 J**	**5,300**
Fluorene	28,000	µg/kg	410 U	410 U	**57 J**	**56 J [60 J]**	**110 J**	360 U	**130 J**	**160 J**	**85 J**	**120 J**	**43 J**	390 U	380 U	**260 J**
Indeno(1,2,3-cd)pyrene	150	µg/kg	**200 J**	**290 J**	**320 J**	**480 [800]**	**420 J**	**390 J**	**1,100 J**	**1,400 J**	**1,000**	**1,500**	**480**	**240 J**	**160 J**	**1,400**
Naphthalene	3,900	µg/kg	410 U	410 U	370 U	**40 J [40 J]**	**76 J**	360 U	**210 J**	**92 J**	**73 J**	**96 J**	380 U	390 U	380 U	**180 J**
Phenanthrene	40,000	µg/kg	**230 J**	**270 J**	**680 J**	**720 J [770]**	**1,100 J**	**400**	**1,700**	**1,800 J**	**1,200 J**	**1,700 J**	**530 J**	**260 J**	**160 J**	**4,400**
Pyrene	13,000	µg/kg	**830 J**	**890 J**	**1,700**	**2,500 [2,400]**	**2,500**	**1,300 J**	**2,500 J**	**5,800 J**	**5,000**	**7,100**	**2,000**	**1,200**	**360 J**	**4,900**
Total PAH SIM	- -	µg/kg	**3,290 J**	**3,830 J**	**7,620 J**	**10,800 J [10,700 J]**	**10,700 J**	**5,400 J**	**16,200 J**	**24,400 J**	**17,800 J**	**25,000 J**	**8,020 J**	**4,240 J**	**2,320 J**	**30,600 J**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF	SO-022-LF	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/20/03	08/20/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03
Sample Name:	PAL	Units	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF	SO-FD-03	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF
SVOC SIM																
2-Methylnaphthalene	31,000	µg/kg	**370 J**	340 U	**58 J**	**380**	350 U	**180 J**	**95 J**	**62 J**	**49 J**	**65 J**	**70 J**	**42 J**	**63 J**	**48 J**
Acenaphthene	20,000	µg/kg	**1,300**	340 U	410 U	340 U	**64 J**	**840**	**130 J**	**92 J**	**85 J**	**97 J**	**220 J**	**68 J**	**49 J**	**110 J**
Acenaphthylene	23,000	µg/kg	**24 J**	340 U	**60 J**	340 U	350 U	**340 J**	**150 J**	**56 J**	**49 J**	**100 J**	**82 J**	**98 J**	**100 J**	**150 J**
Anthracene	35,000	µg/kg	**1,100**	**37 J**	**130 J**	**52 J**	**240 J**	**2,000**	**520**	**340 J**	**290 J**	**270 J**	**610 J**	**220 J**	**200 J**	**400**
Benzo(a)pyrene	15	µg/kg	**4,000 J**	**220 J**	**820**	**150 J**	**810**	**4,500**	**1,400**	**1,200**	**1,000**	**1,400**	**2,200**	**810**	**100 J**	**1,600**
Benzo(b)fluoranthene	150	µg/kg	**6,400**	**270 J**	**1,300**	**190 J**	**980**	**5,300**	**1,800**	**1,400**	**1,200**	**2,700**	**3,400**	**1,400**	**2,100**	**2,500**
Benzo(g,h,i)perylene	800	µg/kg	**2,700**	**180 J**	**710 J**	**100 J**	**530 J**	**2,400 J**	**960**	**890 J**	**740 J**	**1,100 J**	**1,700 J**	**680 J**	**55 J**	**1,200 J**
Benzo(k)fluoranthene	1,500	µg/kg	**2,300**	**130 J**	**400 J**	**92 J**	**430**	**1,400**	**490**	**520**	**500**	**800**	**1,100**	**420**	**610**	**630**
Benzo[a]anthracene	150	µg/kg	**4,500**	**190 J**	**680**	**140 J**	**820**	**5,400**	**1,600**	**1,200**	**990**	**1,400**	**2,400**	**890**	**1,200**	**1,600**
Chrysene	400	µg/kg	**5,000**	**220 J**	**960**	**150 J**	**900**	**6,700**	**1,400**	**1,300**	**1,100**	**1,600**	**2,700**	**870**	**1,400**	**1,600**
Dibenz[a,h]anthracene	15	µg/kg	**750**	**44 J**	**200 J**	340 UJ	**160 J**	**680 J**	**220 J**	**210 J**	**190 J**	**300 J**	**380 J**	**160 J**	**240 J**	**320 J**
Fluoranthene	20,000	µg/kg	**9,000 J**	**340 J**	**1,400**	**300 J**	**1,800**	**8,900**	**2,300**	**2,200**	**2,000**	**1,800**	**4,100**	**1,600**	**1,600**	**3,000**
Fluorene	28,000	µg/kg	**1,100**	340 U	**61 J**	**35 J**	**89 J**	**1,100**	**140 J**	**130 J**	**110 J**	**110 J**	**280 J**	**87 J**	**71 J**	**160 J**
Indeno(1,2,3-cd)pyrene	150	µg/kg	**2,400**	**150 J**	**670**	**98 J**	**510**	**2,300**	**840**	**750**	**670**	**940**	**1,400**	**640**	**960**	**1,100**
Naphthalene	3,900	µg/kg	**870**	340 U	**65 J**	**110 J**	**38 J**	**200 J**	**130 J**	**89 J**	**59 J**	**83 J**	**89 J**	**48 J**	**67 J**	**65 J**
Phenanthrene	40,000	µg/kg	**13,000 J**	**150 J**	**670**	**210 J**	**1,000**	**11,000**	**1,800**	**1,300**	**1,200**	**1,400**	**3,000**	**910**	**890**	**1,700**
Pyrene	13,000	µg/kg	**18,000**	**730**	**1,600**	**260 J**	**1,600**	**11,000**	**2,600**	**2,500**	**2,300**	**5,300 J**	**6,200 J**	**1,500**	**2,200**	**2,900**
Total PAH SIM	- -	µg/kg	**72,800 J**	**2,660 J**	**9,780 J**	**2,270 J**	**9,970 J**	**64,200 J**	**16,600 J**	**14,200 J**	**12,500 J**	**19,500 J**	**29,900 J**	**10,400 J**	**11,900 J**	**19,100 J**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-033-NP	SO-034-NP	SO-034-NP	SO-035-NP	SO-035-NP	SO-036-NP	SO-036-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	1 - 5	0 - 1	6 - 10	0 - 1	5 - 9	0 - 1	1 - 5
Date Collected:			08/22/03	08/22/03	08/22/03	08/28/03	09/05/03	09/05/03	09/05/03	09/05/03	09/06/03	09/06/03	09/06/03	09/06/03
Sample Name:	PAL	Units	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-W14-NP	SO-034-NP	SO-W13-NP	SO-035-NP	SO-W15-NP	SO-036-NP	SSO-FD01
SVOC SIM														
2-Methylnaphthalene	31,000	µg/kg	**76 J**	500 U	**60 J**	830 UJ	**59 J**	390 U	**130 J**	**900 J**	390 U	**460**	350 UJ	390 U
Acenaphthene	20,000	µg/kg	590 U	500 U	**56 J**	**99 J**	**170 J**	390 U	**720 J**	4,200 U	390 U	**1,000**	350 U	390 U
Acenaphthylene	23,000	µg/kg	**130 J**	**97 J**	**130 J**	**200 J**	**160 J**	390 U	370 UJ	4,200 U	390 U	**87 J**	350 UJ	390 U
Anthracene	35,000	µg/kg	**260 J**	**710**	**250 J**	**390 J**	**820**	**190 J**	**840**	4,200 U	**66 J**	**2,000**	350 UJ	**100 J**
Benzo(a)pyrene	15	µg/kg	**1,000**	**740**	**960**	**1,600 J**	**3,500**	**910 J**	**4,300 J**	**450 J**	**490**	**4,600**	**210 J**	**360 J**
Benzo(b)fluoranthene	150	µg/kg	**2,100**	**1,100**	**2,000**	**2,800 J**	**4,100**	**1,300 J**	**5,700 J**	**540 J**	**680**	**5,700**	**370 J**	**470**
Benzo(g,h,i)perylene	800	µg/kg	**1,000**	**600 J**	**870 J**	**730 J**	**2,600 J**	**690 J**	**2,400 J**	4,200 U	**390**	**3,100 J**	**160 J**	**230 J**
Benzo(k)fluoranthene	1,500	µg/kg	**590**	**400 J**	**530**	**1,100 J**	**1,500 J**	**520 J**	**2,400 J**	4,200 U	**290 J**	**2,100 J**	**130 J**	**190 J**
Benzo[a]anthracene	150	µg/kg	**1,100**	**700**	**1,000**	**1,500 J**	**3,200**	**830**	**3,600 J**	**770 J**	**390**	**4,000**	**190 J**	**280 J**
Chrysene	400	µg/kg	**1,200**	**720**	**1,100**	**1,900 J**	**3,500**	**1,000**	**4,800 J**	**550 J**	**490**	**4,700**	**240 J**	**370 J**
Dibenz[a,h]anthracene	15	µg/kg	**250 J**	**99 J**	**230 J**	**230 J**	**680 J**	**160 J**	**610 J**	4,200 U	**98 J**	**800 J**	**40 J**	**51 J**
Fluoranthene	20,000	µg/kg	**1,900**	**1,300**	**2,000**	**3,000 J**	**6,600**	**2,100**	**11,000**	**650 J**	**610**	**6,800**	**310 J**	**420**
Fluorene	28,000	µg/kg	**87 J**	**64 J**	**82 J**	**130 J**	**260 J**	**67 J**	**760**	4,200 U	390 U	**1,100**	350 U	390 U
Indeno(1,2,3-cd)pyrene	150	µg/kg	**970**	**540**	**870**	**800 J**	**2,300 J**	**520 J**	**2,300 J**	4,200 U	**330 J**	**2,700 J**	**150 J**	**190 J**
Naphthalene	3,900	µg/kg	**86 J**	500 U	**73 J**	**100 J**	**93 J**	**49 J**	**180 J**	**550 J**	390 U	**780**	350 U	390 U
Phenanthrene	40,000	µg/kg	**920**	**660**	**960**	**1,700 J**	**4,800**	**1,100**	**9,500**	**1,300 J**	**320 J**	**9,500**	**150 J**	**290 J**
Pyrene	13,000	µg/kg	**1,700**	**1,200**	**1,700**	**3,100 J**	**7,600 J**	**2,200 J**	**12,000 J**	**930 J**	**740 J**	**12,000 J**	**520 J**	**720 J**
Total PAH SIM	- -	µg/kg	**13,400 J**	**8,930 J**	**12,900 J**	**19,400 J**	**41,900 J**	**11,600 J**	**61,200 J**	**6,640 J**	**4,890 J**	**61,400 J**	**2,470 J**	**3,670 J**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-036-NP	SO-037-NP	SO-037-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP
Sample Depth (Feet):			1 - 5	0 - 1	5 - 9	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/06/03	09/06/03	09/06/03	09/09/04	09/09/04	09/09/04	09/10/04	09/10/04	09/09/04	09/09/04	09/09/04	09/09/04	09/08/04
Sample Name:	PAL	Units	SSO-01-NP	SO-037-NP	SO-W16-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP
SVOC SIM															
2-Methylnaphthalene	31,000	µg/kg	380 U	**210 J**	**71 J**	**68 J**	**54 J**	**65 J**	**51 J**	**55 J**	**49 J [73 J]**	**58 J**	**45 J**	400 U	**100 J**
Acenaphthene	20,000	µg/kg	380 U	**1,300**	**260 J**	**150 J**	**120 J**	**88 J**	**120 J**	**67 J**	**76 J [110 J]**	**130 J**	**100 J**	400 U	**120 J**
Acenaphthylene	23,000	µg/kg	380 U	370 U	350 U	**590 J**	**140 J**	**600 J**	**140 J**	**130 J**	**150 J [550 J]**	**310 J**	**650 J**	**72 J**	**480**
Anthracene	35,000	µg/kg	**130 J**	**2,100**	**240 J**	**630 J**	**400**	**430 J**	**390 J**	**240 J**	**330 J [480 J]**	**630**	**420 J**	**150 J**	**610 J**
Benzo(a)pyrene	15	µg/kg	**580 J**	**5,400**	**1,100**	**1,500**	**1,300**	**1,800**	**1,200**	**1,300**	**1,200 [1,600]**	**1,300**	**1,100**	**550**	**1,900**
Benzo(b)fluoranthene	150	µg/kg	**640 J**	**6,900**	**1,600**	**1,800**	**1,800**	**2,600**	**2,300**	**2,500**	NA	**2,000**	**1,300**	NA	**2,200**
Benzo(g,h,i)perylene	800	µg/kg	**380 J**	**2,700 J**	**1,100**	**600**	**520**	**1,200**	**890 J**	**920 J**	**430 [670]**	**680**	**490**	**180 J**	**1,700**
Benzo(k)fluoranthene	1,500	µg/kg	**250 J**	**3,000**	**630**	**840 J**	**760**	**920 J**	**840**	**1,400**	**530 J [920 J]**	**810**	**570 J**	**360 J**	**630**
Benzo[a]anthracene	150	µg/kg	**440**	**5,800**	**650**	**1,800**	**1,400**	**1,800**	**1,400**	**1,500**	**1,100 [1,600]**	**2,000**	**1,200**	**550**	**1,800 J**
Chrysene	400	µg/kg	**550**	**5,800**	**860**	**1,800**	**1,500**	**2,200**	**1,800**	**1,600**	**1,600 [1,500]**	**1,500**	**1,100**	**680**	**2,100 J**
Dibenz[a,h]anthracene	15	µg/kg	**86 J**	**810**	**280 J**	**360 J**	**280 J**	**470 J**	**260 J**	**220 J**	**260 J [510 J]**	**420**	**300 J**	**81 J**	**660**
Fluoranthene	20,000	µg/kg	**640**	**16,000**	**1,700**	**3,300**	**2,700**	**3,600**	**3,200**	**3,000**	**2,700 [3,600]**	**3,200**	**2,100**	**1,300**	**2,400**
Fluorene	28,000	µg/kg	**48 J**	**1,100**	**160 J**	**220 J**	**130 J**	**140 J**	**130 J**	**79 J**	**72 J [160 J]**	**170 J**	**160 J**	**42 J**	**150 J**
Indeno(1,2,3-cd)pyrene	150	µg/kg	**280 J**	**2,800 J**	**900**	**760**	**700**	**1,400**	**760**	**760**	**680 [930]**	**850**	**720**	**250 J**	**1,400**
Naphthalene	3,900	µg/kg	380 U	**700**	**220 J**	**86 J**	**82 J**	**74 J**	**92 J**	**99 J**	**71 J [95 J]**	**100 J**	**62 J**	400 U	**140 J**
Phenanthrene	40,000	µg/kg	**430**	**15,000**	**1,200**	**2,300 J**	**1,800**	**1,700 J**	**1,900**	**1,400**	**1,300 [1,900 J]**	**2,100**	**1,400 J**	**710**	**1,500**
Pyrene	13,000	µg/kg	**1,100 J**	**14,000 J**	**1,700 J**	**2,100**	**1,800**	**2,500**	**2,100**	**1,500**	**1,700 [2,100]**	**2,300 J**	**1,600**	**930**	**2,200 J**
Total PAH SIM	- -	µg/kg	**5,550 J**	**83,600 J**	**12,700 J**	**18,900 J**	**15,500 J**	**21,600 J**	**17,600 J**	**16,800 J**	**12,200 J [19,300 J]**	**18,600 J**	**13,300 J**	**5,860 J**	**20,100 J**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth (Feet): / Date Collected: / Sample Name:	PAL	Units	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT
SVOC SIM															
2-Methylnaphthalene	31,000	µg/kg	**97 J**	**92 J**	**100 J**	**62 J**	**64 J**	**130 J [100 J]**	**62 J**	**140 J**	380 U	340 U	390 U	NA	NA
Acenaphthene	20,000	µg/kg	**190 J**	**120 J**	**120 J**	**140 J**	**87 J**	**190 J [180 J]**	**120 J**	**130 J**	380 U	340 U	390 U	NA	NA
Acenaphthylene	23,000	µg/kg	**420 J**	**450**	**440 J**	**270 J**	**310 J**	**490 [450]**	**680 J**	**530**	380 U	340 U	390 U	NA	NA
Anthracene	35,000	µg/kg	**790 J**	**570 J**	**620 J**	**590 J**	**470 J**	**690 J [1,500 J]**	**450 J**	**650 J**	380 U	340 U	390 U	NA	NA
Benzo(a)pyrene	15	µg/kg	**2,100**	**1,800 J**	**2,200 J**	**1,700**	**1,500**	**2,400 [1,600 J]**	**1,700**	**2,100**	**42 J**	340 U	**100 J**	NA	NA
Benzo(b)fluoranthene	150	µg/kg	**2,700**	**1,900 J**	**3,100 J**	**2,300**	**1,800**	**4,900 J [1,900 J]**	**2,300**	**2,900**	**58 J**	**39 J**	**120 J**	NA	NA
Benzo(g,h,i)perylene	800	µg/kg	**1,900**	**990 J**	**1,100 J**	**1,300**	**910**	**2,100 [1,300 J]**	**1,300**	**1,700**	**51 J**	340 U	**94 J**	NA	NA
Benzo(k)fluoranthene	1,500	µg/kg	**790**	**1,000 J**	**980 J**	**450**	**830**	**1,300 J [620 J]**	**610 J**	**460 J**	380 U	340 U	**59 J**	NA	NA
Benzo[a]anthracene	150	µg/kg	**2,200 J**	**1,900 J**	**2,100 J**	**1,700 J**	**1,600 J**	**2,300 J [1,900 J]**	**1,600**	**2,100 J**	**39 J**	340 U	**84 J**	NA	NA
Chrysene	400	µg/kg	**2,600 J**	**2,100 J**	**2,300 J**	**2,000 J**	**2,000 J**	**2,700 J [1,900 J]**	**1,600**	**2,300 J**	**43 J**	**39 J**	**110 J**	NA	NA
Dibenz[a,h]anthracene	15	µg/kg	**610**	**450 J**	**350 J**	**370**	**270 J**	**600 J [320 J]**	**460**	**720**	380 U	340 U	390 U	NA	NA
Fluoranthene	20,000	µg/kg	**3,200**	**2,400**	**3,900 J**	**2,700**	**2,400 J**	**4,900 [4,100]**	**3,200**	**3,000**	**66 J**	**69 J**	**100 J**	NA	NA
Fluorene	28,000	µg/kg	**210 J**	**150 J**	**160 J**	**180 J**	**100 J**	**250 J [200 J]**	**170 J**	**170 J**	380 U	340 U	390 U	NA	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	**1,700**	**1,000 J**	**1,000 J**	**1,100**	**780**	**1,700 J [1,000 J]**	**1,300**	**1,600**	380 U	340 U	**56 J**	NA	NA
Naphthalene	3,900	µg/kg	**150 J**	**130 J**	**140 J**	**96 J**	**78 J**	**170 J [130 J]**	**84 J**	**190 J**	380 U	340 U	390 U	NA	NA
Phenanthrene	40,000	µg/kg	**2,200**	**1,500**	**2,000 J**	**1,700**	**1,700**	**2,500 [2,600]**	**1,900 J**	**1,800**	380 U	340 U	**58 J**	NA	NA
Pyrene	13,000	µg/kg	**2,700 J**	**2,700 J**	**3,500 J**	**2,100 J**	**1,900 J**	**3,100 J [2,000 J]**	**2,300**	**2,500 J**	**69 J**	**75 J**	**100 J**	NA	NA
Total PAH SIM	- -	µg/kg	**24,600 J**	**19,300 J**	**24,100 J**	**18,800 J**	**16,800 J**	**30,400 J [21,800 J]**	**19,800 J**	**23,000 J**	**368 J**	**222 J**	**881 J**	NA	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-062-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF	SO-073-MF	SO-074-MF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			11/27/04	09/09/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/10/04	09/10/04	09/10/04
Sample Name:	PAL	Units	SO-092-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF	SO-073-MF	SO-074-MF
SVOC SIM															
2-Methylnaphthalene	31,000	µg/kg	400 U [400 U]	370 U	**78 J**	**55 J**	**73 J**	**67 J**	**68 J**	**79 J**	**44 J**	**41 J**	**120 J**	**270 J**	**42 J**
Acenaphthene	20,000	µg/kg	400 U [400 U]	370 U	**120 J**	**160 J**	**140 J**	**150 J**	**130 J**	**140 J**	**120 J**	**98 J**	**220 J**	**880**	**100 J**
Acenaphthylene	23,000	µg/kg	400 U [400 U]	370 U	**380 J**	**240 J**	**340 J**	**310 J**	**260 J**	**300 J**	**220 J**	**150 J**	**330 J**	**730**	**92 J**
Anthracene	35,000	µg/kg	400 U [400 U]	370 U	**730 J**	**630 J**	**540 J**	**600 J**	**420 J**	**530 J**	**1,500 J**	**340 J**	**1,100**	**4,000**	**450**
Benzo(a)pyrene	15	µg/kg	**140 J [140 J]**	**98 J**	**2,400 J**	**1,500**	**1,900**	**1,800**	**1,500**	**2,200**	**1,800 J**	**1,100**	**2,300**	**7,500**	**1,300**
Benzo(b)fluoranthene	150	µg/kg	NA	**130 J**	**3,200 J**	**1,600**	**2,600**	**2,600**	**1,900**	**3,300**	**2,100 J**	**1,400**	**2,400**	**7,800**	**1,500**
Benzo(g,h,i)perylene	800	µg/kg	**66 J [56 J]**	**51 J**	**1,200 J**	**1,100**	**1,300**	**1,300**	**990**	**1,800**	**1,300 J**	**700**	**1,600**	**4,400**	**710 J**
Benzo(k)fluoranthene	1,500	µg/kg	**78 J [82 J]**	**67 J**	**1,200 J**	**930**	**860**	**810**	**830**	**1,100**	**750 J**	**480**	**1,200**	**3,400 J**	**520**
Benzo[a]anthracene	150	µg/kg	**120 J [120 J]**	**110 J**	**2,300 J**	**1,600 J**	**1,900 J**	**2,000 J**	**1,500 J**	**2,300 J**	**1,800 J**	**1,100 J**	**2,200**	**9,300**	**1,200**
Chrysene	400	µg/kg	**160 J [150 J]**	**100 J**	**2,700 J**	**1,800 J**	**2,100 J**	**2,100 J**	**1,800 J**	**2,600 J**	**1,800 J**	**1,300 J**	**2,500**	**8,900**	**1,300**
Dibenz[a,h]anthracene	15	µg/kg	400 U [400 U]	370 U	**350 J**	**340 J**	**380**	**380 J**	**300 J**	**490 J**	**410 J**	**210 J**	**490**	**940 J**	**210 J**
Fluoranthene	20,000	µg/kg	**230 J [210 J]**	**180 J**	**4,800 J**	**2,300**	**3,100**	**2,600 J**	**2,800**	**3,700**	**3,400**	**1,900**	**3,000**	**15,000**	**2,200**
Fluorene	28,000	µg/kg	400 U [400 U]	370 U	**160 J**	**180 J**	**170 J**	**190 J**	**130 J**	**170 J**	**260 J**	**120 J**	**230 J**	**1,200**	**130 J**
Indeno(1,2,3-cd)pyrene	150	µg/kg	**82 J [82 J]**	**66 J**	**1,100 J**	**970**	**1,100**	**1,200**	**880**	**1,500**	**1,100 J**	**580**	**1,300**	**2,600 J**	**580**
Naphthalene	3,900	µg/kg	400 U [400 U]	370 U	**110 J**	**96 J**	**91 J**	**85 J**	**88 J**	**90 J**	**93 J**	**51 J**	**250 J**	**280 J**	**87 J**
Phenanthrene	40,000	µg/kg	**100 J [91 J]**	**86 J**	**2,300 J**	**1,700**	**1,900**	**2,100**	**1,500**	**2,200**	**2,400**	**1,400**	**2,500**	**14,000**	**1,800**
Pyrene	13,000	µg/kg	**190 J [180 J]**	**190 J**	**4,100 J**	**2,100 J**	**2,700 J**	**2,600 J**	**2,400 J**	**2,900 J**	**2,400 J**	**1,700 J**	**2,900 J**	**19,000 J**	**2,000**
Total PAH SIM	- -	µg/kg	**1,170 J [1,290 J]**	**1,080 J**	**27,200 J**	**17,300 J**	**21,200 J**	**20,900 J**	**17,500 J**	**25,400 J**	**21,500 J**	**12,700 J**	**24,600 J**	**100,000 J**	**14,200 J**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth (Feet): / Date Collected: / Sample Name:	PAL	Units	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI	SO-078-UI 0 - 1 09/10/04 SO-078-UI	SO-079-UI 0 - 1 09/10/04 SO-079-UI	SO-080-UI 0 - 1 09/10/04 SO-080-UI	SO-081-UI 0 - 1 09/10/04 SO-081-UI	SO-082-UI 0 - 1 09/10/04 SO-082-UI	SO-083-UI 0 - 1 09/10/04 SO-083-UI	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI
SVOC SIM															
2-Methylnaphthalene	31,000	µg/kg	390 U	380 U [380 U]	370 U	**130 J**	350 U	**60 J**	380 U	350 U	**110 J**	360 U	NA	360 U	NA
Acenaphthene	20,000	µg/kg	390 U	**57 J [50 J]**	370 U	**190 J**	350 U	**200 J**	**45 J**	350 U	**110 J**	360 U	NA	360 U	NA
Acenaphthylene	23,000	µg/kg	390 U	**110 J [120 J]**	370 U	**430**	**67 J**	**110 J**	**69 J**	350 U	**170 J**	360 U	NA	**59 J**	NA
Anthracene	35,000	µg/kg	**54 J**	**230 J [290 J]**	**60 J**	**910**	**160 J**	**550**	**170 J**	350 U	**420**	360 U	NA	**190 J**	NA
Benzo(a)pyrene	15	µg/kg	**260 J**	**1,100 [1,000]**	**220 J**	**2,700**	**640**	**1,400**	**580**	**170 J**	**1,300**	**140 J**	NA	**550**	NA
Benzo(b)fluoranthene	150	µg/kg	**330 J**	**1,200 [1,300]**	**270 J**	**2,700**	NA	**2,300**	**840**	**190 J**	**2,200**	**180 J**	NA	NA	NA
Benzo(g,h,i)perylene	800	µg/kg	**210 J**	**680 J [610 J]**	**160 J**	**1,500 J**	**450 J**	**690 J**	**410 J**	**130 J**	**870 J**	**76 J**	NA	**200 J**	NA
Benzo(k)fluoranthene	1,500	µg/kg	**140 J**	**490 [420]**	**85 J**	**1,300**	**330 J**	**880**	**260 J**	**77 J**	**1,300**	**70 J**	NA	**230 J**	NA
Benzo[a]anthracene	150	µg/kg	**220 J**	**910 [930]**	**220 J**	**2,400**	**600**	**1,600**	**560**	**170 J**	**1,400**	**140 J**	NA	**600**	NA
Chrysene	400	µg/kg	**300 J**	**1,000 [1,100]**	**250 J**	**2,900**	**720**	**1,100**	**740**	**190 J**	**1,600**	**190 J**	NA	**610**	NA
Dibenz[a,h]anthracene	15	µg/kg	**52 J**	**160 J [150 J]**	**41 J**	**470**	**100 J**	**190 J**	**110 J**	350 U	**230 J**	360 U	NA	**80 J**	NA
Fluoranthene	20,000	µg/kg	**340 J**	**1,300 [1,600]**	**290 J**	**3,400**	**950**	**3,600**	**1,000**	**200 J**	**3,000**	**230 J**	NA	**800**	NA
Fluorene	28,000	µg/kg	390 U	**58 J [62 J]**	370 U	**240 J**	350 U	**170 J**	**51 J**	350 U	**100 J**	360 U	NA	360 U	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	**150 J**	**490 [470]**	**120 J**	**1,200**	**330 J**	**530**	**330 J**	**90 J**	**700**	**82 J**	NA	**240 J**	NA
Naphthalene	3,900	µg/kg	390 U	**72 J [66 J]**	**40 J**	**240 J**	**51 J**	**150 J**	**70 J**	350 U	**190 J**	360 U	NA	360 U	NA
Phenanthrene	40,000	µg/kg	**230 J**	**840 [930]**	**200 J**	**2,600**	**580**	**2,600**	**700**	**92 J**	**2,200**	**120 J**	NA	**380**	NA
Pyrene	13,000	µg/kg	**340 J**	**1,400 [1,400]**	**340 J**	**2,400**	**1,000**	**1,300**	**990**	**240 J**	**1,600**	**250 J**	NA	**840**	NA
Total PAH SIM	- -	µg/kg	**2,630 J**	**10,100 J [10,500 J]**	**2,300 J**	**25,700 J**	**5,980 J**	**17,400 J**	**6,930 J**	**1,550 J**	**17,500 J**	**1,480 J**	NA	**4,780 J**	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP	SO-101-NP	SO-101-NP	SO-102-NP	SO-102-NP	SO-103-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	2 - 7	0 - 1	2 - 9	0 - 1	2 - 8.5	2 - 7
Date Collected:			09/09/04	09/09/04	09/10/04	11/01/06	11/01/06	11/01/06	10/31/06	10/31/06	11/01/06
Sample Name:	PAL	Units	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP (2-7')	SO-101-NP (0-1')	SO-101-NP (2-9')	SO-102-NP (0-1')	SO-102-NP (2-8.5')	SO-103-NP (2-7')
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	370 UJ	350 U	380 U	170 U	140 U	140 U	150 U	160 U	140 U
Acenaphthene	20,000	µg/kg	370 U	350 U	380 U	170 U	140 U	140 U	150 U	160 U	140 U
Acenaphthylene	23,000	µg/kg	**60 J**	350 U	**44 J**	170 U	140 U	140 U	**180**	160 U	140 U
Anthracene	35,000	µg/kg	**67 J**	350 U	**67 J**	170 U	140 U	140 U	**180**	**84 J**	140 U
Benzo(a)pyrene	15	µg/kg	**610**	**85 J**	**360 J**	170 U	**90 J**	140 U	**360**	**180**	140 U
Benzo(b)fluoranthene	150	µg/kg	**170 J**	**120 J**	NA	**120 J**	**140**	140 U	**690**	**290**	140 U
Benzo(g,h,i)perylene	800	µg/kg	**290 J**	**43 J**	**320 J**	170 U	**87 J**	140 U	**280**	**170**	140 U
Benzo(k)fluoranthene	1,500	µg/kg	**210 J**	**36 J**	**150 J**	170 U	140 U	140 U	**240**	**93 J**	140 U
Benzo[a]anthracene	150	µg/kg	**540**	**80 J**	**310 J**	170 U	**81 J**	140 U	**420**	**210**	140 U
Chrysene	400	µg/kg	370 U	**92 J**	**390**	170 U	**110 J**	140 U	**520**	**240**	140 U
Dibenz[a,h]anthracene	15	µg/kg	370 U	350 U	**74 J**	170 U	140 U	140 U	**77 J**	160 U	140 U
Fluoranthene	20,000	µg/kg	**610**	**140 J**	**450**	**120 J**	**140**	140 U	**1,000**	**540**	140 U
Fluorene	28,000	µg/kg	370 U	350 U	380 U	170 U	140 U	140 U	150 U	160 U	140 U
Indeno(1,2,3-cd)pyrene	150	µg/kg	**52 J**	**58 J**	**230 J**	170 U	**73 J**	140 U	**260**	**130 J**	140 U
Naphthalene	3,900	µg/kg	**48 J**	350 U	**58 J**	170 U	140 U	140 U	150 U	160 U	140 U
Phenanthrene	40,000	µg/kg	**200 J**	**61 J**	**280 J**	170 U	**78 J**	140 U	**390**	**270**	140 U
Pyrene	13,000	µg/kg	**710**	**170 J**	**470**	**110 J**	**130 J**	140 U	**730**	**440**	140 U
Total PAH SIM	- -	µg/kg	**3,690 J**	**885 J**	**3,200 J**	**350 J**	**929 J**	ND	**5,330 J**	**2,650 J**	ND

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-104-NP	SO-105-NP	SO-106-NP	SO-107-NP	SO-107-NP	SO-108-NP	SO-200-U1	SO-200-U1	SO-200-UI
Sample Depth (Feet):			2 - 3.4	2 - 3.4	2 - 5	0 - 1	2 - 10	3 - 8	0 - 1	5 - 6	0 - 1
Date Collected:			11/02/06	11/02/06	11/02/06	11/02/06	11/02/06	11/02/06	11/18/09	11/18/09	11/18/09
Sample Name:	PAL	Units	SO-104-NP (2-3.4')	SO-105-NP (2-3.4')	SO-106-NP (2-5')	SO-107-NP (0-1')	SO-107-NP (2-10')	SO-108-NP (3-8')	SO-200-U1-0-1'	SO-200-U1-5-6'	SO-200-UI (0-1')
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	150 U	**360**	150 U	140 U	150 U	**400 J [140 J]**	NA	NA	**128**
Acenaphthene	20,000	µg/kg	150 U	**2,400**	150 U	140 U	150 U	**1,000 [810]**	NA	NA	**99.5**
Acenaphthylene	23,000	µg/kg	150 U	**1,800**	150 U	140 U	150 U	**300 [360]**	NA	NA	**200**
Anthracene	35,000	µg/kg	150 U	**6,400**	150 U	140 U	150 U	**2,000 [2,200]**	NA	NA	**289**
Benzo(a)pyrene	15	µg/kg	**120 J**	**21,000**	**89 J**	**290**	150 U	**3,600 [5,900]**	NA	NA	**1,920**
Benzo(b)fluoranthene	150	µg/kg	**180**	**24,000**	**140 J**	**510**	150 U	**4,300 J [7,600 J]**	NA	NA	**2,890**
Benzo(g,h,i)perylene	800	µg/kg	**120 J**	**13,000**	**83 J**	**280**	150 U	**2,500 J [4,600 J]**	NA	NA	**1,440**
Benzo(k)fluoranthene	1,500	µg/kg	150 U	**4,900**	150 U	**120 J**	150 U	**1,800 [2,200]**	NA	NA	**2,410**
Benzo[a]anthracene	150	µg/kg	**100 J**	**22,000**	**83 J**	**280**	150 U	**4,200 [6,400]**	NA	NA	**1,900**
Chrysene	400	µg/kg	**120 J**	**18,000**	**92 J**	**330**	150 U	**3,800 [5,900]**	NA	NA	**2,170**
Dibenz[a,h]anthracene	15	µg/kg	150 U	**4,400**	150 U	140 U	150 U	**710 [1,100]**	NA	NA	**421**
Fluoranthene	20,000	µg/kg	**210**	**39,000**	**160**	**510**	150 U	**9,000 [13,000]**	NA	NA	**4,670**
Fluorene	28,000	µg/kg	150 U	**2,100**	150 U	140 U	150 U	**1,100 [710]**	NA	NA	**124**
Indeno(1,2,3-cd)pyrene	150	µg/kg	**88 J**	**12,000**	150 U	**230**	150 U	**2,300 J [4,000 J]**	NA	NA	**1,320**
Naphthalene	3,900	µg/kg	150 U	**740**	150 U	140 U	150 U	**900 J [220 J]**	NA	NA	**180**
Phenanthrene	40,000	µg/kg	**110 J**	**21,000**	**92 J**	**240**	150 U	**8,400 [8,400]**	NA	NA	**1,680**
Pyrene	13,000	µg/kg	**190**	**32,000**	**140 J**	**410**	150 U	**6,900 [10,000]**	NA	NA	**3,070**
Total PAH SIM	- -	µg/kg	**1,240 J**	**225,000**	**879 J**	**3,200 J**	ND	**53,200 J [73,500 J]**	NA	NA	**24,900**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth (Feet): / Date Collected: / Sample Name:	PAL	Units	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	**3.08 J**	**49.2**	NA	NA	**7.54**	**1,070**	NA	**582**	**39**
Acenaphthene	20,000	µg/kg	**7.15**	**93.6**	NA	NA	**8.78**	**780**	NA	**309**	**25.8**
Acenaphthylene	23,000	µg/kg	4.28 U	**71.6**	NA	NA	**8.11**	**657**	NA	**616**	**54.9**
Anthracene	35,000	µg/kg	**3.85 J**	**281**	NA	NA	**27.8**	**1,730**	NA	**1,370**	**82.2**
Benzo(a)pyrene	15	µg/kg	**6.35**	**685**	NA	NA	**140**	**6,500**	NA	**5,320**	**239**
Benzo(b)fluoranthene	150	µg/kg	**10**	**870**	NA	NA	**138**	**6,540**	NA	**6,120**	**277**
Benzo(g,h,i)perylene	800	µg/kg	**6.08**	**425**	NA	NA	**81.3**	**2,800**	NA	**3,290**	**234**
Benzo(k)fluoranthene	1,500	µg/kg	**5.06**	**582**	NA	NA	**102**	**5,950**	NA	**3,600**	**174**
Benzo[a]anthracene	150	µg/kg	**8.07**	**1,280**	NA	NA	**168**	**6,670**	NA	**6,170**	**349**
Chrysene	400	µg/kg	**8.92**	**968**	NA	NA	**154**	**5,400**	NA	**4,470**	**348**
Dibenz[a,h]anthracene	15	µg/kg	4.28 U	**125**	NA	NA	**23.7**	**1,030**	NA	**851**	**37.8**
Fluoranthene	20,000	µg/kg	**12.8**	**2,620**	NA	NA	**232**	**13,400**	NA	**9,820**	**788**
Fluorene	28,000	µg/kg	4.28 U	**278**	NA	NA	**8.11**	**1,210**	NA	**483**	**35.7**
Indeno(1,2,3-cd)pyrene	150	µg/kg	**4.54**	**389**	NA	NA	**72.6**	**2,660**	NA	**2,700**	**136**
Naphthalene	3,900	µg/kg	15 U	**89**	NA	NA	16.5 U	**1,390**	NA	**870**	**138**
Phenanthrene	40,000	µg/kg	**6.87 EB**	**1,400**	NA	NA	**84.5**	**6,630**	NA	**5,090**	**372**
Pyrene	13,000	µg/kg	**12.8**	**1,870**	NA	NA	**194**	**10,900**	NA	**7,950**	**364**
Total PAH SIM	- -	µg/kg	**95.6 J**	**12,100**	NA	NA	**1,450**	**75,300**	NA	**59,600**	**3,690**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-207B-UI	SO-207B-UI	SO-208B-UI	SO-208B-UI	SO-209-UI	SO-210B-UI	SO-211-UI	SO-212-UI	SO-213-U1
Sample Depth (Feet):			1 - 2	2 - 3	0 - 1	1 - 5	0 - 1	1.25 - 4	0 - 1	1 - 4.5	0 - 1
Date Collected:			11/19/09	11/19/09	11/19/09	11/19/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09
Sample Name:	PAL	Units	SO-207B-UI (1-2')	SO-207B-UI (2-3')	SO-208B-UI (0-1')	SO-208B-UI (1-5')	SO-209-UI (0-1')	SO-210B-UI (1.25-4')	SO-211-UI (0-1')	SO-212-UI (1-4.5')	SO-213-U1-0-1'
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	**20**	**67.8**	**41.3**	**38.5**	**32.2**	**3.99**	**205**	**360 [519]**	NA
Acenaphthene	20,000	µg/kg	**40.5**	**31.1**	**33.5**	**13.6**	**24.8**	3.87 U	**335**	**89 J [154 J]**	NA
Acenaphthylene	23,000	µg/kg	**61.5**	**128**	**106**	**11.6**	**56.3**	**2.08 J**	**310**	**307 [440]**	NA
Anthracene	35,000	µg/kg	**205**	**310**	**210**	**98.4**	**127**	**6.02**	**775**	**847 [1,080]**	NA
Benzo(a)pyrene	15	µg/kg	**1,470**	**1,580**	**973**	**333**	**532**	**18**	**2,650**	**2,830 [3,530]**	NA
Benzo(b)fluoranthene	150	µg/kg	**1,720**	**1,870**	**971**	**428**	**650**	**18.2**	**3,320**	**2,910 [3,480]**	NA
Benzo(g,h,i)perylene	800	µg/kg	**1,090**	**1,270**	**722**	**265**	**503**	**13.9**	**1,650**	**2,130 [2,410]**	NA
Benzo(k)fluoranthene	1,500	µg/kg	**1,230**	**971**	**718**	**298**	**475**	**12.9**	**2,040**	**1,980 [2,550]**	NA
Benzo[a]anthracene	150	µg/kg	**1,770**	**2,100**	**1,180**	**462**	**751**	**19.2**	**3,650**	**3,400 [4,140]**	NA
Chrysene	400	µg/kg	**1,330**	**1,420**	**1,140**	**405**	**550**	**17.4**	**2,570**	**2,260 [2,820]**	NA
Dibenz[a,h]anthracene	15	µg/kg	**324**	**324**	**185**	**81.2**	**125**	**3.2 J**	**485**	**473 [547]**	NA
Fluoranthene	20,000	µg/kg	**2,950**	**2,940**	**2,340**	**930**	**1,320**	**30.2**	**7,930**	**5,170 [5,920]**	NA
Fluorene	28,000	µg/kg	**48.4**	**51**	**56**	**16.7**	**32.7**	3.87 U	**351**	**164 [210]**	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	**973**	**982**	**606**	**215**	**378**	**11**	**1,470**	**1,600 [1,950]**	NA
Naphthalene	3,900	µg/kg	50 U	**109**	**85.5**	49.5 U	64.3 U	9.43 U	**278**	**499 [609]**	NA
Phenanthrene	40,000	µg/kg	**1,030**	**889**	**814**	**532**	**503**	**14.5**	**4,000**	**2,940 [3,540]**	NA
Pyrene	13,000	µg/kg	**2,020**	**2,380**	**1,660**	**683**	**1,000**	**29.6**	**6,220**	**4,430 [5,160]**	NA
Total PAH SIM	- -	µg/kg	**16,300**	**17,400**	**11,800**	**4,810**	**7,060**	**200 J**	**38,200**	**32,400 J [39,100 J]**	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	NA	NA	NA	**178**	**128**	**178**	**120**	8.64 U	**51.6**
Acenaphthene	20,000	µg/kg	NA	NA	NA	**107**	**114**	**144**	**138**	8.64 U	**38.4**
Acenaphthylene	23,000	µg/kg	NA	NA	NA	**237**	**266**	**315**	**363**	8.64 U	**87.6**
Anthracene	35,000	µg/kg	NA	NA	NA	**328**	**452**	**552**	**583**	8.64 U	**138**
Benzo(a)pyrene	15	µg/kg	NA	NA	NA	**1,670**	**1,690**	**1,710**	**1,680**	8.64 U	**617**
Benzo(b)fluoranthene	150	µg/kg	NA	NA	NA	**2,190**	**1,730**	**1,590**	**1,730**	8.64 U	**734**
Benzo(g,h,i)perylene	800	µg/kg	NA	NA	NA	**1,280**	**1,120**	**1,080**	**1,030**	8.64 U	**432**
Benzo(k)fluoranthene	1,500	µg/kg	NA	NA	NA	**1,100**	**1,160**	**1,320**	**1,320**	8.64 U	**477**
Benzo[a]anthracene	150	µg/kg	NA	NA	NA	**2,100**	**1,960**	**1,930**	**2,000**	8.64 U	**700**
Chrysene	400	µg/kg	NA	NA	NA	**1,590**	**1,600**	**1,590**	**1,680**	8.64 U	**656**
Dibenz[a,h]anthracene	15	µg/kg	NA	NA	NA	**335**	**369**	**375**	**360**	8.64 U	**107**
Fluoranthene	20,000	µg/kg	NA	NA	NA	**4,190**	**2,650**	**2,930**	**3,620**	8.64 U	**1,300**
Fluorene	28,000	µg/kg	NA	NA	NA	**127**	**146**	**189**	**195**	8.64 U	**43.4**
Indeno(1,2,3-cd)pyrene	150	µg/kg	NA	NA	NA	**1,070**	**984**	**979**	**958**	8.64 U	**399**
Naphthalene	3,900	µg/kg	NA	NA	NA	**243**	**232**	**285**	**246**	8.64 U	**75.4**
Phenanthrene	40,000	µg/kg	NA	NA	NA	**1,790**	**1,720**	**2,080**	**2,300**	8.64 U	**586**
Pyrene	13,000	µg/kg	NA	NA	NA	**3,340**	**2,990**	**3,210**	**2,500**	8.64 U	**1,350**
Total PAH SIM	- -	µg/kg	NA	NA	NA	**21,900**	**19,300**	**20,500**	**20,800**	ND	**7,790**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-223F-UI	SO-224A-UI	SO-225A-UI	SO-225A-UI	SO-226A-UI	SO-227B-UI	SO-228-UI	SO-W05-DF	SO-W05-DF
Sample Depth (Feet):			11 - 12	1 - 5	0 - 1	1.5 - 5	6 - 8	1 - 5	12 - 14	0 - 1	0 - 1
Date Collected:			11/23/09	11/23/09	11/24/09	11/24/09	11/24/09	11/24/09	11/24/09	08/26/03	09/20/03
Sample Name:	PAL	Units	SO-223F-UI-11-12'	SO-224A-UI-1-5'	SO-225A-UI-0-1'	SO-225A-UI-1.5-5'	SO-226A-UI-6-8'	SO-227B-UI-1-5'	SO-228-UI-12-14'	SO-W05-DF	SO-W05-DFb
SVOC SIM											
2-Methylnaphthalene	31,000	µg/kg	7.88 U	**2,780**	**130 [35.7]**	**674**	**660**	**159**	**7.95**	NA	340 U
Acenaphthene	20,000	µg/kg	7.88 U	**901**	**495 [42.8]**	**556**	**2,010**	**397**	**17.6**	NA	**74 J**
Acenaphthylene	23,000	µg/kg	7.88 U	**878**	**81.1 [81.6]**	**653**	**1,140**	**182**	**4.14 J**	NA	**66 J**
Anthracene	35,000	µg/kg	7.88 U	**396**	**958 [156]**	**1,720 J**	**4,100**	**1,080**	**38.2**	NA	**240 J**
Benzo(a)pyrene	15	µg/kg	7.88 U	**214**	**2,020 [660]**	**5,760 J**	**17,200**	**1,630**	**48**	NA	**830**
Benzo(b)fluoranthene	150	µg/kg	7.88 U	**227**	**2,000 [815]**	**6,710 J**	**9,630**	**1,860**	**57.7**	NA	**1,100**
Benzo(g,h,i)perylene	800	µg/kg	7.88 U	**196**	**1,090 [409]**	**1,910**	**8,440**	**1,450**	**37.9**	NA	**520**
Benzo(k)fluoranthene	1,500	µg/kg	7.88 U	**145**	**1,520 [411]**	**2,830 J**	**6,180**	**747**	**31.9**	NA	**1,100**
Benzo[a]anthracene	150	µg/kg	7.88 U	**525**	**2,460 [767]**	**8,720 J**	**14,400**	**1,700**	**72.4**	NA	**900**
Chrysene	400	µg/kg	7.88 U	**779**	**1,930 [644]**	**6,290 J**	**14,400**	**1,550**	**64.6**	NA	**890**
Dibenz[a,h]anthracene	15	µg/kg	7.88 U	66.7 U	**318 [124]**	**719**	**1,730**	**182**	**8.96**	NA	**150 J**
Fluoranthene	20,000	µg/kg	7.88 U	**1,230**	**6,670 [1,430]**	**11,900**	**37,800**	**5,350**	**190**	NA	**1,200**
Fluorene	28,000	µg/kg	7.88 U	**1,240**	**487 [57.2]**	**695**	**2,400**	**403**	**19.8**	NA	**77 J**
Indeno(1,2,3-cd)pyrene	150	µg/kg	7.88 U	**79.2**	**1,060 [428]**	**1,930**	**6,210**	**681**	**28**	NA	**480**
Naphthalene	3,900	µg/kg	7.88 U	**4,750**	**342 [65.6]**	**895**	**1,360**	**249**	18.4 U	NA	**38 J**
Phenanthrene	40,000	µg/kg	7.88 U	**3,990**	**4,610 [746]**	**6,630 J**	**26,700**	**2,950**	**132**	NA	**960**
Pyrene	13,000	µg/kg	7.88 U	**2,080**	**3,890 [1,250]**	**11,700 J**	**39,500**	**4,450**	**172**	NA	**1,400**
Total PAH SIM	- -	µg/kg	ND	**20,400**	**30,100 [8,120]**	**70,300 J**	**194,000**	**25,000**	**931 J**	NA	**10,000 J**

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF
SVOC SIM												
2-Methylnaphthalene	31,000	µg/kg	NA	340 UJ	390 U	NA	410 U	NA	380 U	NA	380 U	NA
Acenaphthene	20,000	µg/kg	NA	340 UJ	390 U	NA	410 U	NA	**58 J**	NA	380 U	NA
Acenaphthylene	23,000	µg/kg	NA	340 UJ	390 U	NA	**81 J**	NA	**450**	NA	380 U	NA
Anthracene	35,000	µg/kg	NA	340 UJ	390 U	NA	**95 J**	NA	**570**	NA	380 U	NA
Benzo(a)pyrene	15	µg/kg	NA	**94 J**	**160 J**	NA	**310 J**	NA	**2,000 J**	NA	**86 J**	NA
Benzo(b)fluoranthene	150	µg/kg	NA	**150 J**	**240 J**	NA	**450**	NA	**3,500**	NA	**130 J**	NA
Benzo(g,h,i)perylene	800	µg/kg	NA	**74 J**	**150 J**	NA	**290 J**	NA	**1,300 J**	NA	**48 J**	NA
Benzo(k)fluoranthene	1,500	µg/kg	NA	**55 J**	**81 J**	NA	**450**	NA	**1,800 J**	NA	**57 J**	NA
Benzo[a]anthracene	150	µg/kg	NA	**94 J**	**150 J**	NA	**280 J**	NA	**2,400 J**	NA	**65 J**	NA
Chrysene	400	µg/kg	NA	**120 J**	**190 J**	NA	**390 J**	NA	**2,600 J**	NA	**94 J**	NA
Dibenz[a,h]anthracene	15	µg/kg	NA	340 UJ	390 U	NA	**69 J**	NA	**300 J**	NA	380 U	NA
Fluoranthene	20,000	µg/kg	NA	**100 J**	**230 J**	NA	**360 J**	NA	**4,000**	NA	**140 J**	NA
Fluorene	28,000	µg/kg	NA	340 UJ	390 U	NA	410 U	NA	**200 J**	NA	380 U	NA
Indeno(1,2,3-cd)pyrene	150	µg/kg	NA	**59 J**	**120 J**	NA	**220 J**	NA	**1,400 J**	NA	**52 J**	NA
Naphthalene	3,900	µg/kg	NA	340 UJ	390 U	NA	410 U	NA	**39 J**	NA	380 U	NA
Phenanthrene	40,000	µg/kg	NA	**57 J**	**140 J**	NA	**230 J**	NA	**2,300**	NA	**65 J**	NA
Pyrene	13,000	µg/kg	NA	**260 J**	**280 J**	NA	**550**	NA	**4,900**	NA	**140 J**	NA
Total PAH SIM	- -	µg/kg	NA	**1,060 J**	**1,740 J**	NA	**3,780 J**	NA	**27,800 J**	NA	**877 J**	NA

TABLE 4-14
SOIL RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W10-DF	SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W10-DFb	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
SVOC SIM												
2-Methylnaphthalene	31,000	µg/kg	390 U	NA	**71 J**	NA	**56 J**	400 U	**49 J**	**110 J**	**210 J**	**150 J**
Acenaphthene	20,000	µg/kg	390 U	NA	410 U	NA	**54 J**	400 U	410 U	410 U	**150 J**	**140 J**
Acenaphthylene	23,000	µg/kg	390 U	NA	**170 J**	NA	**170 J**	400 U	**71 J**	**140 J**	**84 J**	**73 J**
Anthracene	35,000	µg/kg	**45 J**	NA	**250 J**	NA	**360 J**	**81 J**	**170 J**	**320 J**	**250 J**	**430 J**
Benzo(a)pyrene	15	µg/kg	**230 J**	NA	**800**	NA	**1,500 J**	**440**	**790**	**1,000**	**790**	**1,000 J**
Benzo(b)fluoranthene	150	µg/kg	**310 J**	NA	**1,300**	NA	**2,100 J**	**580**	**1,200**	**1,600**	**1,200**	**1,400 J**
Benzo(g,h,i)perylene	800	µg/kg	**95 J**	NA	**790**	NA	**1,100 J**	**380 J**	**520 J**	**46 J**	**830 J**	**660 J**
Benzo(k)fluoranthene	1,500	µg/kg	**150 J**	NA	**480**	NA	**920 J**	**260 J**	**380 J**	**490**	**220 J**	**390 J**
Benzo[a]anthracene	150	µg/kg	**200 J**	NA	**730**	NA	**1,500 J**	**380 J**	**670**	**770**	**1,600**	**1,300 J**
Chrysene	400	µg/kg	**240 J**	NA	**900**	NA	**1,700 J**	**450**	**690 J**	**1,700 J**	**980**	**1,400 J**
Dibenz[a,h]anthracene	15	µg/kg	390 U	NA	**200 J**	NA	**320 J**	**91 J**	**150 J**	**53 J**	**180 J**	**190 J**
Fluoranthene	20,000	µg/kg	**350 J**	NA	**940**	NA	**1,400 J**	**650**	**860 J**	**1,500 J**	**1,600**	**1,400**
Fluorene	28,000	µg/kg	390 U	NA	**43 J**	NA	**60 J**	400 U	**43 J**	**59 J**	**200 J**	**160 J**
Indeno(1,2,3-cd)pyrene	150	µg/kg	**100 J**	NA	**720**	NA	**1,100 J**	**290 J**	**470**	**140 J**	**610**	**570 J**
Naphthalene	3,900	µg/kg	390 U	NA	**61 J**	NA	**75 J**	400 U	**79 J**	**170 J**	**660**	**230 J**
Phenanthrene	40,000	µg/kg	**150 J**	NA	**580**	NA	**840 J**	**290 J**	**580 J**	**920 J**	**1,500**	**1,700**
Pyrene	13,000	µg/kg	**390**	NA	**1,100**	NA	**3,300 J**	**760**	**2,300**	**3,800 J**	**2,900**	**4,500 J**
Total PAH SIM	- -	µg/kg	**2,260 J**	NA	**9,140 J**	NA	**16,600 J**	**4,650 J**	**9,140 J**	**12,800 J**	**14,000 J**	**15,700 J**

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LLF-002 0 - 1 12/01/05 LLF-002(0-1)	LLF-003 0 - 1 12/01/05 LLF-003(0-1)	LLF-004 0 - 1 12/01/05 LLF-004(0-1)	LNP-007 0 - 1 12/01/05 LNP-007(0-1)	LNP-008 0 - 1 12/01/05 LNP-008(0-1)	LOU-001 0 - 1 12/01/05 LOU-001(0-1)	LQW-009 0 - 1 11/30/05 LQW-009 (0-1)	LQW-010 0 - 1 12/01/05 LQW-010 (0-1)	LQW-011 0 - 1 12/02/05 LQW-011
SVOC TICS											
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg									
.alpha.-Methylstyrene	- -	µg/kg									
.beta.-iso-Methyl ionone	- -	µg/kg									
[3,4:9,10]Dibenzpyrene	- -	µg/kg									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg									
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg									
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg									
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg									
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg									
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg									
1,2,7,8-Debenzphenanthrene	- -	µg/kg									
1,2:4,5-Dibenzopyrene	- -	µg/kg									
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg									
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg									
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg									
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg									
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg									
10-Methylnonadecene	- -	µg/kg									
11H-Benzo[a]fluoren-11-one	- -	µg/kg									
11H-Benzo[a]fluorene	- -	µg/kg									
11H-Benzo[b]fluorene	- -	µg/kg									**550 NJ**
13-Docosenamide, (Z)-	- -	µg/kg									
17-Pentatriacontene	- -	µg/kg									
1-Decene	- -	µg/kg									
1-Docosene	- -	µg/kg									
1-Dodecanol	- -	µg/kg									
1-Dodecene	- -	µg/kg									
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg									

TABLE 4-15
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Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LLF-002 0 - 1 12/01/05 LLF-002(0-1)	LLF-003 0 - 1 12/01/05 LLF-003(0-1)	LLF-004 0 - 1 12/01/05 LLF-004(0-1)	LNP-007 0 - 1 12/01/05 LNP-007(0-1)	LNP-008 0 - 1 12/01/05 LNP-008(0-1)	LOU-001 0 - 1 12/01/05 LOU-001(0-1)	LQW-009 0 - 1 11/30/05 LQW-009 (0-1)	LQW-010 0 - 1 12/01/05 LQW-010 (0-1)	LQW-011 0 - 1 12/02/05 LQW-011
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg									
1-Heneicosyl formate	- -	µg/kg									
1-Heptadecanol	- -	µg/kg									
1-Hexacosanol	- -	µg/kg									
1-Hexadecene	- -	µg/kg									
1H-Indene, 1-phenyl-	- -	µg/kg									
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-phenyl-	- -	µg/kg									
1-Nonadecane	- -	µg/kg									
1-Nonadecanol	- -	µg/kg									
1-Nonene	- -	µg/kg									
1-Octadecanol	- -	µg/kg									
1-Pentadecene	- -	µg/kg									
1-Tridecanol	- -	µg/kg									
1-Tridecene	- -	µg/kg									
1-Undecanol	- -	µg/kg									
2 (3H)-Benzothiazolone	- -	µg/kg									
2',3,4-Trichlorobiphenyl	- -	µg/kg									
2,3,4-Trichlorobiphenyl	- -	µg/kg									
2,3-Dihydro-1-methylindene	- -	µg/kg									
2,4,6-Trichlorobiphenyl	- -	µg/kg									
2,4-Dichlorophenyl isocyanate	- -	µg/kg									
28-Nor-17.alpha.(H)-hopane	- -	µg/kg									
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg									
2-Dodecanol	- -	µg/kg									
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg									
2-Mercaptobenzothiazole	- -	µg/kg									
2-Napthalenamine, n-phenyl	- -	µg/kg									
2-Pentadecanone	- -	µg/kg									
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg							**91,000 NJ [91,000 NJ]**	**100,000 NJ**	**83,000 NJ**
2-Phenylnaphthalene	- -	µg/kg									
2-Propenoic acid, pentadecyl ester	- -	µg/kg									
2-Propenoic acid, tridecyl	- -	µg/kg									
2-Undecanol	- -	µg/kg									
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg									

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3,4:8,9-Dibenzopyrene	- -	µg/kg									
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg									
3,5-Dichlorophenyl isocyanate	- -	µg/kg									
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg									
3-Eicosene, (E)-	- -	µg/kg									
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg									
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg									
4H-Cyclopenta[def]phenanthrene	- -	µg/kg									
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									
5,12-Napthacenedione	- -	µg/kg									
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg									
5-Eicosene, (E)-	- -	µg/kg									
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg									
7H-Benz[de]anthracen-7-one	- -	µg/kg									
7H-Benzo[C]fluorene	- -	µg/kg									
9,10-Anthracenedione	- -	µg/kg							**590 NJ [670 NJ]**	**1,500 NJ**	**1,000 NJ**
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg									
9,10-Dimethylanthracene	- -	µg/kg									
9-Hexacosene	- -	µg/kg									
9-Hexadecenoic acid	- -	µg/kg									
9H-Fluoren-9-one	- -	µg/kg									
9H-Fluorene, 1-methyl-	- -	µg/kg									
9H-Fluorene, 2-methyl-	- -	µg/kg									
9H-Fluorene, 9-methylene-	- -	µg/kg									
9-Octadecenamide, (Z)-	- -	µg/kg									
9-Octadecenoic acid, (E)-	- -	µg/kg									
Abieta-8,11,13-triene	- -	µg/kg									
Acridine	- -	µg/kg									
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg									
Anthracene, 1,4-dimethyl-	- -	µg/kg									
Anthracene, 1-methyl-	- -	µg/kg									
Anthracene, 2-methyl-	- -	µg/kg									**820 NJ**
Anthracene, 9-Ethenyl-	- -	µg/kg									
Anthracene, 9-methyl-	- -	µg/kg									
Benz[a]anthracene, 10-methyl-	- -	µg/kg									
Benz[a]anthracene, 7-methyl-	- -	µg/kg									
Benz[a]anthracene, 8-methyl-	- -	µg/kg									
Benzaldehyde, 2-hydroxy-	- -	µg/kg									

TABLE 4-15
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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

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Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg									
Benzenamine, 4-methyl-2-nitro	- -	µg/kg									
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg									
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg									
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg									
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg									
Benzene, 1,2,4-trimethyl-	- -	µg/kg									
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg									
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg									
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg									
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg									
Benzene, 1-ethyl-3-methyl-	- -	µg/kg									
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg									
Benzene, tert-butyl-	- -	µg/kg									
Benzeneacetic acid	- -	µg/kg									
Benzenemethanol, α,α-dimethyl-	- -	µg/kg									
Benzenesulfonamide, 2-methyl-	- -	µg/kg									
Benzenesulfonamide, 4-methyl-	- -	µg/kg									
Benzo(e)pyrene	- -	µg/kg							**1,200 NJ [1,700 NJ]**		**1,100 NJ**
Benzo[b]chrysene	- -	µg/kg									
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg									
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg									
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg									
Benzo[b]triphenylene	- -	µg/kg									
Benzo[c]phenanthrene	- -	µg/kg									
Benzo[f]quinoline	- -	µg/kg									
Benzo[ghi]fluoranthene	- -	µg/kg									
Benzo[h]quinoline	- -	µg/kg									
Benzo[j]fluoranthene	- -	µg/kg									
Benzo[kl]xanthene	- -	µg/kg									
Benzocycloheptatriene	- -	µg/kg									
Benzoic acid	- -	µg/kg									**560 NJ**
Benzothiazole	- -	µg/kg									
Benzothiazole, 2-(methylthio)-	- -	µg/kg									

TABLE 4-15
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beta-Sitosterol	- -	µg/kg									
Bicyclohexyl, 4-phenyl-	- -	µg/kg									
Butane, 2-methoxy-2-methyl-	- -	µg/kg									
Butylated hydroxytoluene	- -	µg/kg									
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg									
Cholesta-3,5-dien-7-one	- -	µg/kg								**2,800 NJ**	
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg									
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg									
Cholesterol	- -	µg/kg									
Chrysene, 1-methyl-	- -	µg/kg									
Chrysene, 3-methyl-	- -	µg/kg							**640 NJ**		
Chrysene, 4-methyl-	- -	µg/kg									
Chrysene, 5-methyl-	- -	µg/kg									
Chrysene, 6-methyl-	- -	µg/kg									
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg									
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg									
Clorophene	- -	µg/kg									
Coprostan-3-one	- -	µg/kg									
Cyclohexane, isothiocyanato-	- -	µg/kg									
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg									
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg									
Cyclopenta(def)phenanthrenone	- -	µg/kg									
Cyclopenta[cd]pyrene	- -	µg/kg									
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg									
Cyclopentasiloxane, decamethyl-	- -	µg/kg									
Cyclopropanenonanoic Acid, 2	- -	µg/kg									
D:C-friedoolean-8-en-3-one	- -	µg/kg									
dapsone	- -	µg/kg									
Decanoic Acid	- -	µg/kg									**810 NJ**
D-Friedoolean-14-en-3-one	- -	µg/kg									
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg									
Dibenz(a,e)aceanthrylene	- -	µg/kg									
Dibenzo[def,mno]chrysene	- -	µg/kg									
Dibenzofuran, 4-methyl-	- -	µg/kg									
Dibenzothiophene	- -	µg/kg								**690 NJ**	
Dibenzothiophene, 3-methyl	- -	µg/kg									
Diethyltoluamide	- -	µg/kg									
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg									
Diphenyl ether	- -	µg/kg									

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D-Limonene	- -	µg/kg									
Dodecanoic acid	- -	µg/kg									
Dodecanoic acid, methyl ester	- -	µg/kg									
Dodecanoic acid, undecyl ester	- -	µg/kg									
Dodecyl acrylate	- -	µg/kg									
Dotriacontane	- -	µg/kg									
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg									
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg									
Fluoranthene, 2-methyl-	- -	µg/kg									
Gamma-Sitosterol	- -	µg/kg									
Hexadecanal	- -	µg/kg									
Hexadecanoic acid	- -	µg/kg									
Hexadecanoic acid, butyl ester	- -	µg/kg									
Hexadecanoic acid, ethyl ester	- -	µg/kg									
Indene	- -	µg/kg									
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg									
Lup-20-(29)-en-3-one	- -	µg/kg									
Manool	- -	µg/kg									
matrine	- -	µg/kg									
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg									
Methylated Naphthalene	- -	µg/kg									
Methylated Phenol	- -	µg/kg									
Methyldibenzothiophene	- -	µg/kg									
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg									
naphthalene, 1,2,3-trimethyl	- -	µg/kg									
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg									
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg									
Naphthalene, 1,2-Dimethyl-	- -	µg/kg									
Naphthalene, 1,3-dimethyl-	- -	µg/kg									
Naphthalene, 1,4-dimethyl-	- -	µg/kg									
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg									
Naphthalene, 1-ethyl-	- -	µg/kg									
Naphthalene, 1-methyl-	- -	µg/kg									
Naphthalene, 1-phenyl-	- -	µg/kg									
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg									
Naphthalene, 2,3-dimethyl-	- -	µg/kg									
Naphthalene, 2,6-dimethyl-	- -	µg/kg									
Naphthalene, 2,7-dimethyl-	- -	µg/kg									
Naphthalene, 2-Ethyl-	- -	µg/kg									
Naphthalene, 2-phenyl-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LLF-002 0 - 1 12/01/05 LLF-002(0-1)	LLF-003 0 - 1 12/01/05 LLF-003(0-1)	LLF-004 0 - 1 12/01/05 LLF-004(0-1)	LNP-007 0 - 1 12/01/05 LNP-007(0-1)	LNP-008 0 - 1 12/01/05 LNP-008(0-1)	LOU-001 0 - 1 12/01/05 LOU-001(0-1)	LQW-009 0 - 1 11/30/05 LQW-009 (0-1)	LQW-010 0 - 1 12/01/05 LQW-010 (0-1)	LQW-011 0 - 1 12/02/05 LQW-011
Naphthalene, decahydro-, trans-	- -	µg/kg									
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg									
Naphtho[2,3-b]thiophene	- -	µg/kg									
Nonadecane, 9-Methyl-	- -	µg/kg									
Octadecanal	- -	µg/kg									
Octadecanoic acid	- -	µg/kg									
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg									
Octadecanoic acid, butyl ester	- -	µg/kg									
Olean-12-ene	- -	µg/kg									
Organic acid	- -	µg/kg									
Organic acid 1	- -	µg/kg									
Organic acid 2	- -	µg/kg									
Organic acid 3	- -	µg/kg									
Organic acid 4	- -	µg/kg									
Organic acid 5	- -	µg/kg									
o-Terphenyl	- -	µg/kg									
Oxirane, hexadecyl-	- -	µg/kg							**2,100 NJ**		
p-Dicyclohexylbenzene	- -	µg/kg									
Pentadecanal-	- -	µg/kg									
Pentadecanoic acid	- -	µg/kg									
Pentasiloxane, dodecamethyl-	- -	µg/kg									
Perylene	- -	µg/kg									
Perylene isomer C20H12	- -	µg/kg									
Phenanthrene, 1,7-dimethyl-	- -	µg/kg									
Phenanthrene, 1-methyl-	- -	µg/kg									
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg									
Phenanthrene, 2,3-dimethyl-	- -	µg/kg									
Phenanthrene, 2,5-dimethyl-	- -	µg/kg									
Phenanthrene, 2,7-dimethyl-	- -	µg/kg									
Phenanthrene, 2-methyl-	- -	µg/kg								**1,300 NJ**	
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg									
Phenanthrene, 3,6-dimethyl-	- -	µg/kg									
Phenanthrene, 3-methyl-	- -	µg/kg									**880 NJ**
Phenanthrene, 4-methyl-	- -	µg/kg									
Phenanthridine	- -	µg/kg									
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg									
Phenylated naphthalene	- -	µg/kg									
Phthalic anhydride	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LLF-002 0 - 1 12/01/05 LLF-002(0-1)	LLF-003 0 - 1 12/01/05 LLF-003(0-1)	LLF-004 0 - 1 12/01/05 LLF-004(0-1)	LNP-007 0 - 1 12/01/05 LNP-007(0-1)	LNP-008 0 - 1 12/01/05 LNP-008(0-1)	LOU-001 0 - 1 12/01/05 LOU-001(0-1)	LQW-009 0 - 1 11/30/05 LQW-009 (0-1)	LQW-010 0 - 1 12/01/05 LQW-010 (0-1)	LQW-011 0 - 1 12/02/05 LQW-011
Propanoic acid, 3-mercapto-	- -	µg/kg									
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg									
Pyrene, 1-methyl-	- -	µg/kg									
Pyrene, 2-methyl-	- -	µg/kg									
Pyrene, 4-methyl-	- -	µg/kg									
Stigmast-4-en-3-one	- -	µg/kg									
Stigmasta-3,5-dien-7-one	- -	µg/kg									
Stigmasterol, 22,23-dihydro-	- -	µg/kg									
Substituted Benzene	- -	µg/kg									
Substituted Naphthalene	- -	µg/kg									
Substituted Naphthalene 1	- -	µg/kg									
Substituted Naphthalene 2	- -	µg/kg									
Substituted Naphthalene 3	- -	µg/kg									
Substituted Naphthalene 4	- -	µg/kg									
Substituted PAH isomer	- -	µg/kg									
Sulfur hexamer	- -	µg/kg									
Sulfur, mol. (S8)	- -	µg/kg									
Testosterone	- -	µg/kg									
Tetradecanal	- -	µg/kg									
Tetradecanoic acid	- -	µg/kg								**1,100 NJ**	**1,400 NJ**
Tetradecanoic acid, ethyl ester	- -	µg/kg									
Tetradecanoic acid, methyl ester	- -	µg/kg									
Thiophene, 2-(Methylselenyl)	- -	µg/kg									
tri(2-Ethylhexyl) trimellitate	- -	µg/kg									
Tridecanoic acid	- -	µg/kg								**2,300 NJ**	
Triphenylene	- -	µg/kg									
Triphenylene, 2-methyl-	- -	µg/kg									
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg									
Vanillin	- -	µg/kg									
Vitamin E	- -	µg/kg									
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg									
Trichlorobiphenyls	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B	LQW-013 0 - 1 12/01/05 LQW-013 (0-1)	LQW-014 0 - 1 12/01/05 LQW-014 (0-1)	LQW-015 0 - 1 11/30/05 LQW-015 (0-1)	LQW-015 0 - 1 12/02/05 LQW-015B	LQW-016 0 - 1 11/30/05 LQW-016 (0-1)	LQW-016 0 - 1 12/02/05 LQW-016B	LQW-017 0 - 1 11/30/05 LQW-017 (0-1)
SVOC TICS											
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg									
.alpha.-Methylstyrene	- -	µg/kg									
.beta.-iso-Methyl ionone	- -	µg/kg									
[3,4:9,10]Dibenzpyrene	- -	µg/kg									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg									
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg									
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg									
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg									
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg									
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg									
1,2,7,8-Debenzphenanthrene	- -	µg/kg									
1,2:4,5-Dibenzopyrene	- -	µg/kg									
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg									
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg									
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg									
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg									
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg									
10-Methylnonadecene	- -	µg/kg									
11H-Benzo[a]fluoren-11-one	- -	µg/kg									
11H-Benzo[a]fluorene	- -	µg/kg									
11H-Benzo[b]fluorene	- -	µg/kg									
13-Docosenamide, (Z)-	- -	µg/kg									
17-Pentatriacontene	- -	µg/kg									
1-Decene	- -	µg/kg									
1-Docosene	- -	µg/kg									
1-Dodecanol	- -	µg/kg									
1-Dodecene	- -	µg/kg									
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B	LQW-013 0 - 1 12/01/05 LQW-013 (0-1)	LQW-014 0 - 1 12/01/05 LQW-014 (0-1)	LQW-015 0 - 1 11/30/05 LQW-015 (0-1)	LQW-015 0 - 1 12/02/05 LQW-015B	LQW-016 0 - 1 11/30/05 LQW-016 (0-1)	LQW-016 0 - 1 12/02/05 LQW-016B	LQW-017 0 - 1 11/30/05 LQW-017 (0-1)
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg									
1-Heneicosyl formate	- -	µg/kg									
1-Heptadecanol	- -	µg/kg									
1-Hexacosanol	- -	µg/kg							**1,900 J**		**1,800 J**
1-Hexadecene	- -	µg/kg									
1H-Indene, 1-phenyl-	- -	µg/kg									
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-phenyl-	- -	µg/kg									
1-Nonadecane	- -	µg/kg									
1-Nonadecanol	- -	µg/kg									
1-Nonene	- -	µg/kg									
1-Octadecanol	- -	µg/kg									
1-Pentadecene	- -	µg/kg									
1-Tridecanol	- -	µg/kg									
1-Tridecene	- -	µg/kg									
1-Undecanol	- -	µg/kg									
2 (3H)-Benzothiazolone	- -	µg/kg									
2',3,4-Trichlorobiphenyl	- -	µg/kg									
2,3,4-Trichlorobiphenyl	- -	µg/kg									
2,3-Dihydro-1-methylindene	- -	µg/kg									
2,4,6-Trichlorobiphenyl	- -	µg/kg									
2,4-Dichlorophenyl isocyanate	- -	µg/kg									
28-Nor-17.alpha.(H)-hopane	- -	µg/kg									
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg									
2-Dodecanol	- -	µg/kg									
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg									
2-Mercaptobenzothiazole	- -	µg/kg									
2-Napthalenamine, n-phenyl	- -	µg/kg									
2-Pentadecanone	- -	µg/kg	**940 NJ**								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg	**120,000 NJ**		**81,000 NJ**	**68,000 NJ**	**70,000 NJ**		**69,000 NJ**		**69,000 NJ**
2-Phenylnaphthalene	- -	µg/kg									
2-Propenoic acid, pentadecyl ester	- -	µg/kg									
2-Propenoic acid, tridecyl	- -	µg/kg									
2-Undecanol	- -	µg/kg									
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B	LQW-013 0 - 1 12/01/05 LQW-013 (0-1)	LQW-014 0 - 1 12/01/05 LQW-014 (0-1)	LQW-015 0 - 1 11/30/05 LQW-015 (0-1)	LQW-015 0 - 1 12/02/05 LQW-015B	LQW-016 0 - 1 11/30/05 LQW-016 (0-1)	LQW-016 0 - 1 12/02/05 LQW-016B	LQW-017 0 - 1 11/30/05 LQW-017 (0-1)
3,4:8,9-Dibenzopyrene	- -	µg/kg									
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg									
3,5-Dichlorophenyl isocyanate	- -	µg/kg									
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg									
3-Eicosene, (E)-	- -	µg/kg									
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg									
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg									
4H-Cyclopenta[def]phenanthrene	- -	µg/kg									
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									
5,12-Napthacenedione	- -	µg/kg									
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg									
5-Eicosene, (E)-	- -	µg/kg									
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg									
7H-Benz[de]anthracen-7-one	- -	µg/kg									
7H-Benzo[C]fluorene	- -	µg/kg									
9,10-Anthracenedione	- -	µg/kg	**1,700 NJ**		**690 NJ**						
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg									
9,10-Dimethylanthracene	- -	µg/kg									
9-Hexacosene	- -	µg/kg									
9-Hexadecenoic acid	- -	µg/kg									
9H-Fluoren-9-one	- -	µg/kg									
9H-Fluorene, 1-methyl-	- -	µg/kg									
9H-Fluorene, 2-methyl-	- -	µg/kg									
9H-Fluorene, 9-methylene-	- -	µg/kg									
9-Octadecenamide, (Z)-	- -	µg/kg									
9-Octadecenoic acid, (E)-	- -	µg/kg									
Abieta-8,11,13-triene	- -	µg/kg									
Acridine	- -	µg/kg									
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg									
Anthracene, 1,4-dimethyl-	- -	µg/kg									
Anthracene, 1-methyl-	- -	µg/kg									
Anthracene, 2-methyl-	- -	µg/kg			**530 NJ**						
Anthracene, 9-Ethenyl-	- -	µg/kg									
Anthracene, 9-methyl-	- -	µg/kg									
Benz[a]anthracene, 10-methyl-	- -	µg/kg									
Benz[a]anthracene, 7-methyl-	- -	µg/kg									
Benz[a]anthracene, 8-methyl-	- -	µg/kg									
Benzaldehyde, 2-hydroxy-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B	LQW-013 0 - 1 12/01/05 LQW-013 (0-1)	LQW-014 0 - 1 12/01/05 LQW-014 (0-1)	LQW-015 0 - 1 11/30/05 LQW-015 (0-1)	LQW-015 0 - 1 12/02/05 LQW-015B	LQW-016 0 - 1 11/30/05 LQW-016 (0-1)	LQW-016 0 - 1 12/02/05 LQW-016B	LQW-017 0 - 1 11/30/05 LQW-017 (0-1)
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg									
Benzenamine, 4-methyl-2-nitro	- -	µg/kg									
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg									
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg									
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg									
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg									
Benzene, 1,2,4-trimethyl-	- -	µg/kg									
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg									
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg									
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg									
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg									
Benzene, 1-ethyl-3-methyl-	- -	µg/kg									
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg									
Benzene, tert-butyl-	- -	µg/kg									
Benzeneacetic acid	- -	µg/kg									
Benzenemethanol, α,α-dimethyl-	- -	µg/kg									
Benzenesulfonamide, 2-methyl-	- -	µg/kg									
Benzenesulfonamide, 4-methyl-	- -	µg/kg									
Benzo(e)pyrene	- -	µg/kg			**890 NJ**	**1,100 NJ**			**800 NJ**		
Benzo[b]chrysene	- -	µg/kg									
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg									
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg									
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg									
Benzo[b]triphenylene	- -	µg/kg									
Benzo[c]phenanthrene	- -	µg/kg									
Benzo[f]quinoline	- -	µg/kg									
Benzo[ghi]fluoranthene	- -	µg/kg									
Benzo[h]quinoline	- -	µg/kg									
Benzo[j]fluoranthene	- -	µg/kg									
Benzo[kl]xanthene	- -	µg/kg									
Benzocycloheptatriene	- -	µg/kg									
Benzoic acid	- -	µg/kg									
Benzothiazole	- -	µg/kg									
Benzothiazole, 2-(methylthio)-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B	LQW-013 0 - 1 12/01/05 LQW-013 (0-1)	LQW-014 0 - 1 12/01/05 LQW-014 (0-1)	LQW-015 0 - 1 11/30/05 LQW-015 (0-1)	LQW-015 0 - 1 12/02/05 LQW-015B	LQW-016 0 - 1 11/30/05 LQW-016 (0-1)	LQW-016 0 - 1 12/02/05 LQW-016B	LQW-017 0 - 1 11/30/05 LQW-017 (0-1)
beta-Sitosterol	- -	µg/kg									
Bicyclohexyl, 4-phenyl-	- -	µg/kg									
Butane, 2-methoxy-2-methyl-	- -	µg/kg									
Butylated hydroxytoluene	- -	µg/kg									
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg									
Cholesta-3,5-dien-7-one	- -	µg/kg	**3,400 NJ**								
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg									
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg									
Cholesterol	- -	µg/kg									
Chrysene, 1-methyl-	- -	µg/kg									
Chrysene, 3-methyl-	- -	µg/kg									
Chrysene, 4-methyl-	- -	µg/kg									
Chrysene, 5-methyl-	- -	µg/kg									
Chrysene, 6-methyl-	- -	µg/kg									
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg									
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg									
Clorophene	- -	µg/kg									
Coprostan-3-one	- -	µg/kg									
Cyclohexane, isothiocyanato-	- -	µg/kg									
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg									
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg									
Cyclopenta(def)phenanthrenone	- -	µg/kg									
Cyclopenta[cd]pyrene	- -	µg/kg									
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg									
Cyclopentasiloxane, decamethyl-	- -	µg/kg									
Cyclopropanenonanoic Acid, 2	- -	µg/kg									
D:C-friedoolean-8-en-3-one	- -	µg/kg									
dapsone	- -	µg/kg									
Decanoic Acid	- -	µg/kg									
D-Friedoolean-14-en-3-one	- -	µg/kg									
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg							**1,300 NJ**		
Dibenz(a,e)aceanthrylene	- -	µg/kg									
Dibenzo[def,mno]chrysene	- -	µg/kg									
Dibenzofuran, 4-methyl-	- -	µg/kg									
Dibenzothiophene	- -	µg/kg									
Dibenzothiophene, 3-methyl	- -	µg/kg									
Diethyltoluamide	- -	µg/kg									
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg									
Diphenyl ether	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B	LQW-013 0 - 1 12/01/05 LQW-013 (0-1)	LQW-014 0 - 1 12/01/05 LQW-014 (0-1)	LQW-015 0 - 1 11/30/05 LQW-015 (0-1)	LQW-015 0 - 1 12/02/05 LQW-015B	LQW-016 0 - 1 11/30/05 LQW-016 (0-1)	LQW-016 0 - 1 12/02/05 LQW-016B	LQW-017 0 - 1 11/30/05 LQW-017 (0-1)
D-Limonene	- -	µg/kg									
Dodecanoic acid	- -	µg/kg									
Dodecanoic acid, methyl ester	- -	µg/kg									
Dodecanoic acid, undecyl ester	- -	µg/kg									
Dodecyl acrylate	- -	µg/kg									
Dotriacontane	- -	µg/kg									
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg									
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg									
Fluoranthene, 2-methyl-	- -	µg/kg									
Gamma-Sitosterol	- -	µg/kg									
Hexadecanal	- -	µg/kg									
Hexadecanoic acid	- -	µg/kg									
Hexadecanoic acid, butyl ester	- -	µg/kg									
Hexadecanoic acid, ethyl ester	- -	µg/kg									
Indene	- -	µg/kg									
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg									
Lup-20-(29)-en-3-one	- -	µg/kg									
Manool	- -	µg/kg									
matrine	- -	µg/kg									
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg									
Methylated Naphthalene	- -	µg/kg									
Methylated Phenol	- -	µg/kg									
Methyldibenzothiophene	- -	µg/kg									
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg									
naphthalene, 1,2,3-trimethyl	- -	µg/kg									
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg									
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg									
Naphthalene, 1,2-Dimethyl-	- -	µg/kg									
Naphthalene, 1,3-dimethyl-	- -	µg/kg									
Naphthalene, 1,4-dimethyl-	- -	µg/kg									
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg									
Naphthalene, 1-ethyl-	- -	µg/kg									
Naphthalene, 1-methyl-	- -	µg/kg									
Naphthalene, 1-phenyl-	- -	µg/kg									
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg									
Naphthalene, 2,3-dimethyl-	- -	µg/kg									
Naphthalene, 2,6-dimethyl-	- -	µg/kg									
Naphthalene, 2,7-dimethyl-	- -	µg/kg									
Naphthalene, 2-Ethyl-	- -	µg/kg									
Naphthalene, 2-phenyl-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B	LQW-013 0 - 1 12/01/05 LQW-013 (0-1)	LQW-014 0 - 1 12/01/05 LQW-014 (0-1)	LQW-015 0 - 1 11/30/05 LQW-015 (0-1)	LQW-015 0 - 1 12/02/05 LQW-015B	LQW-016 0 - 1 11/30/05 LQW-016 (0-1)	LQW-016 0 - 1 12/02/05 LQW-016B	LQW-017 0 - 1 11/30/05 LQW-017 (0-1)
Naphthalene, decahydro-, trans-	- -	µg/kg									
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg									
Naphtho[2,3-b]thiophene	- -	µg/kg									
Nonadecane, 9-Methyl-	- -	µg/kg									
Octadecanal	- -	µg/kg			**2,600 NJ**	**1,300 NJ**					
Octadecanoic acid	- -	µg/kg									
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg									
Octadecanoic acid, butyl ester	- -	µg/kg									
Olean-12-ene	- -	µg/kg									
Organic acid	- -	µg/kg									
Organic acid 1	- -	µg/kg									
Organic acid 2	- -	µg/kg									
Organic acid 3	- -	µg/kg									
Organic acid 4	- -	µg/kg									
Organic acid 5	- -	µg/kg									
o-Terphenyl	- -	µg/kg									
Oxirane, hexadecyl-	- -	µg/kg					**960 NJ**				**770 NJ**
p-Dicyclohexylbenzene	- -	µg/kg									
Pentadecanal-	- -	µg/kg									
Pentadecanoic acid	- -	µg/kg	**2,000 NJ**								
Pentasiloxane, dodecamethyl-	- -	µg/kg									
Perylene	- -	µg/kg	**1,400 NJ**								
Perylene isomer C20H12	- -	µg/kg									
Phenanthrene, 1,7-dimethyl-	- -	µg/kg									
Phenanthrene, 1-methyl-	- -	µg/kg									
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg									
Phenanthrene, 2,3-dimethyl-	- -	µg/kg									
Phenanthrene, 2,5-dimethyl-	- -	µg/kg									
Phenanthrene, 2,7-dimethyl-	- -	µg/kg									
Phenanthrene, 2-methyl-	- -	µg/kg									
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg									
Phenanthrene, 3,6-dimethyl-	- -	µg/kg									
Phenanthrene, 3-methyl-	- -	µg/kg									
Phenanthrene, 4-methyl-	- -	µg/kg									
Phenanthridine	- -	µg/kg									
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg									
Phenylated naphthalene	- -	µg/kg									
Phthalic anhydride	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B	LQW-013 0 - 1 12/01/05 LQW-013 (0-1)	LQW-014 0 - 1 12/01/05 LQW-014 (0-1)	LQW-015 0 - 1 11/30/05 LQW-015 (0-1)	LQW-015 0 - 1 12/02/05 LQW-015B	LQW-016 0 - 1 11/30/05 LQW-016 (0-1)	LQW-016 0 - 1 12/02/05 LQW-016B	LQW-017 0 - 1 11/30/05 LQW-017 (0-1)
Propanoic acid, 3-mercapto-	- -	µg/kg									
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg									
Pyrene, 1-methyl-	- -	µg/kg									
Pyrene, 2-methyl-	- -	µg/kg									
Pyrene, 4-methyl-	- -	µg/kg									
Stigmast-4-en-3-one	- -	µg/kg									
Stigmasta-3,5-dien-7-one	- -	µg/kg									
Stigmasterol, 22,23-dihydro-	- -	µg/kg									
Substituted Benzene	- -	µg/kg									
Substituted Naphthalene	- -	µg/kg									
Substituted Naphthalene 1	- -	µg/kg									
Substituted Naphthalene 2	- -	µg/kg									
Substituted Naphthalene 3	- -	µg/kg									
Substituted Naphthalene 4	- -	µg/kg									
Substituted PAH isomer	- -	µg/kg									
Sulfur hexamer	- -	µg/kg									
Sulfur, mol. (S8)	- -	µg/kg									
Testosterone	- -	µg/kg									
Tetradecanal	- -	µg/kg									
Tetradecanoic acid	- -	µg/kg	**1,200 NJ**		**880 NJ**						
Tetradecanoic acid, ethyl ester	- -	µg/kg									
Tetradecanoic acid, methyl ester	- -	µg/kg									
Thiophene, 2-(Methylselenyl)	- -	µg/kg									
tri(2-Ethylhexyl) trimellitate	- -	µg/kg									
Tridecanoic acid	- -	µg/kg									
Triphenylene	- -	µg/kg									
Triphenylene, 2-methyl-	- -	µg/kg									
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg									
Vanillin	- -	µg/kg									
Vitamin E	- -	µg/kg									
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg									
Trichlorobiphenyls	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-017 0 - 1 12/02/05 LQW-017B	LQW-018 0 - 1 11/30/05 LQW-018 (0-1)	LQW-018 0 - 1 12/02/05 LQW-018B	LUI-005 12/08/05 LUI-005	LUI-006 12/08/05 LUI-006	SEA-601 4 - 6 09/15/03 SSO-SPT1-5-LF	SEA-601 8 - 10 09/15/03 SSO-SPT1-10-LF	SEA-601 14 - 16 09/15/03 SSO-SPT1-15-LF	SEA-602B 10 - 12 09/15/03 SSO-SPT5-10-LF
SVOC TICS											
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg									
.alpha.-Methylstyrene	- -	µg/kg									
.beta.-iso-Methyl ionone	- -	µg/kg									
[3,4:9,10]Dibenzpyrene	- -	µg/kg									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg									
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg									
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg									
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg									
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg									
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg									
1,2,7,8-Debenzphenanthrene	- -	µg/kg									
1,2:4,5-Dibenzopyrene	- -	µg/kg									
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg									
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg									
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg									
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg									
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg									
10-Methylnonadecene	- -	µg/kg									
11H-Benzo[a]fluoren-11-one	- -	µg/kg									
11H-Benzo[a]fluorene	- -	µg/kg									
11H-Benzo[b]fluorene	- -	µg/kg									
13-Docosenamide, (Z)-	- -	µg/kg									
17-Pentatriacontene	- -	µg/kg									
1-Decene	- -	µg/kg									
1-Docosene	- -	µg/kg									
1-Dodecanol	- -	µg/kg									
1-Dodecene	- -	µg/kg									
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-017 0 - 1 12/02/05 LQW-017B	LQW-018 0 - 1 11/30/05 LQW-018 (0-1)	LQW-018 0 - 1 12/02/05 LQW-018B	LUI-005 12/08/05 LUI-005	LUI-006 12/08/05 LUI-006	SEA-601 4 - 6 09/15/03 SSO-SPT1-5-LF	SEA-601 8 - 10 09/15/03 SSO-SPT1-10-LF	SEA-601 14 - 16 09/15/03 SSO-SPT1-15-LF	SEA-602B 10 - 12 09/15/03 SSO-SPT5-10-LF
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg									
1-Heneicosyl formate	- -	µg/kg									
1-Heptadecanol	- -	µg/kg									
1-Hexacosanol	- -	µg/kg									
1-Hexadecene	- -	µg/kg									
1H-Indene, 1-phenyl-	- -	µg/kg									
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-phenyl-	- -	µg/kg									
1-Nonadecane	- -	µg/kg									
1-Nonadecanol	- -	µg/kg									
1-Nonene	- -	µg/kg									
1-Octadecanol	- -	µg/kg									
1-Pentadecene	- -	µg/kg									
1-Tridecanol	- -	µg/kg									
1-Tridecene	- -	µg/kg									
1-Undecanol	- -	µg/kg									
2 (3H)-Benzothiazolone	- -	µg/kg									
2',3,4-Trichlorobiphenyl	- -	µg/kg									
2,3,4-Trichlorobiphenyl	- -	µg/kg									
2,3-Dihydro-1-methylindene	- -	µg/kg									
2,4,6-Trichlorobiphenyl	- -	µg/kg									
2,4-Dichlorophenyl isocyanate	- -	µg/kg									
28-Nor-17.alpha.(H)-hopane	- -	µg/kg									
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg									
2-Dodecanol	- -	µg/kg									
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg									
2-Mercaptobenzothiazole	- -	µg/kg									
2-Napthalenamine, n-phenyl	- -	µg/kg									
2-Pentadecanone	- -	µg/kg									
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg		**62,000 NJ**							
2-Phenylnaphthalene	- -	µg/kg									
2-Propenoic acid, pentadecyl ester	- -	µg/kg									
2-Propenoic acid, tridecyl	- -	µg/kg									
2-Undecanol	- -	µg/kg									
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-017 0 - 1 12/02/05 LQW-017B	LQW-018 0 - 1 11/30/05 LQW-018 (0-1)	LQW-018 0 - 1 12/02/05 LQW-018B	LUI-005 12/08/05 LUI-005	LUI-006 12/08/05 LUI-006	SEA-601 4 - 6 09/15/03 SSO-SPT1-5-LF	SEA-601 8 - 10 09/15/03 SSO-SPT1-10-LF	SEA-601 14 - 16 09/15/03 SSO-SPT1-15-LF	SEA-602B 10 - 12 09/15/03 SSO-SPT5-10-LF
3,4:8,9-Dibenzopyrene	- -	µg/kg									
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg									
3,5-Dichlorophenyl isocyanate	- -	µg/kg									
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg									
3-Eicosene, (E)-	- -	µg/kg									
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg									
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg									
4H-Cyclopenta[def]phenanthrene	- -	µg/kg									
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									
5,12-Napthacenedione	- -	µg/kg									
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg									
5-Eicosene, (E)-	- -	µg/kg									
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg									
7H-Benz[de]anthracen-7-one	- -	µg/kg									
7H-Benzo[C]fluorene	- -	µg/kg									
9,10-Anthracenedione	- -	µg/kg									
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg									
9,10-Dimethylanthracene	- -	µg/kg									
9-Hexacosene	- -	µg/kg									
9-Hexadecenoic acid	- -	µg/kg									
9H-Fluoren-9-one	- -	µg/kg									
9H-Fluorene, 1-methyl-	- -	µg/kg									
9H-Fluorene, 2-methyl-	- -	µg/kg									
9H-Fluorene, 9-methylene-	- -	µg/kg									
9-Octadecenamide, (Z)-	- -	µg/kg									
9-Octadecenoic acid, (E)-	- -	µg/kg									
Abieta-8,11,13-triene	- -	µg/kg									
Acridine	- -	µg/kg									
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg									
Anthracene, 1,4-dimethyl-	- -	µg/kg									
Anthracene, 1-methyl-	- -	µg/kg									
Anthracene, 2-methyl-	- -	µg/kg									
Anthracene, 9-Ethenyl-	- -	µg/kg									
Anthracene, 9-methyl-	- -	µg/kg									
Benz[a]anthracene, 10-methyl-	- -	µg/kg									
Benz[a]anthracene, 7-methyl-	- -	µg/kg									
Benz[a]anthracene, 8-methyl-	- -	µg/kg									
Benzaldehyde, 2-hydroxy-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-017 0 - 1 12/02/05 LQW-017B	LQW-018 0 - 1 11/30/05 LQW-018 (0-1)	LQW-018 0 - 1 12/02/05 LQW-018B	LUI-005 12/08/05 LUI-005	LUI-006 12/08/05 LUI-006	SEA-601 4 - 6 09/15/03 SSO-SPT1-5-LF	SEA-601 8 - 10 09/15/03 SSO-SPT1-10-LF	SEA-601 14 - 16 09/15/03 SSO-SPT1-15-LF	SEA-602B 10 - 12 09/15/03 SSO-SPT5-10-LF
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg									
Benzenamine, 4-methyl-2-nitro	- -	µg/kg									
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg									
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg									
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg									
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg									
Benzene, 1,2,4-trimethyl-	- -	µg/kg									
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg									
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg									
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg									
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg									
Benzene, 1-ethyl-3-methyl-	- -	µg/kg									
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg									
Benzene, tert-butyl-	- -	µg/kg									
Benzeneacetic acid	- -	µg/kg									
Benzenemethanol, α,α-dimethyl-	- -	µg/kg									
Benzenesulfonamide, 2-methyl-	- -	µg/kg									
Benzenesulfonamide, 4-methyl-	- -	µg/kg									
Benzo(e)pyrene	- -	µg/kg									
Benzo[b]chrysene	- -	µg/kg									
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg									
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg									
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg									
Benzo[b]triphenylene	- -	µg/kg									
Benzo[c]phenanthrene	- -	µg/kg									
Benzo[f]quinoline	- -	µg/kg									
Benzo[ghi]fluoranthene	- -	µg/kg									
Benzo[h]quinoline	- -	µg/kg									
Benzo[j]fluoranthene	- -	µg/kg									
Benzo[kl]xanthene	- -	µg/kg									
Benzocycloheptatriene	- -	µg/kg									
Benzoic acid	- -	µg/kg									
Benzothiazole	- -	µg/kg									
Benzothiazole, 2-(methylthio)-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-017	LQW-018	LQW-018	LUI-005	LUI-006	SEA-601	SEA-601	SEA-601	SEA-602B
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1			4 - 6	8 - 10	14 - 16	10 - 12
Date Collected:			12/02/05	11/30/05	12/02/05	12/08/05	12/08/05	09/15/03	09/15/03	09/15/03	09/15/03
Sample Name:	PAL	Units	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005	LUI-006	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF
beta-Sitosterol	- -	µg/kg									
Bicyclohexyl, 4-phenyl-	- -	µg/kg									
Butane, 2-methoxy-2-methyl-	- -	µg/kg									
Butylated hydroxytoluene	- -	µg/kg									
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg									
Cholesta-3,5-dien-7-one	- -	µg/kg									
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg									
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg									
Cholesterol	- -	µg/kg									
Chrysene, 1-methyl-	- -	µg/kg									
Chrysene, 3-methyl-	- -	µg/kg									
Chrysene, 4-methyl-	- -	µg/kg									
Chrysene, 5-methyl-	- -	µg/kg									
Chrysene, 6-methyl-	- -	µg/kg									
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg									
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg									
Clorophene	- -	µg/kg									
Coprostan-3-one	- -	µg/kg									
Cyclohexane, isothiocyanato-	- -	µg/kg									
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg									
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg									
Cyclopenta(def)phenanthrenone	- -	µg/kg									
Cyclopenta[cd]pyrene	- -	µg/kg									
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg									
Cyclopentasiloxane, decamethyl-	- -	µg/kg									
Cyclopropanenonanoic Acid, 2	- -	µg/kg									
D:C-friedoolean-8-en-3-one	- -	µg/kg									
dapsone	- -	µg/kg									
Decanoic Acid	- -	µg/kg									
D-Friedoolean-14-en-3-one	- -	µg/kg									
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg									
Dibenz(a,e)aceanthrylene	- -	µg/kg									
Dibenzo[def,mno]chrysene	- -	µg/kg									
Dibenzofuran, 4-methyl-	- -	µg/kg									
Dibenzothiophene	- -	µg/kg									
Dibenzothiophene, 3-methyl	- -	µg/kg									
Diethyltoluamide	- -	µg/kg									
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg									
Diphenyl ether	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-017 0 - 1 12/02/05 LQW-017B	LQW-018 0 - 1 11/30/05 LQW-018 (0-1)	LQW-018 0 - 1 12/02/05 LQW-018B	LUI-005 12/08/05 LUI-005	LUI-006 12/08/05 LUI-006	SEA-601 4 - 6 09/15/03 SSO-SPT1-5-LF	SEA-601 8 - 10 09/15/03 SSO-SPT1-10-LF	SEA-601 14 - 16 09/15/03 SSO-SPT1-15-LF	SEA-602B 10 - 12 09/15/03 SSO-SPT5-10-LF
D-Limonene	- -	µg/kg									
Dodecanoic acid	- -	µg/kg									
Dodecanoic acid, methyl ester	- -	µg/kg									
Dodecanoic acid, undecyl ester	- -	µg/kg									
Dodecyl acrylate	- -	µg/kg									
Dotriacontane	- -	µg/kg									
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg									
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg									
Fluoranthene, 2-methyl-	- -	µg/kg									
Gamma-Sitosterol	- -	µg/kg									
Hexadecanal	- -	µg/kg									
Hexadecanoic acid	- -	µg/kg									
Hexadecanoic acid, butyl ester	- -	µg/kg									
Hexadecanoic acid, ethyl ester	- -	µg/kg									
Indene	- -	µg/kg									
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg									
Lup-20-(29)-en-3-one	- -	µg/kg									
Manool	- -	µg/kg									
matrine	- -	µg/kg									
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg									
Methylated Naphthalene	- -	µg/kg									
Methylated Phenol	- -	µg/kg									
Methyldibenzothiophene	- -	µg/kg									
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg									
naphthalene, 1,2,3-trimethyl	- -	µg/kg									
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg									
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg									
Naphthalene, 1,2-Dimethyl-	- -	µg/kg									
Naphthalene, 1,3-dimethyl-	- -	µg/kg									
Naphthalene, 1,4-dimethyl-	- -	µg/kg									
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg									
Naphthalene, 1-ethyl-	- -	µg/kg									
Naphthalene, 1-methyl-	- -	µg/kg									
Naphthalene, 1-phenyl-	- -	µg/kg									
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg									
Naphthalene, 2,3-dimethyl-	- -	µg/kg									
Naphthalene, 2,6-dimethyl-	- -	µg/kg									
Naphthalene, 2,7-dimethyl-	- -	µg/kg									
Naphthalene, 2-Ethyl-	- -	µg/kg									
Naphthalene, 2-phenyl-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LQW-017 0 - 1 12/02/05 LQW-017B	LQW-018 0 - 1 11/30/05 LQW-018 (0-1)	LQW-018 0 - 1 12/02/05 LQW-018B	LUI-005 12/08/05 LUI-005	LUI-006 12/08/05 LUI-006	SEA-601 4 - 6 09/15/03 SSO-SPT1-5-LF	SEA-601 8 - 10 09/15/03 SSO-SPT1-10-LF	SEA-601 14 - 16 09/15/03 SSO-SPT1-15-LF	SEA-602B 10 - 12 09/15/03 SSO-SPT5-10-LF
Naphthalene, decahydro-, trans-	- -	µg/kg									
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg									
Naphtho[2,3-b]thiophene	- -	µg/kg									
Nonadecane, 9-Methyl-	- -	µg/kg									
Octadecanal	- -	µg/kg									
Octadecanoic acid	- -	µg/kg									
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg									
Octadecanoic acid, butyl ester	- -	µg/kg									
Olean-12-ene	- -	µg/kg									
Organic acid	- -	µg/kg									
Organic acid 1	- -	µg/kg									
Organic acid 2	- -	µg/kg									
Organic acid 3	- -	µg/kg									
Organic acid 4	- -	µg/kg									
Organic acid 5	- -	µg/kg									
o-Terphenyl	- -	µg/kg									
Oxirane, hexadecyl-	- -	µg/kg		**460 NJ**							
p-Dicyclohexylbenzene	- -	µg/kg									
Pentadecanal-	- -	µg/kg									
Pentadecanoic acid	- -	µg/kg									
Pentasiloxane, dodecamethyl-	- -	µg/kg									
Perylene	- -	µg/kg									
Perylene isomer C20H12	- -	µg/kg									
Phenanthrene, 1,7-dimethyl-	- -	µg/kg									
Phenanthrene, 1-methyl-	- -	µg/kg									
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg									
Phenanthrene, 2,3-dimethyl-	- -	µg/kg									
Phenanthrene, 2,5-dimethyl-	- -	µg/kg									
Phenanthrene, 2,7-dimethyl-	- -	µg/kg									
Phenanthrene, 2-methyl-	- -	µg/kg									
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg									
Phenanthrene, 3,6-dimethyl-	- -	µg/kg									
Phenanthrene, 3-methyl-	- -	µg/kg									
Phenanthrene, 4-methyl-	- -	µg/kg									
Phenanthridine	- -	µg/kg									
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg									
Phenylated naphthalene	- -	µg/kg									
Phthalic anhydride	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-017	LQW-018	LQW-018	LUI-005	LUI-006	SEA-601	SEA-601	SEA-601	SEA-602B
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1			4 - 6	8 - 10	14 - 16	10 - 12
Date Collected:			12/02/05	11/30/05	12/02/05	12/08/05	12/08/05	09/15/03	09/15/03	09/15/03	09/15/03
Sample Name:	PAL	Units	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005	LUI-006	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF
Propanoic acid, 3-mercapto-	- -	µg/kg									
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg									
Pyrene, 1-methyl-	- -	µg/kg									
Pyrene, 2-methyl-	- -	µg/kg									
Pyrene, 4-methyl-	- -	µg/kg									
Stigmast-4-en-3-one	- -	µg/kg									
Stigmasta-3,5-dien-7-one	- -	µg/kg									
Stigmasterol, 22,23-dihydro-	- -	µg/kg									
Substituted Benzene	- -	µg/kg									
Substituted Naphthalene	- -	µg/kg									
Substituted Naphthalene 1	- -	µg/kg									
Substituted Naphthalene 2	- -	µg/kg									
Substituted Naphthalene 3	- -	µg/kg									
Substituted Naphthalene 4	- -	µg/kg									
Substituted PAH isomer	- -	µg/kg									
Sulfur hexamer	- -	µg/kg									
Sulfur, mol. (S8)	- -	µg/kg									
Testosterone	- -	µg/kg									
Tetradecanal	- -	µg/kg									
Tetradecanoic acid	- -	µg/kg									
Tetradecanoic acid, ethyl ester	- -	µg/kg									
Tetradecanoic acid, methyl ester	- -	µg/kg									
Thiophene, 2-(Methylselenyl)	- -	µg/kg									
tri(2-Ethylhexyl) trimellitate	- -	µg/kg									
Tridecanoic acid	- -	µg/kg									
Triphenylene	- -	µg/kg									
Triphenylene, 2-methyl-	- -	µg/kg									
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg									
Vanillin	- -	µg/kg									
Vitamin E	- -	µg/kg									
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg									
Trichlorobiphenyls	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-602B 14 - 16 09/15/03 SSO-SPT5-15-LF	SEA-602B 18 - 20 09/15/03 SSO-SPT5-20-LF	SEA-602B 24 - 26 09/15/03 SSO-SPT5-25-LF	SEA-602B 30 - 32 09/15/03 SSO-SPT5-30-LF	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF
SVOC TICS										
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg								
.alpha.-Methylstyrene	- -	µg/kg								
.beta.-iso-Methyl ionone	- -	µg/kg								
[3,4:9,10]Dibenzpyrene	- -	µg/kg								
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg								
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg								
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg								
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg								
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg								
1,2,7,8-Debenzphenanthrene	- -	µg/kg								
1,2:4,5-Dibenzopyrene	- -	µg/kg								
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg								
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg								
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg								
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg								
10-Methylnonadecene	- -	µg/kg								
11H-Benzo[a]fluoren-11-one	- -	µg/kg								
11H-Benzo[a]fluorene	- -	µg/kg								
11H-Benzo[b]fluorene	- -	µg/kg								
13-Docosenamide, (Z)-	- -	µg/kg								
17-Pentatriacontene	- -	µg/kg								
1-Decene	- -	µg/kg								
1-Docosene	- -	µg/kg								
1-Dodecanol	- -	µg/kg								
1-Dodecene	- -	µg/kg								
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-602B 14 - 16 09/15/03 SSO-SPT5-15-LF	SEA-602B 18 - 20 09/15/03 SSO-SPT5-20-LF	SEA-602B 24 - 26 09/15/03 SSO-SPT5-25-LF	SEA-602B 30 - 32 09/15/03 SSO-SPT5-30-LF	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg								
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								
1-Heneicosyl formate	- -	µg/kg								
1-Heptadecanol	- -	µg/kg								
1-Hexacosanol	- -	µg/kg								
1-Hexadecene	- -	µg/kg								
1H-Indene, 1-phenyl-	- -	µg/kg								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-phenyl-	- -	µg/kg								
1-Nonadecane	- -	µg/kg								
1-Nonadecanol	- -	µg/kg								
1-Nonene	- -	µg/kg								
1-Octadecanol	- -	µg/kg								
1-Pentadecene	- -	µg/kg								
1-Tridecanol	- -	µg/kg								
1-Tridecene	- -	µg/kg								
1-Undecanol	- -	µg/kg								
2 (3H)-Benzothiazolone	- -	µg/kg								
2',3,4-Trichlorobiphenyl	- -	µg/kg								
2,3,4-Trichlorobiphenyl	- -	µg/kg								
2,3-Dihydro-1-methylindene	- -	µg/kg								
2,4,6-Trichlorobiphenyl	- -	µg/kg								
2,4-Dichlorophenyl isocyanate	- -	µg/kg								
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								
2-Dodecanol	- -	µg/kg								
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg								
2-Mercaptobenzothiazole	- -	µg/kg								
2-Napthalenamine, n-phenyl	- -	µg/kg								
2-Pentadecanone	- -	µg/kg								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg								
2-Phenylnaphthalene	- -	µg/kg								
2-Propenoic acid, pentadecyl ester	- -	µg/kg								
2-Propenoic acid, tridecyl	- -	µg/kg								
2-Undecanol	- -	µg/kg								
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-602B 14 - 16 09/15/03 SSO-SPT5-15-LF	SEA-602B 18 - 20 09/15/03 SSO-SPT5-20-LF	SEA-602B 24 - 26 09/15/03 SSO-SPT5-25-LF	SEA-602B 30 - 32 09/15/03 SSO-SPT5-30-LF	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF
3,4:8,9-Dibenzopyrene	- -	µg/kg								
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg								
3,5-Dichlorophenyl isocyanate	- -	µg/kg								
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg								
3-Eicosene, (E)-	- -	µg/kg								
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg								
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg								
4H-Cyclopenta[def]phenanthrene	- -	µg/kg								
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg								
5,12-Napthacenedione	- -	µg/kg								
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg								
5-Eicosene, (E)-	- -	µg/kg								
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg								
7H-Benz[de]anthracen-7-one	- -	µg/kg								
7H-Benzo[C]fluorene	- -	µg/kg								
9,10-Anthracenedione	- -	µg/kg								
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg								
9,10-Dimethylanthracene	- -	µg/kg								
9-Hexacosene	- -	µg/kg								
9-Hexadecenoic acid	- -	µg/kg								
9H-Fluoren-9-one	- -	µg/kg								
9H-Fluorene, 1-methyl-	- -	µg/kg								
9H-Fluorene, 2-methyl-	- -	µg/kg								
9H-Fluorene, 9-methylene-	- -	µg/kg								
9-Octadecenamide, (Z)-	- -	µg/kg								
9-Octadecenoic acid, (E)-	- -	µg/kg								
Abieta-8,11,13-triene	- -	µg/kg								
Acridine	- -	µg/kg								
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg								
Anthracene, 1,4-dimethyl-	- -	µg/kg								
Anthracene, 1-methyl-	- -	µg/kg								
Anthracene, 2-methyl-	- -	µg/kg								
Anthracene, 9-Ethenyl-	- -	µg/kg								
Anthracene, 9-methyl-	- -	µg/kg								
Benz[a]anthracene, 10-methyl-	- -	µg/kg								
Benz[a]anthracene, 7-methyl-	- -	µg/kg								
Benz[a]anthracene, 8-methyl-	- -	µg/kg								
Benzaldehyde, 2-hydroxy-	- -	µg/kg								

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-602B 14 - 16 09/15/03 SSO-SPT5-15-LF	SEA-602B 18 - 20 09/15/03 SSO-SPT5-20-LF	SEA-602B 24 - 26 09/15/03 SSO-SPT5-25-LF	SEA-602B 30 - 32 09/15/03 SSO-SPT5-30-LF	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg								
Benzenamine, 4-methyl-2-nitro	- -	µg/kg								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg								
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg								
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg								
Benzene, 1,2,4-trimethyl-	- -	µg/kg								
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg								
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg								
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg								
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg								
Benzene, 1-ethyl-3-methyl-	- -	µg/kg								
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg								
Benzene, tert-butyl-	- -	µg/kg								
Benzeneacetic acid	- -	µg/kg								
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								
Benzenesulfonamide, 2-methyl-	- -	µg/kg								
Benzenesulfonamide, 4-methyl-	- -	µg/kg								
Benzo(e)pyrene	- -	µg/kg								
Benzo[b]chrysene	- -	µg/kg								
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								
Benzo[b]triphenylene	- -	µg/kg								
Benzo[c]phenanthrene	- -	µg/kg								
Benzo[f]quinoline	- -	µg/kg								
Benzo[ghi]fluoranthene	- -	µg/kg								
Benzo[h]quinoline	- -	µg/kg								
Benzo[j]fluoranthene	- -	µg/kg								
Benzo[kl]xanthene	- -	µg/kg								
Benzocycloheptatriene	- -	µg/kg								
Benzoic acid	- -	µg/kg								
Benzothiazole	- -	µg/kg								
Benzothiazole, 2-(methylthio)-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-602B 14 - 16 09/15/03 SSO-SPT5-15-LF	SEA-602B 18 - 20 09/15/03 SSO-SPT5-20-LF	SEA-602B 24 - 26 09/15/03 SSO-SPT5-25-LF	SEA-602B 30 - 32 09/15/03 SSO-SPT5-30-LF	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF
beta-Sitosterol	- -	µg/kg								
Bicyclohexyl, 4-phenyl-	- -	µg/kg								
Butane, 2-methoxy-2-methyl-	- -	µg/kg								
Butylated hydroxytoluene	- -	µg/kg								
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg								
Cholesta-3,5-dien-7-one	- -	µg/kg								
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg								
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg								
Cholesterol	- -	µg/kg								
Chrysene, 1-methyl-	- -	µg/kg								
Chrysene, 3-methyl-	- -	µg/kg								
Chrysene, 4-methyl-	- -	µg/kg								
Chrysene, 5-methyl-	- -	µg/kg								
Chrysene, 6-methyl-	- -	µg/kg								
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg								
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								
Clorophene	- -	µg/kg								
Coprostan-3-one	- -	µg/kg								
Cyclohexane, isothiocyanato-	- -	µg/kg								
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg								
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								
Cyclopenta(def)phenanthrenone	- -	µg/kg								
Cyclopenta[cd]pyrene	- -	µg/kg								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg								
Cyclopentasiloxane, decamethyl-	- -	µg/kg								
Cyclopropanenonanoic Acid, 2	- -	µg/kg								
D:C-friedoolean-8-en-3-one	- -	µg/kg								
dapsone	- -	µg/kg								
Decanoic Acid	- -	µg/kg								
D-Friedoolean-14-en-3-one	- -	µg/kg								
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								
Dibenz(a,e)aceanthrylene	- -	µg/kg								
Dibenzo[def,mno]chrysene	- -	µg/kg								
Dibenzofuran, 4-methyl-	- -	µg/kg								
Dibenzothiophene	- -	µg/kg								
Dibenzothiophene, 3-methyl	- -	µg/kg								
Diethyltoluamide	- -	µg/kg								
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg								
Diphenyl ether	- -	µg/kg								

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-602B 14 - 16 09/15/03 SSO-SPT5-15-LF	SEA-602B 18 - 20 09/15/03 SSO-SPT5-20-LF	SEA-602B 24 - 26 09/15/03 SSO-SPT5-25-LF	SEA-602B 30 - 32 09/15/03 SSO-SPT5-30-LF	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF
D-Limonene	- -	µg/kg								
Dodecanoic acid	- -	µg/kg								
Dodecanoic acid, methyl ester	- -	µg/kg								
Dodecanoic acid, undecyl ester	- -	µg/kg								
Dodecyl acrylate	- -	µg/kg								
Dotriacontane	- -	µg/kg								
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg								
Fluoranthene, 2-methyl-	- -	µg/kg								
Gamma-Sitosterol	- -	µg/kg								
Hexadecanal	- -	µg/kg								
Hexadecanoic acid	- -	µg/kg								
Hexadecanoic acid, butyl ester	- -	µg/kg								
Hexadecanoic acid, ethyl ester	- -	µg/kg								
Indene	- -	µg/kg								
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg								
Lup-20-(29)-en-3-one	- -	µg/kg								
Manool	- -	µg/kg								
matrine	- -	µg/kg								
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg								
Methylated Naphthalene	- -	µg/kg								
Methylated Phenol	- -	µg/kg								
Methyldibenzothiophene	- -	µg/kg								
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg								
naphthalene, 1,2,3-trimethyl	- -	µg/kg								
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg								
Naphthalene, 1,2-Dimethyl-	- -	µg/kg								
Naphthalene, 1,3-dimethyl-	- -	µg/kg								
Naphthalene, 1,4-dimethyl-	- -	µg/kg								
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg								
Naphthalene, 1-ethyl-	- -	µg/kg								
Naphthalene, 1-methyl-	- -	µg/kg								
Naphthalene, 1-phenyl-	- -	µg/kg								
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg								
Naphthalene, 2,3-dimethyl-	- -	µg/kg								
Naphthalene, 2,6-dimethyl-	- -	µg/kg								
Naphthalene, 2,7-dimethyl-	- -	µg/kg								
Naphthalene, 2-Ethyl-	- -	µg/kg								
Naphthalene, 2-phenyl-	- -	µg/kg								

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-602B 14 - 16 09/15/03 SSO-SPT5-15-LF	SEA-602B 18 - 20 09/15/03 SSO-SPT5-20-LF	SEA-602B 24 - 26 09/15/03 SSO-SPT5-25-LF	SEA-602B 30 - 32 09/15/03 SSO-SPT5-30-LF	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF
Naphthalene, decahydro-, trans-	- -	µg/kg								
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg								
Naphtho[2,3-b]thiophene	- -	µg/kg								
Nonadecane, 9-Methyl-	- -	µg/kg								
Octadecanal	- -	µg/kg								
Octadecanoic acid	- -	µg/kg								
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								
Octadecanoic acid, butyl ester	- -	µg/kg								
Olean-12-ene	- -	µg/kg								
Organic acid	- -	µg/kg								
Organic acid 1	- -	µg/kg								
Organic acid 2	- -	µg/kg								
Organic acid 3	- -	µg/kg								
Organic acid 4	- -	µg/kg								
Organic acid 5	- -	µg/kg								
o-Terphenyl	- -	µg/kg								
Oxirane, hexadecyl-	- -	µg/kg								
p-Dicyclohexylbenzene	- -	µg/kg								
Pentadecanal-	- -	µg/kg								
Pentadecanoic acid	- -	µg/kg								
Pentasiloxane, dodecamethyl-	- -	µg/kg								
Perylene	- -	µg/kg								
Perylene isomer C20H12	- -	µg/kg								
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								
Phenanthrene, 1-methyl-	- -	µg/kg								
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg								
Phenanthrene, 2,3-dimethyl-	- -	µg/kg								
Phenanthrene, 2,5-dimethyl-	- -	µg/kg								
Phenanthrene, 2,7-dimethyl-	- -	µg/kg								
Phenanthrene, 2-methyl-	- -	µg/kg								
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg								
Phenanthrene, 3,6-dimethyl-	- -	µg/kg								
Phenanthrene, 3-methyl-	- -	µg/kg								
Phenanthrene, 4-methyl-	- -	µg/kg								
Phenanthridine	- -	µg/kg								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg								
Phenylated naphthalene	- -	µg/kg								
Phthalic anhydride	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-602B 14 - 16 09/15/03 SSO-SPT5-15-LF	SEA-602B 18 - 20 09/15/03 SSO-SPT5-20-LF	SEA-602B 24 - 26 09/15/03 SSO-SPT5-25-LF	SEA-602B 30 - 32 09/15/03 SSO-SPT5-30-LF	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF
Propanoic acid, 3-mercapto-	- -	µg/kg								
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg								
Pyrene, 1-methyl-	- -	µg/kg								
Pyrene, 2-methyl-	- -	µg/kg								
Pyrene, 4-methyl-	- -	µg/kg								
Stigmast-4-en-3-one	- -	µg/kg								
Stigmasta-3,5-dien-7-one	- -	µg/kg								
Stigmasterol, 22,23-dihydro-	- -	µg/kg								
Substituted Benzene	- -	µg/kg								
Substituted Naphthalene	- -	µg/kg								
Substituted Naphthalene 1	- -	µg/kg								
Substituted Naphthalene 2	- -	µg/kg								
Substituted Naphthalene 3	- -	µg/kg								
Substituted Naphthalene 4	- -	µg/kg								
Substituted PAH isomer	- -	µg/kg								
Sulfur hexamer	- -	µg/kg								
Sulfur, mol. (S8)	- -	µg/kg								
Testosterone	- -	µg/kg								
Tetradecanal	- -	µg/kg								
Tetradecanoic acid	- -	µg/kg								
Tetradecanoic acid, ethyl ester	- -	µg/kg								
Tetradecanoic acid, methyl ester	- -	µg/kg								
Thiophene, 2-(Methylselenyl)	- -	µg/kg								
tri(2-Ethylhexyl) trimellitate	- -	µg/kg								
Tridecanoic acid	- -	µg/kg								
Triphenylene	- -	µg/kg								
Triphenylene, 2-methyl-	- -	µg/kg								
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg								
Vanillin	- -	µg/kg								
Vitamin E	- -	µg/kg								
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg								
Trichlorobiphenyls	- -	µg/kg								

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF	SEA-606 4 - 6 09/21/03 SSO-SPT8-5-NP	SEA-606 8 - 10 09/21/03 SSO-SPT8-10-NP	SEA-606 14 - 16 09/21/03 SSO-SPT8-15-NP
SVOC TICS										
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg								
.alpha.-Methylstyrene	- -	µg/kg								
.beta.-iso-Methyl ionone	- -	µg/kg								
[3,4:9,10]Dibenzpyrene	- -	µg/kg								
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg								
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg								
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg								
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg								
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg								
1,2,7,8-Debenzphenanthrene	- -	µg/kg								
1,2:4,5-Dibenzopyrene	- -	µg/kg								
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg								
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg								
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg								
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg								
10-Methylnonadecene	- -	µg/kg								
11H-Benzo[a]fluoren-11-one	- -	µg/kg								
11H-Benzo[a]fluorene	- -	µg/kg								
11H-Benzo[b]fluorene	- -	µg/kg								
13-Docosenamide, (Z)-	- -	µg/kg								
17-Pentatriacontene	- -	µg/kg								
1-Decene	- -	µg/kg								
1-Docosene	- -	µg/kg								
1-Dodecanol	- -	µg/kg								
1-Dodecene	- -	µg/kg								
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF	SEA-606 4 - 6 09/21/03 SSO-SPT8-5-NP	SEA-606 8 - 10 09/21/03 SSO-SPT8-10-NP	SEA-606 14 - 16 09/21/03 SSO-SPT8-15-NP
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg								
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								
1-Heneicosyl formate	- -	µg/kg								
1-Heptadecanol	- -	µg/kg								
1-Hexacosanol	- -	µg/kg								
1-Hexadecene	- -	µg/kg								
1H-Indene, 1-phenyl-	- -	µg/kg								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-phenyl-	- -	µg/kg								
1-Nonadecane	- -	µg/kg								
1-Nonadecanol	- -	µg/kg								
1-Nonene	- -	µg/kg								
1-Octadecanol	- -	µg/kg								
1-Pentadecene	- -	µg/kg								
1-Tridecanol	- -	µg/kg								
1-Tridecene	- -	µg/kg								
1-Undecanol	- -	µg/kg								
2 (3H)-Benzothiazolone	- -	µg/kg								
2',3,4-Trichlorobiphenyl	- -	µg/kg								
2,3,4-Trichlorobiphenyl	- -	µg/kg								
2,3-Dihydro-1-methylindene	- -	µg/kg								
2,4,6-Trichlorobiphenyl	- -	µg/kg								
2,4-Dichlorophenyl isocyanate	- -	µg/kg								
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								
2-Dodecanol	- -	µg/kg								
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg								
2-Mercaptobenzothiazole	- -	µg/kg								
2-Napthalenamine, n-phenyl	- -	µg/kg								
2-Pentadecanone	- -	µg/kg								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg								
2-Phenylnaphthalene	- -	µg/kg								
2-Propenoic acid, pentadecyl ester	- -	µg/kg								
2-Propenoic acid, tridecyl	- -	µg/kg								
2-Undecanol	- -	µg/kg								
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF	SEA-606 4 - 6 09/21/03 SSO-SPT8-5-NP	SEA-606 8 - 10 09/21/03 SSO-SPT8-10-NP	SEA-606 14 - 16 09/21/03 SSO-SPT8-15-NP
3,4:8,9-Dibenzopyrene	- -	µg/kg								
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg								
3,5-Dichlorophenyl isocyanate	- -	µg/kg								
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg								
3-Eicosene, (E)-	- -	µg/kg								
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg								
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg								
4H-Cyclopenta[def]phenanthrene	- -	µg/kg								
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg								
5,12-Napthacenedione	- -	µg/kg								
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg								
5-Eicosene, (E)-	- -	µg/kg								
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg								
7H-Benz[de]anthracen-7-one	- -	µg/kg								
7H-Benzo[C]fluorene	- -	µg/kg								
9,10-Anthracenedione	- -	µg/kg								
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg								
9,10-Dimethylanthracene	- -	µg/kg								
9-Hexacosene	- -	µg/kg								
9-Hexadecenoic acid	- -	µg/kg								
9H-Fluoren-9-one	- -	µg/kg								
9H-Fluorene, 1-methyl-	- -	µg/kg								
9H-Fluorene, 2-methyl-	- -	µg/kg								
9H-Fluorene, 9-methylene-	- -	µg/kg								
9-Octadecenamide, (Z)-	- -	µg/kg								
9-Octadecenoic acid, (E)-	- -	µg/kg								
Abieta-8,11,13-triene	- -	µg/kg								
Acridine	- -	µg/kg								
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg								
Anthracene, 1,4-dimethyl-	- -	µg/kg								
Anthracene, 1-methyl-	- -	µg/kg								
Anthracene, 2-methyl-	- -	µg/kg								
Anthracene, 9-Ethenyl-	- -	µg/kg								
Anthracene, 9-methyl-	- -	µg/kg								
Benz[a]anthracene, 10-methyl-	- -	µg/kg								
Benz[a]anthracene, 7-methyl-	- -	µg/kg								
Benz[a]anthracene, 8-methyl-	- -	µg/kg								
Benzaldehyde, 2-hydroxy-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF	SEA-606 4 - 6 09/21/03 SSO-SPT8-5-NP	SEA-606 8 - 10 09/21/03 SSO-SPT8-10-NP	SEA-606 14 - 16 09/21/03 SSO-SPT8-15-NP
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg								
Benzenamine, 4-methyl-2-nitro	- -	µg/kg								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg								
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg								
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg								
Benzene, 1,2,4-trimethyl-	- -	µg/kg								
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg								
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg								
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg								
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg								
Benzene, 1-ethyl-3-methyl-	- -	µg/kg								
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg								
Benzene, tert-butyl-	- -	µg/kg								
Benzeneacetic acid	- -	µg/kg								
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								
Benzenesulfonamide, 2-methyl-	- -	µg/kg								
Benzenesulfonamide, 4-methyl-	- -	µg/kg								
Benzo(e)pyrene	- -	µg/kg								
Benzo[b]chrysene	- -	µg/kg								
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								
Benzo[b]triphenylene	- -	µg/kg								
Benzo[c]phenanthrene	- -	µg/kg								
Benzo[f]quinoline	- -	µg/kg								
Benzo[ghi]fluoranthene	- -	µg/kg								
Benzo[h]quinoline	- -	µg/kg								
Benzo[j]fluoranthene	- -	µg/kg								
Benzo[kl]xanthene	- -	µg/kg								
Benzocycloheptatriene	- -	µg/kg								
Benzoic acid	- -	µg/kg								
Benzothiazole	- -	µg/kg								
Benzothiazole, 2-(methylthio)-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF	SEA-606 4 - 6 09/21/03 SSO-SPT8-5-NP	SEA-606 8 - 10 09/21/03 SSO-SPT8-10-NP	SEA-606 14 - 16 09/21/03 SSO-SPT8-15-NP
beta-Sitosterol	- -	µg/kg								
Bicyclohexyl, 4-phenyl-	- -	µg/kg								
Butane, 2-methoxy-2-methyl-	- -	µg/kg								
Butylated hydroxytoluene	- -	µg/kg								
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg								
Cholesta-3,5-dien-7-one	- -	µg/kg								
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg								
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg								
Cholesterol	- -	µg/kg								
Chrysene, 1-methyl-	- -	µg/kg								
Chrysene, 3-methyl-	- -	µg/kg								
Chrysene, 4-methyl-	- -	µg/kg								
Chrysene, 5-methyl-	- -	µg/kg								
Chrysene, 6-methyl-	- -	µg/kg								
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg								
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								
Clorophene	- -	µg/kg								
Coprostan-3-one	- -	µg/kg								
Cyclohexane, isothiocyanato-	- -	µg/kg								
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg								
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								
Cyclopenta(def)phenanthrenone	- -	µg/kg								
Cyclopenta[cd]pyrene	- -	µg/kg								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg								
Cyclopentasiloxane, decamethyl-	- -	µg/kg								
Cyclopropanenonanoic Acid, 2	- -	µg/kg								
D:C-friedoolean-8-en-3-one	- -	µg/kg								
dapsone	- -	µg/kg								
Decanoic Acid	- -	µg/kg								
D-Friedoolean-14-en-3-one	- -	µg/kg								
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								
Dibenz(a,e)aceanthrylene	- -	µg/kg								
Dibenzo[def,mno]chrysene	- -	µg/kg								
Dibenzofuran, 4-methyl-	- -	µg/kg								
Dibenzothiophene	- -	µg/kg								
Dibenzothiophene, 3-methyl	- -	µg/kg								
Diethyltoluamide	- -	µg/kg								
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg								
Diphenyl ether	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF	SEA-606 4 - 6 09/21/03 SSO-SPT8-5-NP	SEA-606 8 - 10 09/21/03 SSO-SPT8-10-NP	SEA-606 14 - 16 09/21/03 SSO-SPT8-15-NP
D-Limonene	- -	µg/kg								
Dodecanoic acid	- -	µg/kg								
Dodecanoic acid, methyl ester	- -	µg/kg								
Dodecanoic acid, undecyl ester	- -	µg/kg								
Dodecyl acrylate	- -	µg/kg								
Dotriacontane	- -	µg/kg								
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg								
Fluoranthene, 2-methyl-	- -	µg/kg								
Gamma-Sitosterol	- -	µg/kg								
Hexadecanal	- -	µg/kg								
Hexadecanoic acid	- -	µg/kg								
Hexadecanoic acid, butyl ester	- -	µg/kg								
Hexadecanoic acid, ethyl ester	- -	µg/kg								
Indene	- -	µg/kg								
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg								
Lup-20-(29)-en-3-one	- -	µg/kg								
Manool	- -	µg/kg								
matrine	- -	µg/kg								
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg								
Methylated Naphthalene	- -	µg/kg								
Methylated Phenol	- -	µg/kg								
Methyldibenzothiophene	- -	µg/kg								
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg								
naphthalene, 1,2,3-trimethyl	- -	µg/kg								
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg								
Naphthalene, 1,2-Dimethyl-	- -	µg/kg								
Naphthalene, 1,3-dimethyl-	- -	µg/kg								
Naphthalene, 1,4-dimethyl-	- -	µg/kg								
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg								
Naphthalene, 1-ethyl-	- -	µg/kg								
Naphthalene, 1-methyl-	- -	µg/kg								
Naphthalene, 1-phenyl-	- -	µg/kg								
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg								
Naphthalene, 2,3-dimethyl-	- -	µg/kg								
Naphthalene, 2,6-dimethyl-	- -	µg/kg								
Naphthalene, 2,7-dimethyl-	- -	µg/kg								
Naphthalene, 2-Ethyl-	- -	µg/kg								
Naphthalene, 2-phenyl-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF	SEA-606 4 - 6 09/21/03 SSO-SPT8-5-NP	SEA-606 8 - 10 09/21/03 SSO-SPT8-10-NP	SEA-606 14 - 16 09/21/03 SSO-SPT8-15-NP
Naphthalene, decahydro-, trans-	- -	µg/kg								
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg								
Naphtho[2,3-b]thiophene	- -	µg/kg								
Nonadecane, 9-Methyl-	- -	µg/kg								
Octadecanal	- -	µg/kg								
Octadecanoic acid	- -	µg/kg								
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								
Octadecanoic acid, butyl ester	- -	µg/kg								
Olean-12-ene	- -	µg/kg								
Organic acid	- -	µg/kg								
Organic acid 1	- -	µg/kg								
Organic acid 2	- -	µg/kg								
Organic acid 3	- -	µg/kg								
Organic acid 4	- -	µg/kg								
Organic acid 5	- -	µg/kg								
o-Terphenyl	- -	µg/kg								
Oxirane, hexadecyl-	- -	µg/kg								
p-Dicyclohexylbenzene	- -	µg/kg								
Pentadecanal-	- -	µg/kg								
Pentadecanoic acid	- -	µg/kg								
Pentasiloxane, dodecamethyl-	- -	µg/kg								
Perylene	- -	µg/kg								
Perylene isomer C20H12	- -	µg/kg								
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								
Phenanthrene, 1-methyl-	- -	µg/kg								
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg								
Phenanthrene, 2,3-dimethyl-	- -	µg/kg								
Phenanthrene, 2,5-dimethyl-	- -	µg/kg								
Phenanthrene, 2,7-dimethyl-	- -	µg/kg								
Phenanthrene, 2-methyl-	- -	µg/kg								
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg								
Phenanthrene, 3,6-dimethyl-	- -	µg/kg								
Phenanthrene, 3-methyl-	- -	µg/kg								
Phenanthrene, 4-methyl-	- -	µg/kg								
Phenanthridine	- -	µg/kg								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg								
Phenylated naphthalene	- -	µg/kg								
Phthalic anhydride	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF	SEA-606 4 - 6 09/21/03 SSO-SPT8-5-NP	SEA-606 8 - 10 09/21/03 SSO-SPT8-10-NP	SEA-606 14 - 16 09/21/03 SSO-SPT8-15-NP
Propanoic acid, 3-mercapto-	- -	µg/kg								
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg								
Pyrene, 1-methyl-	- -	µg/kg								
Pyrene, 2-methyl-	- -	µg/kg								
Pyrene, 4-methyl-	- -	µg/kg								
Stigmast-4-en-3-one	- -	µg/kg								
Stigmasta-3,5-dien-7-one	- -	µg/kg								
Stigmasterol, 22,23-dihydro-	- -	µg/kg								
Substituted Benzene	- -	µg/kg								
Substituted Naphthalene	- -	µg/kg								
Substituted Naphthalene 1	- -	µg/kg								
Substituted Naphthalene 2	- -	µg/kg								
Substituted Naphthalene 3	- -	µg/kg								
Substituted Naphthalene 4	- -	µg/kg								
Substituted PAH isomer	- -	µg/kg								
Sulfur hexamer	- -	µg/kg								
Sulfur, mol. (S8)	- -	µg/kg								
Testosterone	- -	µg/kg								
Tetradecanal	- -	µg/kg								
Tetradecanoic acid	- -	µg/kg								
Tetradecanoic acid, ethyl ester	- -	µg/kg								
Tetradecanoic acid, methyl ester	- -	µg/kg								
Thiophene, 2-(Methylselenyl)	- -	µg/kg								
tri(2-Ethylhexyl) trimellitate	- -	µg/kg								
Tridecanoic acid	- -	µg/kg								
Triphenylene	- -	µg/kg								
Triphenylene, 2-methyl-	- -	µg/kg								
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg								
Vanillin	- -	µg/kg								
Vitamin E	- -	µg/kg								
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg								
Trichlorobiphenyls	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-607 4 - 6 09/19/03 SSO-SPT6-5-UI	SEA-607 10 - 12 09/19/03 SSO-SPT6-10-UI	SEA-607 14 - 16 09/19/03 SSO-SPT6-15-UI	SEA-608 4 - 6 09/19/03 SSO-SPT7-5-UI	SEA-608 8 - 10 09/19/03 SSO-SPT7-10-UI	SEA-608 14 - 16 09/19/03 SSO-SPT7-15-UI	SO-001-BG 0 - 1 08/18/03 SO-001-BG	SO-002-BG 0 - 1 08/18/03 SO-002-BG
SVOC TICS										
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg								
.alpha.-Methylstyrene	- -	µg/kg								
.beta.-iso-Methyl ionone	- -	µg/kg								
[3,4:9,10]Dibenzpyrene	- -	µg/kg								
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg								
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg								
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg								
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg								
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg								
1,2,7,8-Debenzphenanthrene	- -	µg/kg								
1,2:4,5-Dibenzopyrene	- -	µg/kg								
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg								
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg								
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg								
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg								
10-Methylnonadecene	- -	µg/kg								
11H-Benzo[a]fluoren-11-one	- -	µg/kg								
11H-Benzo[a]fluorene	- -	µg/kg								
11H-Benzo[b]fluorene	- -	µg/kg							**110 NJ**	
13-Docosenamide, (Z)-	- -	µg/kg								
17-Pentatriacontene	- -	µg/kg								
1-Decene	- -	µg/kg							**350 NJ**	
1-Docosene	- -	µg/kg								
1-Dodecanol	- -	µg/kg								**410 NJ**
1-Dodecene	- -	µg/kg								
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-607 4 - 6 09/19/03 SSO-SPT6-5-UI	SEA-607 10 - 12 09/19/03 SSO-SPT6-10-UI	SEA-607 14 - 16 09/19/03 SSO-SPT6-15-UI	SEA-608 4 - 6 09/19/03 SSO-SPT7-5-UI	SEA-608 8 - 10 09/19/03 SSO-SPT7-10-UI	SEA-608 14 - 16 09/19/03 SSO-SPT7-15-UI	SO-001-BG 0 - 1 08/18/03 SO-001-BG	SO-002-BG 0 - 1 08/18/03 SO-002-BG
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg								
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								
1-Heneicosyl formate	- -	µg/kg								
1-Heptadecanol	- -	µg/kg								
1-Hexacosanol	- -	µg/kg								
1-Hexadecene	- -	µg/kg								
1H-Indene, 1-phenyl-	- -	µg/kg								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-phenyl-	- -	µg/kg								
1-Nonadecane	- -	µg/kg								
1-Nonadecanol	- -	µg/kg								
1-Nonene	- -	µg/kg								
1-Octadecanol	- -	µg/kg								
1-Pentadecene	- -	µg/kg								
1-Tridecanol	- -	µg/kg								
1-Tridecene	- -	µg/kg								
1-Undecanol	- -	µg/kg								
2 (3H)-Benzothiazolone	- -	µg/kg								
2',3,4-Trichlorobiphenyl	- -	µg/kg								
2,3,4-Trichlorobiphenyl	- -	µg/kg								
2,3-Dihydro-1-methylindene	- -	µg/kg								
2,4,6-Trichlorobiphenyl	- -	µg/kg								
2,4-Dichlorophenyl isocyanate	- -	µg/kg								
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								
2-Dodecanol	- -	µg/kg								
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg								
2-Mercaptobenzothiazole	- -	µg/kg								
2-Napthalenamine, n-phenyl	- -	µg/kg								
2-Pentadecanone	- -	µg/kg								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg								
2-Phenylnaphthalene	- -	µg/kg								
2-Propenoic acid, pentadecyl ester	- -	µg/kg								
2-Propenoic acid, tridecyl	- -	µg/kg								
2-Undecanol	- -	µg/kg								
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-607 4 - 6 09/19/03 SSO-SPT6-5-UI	SEA-607 10 - 12 09/19/03 SSO-SPT6-10-UI	SEA-607 14 - 16 09/19/03 SSO-SPT6-15-UI	SEA-608 4 - 6 09/19/03 SSO-SPT7-5-UI	SEA-608 8 - 10 09/19/03 SSO-SPT7-10-UI	SEA-608 14 - 16 09/19/03 SSO-SPT7-15-UI	SO-001-BG 0 - 1 08/18/03 SO-001-BG	SO-002-BG 0 - 1 08/18/03 SO-002-BG
3,4:8,9-Dibenzopyrene	- -	µg/kg								
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg								
3,5-Dichlorophenyl isocyanate	- -	µg/kg								
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg								
3-Eicosene, (E)-	- -	µg/kg								
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg								
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg								
4H-Cyclopenta[def]phenanthrene	- -	µg/kg							**120 NJ**	
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg								
5,12-Napthacenedione	- -	µg/kg								
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg								
5-Eicosene, (E)-	- -	µg/kg								
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg								
7H-Benz[de]anthracen-7-one	- -	µg/kg								
7H-Benzo[C]fluorene	- -	µg/kg								
9,10-Anthracenedione	- -	µg/kg								
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg								
9,10-Dimethylanthracene	- -	µg/kg								
9-Hexacosene	- -	µg/kg								
9-Hexadecenoic acid	- -	µg/kg								
9H-Fluoren-9-one	- -	µg/kg								
9H-Fluorene, 1-methyl-	- -	µg/kg								
9H-Fluorene, 2-methyl-	- -	µg/kg								
9H-Fluorene, 9-methylene-	- -	µg/kg								
9-Octadecenamide, (Z)-	- -	µg/kg							**190 NJ**	
9-Octadecenoic acid, (E)-	- -	µg/kg								
Abieta-8,11,13-triene	- -	µg/kg								
Acridine	- -	µg/kg								
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg								
Anthracene, 1,4-dimethyl-	- -	µg/kg								
Anthracene, 1-methyl-	- -	µg/kg								
Anthracene, 2-methyl-	- -	µg/kg								
Anthracene, 9-Ethenyl-	- -	µg/kg								
Anthracene, 9-methyl-	- -	µg/kg								
Benz[a]anthracene, 10-methyl-	- -	µg/kg								
Benz[a]anthracene, 7-methyl-	- -	µg/kg								
Benz[a]anthracene, 8-methyl-	- -	µg/kg								
Benzaldehyde, 2-hydroxy-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-607 4 - 6 09/19/03 SSO-SPT6-5-UI	SEA-607 10 - 12 09/19/03 SSO-SPT6-10-UI	SEA-607 14 - 16 09/19/03 SSO-SPT6-15-UI	SEA-608 4 - 6 09/19/03 SSO-SPT7-5-UI	SEA-608 8 - 10 09/19/03 SSO-SPT7-10-UI	SEA-608 14 - 16 09/19/03 SSO-SPT7-15-UI	SO-001-BG 0 - 1 08/18/03 SO-001-BG	SO-002-BG 0 - 1 08/18/03 SO-002-BG
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg								
Benzenamine, 4-methyl-2-nitro	- -	µg/kg								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg								
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg								
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg								
Benzene, 1,2,4-trimethyl-	- -	µg/kg								
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg								
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg								
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg								
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg								
Benzene, 1-ethyl-3-methyl-	- -	µg/kg								
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg								
Benzene, tert-butyl-	- -	µg/kg								
Benzeneacetic acid	- -	µg/kg								
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								
Benzenesulfonamide, 2-methyl-	- -	µg/kg								
Benzenesulfonamide, 4-methyl-	- -	µg/kg								
Benzo(e)pyrene	- -	µg/kg							**300 NJ**	**420 NJ**
Benzo[b]chrysene	- -	µg/kg								
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								
Benzo[b]triphenylene	- -	µg/kg								
Benzo[c]phenanthrene	- -	µg/kg								
Benzo[f]quinoline	- -	µg/kg								
Benzo[ghi]fluoranthene	- -	µg/kg								
Benzo[h]quinoline	- -	µg/kg								
Benzo[j]fluoranthene	- -	µg/kg								
Benzo[kl]xanthene	- -	µg/kg								
Benzocycloheptatriene	- -	µg/kg								
Benzoic acid	- -	µg/kg								**160 NJ**
Benzothiazole	- -	µg/kg								
Benzothiazole, 2-(methylthio)-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-607 4 - 6 09/19/03 SSO-SPT6-5-UI	SEA-607 10 - 12 09/19/03 SSO-SPT6-10-UI	SEA-607 14 - 16 09/19/03 SSO-SPT6-15-UI	SEA-608 4 - 6 09/19/03 SSO-SPT7-5-UI	SEA-608 8 - 10 09/19/03 SSO-SPT7-10-UI	SEA-608 14 - 16 09/19/03 SSO-SPT7-15-UI	SO-001-BG 0 - 1 08/18/03 SO-001-BG	SO-002-BG 0 - 1 08/18/03 SO-002-BG
beta-Sitosterol	- -	µg/kg								
Bicyclohexyl, 4-phenyl-	- -	µg/kg								
Butane, 2-methoxy-2-methyl-	- -	µg/kg								
Butylated hydroxytoluene	- -	µg/kg								
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg								
Cholesta-3,5-dien-7-one	- -	µg/kg								
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg								
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg								
Cholesterol	- -	µg/kg								
Chrysene, 1-methyl-	- -	µg/kg								
Chrysene, 3-methyl-	- -	µg/kg								
Chrysene, 4-methyl-	- -	µg/kg								
Chrysene, 5-methyl-	- -	µg/kg								
Chrysene, 6-methyl-	- -	µg/kg								
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg								
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								
Clorophene	- -	µg/kg								
Coprostan-3-one	- -	µg/kg								
Cyclohexane, isothiocyanato-	- -	µg/kg								
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg								
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								
Cyclopenta(def)phenanthrenone	- -	µg/kg								
Cyclopenta[cd]pyrene	- -	µg/kg								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg								
Cyclopentasiloxane, decamethyl-	- -	µg/kg								
Cyclopropanenonanoic Acid, 2	- -	µg/kg								
D:C-friedoolean-8-en-3-one	- -	µg/kg								
dapsone	- -	µg/kg								
Decanoic Acid	- -	µg/kg								
D-Friedoolean-14-en-3-one	- -	µg/kg								
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								
Dibenz(a,e)aceanthrylene	- -	µg/kg								
Dibenzo[def,mno]chrysene	- -	µg/kg								
Dibenzofuran, 4-methyl-	- -	µg/kg								
Dibenzothiophene	- -	µg/kg								
Dibenzothiophene, 3-methyl	- -	µg/kg								
Diethyltoluamide	- -	µg/kg								
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg								
Diphenyl ether	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-607 4 - 6 09/19/03 SSO-SPT6-5-UI	SEA-607 10 - 12 09/19/03 SSO-SPT6-10-UI	SEA-607 14 - 16 09/19/03 SSO-SPT6-15-UI	SEA-608 4 - 6 09/19/03 SSO-SPT7-5-UI	SEA-608 8 - 10 09/19/03 SSO-SPT7-10-UI	SEA-608 14 - 16 09/19/03 SSO-SPT7-15-UI	SO-001-BG 0 - 1 08/18/03 SO-001-BG	SO-002-BG 0 - 1 08/18/03 SO-002-BG
D-Limonene	- -	µg/kg								
Dodecanoic acid	- -	µg/kg								
Dodecanoic acid, methyl ester	- -	µg/kg								
Dodecanoic acid, undecyl ester	- -	µg/kg								
Dodecyl acrylate	- -	µg/kg								
Dotriacontane	- -	µg/kg								
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg								
Fluoranthene, 2-methyl-	- -	µg/kg								
Gamma-Sitosterol	- -	µg/kg								
Hexadecanal	- -	µg/kg								
Hexadecanoic acid	- -	µg/kg							**200 NJ**	**360 NJ**
Hexadecanoic acid, butyl ester	- -	µg/kg								
Hexadecanoic acid, ethyl ester	- -	µg/kg								
Indene	- -	µg/kg								
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg								
Lup-20-(29)-en-3-one	- -	µg/kg								
Manool	- -	µg/kg								
matrine	- -	µg/kg								
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg								
Methylated Naphthalene	- -	µg/kg								
Methylated Phenol	- -	µg/kg								
Methyldibenzothiophene	- -	µg/kg								
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg							**2,200 NJ**	
naphthalene, 1,2,3-trimethyl	- -	µg/kg								
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg								
Naphthalene, 1,2-Dimethyl-	- -	µg/kg								
Naphthalene, 1,3-dimethyl-	- -	µg/kg								
Naphthalene, 1,4-dimethyl-	- -	µg/kg								
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg								
Naphthalene, 1-ethyl-	- -	µg/kg								
Naphthalene, 1-methyl-	- -	µg/kg								
Naphthalene, 1-phenyl-	- -	µg/kg								
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg								
Naphthalene, 2,3-dimethyl-	- -	µg/kg								
Naphthalene, 2,6-dimethyl-	- -	µg/kg								
Naphthalene, 2,7-dimethyl-	- -	µg/kg								
Naphthalene, 2-Ethyl-	- -	µg/kg								
Naphthalene, 2-phenyl-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-607 4 - 6 09/19/03 SSO-SPT6-5-UI	SEA-607 10 - 12 09/19/03 SSO-SPT6-10-UI	SEA-607 14 - 16 09/19/03 SSO-SPT6-15-UI	SEA-608 4 - 6 09/19/03 SSO-SPT7-5-UI	SEA-608 8 - 10 09/19/03 SSO-SPT7-10-UI	SEA-608 14 - 16 09/19/03 SSO-SPT7-15-UI	SO-001-BG 0 - 1 08/18/03 SO-001-BG	SO-002-BG 0 - 1 08/18/03 SO-002-BG
Naphthalene, decahydro-, trans-	- -	µg/kg								
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg								
Naphtho[2,3-b]thiophene	- -	µg/kg								
Nonadecane, 9-Methyl-	- -	µg/kg								
Octadecanal	- -	µg/kg							**390 NJ**	
Octadecanoic acid	- -	µg/kg								**120 NJ**
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								
Octadecanoic acid, butyl ester	- -	µg/kg							**280 J**	**470 NJ**
Olean-12-ene	- -	µg/kg								
Organic acid	- -	µg/kg								
Organic acid 1	- -	µg/kg								
Organic acid 2	- -	µg/kg								
Organic acid 3	- -	µg/kg								
Organic acid 4	- -	µg/kg								
Organic acid 5	- -	µg/kg								
o-Terphenyl	- -	µg/kg								
Oxirane, hexadecyl-	- -	µg/kg								
p-Dicyclohexylbenzene	- -	µg/kg								
Pentadecanal-	- -	µg/kg								
Pentadecanoic acid	- -	µg/kg								
Pentasiloxane, dodecamethyl-	- -	µg/kg								
Perylene	- -	µg/kg							**310 NJ**	**510 NJ**
Perylene isomer C20H12	- -	µg/kg								
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								
Phenanthrene, 1-methyl-	- -	µg/kg								
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg								
Phenanthrene, 2,3-dimethyl-	- -	µg/kg								
Phenanthrene, 2,5-dimethyl-	- -	µg/kg								
Phenanthrene, 2,7-dimethyl-	- -	µg/kg								
Phenanthrene, 2-methyl-	- -	µg/kg								
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg								
Phenanthrene, 3,6-dimethyl-	- -	µg/kg								
Phenanthrene, 3-methyl-	- -	µg/kg								
Phenanthrene, 4-methyl-	- -	µg/kg								
Phenanthridine	- -	µg/kg								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg								
Phenylated naphthalene	- -	µg/kg								
Phthalic anhydride	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-607 4 - 6 09/19/03 SSO-SPT6-5-UI	SEA-607 10 - 12 09/19/03 SSO-SPT6-10-UI	SEA-607 14 - 16 09/19/03 SSO-SPT6-15-UI	SEA-608 4 - 6 09/19/03 SSO-SPT7-5-UI	SEA-608 8 - 10 09/19/03 SSO-SPT7-10-UI	SEA-608 14 - 16 09/19/03 SSO-SPT7-15-UI	SO-001-BG 0 - 1 08/18/03 SO-001-BG	SO-002-BG 0 - 1 08/18/03 SO-002-BG
Propanoic acid, 3-mercapto-	- -	µg/kg								
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg								
Pyrene, 1-methyl-	- -	µg/kg								
Pyrene, 2-methyl-	- -	µg/kg								
Pyrene, 4-methyl-	- -	µg/kg								
Stigmast-4-en-3-one	- -	µg/kg								
Stigmasta-3,5-dien-7-one	- -	µg/kg								
Stigmasterol, 22,23-dihydro-	- -	µg/kg								
Substituted Benzene	- -	µg/kg								
Substituted Naphthalene	- -	µg/kg								
Substituted Naphthalene 1	- -	µg/kg								
Substituted Naphthalene 2	- -	µg/kg								
Substituted Naphthalene 3	- -	µg/kg								
Substituted Naphthalene 4	- -	µg/kg								
Substituted PAH isomer	- -	µg/kg								
Sulfur hexamer	- -	µg/kg								
Sulfur, mol. (S8)	- -	µg/kg								
Testosterone	- -	µg/kg								
Tetradecanal	- -	µg/kg								
Tetradecanoic acid	- -	µg/kg								
Tetradecanoic acid, ethyl ester	- -	µg/kg								
Tetradecanoic acid, methyl ester	- -	µg/kg								
Thiophene, 2-(Methylselenyl)	- -	µg/kg								
tri(2-Ethylhexyl) trimellitate	- -	µg/kg								
Tridecanoic acid	- -	µg/kg								
Triphenylene	- -	µg/kg								
Triphenylene, 2-methyl-	- -	µg/kg								
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg								
Vanillin	- -	µg/kg								**94 NJ**
Vitamin E	- -	µg/kg								
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg								
Trichlorobiphenyls	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-003-BG 0 - 1 08/18/03 SO-003-BG	SO-004-BG 0 - 1 08/18/03 SO-004-BG	SO-005-BG 0 - 1 08/18/03 SO-005-BG	SO-006-UI 0 - 1 08/19/03 SO-006-UI	SO-007-UI 0 - 1 08/19/03 SO-007-UI	SO-008-NP 0 - 1 08/19/03 SO-008-NP	SO-009-NP 0 - 1 08/19/03 SO-009-NP	SO-010-UI 0 - 1 08/20/03 SO-010-UI	SO-011-UI 0 - 1 08/20/03 SO-011-UI	SO-012-UI 0 - 1 08/20/03 SO-012-UI
SVOC TICS												
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg										
.alpha.-Methylstyrene	- -	µg/kg										
.beta.-iso-Methyl ionone	- -	µg/kg										
[3,4:9,10]Dibenzpyrene	- -	µg/kg										
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg										
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg										
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg										
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg										
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg										
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg	**390 NJ**							**470 NJD**		
1,2,7,8-Debenzphenanthrene	- -	µg/kg										
1,2:4,5-Dibenzopyrene	- -	µg/kg										
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg										
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg							**140 NJ**			
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg										
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg							**1,200 NJ**			
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg										
10-Methylnonadecene	- -	µg/kg										
11H-Benzo[a]fluoren-11-one	- -	µg/kg										
11H-Benzo[a]fluorene	- -	µg/kg			**230 NJ**							
11H-Benzo[b]fluorene	- -	µg/kg	**110 NJ**	**250 NJ [190 NJ]**				**210 NJ**	**400 NJD**		**97 NJ**	
13-Docosenamide, (Z)-	- -	µg/kg										
17-Pentatriacontene	- -	µg/kg										
1-Decene	- -	µg/kg			**440 NJ**		**260 NJ**					
1-Docosene	- -	µg/kg										
1-Dodecanol	- -	µg/kg							**440 NJ**	**510 NJD**		**380 NJ**
1-Dodecene	- -	µg/kg									**730 NJ**	
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-003-BG 0 - 1 08/18/03 SO-003-BG	SO-004-BG 0 - 1 08/18/03 SO-004-BG	SO-005-BG 0 - 1 08/18/03 SO-005-BG	SO-006-UI 0 - 1 08/19/03 SO-006-UI	SO-007-UI 0 - 1 08/19/03 SO-007-UI	SO-008-NP 0 - 1 08/19/03 SO-008-NP	SO-009-NP 0 - 1 08/19/03 SO-009-NP	SO-010-UI 0 - 1 08/20/03 SO-010-UI	SO-011-UI 0 - 1 08/20/03 SO-011-UI	SO-012-UI 0 - 1 08/20/03 SO-012-UI
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg										
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg										
1-Heneicosyl formate	- -	µg/kg										
1-Heptadecanol	- -	µg/kg										
1-Hexacosanol	- -	µg/kg										
1-Hexadecene	- -	µg/kg										
1H-Indene, 1-phenyl-	- -	µg/kg		**130 NJ**								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-phenyl-	- -	µg/kg			**270 NJ**					**420 NJD**		
1-Nonadecane	- -	µg/kg										
1-Nonadecanol	- -	µg/kg										
1-Nonene	- -	µg/kg										
1-Octadecanol	- -	µg/kg										
1-Pentadecene	- -	µg/kg						**400 NJ**				
1-Tridecanol	- -	µg/kg						**410 NJD**				
1-Tridecene	- -	µg/kg										
1-Undecanol	- -	µg/kg							**410 NJD**		**350 NJ**	
2 (3H)-Benzothiazolone	- -	µg/kg										
2',3,4-Trichlorobiphenyl	- -	µg/kg										
2,3,4-Trichlorobiphenyl	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2,4,6-Trichlorobiphenyl	- -	µg/kg										
2,4-Dichlorophenyl isocyanate	- -	µg/kg										
28-Nor-17.alpha.(H)-hopane	- -	µg/kg										
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg										
2-Dodecanol	- -	µg/kg										
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg										
2-Mercaptobenzothiazole	- -	µg/kg									**180 NJ**	
2-Napthalenamine, n-phenyl	- -	µg/kg										
2-Pentadecanone	- -	µg/kg										
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg										
2-Phenylnaphthalene	- -	µg/kg	**110 NJ**	**140 NJ [140 NJ]**	**160 NJ**		**200 NJ**	**140 NJ**	**230 NJD**		**77 NJ**	
2-Propenoic acid, pentadecyl ester	- -	µg/kg										
2-Propenoic acid, tridecyl	- -	µg/kg										
2-Undecanol	- -	µg/kg										
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-003-BG 0 - 1 08/18/03 SO-003-BG	SO-004-BG 0 - 1 08/18/03 SO-004-BG	SO-005-BG 0 - 1 08/18/03 SO-005-BG	SO-006-UI 0 - 1 08/19/03 SO-006-UI	SO-007-UI 0 - 1 08/19/03 SO-007-UI	SO-008-NP 0 - 1 08/19/03 SO-008-NP	SO-009-NP 0 - 1 08/19/03 SO-009-NP	SO-010-UI 0 - 1 08/20/03 SO-010-UI	SO-011-UI 0 - 1 08/20/03 SO-011-UI	SO-012-UI 0 - 1 08/20/03 SO-012-UI
3,4:8,9-Dibenzopyrene	- -	µg/kg										
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg										
3,5-Dichlorophenyl isocyanate	- -	µg/kg										
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg										
3-Eicosene, (E)-	- -	µg/kg										
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg										
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg										
4H-Cyclopenta[def]phenanthrene	- -	µg/kg			**190 NJ**		**350 NJ**		**280 NJ**	**430 NJ**	**180 NJ**	
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									**110 NJ**	
5,12-Napthacenedione	- -	µg/kg										
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg										
5-Eicosene, (E)-	- -	µg/kg										
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg										
7H-Benz[de]anthracen-7-one	- -	µg/kg		**79 NJ**		**490 NJD**						
7H-Benzo[C]fluorene	- -	µg/kg										
9,10-Anthracenedione	- -	µg/kg	**100 NJ**	**110 NJ [140 NJ]**	**170 NJ**		**240 NJ**	**510 NJD**	**170 NJD**	**250 NJD**	**92 NJ**	
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg										
9,10-Dimethylanthracene	- -	µg/kg	**130 NJ**	**180 NJ**	**180 NJ**						**86 NJ**	
9-Hexacosene	- -	µg/kg										
9-Hexadecenoic acid	- -	µg/kg										
9H-Fluoren-9-one	- -	µg/kg					**180 NJ**	**140 NJ**	**120 NJ**	**250 NJ**	**80 NJ**	
9H-Fluorene, 1-methyl-	- -	µg/kg										
9H-Fluorene, 2-methyl-	- -	µg/kg										
9H-Fluorene, 9-methylene-	- -	µg/kg										
9-Octadecenamide, (Z)-	- -	µg/kg										
9-Octadecenoic acid, (E)-	- -	µg/kg										
Abieta-8,11,13-triene	- -	µg/kg										
Acridine	- -	µg/kg						**99 NJ**				
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg										
Anthracene, 1,4-dimethyl-	- -	µg/kg										
Anthracene, 1-methyl-	- -	µg/kg	**120 NJ**		**160 NJ**	**110 NJ**						
Anthracene, 2-methyl-	- -	µg/kg	**180 NJ**	**250 NJ**								
Anthracene, 9-Ethenyl-	- -	µg/kg										
Anthracene, 9-methyl-	- -	µg/kg			**230 NJ**					**430 NJ**		
Benz[a]anthracene, 10-methyl-	- -	µg/kg										
Benz[a]anthracene, 7-methyl-	- -	µg/kg										
Benz[a]anthracene, 8-methyl-	- -	µg/kg										
Benzaldehyde, 2-hydroxy-	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-003-BG 0 - 1 08/18/03 SO-003-BG	SO-004-BG 0 - 1 08/18/03 SO-004-BG	SO-005-BG 0 - 1 08/18/03 SO-005-BG	SO-006-UI 0 - 1 08/19/03 SO-006-UI	SO-007-UI 0 - 1 08/19/03 SO-007-UI	SO-008-NP 0 - 1 08/19/03 SO-008-NP	SO-009-NP 0 - 1 08/19/03 SO-009-NP	SO-010-UI 0 - 1 08/20/03 SO-010-UI	SO-011-UI 0 - 1 08/20/03 SO-011-UI	SO-012-UI 0 - 1 08/20/03 SO-012-UI
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg										
Benzenamine, 4-methyl-2-nitro	- -	µg/kg										
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg										
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg		**170 NJ**	**140 NJ**							
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg										
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg										
Benzene, 1,2,4-trimethyl-	- -	µg/kg										
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg										
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg										
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg						**110 NJ**				
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg										
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg										
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg										
Benzene, tert-butyl-	- -	µg/kg										
Benzeneacetic acid	- -	µg/kg										
Benzenemethanol, α,α-dimethyl-	- -	µg/kg										
Benzenesulfonamide, 2-methyl-	- -	µg/kg										
Benzenesulfonamide, 4-methyl-	- -	µg/kg										
Benzo(e)pyrene	- -	µg/kg	**600 NJ**	**1,300 NJ [1,200 NJ]**	**1,200 NJ**	**620 NJD**		**1,500 NJD**	**1,900 NJD**		**1,600 NJ**	
Benzo[b]chrysene	- -	µg/kg										
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg										
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg			**120 NJ**							
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg										
Benzo[b]triphenylene	- -	µg/kg										
Benzo[c]phenanthrene	- -	µg/kg										
Benzo[f]quinoline	- -	µg/kg										
Benzo[ghi]fluoranthene	- -	µg/kg					**1,300 NJD**					
Benzo[h]quinoline	- -	µg/kg										
Benzo[j]fluoranthene	- -	µg/kg										
Benzo[kl]xanthene	- -	µg/kg										
Benzocycloheptatriene	- -	µg/kg										
Benzoic acid	- -	µg/kg										
Benzothiazole	- -	µg/kg									**190 NJ**	
Benzothiazole, 2-(methylthio)-	- -	µg/kg									**110 NJ**	

TABLE 4-15
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Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-003-BG 0 - 1 08/18/03 SO-003-BG	SO-004-BG 0 - 1 08/18/03 SO-004-BG	SO-005-BG 0 - 1 08/18/03 SO-005-BG	SO-006-UI 0 - 1 08/19/03 SO-006-UI	SO-007-UI 0 - 1 08/19/03 SO-007-UI	SO-008-NP 0 - 1 08/19/03 SO-008-NP	SO-009-NP 0 - 1 08/19/03 SO-009-NP	SO-010-UI 0 - 1 08/20/03 SO-010-UI	SO-011-UI 0 - 1 08/20/03 SO-011-UI	SO-012-UI 0 - 1 08/20/03 SO-012-UI
beta-Sitosterol	- -	µg/kg										
Bicyclohexyl, 4-phenyl-	- -	µg/kg										
Butane, 2-methoxy-2-methyl-	- -	µg/kg										
Butylated hydroxytoluene	- -	µg/kg										
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg										
Cholesta-3,5-dien-7-one	- -	µg/kg										
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg										
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg										
Cholesterol	- -	µg/kg										
Chrysene, 1-methyl-	- -	µg/kg										
Chrysene, 3-methyl-	- -	µg/kg										
Chrysene, 4-methyl-	- -	µg/kg										
Chrysene, 5-methyl-	- -	µg/kg										
Chrysene, 6-methyl-	- -	µg/kg										
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg										**190 NJ**
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg										
Clorophene	- -	µg/kg										
Coprostan-3-one	- -	µg/kg										
Cyclohexane, isothiocyanato-	- -	µg/kg										
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg										
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg										
Cyclopenta(def)phenanthrenone	- -	µg/kg		**120 NJ**	**120 NJ**				**130 NJ**			
Cyclopenta[cd]pyrene	- -	µg/kg						**290 NJD**				
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg										
Cyclopentasiloxane, decamethyl-	- -	µg/kg										
Cyclopropanenonanoic Acid, 2	- -	µg/kg				**19,000 NJ**						
D:C-friedoolean-8-en-3-one	- -	µg/kg										
dapsone	- -	µg/kg										
Decanoic Acid	- -	µg/kg										
D-Friedoolean-14-en-3-one	- -	µg/kg										
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg										
Dibenz(a,e)aceanthrylene	- -	µg/kg										
Dibenzo[def,mno]chrysene	- -	µg/kg										
Dibenzofuran, 4-methyl-	- -	µg/kg										
Dibenzothiophene	- -	µg/kg					**100 NJ**	**130 NJ**	**170 NJD**	**130 NJ**		
Dibenzothiophene, 3-methyl	- -	µg/kg										
Diethyltoluamide	- -	µg/kg										
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg										
Diphenyl ether	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-003-BG 0 - 1 08/18/03 SO-003-BG	SO-004-BG 0 - 1 08/18/03 SO-004-BG	SO-005-BG 0 - 1 08/18/03 SO-005-BG	SO-006-UI 0 - 1 08/19/03 SO-006-UI	SO-007-UI 0 - 1 08/19/03 SO-007-UI	SO-008-NP 0 - 1 08/19/03 SO-008-NP	SO-009-NP 0 - 1 08/19/03 SO-009-NP	SO-010-UI 0 - 1 08/20/03 SO-010-UI	SO-011-UI 0 - 1 08/20/03 SO-011-UI	SO-012-UI 0 - 1 08/20/03 SO-012-UI
D-Limonene	- -	µg/kg										
Dodecanoic acid	- -	µg/kg										
Dodecanoic acid, methyl ester	- -	µg/kg										
Dodecanoic acid, undecyl ester	- -	µg/kg										
Dodecyl acrylate	- -	µg/kg										
Dotriacontane	- -	µg/kg										
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg										
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg										
Fluoranthene, 2-methyl-	- -	µg/kg										
Gamma-Sitosterol	- -	µg/kg										
Hexadecanal	- -	µg/kg										
Hexadecanoic acid	- -	µg/kg	**320 NJ**	**350 NJ [320 NJ]**	**290 NJ**	**290 NJ**	**600 NJ**	**690 NJ**	**710 NJ**		**580 NJ**	**340 NJ**
Hexadecanoic acid, butyl ester	- -	µg/kg										
Hexadecanoic acid, ethyl ester	- -	µg/kg										
Indene	- -	µg/kg										
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg										
Lup-20-(29)-en-3-one	- -	µg/kg										
Manool	- -	µg/kg										
matrine	- -	µg/kg										
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg										
Methylated Naphthalene	- -	µg/kg										
Methylated Phenol	- -	µg/kg										
Methyldibenzothiophene	- -	µg/kg										
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg							**1,300 NJD**			
naphthalene, 1,2,3-trimethyl	- -	µg/kg										
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg										
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg										
Naphthalene, 1,2-Dimethyl-	- -	µg/kg					**130 NJ**					
Naphthalene, 1,3-dimethyl-	- -	µg/kg										
Naphthalene, 1,4-dimethyl-	- -	µg/kg										
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg					**120 NJ**					
Naphthalene, 1-phenyl-	- -	µg/kg										
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg					**110 NJ**					
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, 2,7-dimethyl-	- -	µg/kg										
Naphthalene, 2-Ethyl-	- -	µg/kg										
Naphthalene, 2-phenyl-	- -	µg/kg							**140 NJ**			

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-003-BG 0 - 1 08/18/03 SO-003-BG	SO-004-BG 0 - 1 08/18/03 SO-004-BG	SO-005-BG 0 - 1 08/18/03 SO-005-BG	SO-006-UI 0 - 1 08/19/03 SO-006-UI	SO-007-UI 0 - 1 08/19/03 SO-007-UI	SO-008-NP 0 - 1 08/19/03 SO-008-NP	SO-009-NP 0 - 1 08/19/03 SO-009-NP	SO-010-UI 0 - 1 08/20/03 SO-010-UI	SO-011-UI 0 - 1 08/20/03 SO-011-UI	SO-012-UI 0 - 1 08/20/03 SO-012-UI
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg										
Naphtho[2,3-b]thiophene	- -	µg/kg										
Nonadecane, 9-Methyl-	- -	µg/kg							**2,100 NJD**			
Octadecanal	- -	µg/kg										
Octadecanoic acid	- -	µg/kg	**160 NJ**	**78 NJ [210 NJ]**		**350 NJD**		**210 NJ**	**250 NJ**		**150 NJ**	
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg	**190 NJ**	**130 NJ [250 NJ]**	**350 NJ**			**300 NJD**	**230 NJD**		**160 NJ**	
Octadecanoic acid, butyl ester	- -	µg/kg	**230 NJ**	**150 NJ [320 NJ]**	**440 NJ**			**340 NJ**	**280 NJ**		**330 NJ**	**310 NJ**
Olean-12-ene	- -	µg/kg										
Organic acid	- -	µg/kg										
Organic acid 1	- -	µg/kg										
Organic acid 2	- -	µg/kg										
Organic acid 3	- -	µg/kg										
Organic acid 4	- -	µg/kg										
Organic acid 5	- -	µg/kg										
o-Terphenyl	- -	µg/kg										
Oxirane, hexadecyl-	- -	µg/kg										
p-Dicyclohexylbenzene	- -	µg/kg										
Pentadecanal-	- -	µg/kg										**290 NJ**
Pentadecanoic acid	- -	µg/kg						**97 NJ**				
Pentasiloxane, dodecamethyl-	- -	µg/kg										
Perylene	- -	µg/kg		**1,000 NJ [710 NJ]**					**470 NJ**			**430 NJ**
Perylene isomer C20H12	- -	µg/kg										
Phenanthrene, 1,7-dimethyl-	- -	µg/kg										
Phenanthrene, 1-methyl-	- -	µg/kg										
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg										
Phenanthrene, 2,3-dimethyl-	- -	µg/kg										
Phenanthrene, 2,5-dimethyl-	- -	µg/kg						**190 NJ**	**100 NJ**		**96 NJ**	
Phenanthrene, 2,7-dimethyl-	- -	µg/kg										
Phenanthrene, 2-methyl-	- -	µg/kg					**280 NJ**	**340 NJD**				
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg										
Phenanthrene, 3,6-dimethyl-	- -	µg/kg						**340 NJD**				
Phenanthrene, 3-methyl-	- -	µg/kg										
Phenanthrene, 4-methyl-	- -	µg/kg							**510 NJD**			
Phenanthridine	- -	µg/kg										
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg										
Phenylated naphthalene	- -	µg/kg										
Phthalic anhydride	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-003-BG 0 - 1 08/18/03 SO-003-BG	SO-004-BG 0 - 1 08/18/03 SO-004-BG	SO-005-BG 0 - 1 08/18/03 SO-005-BG	SO-006-UI 0 - 1 08/19/03 SO-006-UI	SO-007-UI 0 - 1 08/19/03 SO-007-UI	SO-008-NP 0 - 1 08/19/03 SO-008-NP	SO-009-NP 0 - 1 08/19/03 SO-009-NP	SO-010-UI 0 - 1 08/20/03 SO-010-UI	SO-011-UI 0 - 1 08/20/03 SO-011-UI	SO-012-UI 0 - 1 08/20/03 SO-012-UI
Propanoic acid, 3-mercapto-	- -	µg/kg										
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg										
Pyrene, 1-methyl-	- -	µg/kg			**110 NJ**							
Pyrene, 2-methyl-	- -	µg/kg			**150 NJ**				**310 NJD**			
Pyrene, 4-methyl-	- -	µg/kg										
Stigmast-4-en-3-one	- -	µg/kg										
Stigmasta-3,5-dien-7-one	- -	µg/kg										
Stigmasterol, 22,23-dihydro-	- -	µg/kg										
Substituted Benzene	- -	µg/kg										
Substituted Naphthalene	- -	µg/kg										
Substituted Naphthalene 1	- -	µg/kg										
Substituted Naphthalene 2	- -	µg/kg										
Substituted Naphthalene 3	- -	µg/kg										
Substituted Naphthalene 4	- -	µg/kg										
Substituted PAH isomer	- -	µg/kg										
Sulfur hexamer	- -	µg/kg										
Sulfur, mol. (S8)	- -	µg/kg										
Testosterone	- -	µg/kg										
Tetradecanal	- -	µg/kg										
Tetradecanoic acid	- -	µg/kg										
Tetradecanoic acid, ethyl ester	- -	µg/kg										
Tetradecanoic acid, methyl ester	- -	µg/kg										
Thiophene, 2-(Methylselenyl)	- -	µg/kg										
tri(2-Ethylhexyl) trimellitate	- -	µg/kg										
Tridecanoic acid	- -	µg/kg										
Triphenylene	- -	µg/kg										
Triphenylene, 2-methyl-	- -	µg/kg										
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg										
Vanillin	- -	µg/kg										
Vitamin E	- -	µg/kg										
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg										
Trichlorobiphenyls	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-013-UI 0 - 1 08/20/03 SO-013-UI	SO-014-UI 0 - 1 08/20/03 SO-014-UI	SO-015-UI 0 - 1 08/20/03 SO-015-UI	SO-016-UI 0 - 1 08/20/03 SO-016-UI	SO-017-NP 0 - 1 08/21/03 SO-017-NP	SO-018-LF 0 - 1 08/21/03 SO-018-LF	SO-019-LF 0 - 1 08/21/03 SO-019-LF	SO-020-LF 0 - 1 08/21/03 SO-020-LF	SO-021-LF 0 - 1 08/21/03 SO-021-LF	SO-022-LF 0 - 1 08/21/03 SO-022-LF
SVOC TICS												
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg										
.alpha.-Methylstyrene	- -	µg/kg										
.beta.-iso-Methyl ionone	- -	µg/kg										
[3,4:9,10]Dibenzpyrene	- -	µg/kg										
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg										
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg										
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg										
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg										
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg										
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg										
1,2,7,8-Debenzphenanthrene	- -	µg/kg										
1,2:4,5-Dibenzopyrene	- -	µg/kg										
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg										
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg										
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg										
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg										
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg										
10-Methylnonadecene	- -	µg/kg					**260 NJ**					
11H-Benzo[a]fluoren-11-one	- -	µg/kg										
11H-Benzo[a]fluorene	- -	µg/kg		**890 NJD**	**130 NJ**					**1,600 NJD**		**290 NJ**
11H-Benzo[b]fluorene	- -	µg/kg		**470 NJ**	**1,600 NJD**					**800 NJD**	**310 NJD**	**120 NJ**
13-Docosenamide, (Z)-	- -	µg/kg										
17-Pentatriacontene	- -	µg/kg										
1-Decene	- -	µg/kg	**450 NJ**			**370 NJD**						
1-Docosene	- -	µg/kg										
1-Dodecanol	- -	µg/kg							**300 NJ**			**410 NJ**
1-Dodecene	- -	µg/kg										
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg										

TABLE 4-15
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1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg	**530 NJ**									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg										
1-Heneicosyl formate	- -	µg/kg										
1-Heptadecanol	- -	µg/kg										
1-Hexacosanol	- -	µg/kg										
1-Hexadecene	- -	µg/kg										
1H-Indene, 1-phenyl-	- -	µg/kg			**1,000 NJD**					**2,200 NJD**		
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-phenyl-	- -	µg/kg										
1-Nonadecane	- -	µg/kg										
1-Nonadecanol	- -	µg/kg										
1-Nonene	- -	µg/kg										
1-Octadecanol	- -	µg/kg										
1-Pentadecene	- -	µg/kg										
1-Tridecanol	- -	µg/kg										
1-Tridecene	- -	µg/kg						**170 NJ**				
1-Undecanol	- -	µg/kg										
2 (3H)-Benzothiazolone	- -	µg/kg										
2',3,4-Trichlorobiphenyl	- -	µg/kg										
2,3,4-Trichlorobiphenyl	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2,4,6-Trichlorobiphenyl	- -	µg/kg										
2,4-Dichlorophenyl isocyanate	- -	µg/kg										
28-Nor-17.alpha.(H)-hopane	- -	µg/kg										
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg										
2-Dodecanol	- -	µg/kg										
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg			**89 NJ**							
2-Mercaptobenzothiazole	- -	µg/kg										
2-Napthalenamine, n-phenyl	- -	µg/kg										
2-Pentadecanone	- -	µg/kg										
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg										
2-Phenylnaphthalene	- -	µg/kg			**180 NJ**				**140 NJ**		**250 NJD**	**180 NJ**
2-Propenoic acid, pentadecyl ester	- -	µg/kg										
2-Propenoic acid, tridecyl	- -	µg/kg										
2-Undecanol	- -	µg/kg										
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg										

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3,4:8,9-Dibenzopyrene	- -	µg/kg										
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg										
3,5-Dichlorophenyl isocyanate	- -	µg/kg										
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg										
3-Eicosene, (E)-	- -	µg/kg										
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg										
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg										
4H-Cyclopenta[def]phenanthrene	- -	µg/kg			**1,600 NJD**			**71 NJ**				
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg										
5,12-Napthacenedione	- -	µg/kg										
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg										
5-Eicosene, (E)-	- -	µg/kg										
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg										
7H-Benz[de]anthracen-7-one	- -	µg/kg		**700 NJ**	**110 NJ**				**99 NJ**	**800 NJD**		
7H-Benzo[C]fluorene	- -	µg/kg								**300 NJ**		
9,10-Anthracenedione	- -	µg/kg		**440 NJ**	**130 NJ**		**150 NJ**		**110 NJ**	**1,100 NJD**	**290 NJD**	**160 NJ**
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg										
9,10-Dimethylanthracene	- -	µg/kg									**280 NJD**	**190 NJ**
9-Hexacosene	- -	µg/kg										
9-Hexadecenoic acid	- -	µg/kg										
9H-Fluoren-9-one	- -	µg/kg			**500 NJ**					**460 NJ**	**190 NJD**	
9H-Fluorene, 1-methyl-	- -	µg/kg			**470 NJ**					**840 NJ**		
9H-Fluorene, 2-methyl-	- -	µg/kg										
9H-Fluorene, 9-methylene-	- -	µg/kg										
9-Octadecenamide, (Z)-	- -	µg/kg				**130 NJ**						
9-Octadecenoic acid, (E)-	- -	µg/kg										
Abieta-8,11,13-triene	- -	µg/kg										
Acridine	- -	µg/kg			**310 NJ**							
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg										
Anthracene, 1,4-dimethyl-	- -	µg/kg										
Anthracene, 1-methyl-	- -	µg/kg							**230 NJD**			
Anthracene, 2-methyl-	- -	µg/kg		**350 NJ**	**1,300 NJ**					**2,900 NJ**	**320 NJD**	**340 NJ**
Anthracene, 9-Ethenyl-	- -	µg/kg										
Anthracene, 9-methyl-	- -	µg/kg			**1,300 NJD**							**240 NJ**
Benz[a]anthracene, 10-methyl-	- -	µg/kg								**150 NJ**		
Benz[a]anthracene, 7-methyl-	- -	µg/kg										
Benz[a]anthracene, 8-methyl-	- -	µg/kg								**470 NJ**		
Benzaldehyde, 2-hydroxy-	- -	µg/kg										

TABLE 4-15
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Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg										
Benzenamine, 4-methyl-2-nitro	- -	µg/kg						**190 NJ**				
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg										
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg										
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg										
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg										
Benzene, 1,2,4-trimethyl-	- -	µg/kg										
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg										
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg										
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg										
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg										
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg										
Benzene, tert-butyl-	- -	µg/kg										
Benzeneacetic acid	- -	µg/kg										
Benzenemethanol, α,α-dimethyl-	- -	µg/kg										
Benzenesulfonamide, 2-methyl-	- -	µg/kg										
Benzenesulfonamide, 4-methyl-	- -	µg/kg										
Benzo(e)pyrene	- -	µg/kg		**2,800 NJD**	**4,000 NJD**	**230 NJ**			**170 NJ**	**4,000 NJD**	**1,400 NJD**	**850 NJ**
Benzo[b]chrysene	- -	µg/kg										
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg			**160 NJ**					**830 NJD**		
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg		**190 NJ**	**110 NJ**				**230 NJD**			
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg										
Benzo[b]triphenylene	- -	µg/kg										
Benzo[c]phenanthrene	- -	µg/kg			**110 NJ**							
Benzo[f]quinoline	- -	µg/kg										
Benzo[ghi]fluoranthene	- -	µg/kg										
Benzo[h]quinoline	- -	µg/kg										
Benzo[j]fluoranthene	- -	µg/kg		**480 NJ**								
Benzo[kl]xanthene	- -	µg/kg										
Benzocycloheptatriene	- -	µg/kg										
Benzoic acid	- -	µg/kg										
Benzothiazole	- -	µg/kg										
Benzothiazole, 2-(methylthio)-	- -	µg/kg										

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beta-Sitosterol	- -	µg/kg										
Bicyclohexyl, 4-phenyl-	- -	µg/kg										
Butane, 2-methoxy-2-methyl-	- -	µg/kg										
Butylated hydroxytoluene	- -	µg/kg										
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg										
Cholesta-3,5-dien-7-one	- -	µg/kg										
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg										
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg										
Cholesterol	- -	µg/kg										
Chrysene, 1-methyl-	- -	µg/kg			**120 NJ**							
Chrysene, 3-methyl-	- -	µg/kg		**870 NJ**								
Chrysene, 4-methyl-	- -	µg/kg										
Chrysene, 5-methyl-	- -	µg/kg										
Chrysene, 6-methyl-	- -	µg/kg										
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg										
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg										
Clorophene	- -	µg/kg										
Coprostan-3-one	- -	µg/kg										
Cyclohexane, isothiocyanato-	- -	µg/kg										
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg										
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg										
Cyclopenta(def)phenanthrenone	- -	µg/kg		**220 NJ**							**120 NJ**	**89 NJ**
Cyclopenta[cd]pyrene	- -	µg/kg										
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg										
Cyclopentasiloxane, decamethyl-	- -	µg/kg										
Cyclopropanenonanoic Acid, 2	- -	µg/kg										
D:C-friedoolean-8-en-3-one	- -	µg/kg										
dapsone	- -	µg/kg										
Decanoic Acid	- -	µg/kg										
D-Friedoolean-14-en-3-one	- -	µg/kg										
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg										
Dibenz(a,e)aceanthrylene	- -	µg/kg										
Dibenzo[def,mno]chrysene	- -	µg/kg										
Dibenzofuran, 4-methyl-	- -	µg/kg			**360 NJ**					**340 NJ**	**90 NJ**	
Dibenzothiophene	- -	µg/kg			**950 NJD**					**820 NJ**	**80 NJ**	
Dibenzothiophene, 3-methyl	- -	µg/kg								**450 NJ**		
Diethyltoluamide	- -	µg/kg										
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg										
Diphenyl ether	- -	µg/kg										

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D-Limonene	- -	µg/kg										
Dodecanoic acid	- -	µg/kg										
Dodecanoic acid, methyl ester	- -	µg/kg										
Dodecanoic acid, undecyl ester	- -	µg/kg										
Dodecyl acrylate	- -	µg/kg										
Dotriacontane	- -	µg/kg										
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg										
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg										
Fluoranthene, 2-methyl-	- -	µg/kg										
Gamma-Sitosterol	- -	µg/kg										
Hexadecanal	- -	µg/kg										
Hexadecanoic acid	- -	µg/kg	**170 NJ**			**120 NJD**	**480 NJ**	**120 NJ**	**260 NJ**		**500 NJ**	
Hexadecanoic acid, butyl ester	- -	µg/kg										
Hexadecanoic acid, ethyl ester	- -	µg/kg										
Indene	- -	µg/kg										
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg										
Lup-20-(29)-en-3-one	- -	µg/kg										
Manool	- -	µg/kg										
matrine	- -	µg/kg										
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg										
Methylated Naphthalene	- -	µg/kg										
Methylated Phenol	- -	µg/kg										
Methyldibenzothiophene	- -	µg/kg								**730 NJ**		
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg										
naphthalene, 1,2,3-trimethyl	- -	µg/kg										
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								**360 NJ**		
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg										
Naphthalene, 1,2-Dimethyl-	- -	µg/kg										
Naphthalene, 1,3-dimethyl-	- -	µg/kg										
Naphthalene, 1,4-dimethyl-	- -	µg/kg						**130 NJ**				
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg						**130 NJ**				
Naphthalene, 1-methyl-	- -	µg/kg						**340 NJ**				
Naphthalene, 1-phenyl-	- -	µg/kg										
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg						**84 NJ**		**320 NJ**		
Naphthalene, 2,3-dimethyl-	- -	µg/kg						**320 NJ**				
Naphthalene, 2,6-dimethyl-	- -	µg/kg						**230 NJ**				
Naphthalene, 2,7-dimethyl-	- -	µg/kg										
Naphthalene, 2-Ethyl-	- -	µg/kg										
Naphthalene, 2-phenyl-	- -	µg/kg		**430 NJ**								

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Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg										
Naphtho[2,3-b]thiophene	- -	µg/kg										
Nonadecane, 9-Methyl-	- -	µg/kg										
Octadecanal	- -	µg/kg										
Octadecanoic acid	- -	µg/kg	**91 NJ**				**220 NJ**					**180 NJ**
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg			**1,200 NJD**				**260 NJD**			
Octadecanoic acid, butyl ester	- -	µg/kg	**140 NJ**	**160 NJ**		**430 NJ**	**260 NJ**	**160 NJ**	**120 NJ**			**210 NJ**
Olean-12-ene	- -	µg/kg										
Organic acid	- -	µg/kg										
Organic acid 1	- -	µg/kg										
Organic acid 2	- -	µg/kg										
Organic acid 3	- -	µg/kg										
Organic acid 4	- -	µg/kg										
Organic acid 5	- -	µg/kg										
o-Terphenyl	- -	µg/kg										
Oxirane, hexadecyl-	- -	µg/kg										
p-Dicyclohexylbenzene	- -	µg/kg										
Pentadecanal-	- -	µg/kg										
Pentadecanoic acid	- -	µg/kg										
Pentasiloxane, dodecamethyl-	- -	µg/kg										
Perylene	- -	µg/kg	**240 NJ**				**1,100 NJ**		**770 NJD**			**1,500 NJ**
Perylene isomer C20H12	- -	µg/kg										
Phenanthrene, 1,7-dimethyl-	- -	µg/kg										
Phenanthrene, 1-methyl-	- -	µg/kg		**590 NJ**					**200 NJ**		**450 NJD**	
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg										
Phenanthrene, 2,3-dimethyl-	- -	µg/kg										
Phenanthrene, 2,5-dimethyl-	- -	µg/kg		**290 NJ**						**1,400 NJD**	**220 NJ**	
Phenanthrene, 2,7-dimethyl-	- -	µg/kg										
Phenanthrene, 2-methyl-	- -	µg/kg										
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg										
Phenanthrene, 3,6-dimethyl-	- -	µg/kg										
Phenanthrene, 3-methyl-	- -	µg/kg										
Phenanthrene, 4-methyl-	- -	µg/kg								**1,700 NJD**		**140 NJ**
Phenanthridine	- -	µg/kg										
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg						**1,200 NJ**				
Phenylated naphthalene	- -	µg/kg										
Phthalic anhydride	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-013-UI 0 - 1 08/20/03 SO-013-UI	SO-014-UI 0 - 1 08/20/03 SO-014-UI	SO-015-UI 0 - 1 08/20/03 SO-015-UI	SO-016-UI 0 - 1 08/20/03 SO-016-UI	SO-017-NP 0 - 1 08/21/03 SO-017-NP	SO-018-LF 0 - 1 08/21/03 SO-018-LF	SO-019-LF 0 - 1 08/21/03 SO-019-LF	SO-020-LF 0 - 1 08/21/03 SO-020-LF	SO-021-LF 0 - 1 08/21/03 SO-021-LF	SO-022-LF 0 - 1 08/21/03 SO-022-LF
Propanoic acid, 3-mercapto-	- -	µg/kg										
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg										
Pyrene, 1-methyl-	- -	µg/kg			**1,000 NJD**				**100 NJ**	**330 NJ**		**98 NJ**
Pyrene, 2-methyl-	- -	µg/kg		**160 NJ**	**170 NJ**					**810 NJD**	**120 NJ**	**88 NJ**
Pyrene, 4-methyl-	- -	µg/kg		**310 NJ**								
Stigmast-4-en-3-one	- -	µg/kg										
Stigmasta-3,5-dien-7-one	- -	µg/kg										
Stigmasterol, 22,23-dihydro-	- -	µg/kg										
Substituted Benzene	- -	µg/kg										
Substituted Naphthalene	- -	µg/kg										
Substituted Naphthalene 1	- -	µg/kg										
Substituted Naphthalene 2	- -	µg/kg										
Substituted Naphthalene 3	- -	µg/kg										
Substituted Naphthalene 4	- -	µg/kg										
Substituted PAH isomer	- -	µg/kg										
Sulfur hexamer	- -	µg/kg										
Sulfur, mol. (S8)	- -	µg/kg										
Testosterone	- -	µg/kg										
Tetradecanal	- -	µg/kg										
Tetradecanoic acid	- -	µg/kg										
Tetradecanoic acid, ethyl ester	- -	µg/kg										
Tetradecanoic acid, methyl ester	- -	µg/kg										
Thiophene, 2-(Methylselenyl)	- -	µg/kg										
tri(2-Ethylhexyl) trimellitate	- -	µg/kg										
Tridecanoic acid	- -	µg/kg										
Triphenylene	- -	µg/kg			**2,200 NJD**				**460 NJ**			**510 NJ**
Triphenylene, 2-methyl-	- -	µg/kg			**190 NJ**							**130 NJ**
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg										
Vanillin	- -	µg/kg										
Vitamin E	- -	µg/kg										
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg										
Trichlorobiphenyls	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF	SO-024-LF 0 - 1 08/22/03 SO-024-LF	SO-025-LF 0 - 1 08/22/03 SO-025-LF	SO-026-LF 0 - 1 08/22/03 SO-026-LF	SO-027-LF 0 - 1 08/22/03 SO-027-LF	SO-028-LF 0 - 1 08/22/03 SO-028-LF	SO-029-LF 0 - 1 08/22/03 SO-029-LF	SO-030-LF 0 - 1 08/22/03 SO-030-LF
SVOC TICS											
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg									
.alpha.-Methylstyrene	- -	µg/kg									
.beta.-iso-Methyl ionone	- -	µg/kg									
[3,4:9,10]Dibenzpyrene	- -	µg/kg									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg									
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg									
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg									
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg									
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg									
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg									
1,2,7,8-Debenzphenanthrene	- -	µg/kg									
1,2:4,5-Dibenzopyrene	- -	µg/kg									
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg									
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg									
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg									
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg									
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg									
10-Methylnonadecene	- -	µg/kg									
11H-Benzo[a]fluoren-11-one	- -	µg/kg									
11H-Benzo[a]fluorene	- -	µg/kg		**200 NJ**	**410 NJ**						
11H-Benzo[b]fluorene	- -	µg/kg		**310 NJD**	**680 NJD**	**260 NJD**		**210 NJ**			**160 NJ**
13-Docosenamide, (Z)-	- -	µg/kg									
17-Pentatriacontene	- -	µg/kg									
1-Decene	- -	µg/kg		**250 NJD**			**370 NJ**		**590 NJ**	**390 NJ**	
1-Docosene	- -	µg/kg									
1-Dodecanol	- -	µg/kg		**330 NJ**							
1-Dodecene	- -	µg/kg									
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF	SO-024-LF 0 - 1 08/22/03 SO-024-LF	SO-025-LF 0 - 1 08/22/03 SO-025-LF	SO-026-LF 0 - 1 08/22/03 SO-026-LF	SO-027-LF 0 - 1 08/22/03 SO-027-LF	SO-028-LF 0 - 1 08/22/03 SO-028-LF	SO-029-LF 0 - 1 08/22/03 SO-029-LF	SO-030-LF 0 - 1 08/22/03 SO-030-LF
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg									
1-Heneicosyl formate	- -	µg/kg									
1-Heptadecanol	- -	µg/kg									
1-Hexacosanol	- -	µg/kg									
1-Hexadecene	- -	µg/kg									
1H-Indene, 1-phenyl-	- -	µg/kg			**160 NJ**						
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-phenyl-	- -	µg/kg									
1-Nonadecane	- -	µg/kg									
1-Nonadecanol	- -	µg/kg									
1-Nonene	- -	µg/kg									
1-Octadecanol	- -	µg/kg									
1-Pentadecene	- -	µg/kg			**940 NJ**						
1-Tridecanol	- -	µg/kg			**340 NJ**						
1-Tridecene	- -	µg/kg									
1-Undecanol	- -	µg/kg									
2 (3H)-Benzothiazolone	- -	µg/kg									
2',3,4-Trichlorobiphenyl	- -	µg/kg									
2,3,4-Trichlorobiphenyl	- -	µg/kg									
2,3-Dihydro-1-methylindene	- -	µg/kg									
2,4,6-Trichlorobiphenyl	- -	µg/kg									
2,4-Dichlorophenyl isocyanate	- -	µg/kg									
28-Nor-17.alpha.(H)-hopane	- -	µg/kg									
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg									
2-Dodecanol	- -	µg/kg									
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg									
2-Mercaptobenzothiazole	- -	µg/kg									
2-Napthalenamine, n-phenyl	- -	µg/kg									
2-Pentadecanone	- -	µg/kg									
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg									
2-Phenylnaphthalene	- -	µg/kg	**170 NJ**		**310 NJ**			**150 NJ**			
2-Propenoic acid, pentadecyl ester	- -	µg/kg									
2-Propenoic acid, tridecyl	- -	µg/kg									
2-Undecanol	- -	µg/kg									
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF	SO-024-LF 0 - 1 08/22/03 SO-024-LF	SO-025-LF 0 - 1 08/22/03 SO-025-LF	SO-026-LF 0 - 1 08/22/03 SO-026-LF	SO-027-LF 0 - 1 08/22/03 SO-027-LF	SO-028-LF 0 - 1 08/22/03 SO-028-LF	SO-029-LF 0 - 1 08/22/03 SO-029-LF	SO-030-LF 0 - 1 08/22/03 SO-030-LF
3,4:8,9-Dibenzopyrene	- -	µg/kg									
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg			**880 NJ**						
3,5-Dichlorophenyl isocyanate	- -	µg/kg									
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg									
3-Eicosene, (E)-	- -	µg/kg									
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg									
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg									
4H-Cyclopenta[def]phenanthrene	- -	µg/kg								**150 NJ**	
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									
5,12-Napthacenedione	- -	µg/kg									
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg									
5-Eicosene, (E)-	- -	µg/kg									
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg									
7H-Benz[de]anthracen-7-one	- -	µg/kg				**250 NJD**					
7H-Benzo[C]fluorene	- -	µg/kg									
9,10-Anthracenedione	- -	µg/kg	**170 NJ**	**380 NJD**	**310 NJD**	**140 NJ**	**130 NJ**	**150 NJ**		**120 NJ**	**150 NJ**
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg									
9,10-Dimethylanthracene	- -	µg/kg									
9-Hexacosene	- -	µg/kg									
9-Hexadecenoic acid	- -	µg/kg									
9H-Fluoren-9-one	- -	µg/kg		**110 NJ**	**160 NJ**						
9H-Fluorene, 1-methyl-	- -	µg/kg			**87 NJ**						
9H-Fluorene, 2-methyl-	- -	µg/kg									
9H-Fluorene, 9-methylene-	- -	µg/kg									
9-Octadecenamide, (Z)-	- -	µg/kg									
9-Octadecenoic acid, (E)-	- -	µg/kg									
Abieta-8,11,13-triene	- -	µg/kg									
Acridine	- -	µg/kg		**92 NJ**	**77 NJ**						
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg									
Anthracene, 1,4-dimethyl-	- -	µg/kg									
Anthracene, 1-methyl-	- -	µg/kg			**230 NJ**						
Anthracene, 2-methyl-	- -	µg/kg	**230 NJ**	**290 NJD**	**410 NJD**					**150 NJ**	
Anthracene, 9-Ethenyl-	- -	µg/kg									
Anthracene, 9-methyl-	- -	µg/kg	**130 NJ**								
Benz[a]anthracene, 10-methyl-	- -	µg/kg		**270 NJD**							
Benz[a]anthracene, 7-methyl-	- -	µg/kg									
Benz[a]anthracene, 8-methyl-	- -	µg/kg									
Benzaldehyde, 2-hydroxy-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF	SO-024-LF 0 - 1 08/22/03 SO-024-LF	SO-025-LF 0 - 1 08/22/03 SO-025-LF	SO-026-LF 0 - 1 08/22/03 SO-026-LF	SO-027-LF 0 - 1 08/22/03 SO-027-LF	SO-028-LF 0 - 1 08/22/03 SO-028-LF	SO-029-LF 0 - 1 08/22/03 SO-029-LF	SO-030-LF 0 - 1 08/22/03 SO-030-LF
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg									
Benzenamine, 4-methyl-2-nitro	- -	µg/kg									
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg									
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg									
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg									
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg									
Benzene, 1,2,4-trimethyl-	- -	µg/kg									
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg									
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg									
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg					**100 NJ**		**120 NJ**		
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg									
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg									
Benzene, 1-ethyl-3-methyl-	- -	µg/kg									
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg									
Benzene, tert-butyl-	- -	µg/kg									
Benzeneacetic acid	- -	µg/kg									
Benzenemethanol, α,α-dimethyl-	- -	µg/kg									
Benzenesulfonamide, 2-methyl-	- -	µg/kg		**83 NJ**							
Benzenesulfonamide, 4-methyl-	- -	µg/kg									
Benzo(e)pyrene	- -	µg/kg	**280 NJ**		**2,600 NJ**	**180 NJ**					
Benzo[b]chrysene	- -	µg/kg									
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg			**800 NJ**						
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg			**110 NJ**	**230 NJ**					
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg									
Benzo[b]triphenylene	- -	µg/kg	**300 NJ**								
Benzo[c]phenanthrene	- -	µg/kg									
Benzo[f]quinoline	- -	µg/kg									
Benzo[ghi]fluoranthene	- -	µg/kg									
Benzo[h]quinoline	- -	µg/kg									
Benzo[j]fluoranthene	- -	µg/kg									
Benzo[kl]xanthene	- -	µg/kg									
Benzocycloheptatriene	- -	µg/kg									
Benzoic acid	- -	µg/kg									
Benzothiazole	- -	µg/kg									
Benzothiazole, 2-(methylthio)-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF	SO-024-LF 0 - 1 08/22/03 SO-024-LF	SO-025-LF 0 - 1 08/22/03 SO-025-LF	SO-026-LF 0 - 1 08/22/03 SO-026-LF	SO-027-LF 0 - 1 08/22/03 SO-027-LF	SO-028-LF 0 - 1 08/22/03 SO-028-LF	SO-029-LF 0 - 1 08/22/03 SO-029-LF	SO-030-LF 0 - 1 08/22/03 SO-030-LF
beta-Sitosterol	- -	µg/kg									
Bicyclohexyl, 4-phenyl-	- -	µg/kg									
Butane, 2-methoxy-2-methyl-	- -	µg/kg									
Butylated hydroxytoluene	- -	µg/kg									
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg									
Cholesta-3,5-dien-7-one	- -	µg/kg									
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg									
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg									
Cholesterol	- -	µg/kg									
Chrysene, 1-methyl-	- -	µg/kg									
Chrysene, 3-methyl-	- -	µg/kg									
Chrysene, 4-methyl-	- -	µg/kg									
Chrysene, 5-methyl-	- -	µg/kg									
Chrysene, 6-methyl-	- -	µg/kg									
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg									
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg									
Clorophene	- -	µg/kg									
Coprostan-3-one	- -	µg/kg									
Cyclohexane, isothiocyanato-	- -	µg/kg									
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg									
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg									
Cyclopenta(def)phenanthrenone	- -	µg/kg		**110 NJ**							
Cyclopenta[cd]pyrene	- -	µg/kg		**350 NJD**							
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg									
Cyclopentasiloxane, decamethyl-	- -	µg/kg									
Cyclopropanenonanoic Acid, 2	- -	µg/kg									
D:C-friedoolean-8-en-3-one	- -	µg/kg									
dapsone	- -	µg/kg									
Decanoic Acid	- -	µg/kg									
D-Friedoolean-14-en-3-one	- -	µg/kg									
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg									
Dibenz(a,e)aceanthrylene	- -	µg/kg									
Dibenzo[def,mno]chrysene	- -	µg/kg									
Dibenzofuran, 4-methyl-	- -	µg/kg									
Dibenzothiophene	- -	µg/kg		**89 NJ**	**81 NJ**						
Dibenzothiophene, 3-methyl	- -	µg/kg									
Diethyltoluamide	- -	µg/kg									
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg									
Diphenyl ether	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF	SO-024-LF 0 - 1 08/22/03 SO-024-LF	SO-025-LF 0 - 1 08/22/03 SO-025-LF	SO-026-LF 0 - 1 08/22/03 SO-026-LF	SO-027-LF 0 - 1 08/22/03 SO-027-LF	SO-028-LF 0 - 1 08/22/03 SO-028-LF	SO-029-LF 0 - 1 08/22/03 SO-029-LF	SO-030-LF 0 - 1 08/22/03 SO-030-LF
D-Limonene	- -	µg/kg									
Dodecanoic acid	- -	µg/kg									
Dodecanoic acid, methyl ester	- -	µg/kg									
Dodecanoic acid, undecyl ester	- -	µg/kg									
Dodecyl acrylate	- -	µg/kg									
Dotriacontane	- -	µg/kg									
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg									
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg									
Fluoranthene, 2-methyl-	- -	µg/kg									
Gamma-Sitosterol	- -	µg/kg									
Hexadecanal	- -	µg/kg									
Hexadecanoic acid	- -	µg/kg	**360 NJ**	**550 NJ**	**420 NJ**	**350 NJ**	**500 NJ**	**240 NJ**			**340 NJ**
Hexadecanoic acid, butyl ester	- -	µg/kg									
Hexadecanoic acid, ethyl ester	- -	µg/kg									
Indene	- -	µg/kg									
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg									
Lup-20-(29)-en-3-one	- -	µg/kg									
Manool	- -	µg/kg									
matrine	- -	µg/kg									
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg									
Methylated Naphthalene	- -	µg/kg									
Methylated Phenol	- -	µg/kg									
Methyldibenzothiophene	- -	µg/kg									
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg									
naphthalene, 1,2,3-trimethyl	- -	µg/kg									
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg		**110 NJ**							
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg									
Naphthalene, 1,2-Dimethyl-	- -	µg/kg									
Naphthalene, 1,3-dimethyl-	- -	µg/kg									
Naphthalene, 1,4-dimethyl-	- -	µg/kg									
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg									
Naphthalene, 1-ethyl-	- -	µg/kg									
Naphthalene, 1-methyl-	- -	µg/kg									
Naphthalene, 1-phenyl-	- -	µg/kg									
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg									
Naphthalene, 2,3-dimethyl-	- -	µg/kg									
Naphthalene, 2,6-dimethyl-	- -	µg/kg									
Naphthalene, 2,7-dimethyl-	- -	µg/kg									
Naphthalene, 2-Ethyl-	- -	µg/kg									
Naphthalene, 2-phenyl-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF	SO-024-LF 0 - 1 08/22/03 SO-024-LF	SO-025-LF 0 - 1 08/22/03 SO-025-LF	SO-026-LF 0 - 1 08/22/03 SO-026-LF	SO-027-LF 0 - 1 08/22/03 SO-027-LF	SO-028-LF 0 - 1 08/22/03 SO-028-LF	SO-029-LF 0 - 1 08/22/03 SO-029-LF	SO-030-LF 0 - 1 08/22/03 SO-030-LF
Naphthalene, decahydro-, trans-	- -	µg/kg									
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg									
Naphtho[2,3-b]thiophene	- -	µg/kg									
Nonadecane, 9-Methyl-	- -	µg/kg									
Octadecanal	- -	µg/kg									
Octadecanoic acid	- -	µg/kg	**140 NJ**	**160 NJ**	**150 NJ**						
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg		**440 NJ**	**380 NJ**						
Octadecanoic acid, butyl ester	- -	µg/kg									
Olean-12-ene	- -	µg/kg									
Organic acid	- -	µg/kg									
Organic acid 1	- -	µg/kg									
Organic acid 2	- -	µg/kg									
Organic acid 3	- -	µg/kg									
Organic acid 4	- -	µg/kg									
Organic acid 5	- -	µg/kg									
o-Terphenyl	- -	µg/kg									
Oxirane, hexadecyl-	- -	µg/kg									
p-Dicyclohexylbenzene	- -	µg/kg									
Pentadecanal-	- -	µg/kg									
Pentadecanoic acid	- -	µg/kg									
Pentasiloxane, dodecamethyl-	- -	µg/kg									
Perylene	- -	µg/kg	**1,200 NJ**	**1,800 NJD**	**290 NJ**						
Perylene isomer C20H12	- -	µg/kg									
Phenanthrene, 1,7-dimethyl-	- -	µg/kg									
Phenanthrene, 1-methyl-	- -	µg/kg			**420 NJ**						
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg									
Phenanthrene, 2,3-dimethyl-	- -	µg/kg	**340 NJ**		**140 NJ**						
Phenanthrene, 2,5-dimethyl-	- -	µg/kg						**100 NJ**			
Phenanthrene, 2,7-dimethyl-	- -	µg/kg			**250 NJ**						
Phenanthrene, 2-methyl-	- -	µg/kg									
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg									
Phenanthrene, 3,6-dimethyl-	- -	µg/kg									
Phenanthrene, 3-methyl-	- -	µg/kg									
Phenanthrene, 4-methyl-	- -	µg/kg									
Phenanthridine	- -	µg/kg									
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg									
Phenylated naphthalene	- -	µg/kg									
Phthalic anhydride	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF	SO-024-LF 0 - 1 08/22/03 SO-024-LF	SO-025-LF 0 - 1 08/22/03 SO-025-LF	SO-026-LF 0 - 1 08/22/03 SO-026-LF	SO-027-LF 0 - 1 08/22/03 SO-027-LF	SO-028-LF 0 - 1 08/22/03 SO-028-LF	SO-029-LF 0 - 1 08/22/03 SO-029-LF	SO-030-LF 0 - 1 08/22/03 SO-030-LF
Propanoic acid, 3-mercapto-	- -	µg/kg									
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg									
Pyrene, 1-methyl-	- -	µg/kg	**94 NJ**		**140 NJ**						
Pyrene, 2-methyl-	- -	µg/kg	**220 NJ**								
Pyrene, 4-methyl-	- -	µg/kg			**270 NJ**						
Stigmast-4-en-3-one	- -	µg/kg									
Stigmasta-3,5-dien-7-one	- -	µg/kg									
Stigmasterol, 22,23-dihydro-	- -	µg/kg									
Substituted Benzene	- -	µg/kg									
Substituted Naphthalene	- -	µg/kg									
Substituted Naphthalene 1	- -	µg/kg									
Substituted Naphthalene 2	- -	µg/kg									
Substituted Naphthalene 3	- -	µg/kg									
Substituted Naphthalene 4	- -	µg/kg									
Substituted PAH isomer	- -	µg/kg									
Sulfur hexamer	- -	µg/kg									
Sulfur, mol. (S8)	- -	µg/kg									
Testosterone	- -	µg/kg									
Tetradecanal	- -	µg/kg									
Tetradecanoic acid	- -	µg/kg							**570**	**270 NJ**	
Tetradecanoic acid, ethyl ester	- -	µg/kg									
Tetradecanoic acid, methyl ester	- -	µg/kg									
Thiophene, 2-(Methylselenyl)	- -	µg/kg									
tri(2-Ethylhexyl) trimellitate	- -	µg/kg									
Tridecanoic acid	- -	µg/kg									
Triphenylene	- -	µg/kg									
Triphenylene, 2-methyl-	- -	µg/kg			**1,100 NJ**						
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg									
Vanillin	- -	µg/kg									
Vitamin E	- -	µg/kg									
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg									
Trichlorobiphenyls	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-032-LF 0 - 1 08/28/03 SO-032-LF	SO-033-NP 0 - 1 09/05/03 SO-033-NP	SO-033-NP 1 - 5 09/05/03 SO-W14-NP	SO-034-NP 0 - 1 09/05/03 SO-034-NP	SO-034-NP 6 - 10 09/05/03 SO-W13-NP	SO-035-NP 0 - 1 09/06/03 SO-035-NP	SO-035-NP 5 - 9 09/06/03 SO-W15-NP	SO-036-NP 0 - 1 09/06/03 SO-036-NP	SO-036-NP 1 - 5 09/06/03 SSO-FD01	SO-036-NP 1 - 5 09/06/03 SSO-01-NP
SVOC TICS												
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg										
.alpha.-Methylstyrene	- -	µg/kg										
.beta.-iso-Methyl ionone	- -	µg/kg										
[3,4:9,10]Dibenzpyrene	- -	µg/kg										
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg										
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg										
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg										
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg										
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg										
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg										
1,2,7,8-Debenzphenanthrene	- -	µg/kg										
1,2:4,5-Dibenzopyrene	- -	µg/kg										
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg										
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg										
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg										
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg										
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg										
10-Methylnonadecene	- -	µg/kg										
11H-Benzo[a]fluoren-11-one	- -	µg/kg										
11H-Benzo[a]fluorene	- -	µg/kg		**150 NJ**								
11H-Benzo[b]fluorene	- -	µg/kg	**290 NJ**	**420 NJD**	**110 NJ**	**470 NJD**			**580 NJD**			
13-Docosenamide, (Z)-	- -	µg/kg										
17-Pentatriacontene	- -	µg/kg										
1-Decene	- -	µg/kg	**740 NJD**		**530 NJ**							
1-Docosene	- -	µg/kg										
1-Dodecanol	- -	µg/kg								**450 NJ**	**370 NJ**	**560 NJ**
1-Dodecene	- -	µg/kg										
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-032-LF 0 - 1 08/28/03 SO-032-LF	SO-033-NP 0 - 1 09/05/03 SO-033-NP	SO-033-NP 1 - 5 09/05/03 SO-W14-NP	SO-034-NP 0 - 1 09/05/03 SO-034-NP	SO-034-NP 6 - 10 09/05/03 SO-W13-NP	SO-035-NP 0 - 1 09/06/03 SO-035-NP	SO-035-NP 5 - 9 09/06/03 SO-W15-NP	SO-036-NP 0 - 1 09/06/03 SO-036-NP	SO-036-NP 1 - 5 09/06/03 SSO-FD01	SO-036-NP 1 - 5 09/06/03 SSO-01-NP
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg										
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg										
1-Heneicosyl formate	- -	µg/kg	**1,700 NJD**									
1-Heptadecanol	- -	µg/kg										
1-Hexacosanol	- -	µg/kg										
1-Hexadecene	- -	µg/kg										
1H-Indene, 1-phenyl-	- -	µg/kg							**410 NJ**			
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-phenyl-	- -	µg/kg										
1-Nonadecane	- -	µg/kg										
1-Nonadecanol	- -	µg/kg										
1-Nonene	- -	µg/kg										
1-Octadecanol	- -	µg/kg										
1-Pentadecene	- -	µg/kg										
1-Tridecanol	- -	µg/kg										
1-Tridecene	- -	µg/kg										
1-Undecanol	- -	µg/kg										
2 (3H)-Benzothiazolone	- -	µg/kg					**16,000 NJ**					
2',3,4-Trichlorobiphenyl	- -	µg/kg										
2,3,4-Trichlorobiphenyl	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2,4,6-Trichlorobiphenyl	- -	µg/kg										
2,4-Dichlorophenyl isocyanate	- -	µg/kg										
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								**310 NJ**		
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg										
2-Dodecanol	- -	µg/kg										
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg										
2-Mercaptobenzothiazole	- -	µg/kg										
2-Napthalenamine, n-phenyl	- -	µg/kg										
2-Pentadecanone	- -	µg/kg										
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg										
2-Phenylnaphthalene	- -	µg/kg				**220 NJ**						
2-Propenoic acid, pentadecyl ester	- -	µg/kg										
2-Propenoic acid, tridecyl	- -	µg/kg										
2-Undecanol	- -	µg/kg										
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-032-LF 0 - 1 08/28/03 SO-032-LF	SO-033-NP 0 - 1 09/05/03 SO-033-NP	SO-033-NP 1 - 5 09/05/03 SO-W14-NP	SO-034-NP 0 - 1 09/05/03 SO-034-NP	SO-034-NP 6 - 10 09/05/03 SO-W13-NP	SO-035-NP 0 - 1 09/06/03 SO-035-NP	SO-035-NP 5 - 9 09/06/03 SO-W15-NP	SO-036-NP 0 - 1 09/06/03 SO-036-NP	SO-036-NP 1 - 5 09/06/03 SSO-FD01	SO-036-NP 1 - 5 09/06/03 SSO-01-NP
3,4:8,9-Dibenzopyrene	- -	µg/kg										
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg										
3,5-Dichlorophenyl isocyanate	- -	µg/kg										
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg										
3-Eicosene, (E)-	- -	µg/kg										
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg										
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg										
4H-Cyclopenta[def]phenanthrene	- -	µg/kg							**1,200 NJD**			
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg										
5,12-Napthacenedione	- -	µg/kg										
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg										
5-Eicosene, (E)-	- -	µg/kg										
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg										
7H-Benz[de]anthracen-7-one	- -	µg/kg				**150 NJ**						
7H-Benzo[C]fluorene	- -	µg/kg										
9,10-Anthracenedione	- -	µg/kg	**140 NJ**	**370 NJD**	**79 NJ**	**1,600 NJD**			**720 NJD**			
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg										
9,10-Dimethylanthracene	- -	µg/kg		**280 NJ**								
9-Hexacosene	- -	µg/kg										
9-Hexadecenoic acid	- -	µg/kg										
9H-Fluoren-9-one	- -	µg/kg	**210 NJD**	**160 NJ**		**450 NJD**						
9H-Fluorene, 1-methyl-	- -	µg/kg							**790 NJD**			
9H-Fluorene, 2-methyl-	- -	µg/kg										
9H-Fluorene, 9-methylene-	- -	µg/kg										
9-Octadecenamide, (Z)-	- -	µg/kg										
9-Octadecenoic acid, (E)-	- -	µg/kg										
Abieta-8,11,13-triene	- -	µg/kg							**740 NJ**			
Acridine	- -	µg/kg				**380 NJD**						
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg										
Anthracene, 1,4-dimethyl-	- -	µg/kg										
Anthracene, 1-methyl-	- -	µg/kg							**650 NJ**			
Anthracene, 2-methyl-	- -	µg/kg	**350 NJD**	**750 NJD**		**920 NJD**			**710 NJD**			
Anthracene, 9-Ethenyl-	- -	µg/kg				**110 NJ**						
Anthracene, 9-methyl-	- -	µg/kg		**520 NJ**		**570 NJ**						
Benz[a]anthracene, 10-methyl-	- -	µg/kg										
Benz[a]anthracene, 7-methyl-	- -	µg/kg										
Benz[a]anthracene, 8-methyl-	- -	µg/kg										
Benzaldehyde, 2-hydroxy-	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-032-LF 0 - 1 08/28/03 SO-032-LF	SO-033-NP 0 - 1 09/05/03 SO-033-NP	SO-033-NP 1 - 5 09/05/03 SO-W14-NP	SO-034-NP 0 - 1 09/05/03 SO-034-NP	SO-034-NP 6 - 10 09/05/03 SO-W13-NP	SO-035-NP 0 - 1 09/06/03 SO-035-NP	SO-035-NP 5 - 9 09/06/03 SO-W15-NP	SO-036-NP 0 - 1 09/06/03 SO-036-NP	SO-036-NP 1 - 5 09/06/03 SSO-FD01	SO-036-NP 1 - 5 09/06/03 SSO-01-NP
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg										
Benzenamine, 4-methyl-2-nitro	- -	µg/kg										
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg										
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg	**200 NJD**	**240 NJ**								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg										
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg										
Benzene, 1,2,4-trimethyl-	- -	µg/kg										
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg										
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg										
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg										
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg										
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg										
Benzene, tert-butyl-	- -	µg/kg										
Benzeneacetic acid	- -	µg/kg										
Benzenemethanol, α,α-dimethyl-	- -	µg/kg										
Benzenesulfonamide, 2-methyl-	- -	µg/kg										
Benzenesulfonamide, 4-methyl-	- -	µg/kg										
Benzo(e)pyrene	- -	µg/kg	**1,200 NJD**	**110 NJ**		**160 NJ**			**660 NJ**			
Benzo[b]chrysene	- -	µg/kg										
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg										
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg			**78 NJ**	**120 NJ**						
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg										
Benzo[b]triphenylene	- -	µg/kg										
Benzo[c]phenanthrene	- -	µg/kg										
Benzo[f]quinoline	- -	µg/kg										
Benzo[ghi]fluoranthene	- -	µg/kg										
Benzo[h]quinoline	- -	µg/kg										
Benzo[j]fluoranthene	- -	µg/kg										
Benzo[kl]xanthene	- -	µg/kg										
Benzocycloheptatriene	- -	µg/kg										
Benzoic acid	- -	µg/kg		**240 NJ**								
Benzothiazole	- -	µg/kg										
Benzothiazole, 2-(methylthio)-	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-032-LF 0 - 1 08/28/03 SO-032-LF	SO-033-NP 0 - 1 09/05/03 SO-033-NP	SO-033-NP 1 - 5 09/05/03 SO-W14-NP	SO-034-NP 0 - 1 09/05/03 SO-034-NP	SO-034-NP 6 - 10 09/05/03 SO-W13-NP	SO-035-NP 0 - 1 09/06/03 SO-035-NP	SO-035-NP 5 - 9 09/06/03 SO-W15-NP	SO-036-NP 0 - 1 09/06/03 SO-036-NP	SO-036-NP 1 - 5 09/06/03 SSO-FD01	SO-036-NP 1 - 5 09/06/03 SSO-01-NP
beta-Sitosterol	- -	µg/kg										
Bicyclohexyl, 4-phenyl-	- -	µg/kg					**3,800 NJ**					
Butane, 2-methoxy-2-methyl-	- -	µg/kg										
Butylated hydroxytoluene	- -	µg/kg										
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg										
Cholesta-3,5-dien-7-one	- -	µg/kg										
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg										
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg										
Cholesterol	- -	µg/kg										
Chrysene, 1-methyl-	- -	µg/kg										
Chrysene, 3-methyl-	- -	µg/kg										
Chrysene, 4-methyl-	- -	µg/kg										
Chrysene, 5-methyl-	- -	µg/kg										
Chrysene, 6-methyl-	- -	µg/kg										
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg										
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg										
Clorophene	- -	µg/kg										
Coprostan-3-one	- -	µg/kg										
Cyclohexane, isothiocyanato-	- -	µg/kg										
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg										
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								**93 NJ**		
Cyclopenta(def)phenanthrenone	- -	µg/kg				**140 NJ**						
Cyclopenta[cd]pyrene	- -	µg/kg										
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg				**530 NJ**						
Cyclopentasiloxane, decamethyl-	- -	µg/kg										
Cyclopropanenonanoic Acid, 2	- -	µg/kg					**990,000 NJD**					
D:C-friedoolean-8-en-3-one	- -	µg/kg										
dapsone	- -	µg/kg										
Decanoic Acid	- -	µg/kg										
D-Friedoolean-14-en-3-one	- -	µg/kg										
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg										
Dibenz(a,e)aceanthrylene	- -	µg/kg										
Dibenzo[def,mno]chrysene	- -	µg/kg										
Dibenzofuran, 4-methyl-	- -	µg/kg		**110 NJ**		**190 NJ**						
Dibenzothiophene	- -	µg/kg		**220 NJ**	**90 NJ**	**420 NJD**			**850 NJD**			
Dibenzothiophene, 3-methyl	- -	µg/kg										
Diethyltoluamide	- -	µg/kg										
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg										
Diphenyl ether	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-032-LF 0 - 1 08/28/03 SO-032-LF	SO-033-NP 0 - 1 09/05/03 SO-033-NP	SO-033-NP 1 - 5 09/05/03 SO-W14-NP	SO-034-NP 0 - 1 09/05/03 SO-034-NP	SO-034-NP 6 - 10 09/05/03 SO-W13-NP	SO-035-NP 0 - 1 09/06/03 SO-035-NP	SO-035-NP 5 - 9 09/06/03 SO-W15-NP	SO-036-NP 0 - 1 09/06/03 SO-036-NP	SO-036-NP 1 - 5 09/06/03 SSO-FD01	SO-036-NP 1 - 5 09/06/03 SSO-01-NP
D-Limonene	- -	µg/kg										
Dodecanoic acid	- -	µg/kg										
Dodecanoic acid, methyl ester	- -	µg/kg										
Dodecanoic acid, undecyl ester	- -	µg/kg										
Dodecyl acrylate	- -	µg/kg										
Dotriacontane	- -	µg/kg										
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg										
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg										
Fluoranthene, 2-methyl-	- -	µg/kg										
Gamma-Sitosterol	- -	µg/kg	**1,300 NJD**									
Hexadecanal	- -	µg/kg										
Hexadecanoic acid	- -	µg/kg			**640 NJ**							
Hexadecanoic acid, butyl ester	- -	µg/kg										
Hexadecanoic acid, ethyl ester	- -	µg/kg										
Indene	- -	µg/kg										
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg										
Lup-20-(29)-en-3-one	- -	µg/kg										
Manool	- -	µg/kg										
matrine	- -	µg/kg										
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg										
Methylated Naphthalene	- -	µg/kg										
Methylated Phenol	- -	µg/kg										
Methyldibenzothiophene	- -	µg/kg										
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg										
naphthalene, 1,2,3-trimethyl	- -	µg/kg										
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg										
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg										
Naphthalene, 1,2-Dimethyl-	- -	µg/kg										
Naphthalene, 1,3-dimethyl-	- -	µg/kg							**500 NJ**			
Naphthalene, 1,4-dimethyl-	- -	µg/kg							**310 NJ**			
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg							**210 NJ**			
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg				**120 NJ**			**470 NJ**			
Naphthalene, 1-phenyl-	- -	µg/kg										
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg							**510 NJ**			
Naphthalene, 2,7-dimethyl-	- -	µg/kg							**510 NJ**			
Naphthalene, 2-Ethyl-	- -	µg/kg							**300 NJ**			
Naphthalene, 2-phenyl-	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-032-LF 0 - 1 08/28/03 SO-032-LF	SO-033-NP 0 - 1 09/05/03 SO-033-NP	SO-033-NP 1 - 5 09/05/03 SO-W14-NP	SO-034-NP 0 - 1 09/05/03 SO-034-NP	SO-034-NP 6 - 10 09/05/03 SO-W13-NP	SO-035-NP 0 - 1 09/06/03 SO-035-NP	SO-035-NP 5 - 9 09/06/03 SO-W15-NP	SO-036-NP 0 - 1 09/06/03 SO-036-NP	SO-036-NP 1 - 5 09/06/03 SSO-FD01	SO-036-NP 1 - 5 09/06/03 SSO-01-NP
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg										
Naphtho[2,3-b]thiophene	- -	µg/kg										
Nonadecane, 9-Methyl-	- -	µg/kg										
Octadecanal	- -	µg/kg										
Octadecanoic acid	- -	µg/kg										
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg										
Octadecanoic acid, butyl ester	- -	µg/kg										
Olean-12-ene	- -	µg/kg										
Organic acid	- -	µg/kg										
Organic acid 1	- -	µg/kg										
Organic acid 2	- -	µg/kg										
Organic acid 3	- -	µg/kg										
Organic acid 4	- -	µg/kg										
Organic acid 5	- -	µg/kg										
o-Terphenyl	- -	µg/kg					**3,700 NJ**					
Oxirane, hexadecyl-	- -	µg/kg										
p-Dicyclohexylbenzene	- -	µg/kg										
Pentadecanal-	- -	µg/kg										
Pentadecanoic acid	- -	µg/kg										
Pentasiloxane, dodecamethyl-	- -	µg/kg										
Perylene	- -	µg/kg		**2,900 NJD**		**260 NJ**						
Perylene isomer C20H12	- -	µg/kg										
Phenanthrene, 1,7-dimethyl-	- -	µg/kg										
Phenanthrene, 1-methyl-	- -	µg/kg				**470 NJD**						
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg							**740 NJD**			
Phenanthrene, 2,3-dimethyl-	- -	µg/kg										
Phenanthrene, 2,5-dimethyl-	- -	µg/kg										
Phenanthrene, 2,7-dimethyl-	- -	µg/kg	**110 NJ**									
Phenanthrene, 2-methyl-	- -	µg/kg										
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg										
Phenanthrene, 3,6-dimethyl-	- -	µg/kg										
Phenanthrene, 3-methyl-	- -	µg/kg				**430 NJ**						
Phenanthrene, 4-methyl-	- -	µg/kg	**330 NJ**						**1,200 NJD**			
Phenanthridine	- -	µg/kg										
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg										
Phenylated naphthalene	- -	µg/kg										
Phthalic anhydride	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-032-LF 0 - 1 08/28/03 SO-032-LF	SO-033-NP 0 - 1 09/05/03 SO-033-NP	SO-033-NP 1 - 5 09/05/03 SO-W14-NP	SO-034-NP 0 - 1 09/05/03 SO-034-NP	SO-034-NP 6 - 10 09/05/03 SO-W13-NP	SO-035-NP 0 - 1 09/06/03 SO-035-NP	SO-035-NP 5 - 9 09/06/03 SO-W15-NP	SO-036-NP 0 - 1 09/06/03 SO-036-NP	SO-036-NP 1 - 5 09/06/03 SSO-FD01	SO-036-NP 1 - 5 09/06/03 SSO-01-NP
Propanoic acid, 3-mercapto-	- -	µg/kg										
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg										
Pyrene, 1-methyl-	- -	µg/kg										
Pyrene, 2-methyl-	- -	µg/kg	**220 NJD**	**120 NJ**					**1,000 NJD**			
Pyrene, 4-methyl-	- -	µg/kg				**160 NJ**						
Stigmast-4-en-3-one	- -	µg/kg	**600 NJD**									
Stigmasta-3,5-dien-7-one	- -	µg/kg										
Stigmasterol, 22,23-dihydro-	- -	µg/kg										
Substituted Benzene	- -	µg/kg										
Substituted Naphthalene	- -	µg/kg										
Substituted Naphthalene 1	- -	µg/kg										
Substituted Naphthalene 2	- -	µg/kg										
Substituted Naphthalene 3	- -	µg/kg										
Substituted Naphthalene 4	- -	µg/kg										
Substituted PAH isomer	- -	µg/kg										
Sulfur hexamer	- -	µg/kg										
Sulfur, mol. (S8)	- -	µg/kg										
Testosterone	- -	µg/kg										
Tetradecanal	- -	µg/kg										
Tetradecanoic acid	- -	µg/kg										
Tetradecanoic acid, ethyl ester	- -	µg/kg										
Tetradecanoic acid, methyl ester	- -	µg/kg										
Thiophene, 2-(Methylselenyl)	- -	µg/kg			**450 NJ**							
tri(2-Ethylhexyl) trimellitate	- -	µg/kg										
Tridecanoic acid	- -	µg/kg										
Triphenylene	- -	µg/kg										
Triphenylene, 2-methyl-	- -	µg/kg										
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg										
Vanillin	- -	µg/kg										
Vitamin E	- -	µg/kg										
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg										
Trichlorobiphenyls	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-037-NP 0 - 1 09/06/03 SO-037-NP	SO-037-NP 5 - 9 09/06/03 SO-W16-NP	SO-041-LF 0 - 1 09/09/04 SO-041-LF	SO-042-LF 0 - 1 09/09/04 SO-042-LF	SO-043-LF 0 - 1 09/09/04 SO-043-LF	SO-044-QW 0 - 1 09/10/04 SO-044-QW	SO-045-QW 0 - 1 09/10/04 SO-045-QW	SO-046-DF 0 - 1 09/09/04 SO-046-DF	SO-047-DF 0 - 1 09/09/04 SO-047-DF
SVOC TICS											
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg									
.alpha.-Methylstyrene	- -	µg/kg									
.beta.-iso-Methyl ionone	- -	µg/kg									
[3,4:9,10]Dibenzpyrene	- -	µg/kg									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg									
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg									
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg									
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg									
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg									
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg									
1,2,7,8-Debenzphenanthrene	- -	µg/kg									
1,2:4,5-Dibenzopyrene	- -	µg/kg									
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg									
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg									
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg									
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg									
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg									
10-Methylnonadecene	- -	µg/kg									
11H-Benzo[a]fluoren-11-one	- -	µg/kg								**92 NJ**	**740 NJ**
11H-Benzo[a]fluorene	- -	µg/kg						**100 NJ**			
11H-Benzo[b]fluorene	- -	µg/kg	**920 NJD**	**200 NJ**			**110 NJ**			**360 NJ [97 NJ]**	**940 NJ**
13-Docosenamide, (Z)-	- -	µg/kg				840 UJ					
17-Pentatriacontene	- -	µg/kg									
1-Decene	- -	µg/kg						**430 NJ**	**450 NJ**	**690 NJ**	
1-Docosene	- -	µg/kg								**130 NJ**	
1-Dodecanol	- -	µg/kg									
1-Dodecene	- -	µg/kg									
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-037-NP 0 - 1 09/06/03 SO-037-NP	SO-037-NP 5 - 9 09/06/03 SO-W16-NP	SO-041-LF 0 - 1 09/09/04 SO-041-LF	SO-042-LF 0 - 1 09/09/04 SO-042-LF	SO-043-LF 0 - 1 09/09/04 SO-043-LF	SO-044-QW 0 - 1 09/10/04 SO-044-QW	SO-045-QW 0 - 1 09/10/04 SO-045-QW	SO-046-DF 0 - 1 09/09/04 SO-046-DF	SO-047-DF 0 - 1 09/09/04 SO-047-DF
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								**180 NJ**	
1-Heneicosyl formate	- -	µg/kg									
1-Heptadecanol	- -	µg/kg									
1-Hexacosanol	- -	µg/kg									
1-Hexadecene	- -	µg/kg									
1H-Indene, 1-phenyl-	- -	µg/kg									
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-phenyl-	- -	µg/kg									
1-Nonadecane	- -	µg/kg									
1-Nonadecanol	- -	µg/kg									
1-Nonene	- -	µg/kg							**680 NJ**		
1-Octadecanol	- -	µg/kg									
1-Pentadecene	- -	µg/kg									
1-Tridecanol	- -	µg/kg									
1-Tridecene	- -	µg/kg							**230 NJ**		
1-Undecanol	- -	µg/kg	**560 NJ**								
2 (3H)-Benzothiazolone	- -	µg/kg									
2',3,4-Trichlorobiphenyl	- -	µg/kg									
2,3,4-Trichlorobiphenyl	- -	µg/kg									
2,3-Dihydro-1-methylindene	- -	µg/kg									
2,4,6-Trichlorobiphenyl	- -	µg/kg									
2,4-Dichlorophenyl isocyanate	- -	µg/kg									
28-Nor-17.alpha.(H)-hopane	- -	µg/kg									
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg									
2-Dodecanol	- -	µg/kg						**130 NJ**			
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg									
2-Mercaptobenzothiazole	- -	µg/kg									
2-Napthalenamine, n-phenyl	- -	µg/kg									
2-Pentadecanone	- -	µg/kg									
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg									
2-Phenylnaphthalene	- -	µg/kg	**150 NJ**		**280 NJ**			**140 NJ**		**130 NJ**	
2-Propenoic acid, pentadecyl ester	- -	µg/kg									
2-Propenoic acid, tridecyl	- -	µg/kg			**490 NJ**	**430 NJ**					**450 NJ**
2-Undecanol	- -	µg/kg							140 UJ		
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg									

TABLE 4-15
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3,4:8,9-Dibenzopyrene	- -	µg/kg									
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg									
3,5-Dichlorophenyl isocyanate	- -	µg/kg									
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg									
3-Eicosene, (E)-	- -	µg/kg									
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg									
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg									
4H-Cyclopenta[def]phenanthrene	- -	µg/kg	**380 NJ**		**800 NJ**						**700 NJ**
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									
5,12-Napthacenedione	- -	µg/kg									
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg					**170 NJ**				
5-Eicosene, (E)-	- -	µg/kg									
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg									
7H-Benz[de]anthracen-7-one	- -	µg/kg	**120 NJ**								
7H-Benzo[C]fluorene	- -	µg/kg									
9,10-Anthracenedione	- -	µg/kg	**2,200 NJD**		**620 NJ**	**390 NJ**	**770 NJ**	**280 NJ**	**320 NJ**	**350 NJ [530 NJ]**	**440 NJ**
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg									
9,10-Dimethylanthracene	- -	µg/kg								**210 NJ [470 NJ]**	**330 NJ**
9-Hexacosene	- -	µg/kg									
9-Hexadecenoic acid	- -	µg/kg									
9H-Fluoren-9-one	- -	µg/kg	**540 NJ**		**100 NJ**	**97 NJ**		**86 NJ**			
9H-Fluorene, 1-methyl-	- -	µg/kg									
9H-Fluorene, 2-methyl-	- -	µg/kg									
9H-Fluorene, 9-methylene-	- -	µg/kg									
9-Octadecenamide, (Z)-	- -	µg/kg									
9-Octadecenoic acid, (E)-	- -	µg/kg									
Abieta-8,11,13-triene	- -	µg/kg									
Acridine	- -	µg/kg	**320 NJ**					**94 NJ**			
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg									
Anthracene, 1,4-dimethyl-	- -	µg/kg			**370 NJ**						
Anthracene, 1-methyl-	- -	µg/kg		**220 NJ**		**200 NJ**				**220 NJ**	
Anthracene, 2-methyl-	- -	µg/kg	**1,000 NJ**	**120 NJ**				**240 NJ**	**130 NJ**		**330 NJ**
Anthracene, 9-Ethenyl-	- -	µg/kg									
Anthracene, 9-methyl-	- -	µg/kg									
Benz[a]anthracene, 10-methyl-	- -	µg/kg									
Benz[a]anthracene, 7-methyl-	- -	µg/kg									
Benz[a]anthracene, 8-methyl-	- -	µg/kg									
Benzaldehyde, 2-hydroxy-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-037-NP 0 - 1 09/06/03 SO-037-NP	SO-037-NP 5 - 9 09/06/03 SO-W16-NP	SO-041-LF 0 - 1 09/09/04 SO-041-LF	SO-042-LF 0 - 1 09/09/04 SO-042-LF	SO-043-LF 0 - 1 09/09/04 SO-043-LF	SO-044-QW 0 - 1 09/10/04 SO-044-QW	SO-045-QW 0 - 1 09/10/04 SO-045-QW	SO-046-DF 0 - 1 09/09/04 SO-046-DF	SO-047-DF 0 - 1 09/09/04 SO-047-DF
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg									
Benzenamine, 4-methyl-2-nitro	- -	µg/kg									
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg									
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg									
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg									
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg									
Benzene, 1,2,4-trimethyl-	- -	µg/kg									
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg									
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg			**240 NJ**						**160 NJ**
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg					**280 NJ**				
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg			**210 NJ**						
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg									**120 NJ**
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg					**230 NJ**				
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg							120 UJ		
Benzene, 1-ethyl-3-methyl-	- -	µg/kg									
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg									
Benzene, tert-butyl-	- -	µg/kg									
Benzeneacetic acid	- -	µg/kg									
Benzenemethanol, α,α-dimethyl-	- -	µg/kg									
Benzenesulfonamide, 2-methyl-	- -	µg/kg									
Benzenesulfonamide, 4-methyl-	- -	µg/kg									
Benzo(e)pyrene	- -	µg/kg	**2,300 NJ**								
Benzo[b]chrysene	- -	µg/kg									
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg	**110 NJ**								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg	**130 NJ**							**100 NJ [25 NJ]**	**270 NJ**
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								**96 NJ**	
Benzo[b]triphenylene	- -	µg/kg									
Benzo[c]phenanthrene	- -	µg/kg	**87 NJ**								
Benzo[f]quinoline	- -	µg/kg									
Benzo[ghi]fluoranthene	- -	µg/kg									
Benzo[h]quinoline	- -	µg/kg									
Benzo[j]fluoranthene	- -	µg/kg	**1,000 NJD**								
Benzo[kl]xanthene	- -	µg/kg									
Benzocycloheptatriene	- -	µg/kg									
Benzoic acid	- -	µg/kg									
Benzothiazole	- -	µg/kg									
Benzothiazole, 2-(methylthio)-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-037-NP 0 - 1 09/06/03 SO-037-NP	SO-037-NP 5 - 9 09/06/03 SO-W16-NP	SO-041-LF 0 - 1 09/09/04 SO-041-LF	SO-042-LF 0 - 1 09/09/04 SO-042-LF	SO-043-LF 0 - 1 09/09/04 SO-043-LF	SO-044-QW 0 - 1 09/10/04 SO-044-QW	SO-045-QW 0 - 1 09/10/04 SO-045-QW	SO-046-DF 0 - 1 09/09/04 SO-046-DF	SO-047-DF 0 - 1 09/09/04 SO-047-DF
beta-Sitosterol	- -	µg/kg									
Bicyclohexyl, 4-phenyl-	- -	µg/kg									
Butane, 2-methoxy-2-methyl-	- -	µg/kg									
Butylated hydroxytoluene	- -	µg/kg									
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg									
Cholesta-3,5-dien-7-one	- -	µg/kg									
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg									
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg									
Cholesterol	- -	µg/kg									
Chrysene, 1-methyl-	- -	µg/kg									
Chrysene, 3-methyl-	- -	µg/kg									
Chrysene, 4-methyl-	- -	µg/kg									
Chrysene, 5-methyl-	- -	µg/kg									
Chrysene, 6-methyl-	- -	µg/kg									
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg									
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg									
Clorophene	- -	µg/kg									
Coprostan-3-one	- -	µg/kg									
Cyclohexane, isothiocyanato-	- -	µg/kg									**130 NJ**
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg									
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg									
Cyclopenta(def)phenanthrenone	- -	µg/kg			**320 NJ**	**170 NJ**	**260 NJ**		**120 NJ**	**150 NJ [310 NJ]**	**270 NJ**
Cyclopenta[cd]pyrene	- -	µg/kg	**140 NJ**								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg									
Cyclopentasiloxane, decamethyl-	- -	µg/kg									
Cyclopropanenonanoic Acid, 2	- -	µg/kg									
D:C-friedoolean-8-en-3-one	- -	µg/kg									
dapsone	- -	µg/kg									
Decanoic Acid	- -	µg/kg									
D-Friedoolean-14-en-3-one	- -	µg/kg									
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg									
Dibenz(a,e)aceanthrylene	- -	µg/kg									
Dibenzo[def,mno]chrysene	- -	µg/kg									
Dibenzofuran, 4-methyl-	- -	µg/kg	**190 NJ**			**82 NJ**					
Dibenzothiophene	- -	µg/kg	**860 NJ**		**140 NJ**	**82 NJ**		**120 NJ**			
Dibenzothiophene, 3-methyl	- -	µg/kg									
Diethyltoluamide	- -	µg/kg									
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg									
Diphenyl ether	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-037-NP 0 - 1 09/06/03 SO-037-NP	SO-037-NP 5 - 9 09/06/03 SO-W16-NP	SO-041-LF 0 - 1 09/09/04 SO-041-LF	SO-042-LF 0 - 1 09/09/04 SO-042-LF	SO-043-LF 0 - 1 09/09/04 SO-043-LF	SO-044-QW 0 - 1 09/10/04 SO-044-QW	SO-045-QW 0 - 1 09/10/04 SO-045-QW	SO-046-DF 0 - 1 09/09/04 SO-046-DF	SO-047-DF 0 - 1 09/09/04 SO-047-DF
D-Limonene	- -	µg/kg	**250 NJ**								
Dodecanoic acid	- -	µg/kg									
Dodecanoic acid, methyl ester	- -	µg/kg							120 UJ		
Dodecanoic acid, undecyl ester	- -	µg/kg									
Dodecyl acrylate	- -	µg/kg								**440 NJ**	
Dotriacontane	- -	µg/kg									
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg									
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg									
Fluoranthene, 2-methyl-	- -	µg/kg				**110 NJ**				**500 NJ [140 NJ]**	
Gamma-Sitosterol	- -	µg/kg						**1,900 NJ**			
Hexadecanal	- -	µg/kg									
Hexadecanoic acid	- -	µg/kg				**340 NJ**			**190 NJ**		
Hexadecanoic acid, butyl ester	- -	µg/kg									
Hexadecanoic acid, ethyl ester	- -	µg/kg									
Indene	- -	µg/kg									
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg									
Lup-20-(29)-en-3-one	- -	µg/kg									
Manool	- -	µg/kg				**580 NJ**					
matrine	- -	µg/kg									
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg									
Methylated Naphthalene	- -	µg/kg									
Methylated Phenol	- -	µg/kg									
Methyldibenzothiophene	- -	µg/kg									
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg									
naphthalene, 1,2,3-trimethyl	- -	µg/kg									
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg									
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg									
Naphthalene, 1,2-Dimethyl-	- -	µg/kg									
Naphthalene, 1,3-dimethyl-	- -	µg/kg									
Naphthalene, 1,4-dimethyl-	- -	µg/kg									
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg									
Naphthalene, 1-ethyl-	- -	µg/kg									
Naphthalene, 1-methyl-	- -	µg/kg									
Naphthalene, 1-phenyl-	- -	µg/kg									
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg									
Naphthalene, 2,3-dimethyl-	- -	µg/kg									
Naphthalene, 2,6-dimethyl-	- -	µg/kg									
Naphthalene, 2,7-dimethyl-	- -	µg/kg									
Naphthalene, 2-Ethyl-	- -	µg/kg									
Naphthalene, 2-phenyl-	- -	µg/kg				**140 NJ**					**340 NJ**

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-037-NP 0 - 1 09/06/03 SO-037-NP	SO-037-NP 5 - 9 09/06/03 SO-W16-NP	SO-041-LF 0 - 1 09/09/04 SO-041-LF	SO-042-LF 0 - 1 09/09/04 SO-042-LF	SO-043-LF 0 - 1 09/09/04 SO-043-LF	SO-044-QW 0 - 1 09/10/04 SO-044-QW	SO-045-QW 0 - 1 09/10/04 SO-045-QW	SO-046-DF 0 - 1 09/09/04 SO-046-DF	SO-047-DF 0 - 1 09/09/04 SO-047-DF
Naphthalene, decahydro-, trans-	- -	µg/kg									
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg									
Naphtho[2,3-b]thiophene	- -	µg/kg									
Nonadecane, 9-Methyl-	- -	µg/kg									
Octadecanal	- -	µg/kg									
Octadecanoic acid	- -	µg/kg									
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg									
Octadecanoic acid, butyl ester	- -	µg/kg					**170 NJ**			**280 NJ [83 NJ]**	
Olean-12-ene	- -	µg/kg							**3,300 NJ**		
Organic acid	- -	µg/kg									
Organic acid 1	- -	µg/kg									
Organic acid 2	- -	µg/kg									
Organic acid 3	- -	µg/kg									
Organic acid 4	- -	µg/kg									
Organic acid 5	- -	µg/kg									
o-Terphenyl	- -	µg/kg									
Oxirane, hexadecyl-	- -	µg/kg									
p-Dicyclohexylbenzene	- -	µg/kg									
Pentadecanal-	- -	µg/kg									
Pentadecanoic acid	- -	µg/kg									
Pentasiloxane, dodecamethyl-	- -	µg/kg									
Perylene	- -	µg/kg	**3,600 NJD**					**790 NJ**			
Perylene isomer C20H12	- -	µg/kg									
Phenanthrene, 1,7-dimethyl-	- -	µg/kg									
Phenanthrene, 1-methyl-	- -	µg/kg			**350 NJ**					**170 NJ [320 NJ]**	**260 NJ**
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg									
Phenanthrene, 2,3-dimethyl-	- -	µg/kg									
Phenanthrene, 2,5-dimethyl-	- -	µg/kg									
Phenanthrene, 2,7-dimethyl-	- -	µg/kg									
Phenanthrene, 2-methyl-	- -	µg/kg			**550 NJ**	**310 NJ**	**330 NJ**				**380 NJ**
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg									
Phenanthrene, 3,6-dimethyl-	- -	µg/kg									
Phenanthrene, 3-methyl-	- -	µg/kg						**180 NJ**			
Phenanthrene, 4-methyl-	- -	µg/kg									
Phenanthridine	- -	µg/kg									
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg									
Phenylated naphthalene	- -	µg/kg									
Phthalic anhydride	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-037-NP 0 - 1 09/06/03 SO-037-NP	SO-037-NP 5 - 9 09/06/03 SO-W16-NP	SO-041-LF 0 - 1 09/09/04 SO-041-LF	SO-042-LF 0 - 1 09/09/04 SO-042-LF	SO-043-LF 0 - 1 09/09/04 SO-043-LF	SO-044-QW 0 - 1 09/10/04 SO-044-QW	SO-045-QW 0 - 1 09/10/04 SO-045-QW	SO-046-DF 0 - 1 09/09/04 SO-046-DF	SO-047-DF 0 - 1 09/09/04 SO-047-DF
Propanoic acid, 3-mercapto-	- -	µg/kg									
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg									
Pyrene, 1-methyl-	- -	µg/kg		**180 NJ**						**390 NJ [39 NJ]**	**490 NJ**
Pyrene, 2-methyl-	- -	µg/kg						**87 NJ**			
Pyrene, 4-methyl-	- -	µg/kg					**130 NJ**			**190 NJ [110 NJ]**	**800 NJ**
Stigmast-4-en-3-one	- -	µg/kg						**1,800 NJ**	**1,300 NJ**		
Stigmasta-3,5-dien-7-one	- -	µg/kg									
Stigmasterol, 22,23-dihydro-	- -	µg/kg									
Substituted Benzene	- -	µg/kg									
Substituted Naphthalene	- -	µg/kg									
Substituted Naphthalene 1	- -	µg/kg									
Substituted Naphthalene 2	- -	µg/kg									
Substituted Naphthalene 3	- -	µg/kg									
Substituted Naphthalene 4	- -	µg/kg									
Substituted PAH isomer	- -	µg/kg									
Sulfur hexamer	- -	µg/kg									
Sulfur, mol. (S8)	- -	µg/kg									
Testosterone	- -	µg/kg									
Tetradecanal	- -	µg/kg									
Tetradecanoic acid	- -	µg/kg									
Tetradecanoic acid, ethyl ester	- -	µg/kg									
Tetradecanoic acid, methyl ester	- -	µg/kg							**98 NJ**		
Thiophene, 2-(Methylselenyl)	- -	µg/kg									
tri(2-Ethylhexyl) trimellitate	- -	µg/kg									
Tridecanoic acid	- -	µg/kg									
Triphenylene	- -	µg/kg									
Triphenylene, 2-methyl-	- -	µg/kg									
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg									
Vanillin	- -	µg/kg									
Vitamin E	- -	µg/kg									
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg									
Trichlorobiphenyls	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP
SVOC TICS											
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg									
.alpha.-Methylstyrene	- -	µg/kg									
.beta.-iso-Methyl ionone	- -	µg/kg									
[3,4:9,10]Dibenzpyrene	- -	µg/kg									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg									
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg									
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg									
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg									
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg									
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg									
1,2,7,8-Debenzphenanthrene	- -	µg/kg									
1,2:4,5-Dibenzopyrene	- -	µg/kg									
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg									
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg									
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg									
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg									
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg									**180 NJ**
10-Methylnonadecene	- -	µg/kg									
11H-Benzo[a]fluoren-11-one	- -	µg/kg								**180 NJ**	
11H-Benzo[a]fluorene	- -	µg/kg				**170 NJ**			**170 NJ**		
11H-Benzo[b]fluorene	- -	µg/kg	**96 NJ**	**230 NJ**	**180 NJ**	**220 NJ**					
13-Docosenamide, (Z)-	- -	µg/kg									
17-Pentatriacontene	- -	µg/kg									
1-Decene	- -	µg/kg			**410 NJ**		**350 NJ**	**430 NJ**		**460 NJ**	
1-Docosene	- -	µg/kg									
1-Dodecanol	- -	µg/kg									
1-Dodecene	- -	µg/kg									
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg									
1-Heneicosyl formate	- -	µg/kg									
1-Heptadecanol	- -	µg/kg									
1-Hexacosanol	- -	µg/kg									
1-Hexadecene	- -	µg/kg									
1H-Indene, 1-phenyl-	- -	µg/kg									
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-phenyl-	- -	µg/kg									
1-Nonadecane	- -	µg/kg									
1-Nonadecanol	- -	µg/kg									
1-Nonene	- -	µg/kg									
1-Octadecanol	- -	µg/kg									
1-Pentadecene	- -	µg/kg									
1-Tridecanol	- -	µg/kg									
1-Tridecene	- -	µg/kg									
1-Undecanol	- -	µg/kg									
2 (3H)-Benzothiazolone	- -	µg/kg									
2',3,4-Trichlorobiphenyl	- -	µg/kg									
2,3,4-Trichlorobiphenyl	- -	µg/kg									
2,3-Dihydro-1-methylindene	- -	µg/kg									
2,4,6-Trichlorobiphenyl	- -	µg/kg									
2,4-Dichlorophenyl isocyanate	- -	µg/kg									
28-Nor-17.alpha.(H)-hopane	- -	µg/kg									
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg									
2-Dodecanol	- -	µg/kg									
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg									
2-Mercaptobenzothiazole	- -	µg/kg									
2-Napthalenamine, n-phenyl	- -	µg/kg									
2-Pentadecanone	- -	µg/kg									
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg									
2-Phenylnaphthalene	- -	µg/kg									
2-Propenoic acid, pentadecyl ester	- -	µg/kg									
2-Propenoic acid, tridecyl	- -	µg/kg	**270 NJ**					**340 NJ**			
2-Undecanol	- -	µg/kg									
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP
3,4:8,9-Dibenzopyrene	- -	µg/kg									
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg									
3,5-Dichlorophenyl isocyanate	- -	µg/kg	**240 NJ**								**320 NJ**
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg									
3-Eicosene, (E)-	- -	µg/kg									
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg									
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg									
4H-Cyclopenta[def]phenanthrene	- -	µg/kg	**590 NJ**	**120 NJ**	**360 NJ**	**880 NJ**		**430 NJ**	**710 NJ**		**810 NJ [950 NJ]**
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									
5,12-Napthacenedione	- -	µg/kg									
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg									
5-Eicosene, (E)-	- -	µg/kg									
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg									
7H-Benz[de]anthracen-7-one	- -	µg/kg									
7H-Benzo[C]fluorene	- -	µg/kg									
9,10-Anthracenedione	- -	µg/kg	**370 NJ**	**190 NJ**	**380 NJ**	**550 NJ**		**310 NJ**	**440 NJ**	**260 NJ**	**580 NJ [600 NJ]**
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg									
9,10-Dimethylanthracene	- -	µg/kg	**460 NJ**					**350 NJ**		**360 NJ**	
9-Hexacosene	- -	µg/kg								**360 NJ**	
9-Hexadecenoic acid	- -	µg/kg									
9H-Fluoren-9-one	- -	µg/kg			**120 NJ**	**150 NJ**	**120 NJ**	**130 NJ**	**120 NJ**	**110 NJ**	**170 NJ [180 NJ]**
9H-Fluorene, 1-methyl-	- -	µg/kg									
9H-Fluorene, 2-methyl-	- -	µg/kg									
9H-Fluorene, 9-methylene-	- -	µg/kg			**84 NJ**						
9-Octadecenamide, (Z)-	- -	µg/kg									
9-Octadecenoic acid, (E)-	- -	µg/kg									
Abieta-8,11,13-triene	- -	µg/kg									
Acridine	- -	µg/kg									
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg									
Anthracene, 1,4-dimethyl-	- -	µg/kg			**380 NJ**				**490 NJ**		
Anthracene, 1-methyl-	- -	µg/kg		**110 NJ**					**390 NJ**	**450 NJ**	
Anthracene, 2-methyl-	- -	µg/kg	**450 NJ**		**410 NJ**	**670 NJ**	**440 NJ**	**360 NJ**	**310 NJ**		
Anthracene, 9-Ethenyl-	- -	µg/kg									
Anthracene, 9-methyl-	- -	µg/kg					**500 NJ**			**330 NJ**	
Benz[a]anthracene, 10-methyl-	- -	µg/kg									
Benz[a]anthracene, 7-methyl-	- -	µg/kg									
Benz[a]anthracene, 8-methyl-	- -	µg/kg									
Benzaldehyde, 2-hydroxy-	- -	µg/kg						**110 NJ**	**130 NJ**		**160 NJ**

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg									
Benzenamine, 4-methyl-2-nitro	- -	µg/kg									
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg									**630 NJ**
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg									
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg									
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg									
Benzene, 1,2,4-trimethyl-	- -	µg/kg									
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg						**100 NJ**			
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg			**100 NJ**		**160 NJ**			**110 NJ**	
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg	**130 NJ**				**210 NJ**				
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg						**110 NJ**		**100 NJ**	**250 NJ [150 NJ]**
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg			**120 NJ**						
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg									
Benzene, 1-ethyl-3-methyl-	- -	µg/kg									
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg									
Benzene, tert-butyl-	- -	µg/kg									
Benzeneacetic acid	- -	µg/kg			**170 NJ**	**120 NJ**	**160 NJ**				**240 NJ [270 NJ]**
Benzenemethanol, α,α-dimethyl-	- -	µg/kg									
Benzenesulfonamide, 2-methyl-	- -	µg/kg	**170 NJ**		**130 NJ**	**240 NJ**	**89 NJ**	**180 NJ**	**170 NJ**		**270 NJ [230 NJ]**
Benzenesulfonamide, 4-methyl-	- -	µg/kg	**140 NJ**			**770 NJ**					
Benzo(e)pyrene	- -	µg/kg		**540 NJ**							
Benzo[b]chrysene	- -	µg/kg									
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg									
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg									
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg									
Benzo[b]triphenylene	- -	µg/kg									
Benzo[c]phenanthrene	- -	µg/kg									
Benzo[f]quinoline	- -	µg/kg			**110 NJ**				**120 NJ**		
Benzo[ghi]fluoranthene	- -	µg/kg									
Benzo[h]quinoline	- -	µg/kg									
Benzo[j]fluoranthene	- -	µg/kg									
Benzo[kl]xanthene	- -	µg/kg	**22 NJ**								
Benzocycloheptatriene	- -	µg/kg									
Benzoic acid	- -	µg/kg							**94 NJ**		
Benzothiazole	- -	µg/kg									
Benzothiazole, 2-(methylthio)-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP
beta-Sitosterol	- -	µg/kg									
Bicyclohexyl, 4-phenyl-	- -	µg/kg									
Butane, 2-methoxy-2-methyl-	- -	µg/kg									
Butylated hydroxytoluene	- -	µg/kg									
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg									
Cholesta-3,5-dien-7-one	- -	µg/kg									
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg									
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg									
Cholesterol	- -	µg/kg									
Chrysene, 1-methyl-	- -	µg/kg									
Chrysene, 3-methyl-	- -	µg/kg									
Chrysene, 4-methyl-	- -	µg/kg									
Chrysene, 5-methyl-	- -	µg/kg									
Chrysene, 6-methyl-	- -	µg/kg									
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg									
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg									
Clorophene	- -	µg/kg									
Coprostan-3-one	- -	µg/kg									
Cyclohexane, isothiocyanato-	- -	µg/kg									
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg									
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg									
Cyclopenta(def)phenanthrenone	- -	µg/kg	**260 NJ**			**330 NJ**			**240 NJ**		**450 NJ**
Cyclopenta[cd]pyrene	- -	µg/kg									
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg									
Cyclopentasiloxane, decamethyl-	- -	µg/kg									
Cyclopropanenonanoic Acid, 2	- -	µg/kg									
D:C-friedoolean-8-en-3-one	- -	µg/kg									
dapsone	- -	µg/kg									
Decanoic Acid	- -	µg/kg									
D-Friedoolean-14-en-3-one	- -	µg/kg									
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg									
Dibenz(a,e)aceanthrylene	- -	µg/kg									
Dibenzo[def,mno]chrysene	- -	µg/kg									
Dibenzofuran, 4-methyl-	- -	µg/kg									
Dibenzothiophene	- -	µg/kg			**140 NJ**	**190 NJ**			**210 NJ**		**350 NJ [240 NJ]**
Dibenzothiophene, 3-methyl	- -	µg/kg									
Diethyltoluamide	- -	µg/kg									
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg									
Diphenyl ether	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP
D-Limonene	- -	µg/kg									
Dodecanoic acid	- -	µg/kg									
Dodecanoic acid, methyl ester	- -	µg/kg									
Dodecanoic acid, undecyl ester	- -	µg/kg									
Dodecyl acrylate	- -	µg/kg			**540 NJ**				**470 NJ**		**890 NJ**
Dotriacontane	- -	µg/kg									
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg									
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg									
Fluoranthene, 2-methyl-	- -	µg/kg									
Gamma-Sitosterol	- -	µg/kg									
Hexadecanal	- -	µg/kg									
Hexadecanoic acid	- -	µg/kg					**1,100 NJ**				
Hexadecanoic acid, butyl ester	- -	µg/kg									
Hexadecanoic acid, ethyl ester	- -	µg/kg									
Indene	- -	µg/kg			**110 NJ**						
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg									
Lup-20-(29)-en-3-one	- -	µg/kg									
Manool	- -	µg/kg									
matrine	- -	µg/kg									
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg									
Methylated Naphthalene	- -	µg/kg									
Methylated Phenol	- -	µg/kg									
Methyldibenzothiophene	- -	µg/kg									
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg									
naphthalene, 1,2,3-trimethyl	- -	µg/kg									
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg									
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg									
Naphthalene, 1,2-Dimethyl-	- -	µg/kg									
Naphthalene, 1,3-dimethyl-	- -	µg/kg									
Naphthalene, 1,4-dimethyl-	- -	µg/kg					**98 NJ**				
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg									
Naphthalene, 1-ethyl-	- -	µg/kg									
Naphthalene, 1-methyl-	- -	µg/kg					**110 NJ**		**88 NJ**	**140 NJ**	
Naphthalene, 1-phenyl-	- -	µg/kg									
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg			**93 NJ**						
Naphthalene, 2,3-dimethyl-	- -	µg/kg									
Naphthalene, 2,6-dimethyl-	- -	µg/kg									
Naphthalene, 2,7-dimethyl-	- -	µg/kg									
Naphthalene, 2-Ethyl-	- -	µg/kg									
Naphthalene, 2-phenyl-	- -	µg/kg	**220 NJ**								**510 NJ [570 NJ]**

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP
Naphthalene, decahydro-, trans-	- -	µg/kg									
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg									
Naphtho[2,3-b]thiophene	- -	µg/kg								**160 NJ**	
Nonadecane, 9-Methyl-	- -	µg/kg									
Octadecanal	- -	µg/kg									
Octadecanoic acid	- -	µg/kg			**150 NJ**	**230 NJ**					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg									
Octadecanoic acid, butyl ester	- -	µg/kg		**100 NJ**							
Olean-12-ene	- -	µg/kg									
Organic acid	- -	µg/kg									
Organic acid 1	- -	µg/kg									
Organic acid 2	- -	µg/kg									
Organic acid 3	- -	µg/kg									
Organic acid 4	- -	µg/kg									
Organic acid 5	- -	µg/kg									
o-Terphenyl	- -	µg/kg									
Oxirane, hexadecyl-	- -	µg/kg									
p-Dicyclohexylbenzene	- -	µg/kg									
Pentadecanal-	- -	µg/kg									
Pentadecanoic acid	- -	µg/kg									
Pentasiloxane, dodecamethyl-	- -	µg/kg									
Perylene	- -	µg/kg									
Perylene isomer C20H12	- -	µg/kg									
Phenanthrene, 1,7-dimethyl-	- -	µg/kg									
Phenanthrene, 1-methyl-	- -	µg/kg	**270 NJ**	**110 NJ**		**520 NJ**					**390 NJ [520 NJ]**
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg									
Phenanthrene, 2,3-dimethyl-	- -	µg/kg									
Phenanthrene, 2,5-dimethyl-	- -	µg/kg				**320 NJ**					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg									
Phenanthrene, 2-methyl-	- -	µg/kg									**490 NJ**
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg									
Phenanthrene, 3,6-dimethyl-	- -	µg/kg									
Phenanthrene, 3-methyl-	- -	µg/kg									
Phenanthrene, 4-methyl-	- -	µg/kg									
Phenanthridine	- -	µg/kg									**120 NJ**
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg									
Phenylated naphthalene	- -	µg/kg									
Phthalic anhydride	- -	µg/kg	**120 NJ**								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP	SO-055-NP 0 - 1 09/08/04 SO-055-NP	SO-056-NP 0 - 1 09/08/04 SO-056-NP
Propanoic acid, 3-mercapto-	- -	µg/kg									
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg									
Pyrene, 1-methyl-	- -	µg/kg	**88 NJ**								**140 NJ**
Pyrene, 2-methyl-	- -	µg/kg	**100 NJ**			**190 NJ**			**140 NJ**		
Pyrene, 4-methyl-	- -	µg/kg									
Stigmast-4-en-3-one	- -	µg/kg									
Stigmasta-3,5-dien-7-one	- -	µg/kg									
Stigmasterol, 22,23-dihydro-	- -	µg/kg									
Substituted Benzene	- -	µg/kg									
Substituted Naphthalene	- -	µg/kg									
Substituted Naphthalene 1	- -	µg/kg									
Substituted Naphthalene 2	- -	µg/kg									
Substituted Naphthalene 3	- -	µg/kg									
Substituted Naphthalene 4	- -	µg/kg									
Substituted PAH isomer	- -	µg/kg									
Sulfur hexamer	- -	µg/kg									**270 NJ**
Sulfur, mol. (S8)	- -	µg/kg									
Testosterone	- -	µg/kg									
Tetradecanal	- -	µg/kg									
Tetradecanoic acid	- -	µg/kg									
Tetradecanoic acid, ethyl ester	- -	µg/kg									**210 NJ**
Tetradecanoic acid, methyl ester	- -	µg/kg									
Thiophene, 2-(Methylselenyl)	- -	µg/kg									
tri(2-Ethylhexyl) trimellitate	- -	µg/kg									
Tridecanoic acid	- -	µg/kg									
Triphenylene	- -	µg/kg									
Triphenylene, 2-methyl-	- -	µg/kg									
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg									
Vanillin	- -	µg/kg									
Vitamin E	- -	µg/kg									
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg									
Trichlorobiphenyls	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT
SVOC TICS											
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg									
.alpha.-Methylstyrene	- -	µg/kg									
.beta.-iso-Methyl ionone	- -	µg/kg									
[3,4:9,10]Dibenzpyrene	- -	µg/kg									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg									
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg									
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg									
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg									
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg									
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg									
1,2,7,8-Debenzphenanthrene	- -	µg/kg									
1,2:4,5-Dibenzopyrene	- -	µg/kg									
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg									
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg									
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg									
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg									
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg									
10-Methylnonadecene	- -	µg/kg									
11H-Benzo[a]fluoren-11-one	- -	µg/kg									
11H-Benzo[a]fluorene	- -	µg/kg									
11H-Benzo[b]fluorene	- -	µg/kg	**110 NJ**								
13-Docosenamide, (Z)-	- -	µg/kg					430 UJ				410 UJ
17-Pentatriacontene	- -	µg/kg									
1-Decene	- -	µg/kg					**660 NJ**			**600 NJ**	**500 NJ**
1-Docosene	- -	µg/kg					**320 NJ**				
1-Dodecanol	- -	µg/kg									
1-Dodecene	- -	µg/kg				**150 NJ**					
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg									
1-Heneicosyl formate	- -	µg/kg									
1-Heptadecanol	- -	µg/kg									
1-Hexacosanol	- -	µg/kg									
1-Hexadecene	- -	µg/kg		**170 NJ**							
1H-Indene, 1-phenyl-	- -	µg/kg									
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg	**340 NJ**								
1H-Indene, 2-phenyl-	- -	µg/kg									
1-Nonadecane	- -	µg/kg									
1-Nonadecanol	- -	µg/kg									
1-Nonene	- -	µg/kg									
1-Octadecanol	- -	µg/kg									
1-Pentadecene	- -	µg/kg									
1-Tridecanol	- -	µg/kg									
1-Tridecene	- -	µg/kg									
1-Undecanol	- -	µg/kg									
2 (3H)-Benzothiazolone	- -	µg/kg									
2',3,4-Trichlorobiphenyl	- -	µg/kg									
2,3,4-Trichlorobiphenyl	- -	µg/kg									
2,3-Dihydro-1-methylindene	- -	µg/kg									
2,4,6-Trichlorobiphenyl	- -	µg/kg									
2,4-Dichlorophenyl isocyanate	- -	µg/kg									
28-Nor-17.alpha.(H)-hopane	- -	µg/kg									
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg									
2-Dodecanol	- -	µg/kg									
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg									
2-Mercaptobenzothiazole	- -	µg/kg									
2-Napthalenamine, n-phenyl	- -	µg/kg									
2-Pentadecanone	- -	µg/kg									
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg									
2-Phenylnaphthalene	- -	µg/kg									
2-Propenoic acid, pentadecyl ester	- -	µg/kg								170 UJ	
2-Propenoic acid, tridecyl	- -	µg/kg	**360 NJ**	**590 NJ**							
2-Undecanol	- -	µg/kg									
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT
3,4:8,9-Dibenzopyrene	- -	µg/kg									
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg									
3,5-Dichlorophenyl isocyanate	- -	µg/kg									
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg									
3-Eicosene, (E)-	- -	µg/kg									
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg									
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg									
4H-Cyclopenta[def]phenanthrene	- -	µg/kg	**500 NJ**	**400 NJ**							
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									
5,12-Napthacenedione	- -	µg/kg									
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg									
5-Eicosene, (E)-	- -	µg/kg					**170 NJ**				
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg									
7H-Benz[de]anthracen-7-one	- -	µg/kg									
7H-Benzo[C]fluorene	- -	µg/kg									
9,10-Anthracenedione	- -	µg/kg		**470 NJ**							
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg									
9,10-Dimethylanthracene	- -	µg/kg									
9-Hexacosene	- -	µg/kg									
9-Hexadecenoic acid	- -	µg/kg									
9H-Fluoren-9-one	- -	µg/kg	**96 NJ**	**110 NJ**							
9H-Fluorene, 1-methyl-	- -	µg/kg									
9H-Fluorene, 2-methyl-	- -	µg/kg									
9H-Fluorene, 9-methylene-	- -	µg/kg									
9-Octadecenamide, (Z)-	- -	µg/kg									
9-Octadecenoic acid, (E)-	- -	µg/kg									
Abieta-8,11,13-triene	- -	µg/kg									
Acridine	- -	µg/kg									
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg									
Anthracene, 1,4-dimethyl-	- -	µg/kg									
Anthracene, 1-methyl-	- -	µg/kg	**370 NJ**								
Anthracene, 2-methyl-	- -	µg/kg		**340 NJ**							
Anthracene, 9-Ethenyl-	- -	µg/kg									
Anthracene, 9-methyl-	- -	µg/kg									
Benz[a]anthracene, 10-methyl-	- -	µg/kg									
Benz[a]anthracene, 7-methyl-	- -	µg/kg									
Benz[a]anthracene, 8-methyl-	- -	µg/kg									
Benzaldehyde, 2-hydroxy-	- -	µg/kg		**260 NJ**							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg									
Benzenamine, 4-methyl-2-nitro	- -	µg/kg									
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg									
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg									
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg									
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg									
Benzene, 1,2,4-trimethyl-	- -	µg/kg									
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg	**380 NJ**								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg		**120 NJ**							
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg	**310 NJ**								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg		**130 NJ**							
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg									
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg									
Benzene, 1-ethyl-3-methyl-	- -	µg/kg									
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg									
Benzene, tert-butyl-	- -	µg/kg									
Benzeneacetic acid	- -	µg/kg		**150 NJ**							
Benzenemethanol, α,α-dimethyl-	- -	µg/kg									
Benzenesulfonamide, 2-methyl-	- -	µg/kg		**170 NJ**							
Benzenesulfonamide, 4-methyl-	- -	µg/kg									
Benzo(e)pyrene	- -	µg/kg								**270 NJ**	
Benzo[b]chrysene	- -	µg/kg									
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg									
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg									
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg									
Benzo[b]triphenylene	- -	µg/kg									
Benzo[c]phenanthrene	- -	µg/kg									
Benzo[f]quinoline	- -	µg/kg									
Benzo[ghi]fluoranthene	- -	µg/kg									
Benzo[h]quinoline	- -	µg/kg									
Benzo[j]fluoranthene	- -	µg/kg									
Benzo[kl]xanthene	- -	µg/kg									
Benzocycloheptatriene	- -	µg/kg									
Benzoic acid	- -	µg/kg		**97 NJ**							
Benzothiazole	- -	µg/kg									
Benzothiazole, 2-(methylthio)-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT
beta-Sitosterol	- -	µg/kg				**530 NJ**					
Bicyclohexyl, 4-phenyl-	- -	µg/kg	**310 NJ**								
Butane, 2-methoxy-2-methyl-	- -	µg/kg									
Butylated hydroxytoluene	- -	µg/kg									
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg									
Cholesta-3,5-dien-7-one	- -	µg/kg									
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg									
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg									
Cholesterol	- -	µg/kg									
Chrysene, 1-methyl-	- -	µg/kg									
Chrysene, 3-methyl-	- -	µg/kg									
Chrysene, 4-methyl-	- -	µg/kg									
Chrysene, 5-methyl-	- -	µg/kg									
Chrysene, 6-methyl-	- -	µg/kg									
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg									
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg									
Clorophene	- -	µg/kg									
Coprostan-3-one	- -	µg/kg									
Cyclohexane, isothiocyanato-	- -	µg/kg					**100 NJ**				**130 NJ**
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg									
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg									
Cyclopenta(def)phenanthrenone	- -	µg/kg	**330 NJ**								
Cyclopenta[cd]pyrene	- -	µg/kg									
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg									
Cyclopentasiloxane, decamethyl-	- -	µg/kg									
Cyclopropanenonanoic Acid, 2	- -	µg/kg									
D:C-friedoolean-8-en-3-one	- -	µg/kg									
dapsone	- -	µg/kg									
Decanoic Acid	- -	µg/kg									
D-Friedoolean-14-en-3-one	- -	µg/kg									**160 NJ**
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg									
Dibenz(a,e)aceanthrylene	- -	µg/kg									
Dibenzo[def,mno]chrysene	- -	µg/kg									
Dibenzofuran, 4-methyl-	- -	µg/kg									
Dibenzothiophene	- -	µg/kg	**89 NJ**	**150 NJ**							
Dibenzothiophene, 3-methyl	- -	µg/kg									
Diethyltoluamide	- -	µg/kg									
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg									
Diphenyl ether	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT
D-Limonene	- -	µg/kg									
Dodecanoic acid	- -	µg/kg									
Dodecanoic acid, methyl ester	- -	µg/kg									
Dodecanoic acid, undecyl ester	- -	µg/kg									
Dodecyl acrylate	- -	µg/kg									
Dotriacontane	- -	µg/kg									
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								**240 NJ [280 NJ]**	
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg									
Fluoranthene, 2-methyl-	- -	µg/kg									
Gamma-Sitosterol	- -	µg/kg									
Hexadecanal	- -	µg/kg									
Hexadecanoic acid	- -	µg/kg				**79 NJ**					
Hexadecanoic acid, butyl ester	- -	µg/kg								**330 NJ [290 NJ]**	
Hexadecanoic acid, ethyl ester	- -	µg/kg									
Indene	- -	µg/kg									
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg									
Lup-20-(29)-en-3-one	- -	µg/kg									**1,100 NJ**
Manool	- -	µg/kg									
matrine	- -	µg/kg									
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg									
Methylated Naphthalene	- -	µg/kg									
Methylated Phenol	- -	µg/kg									
Methyldibenzothiophene	- -	µg/kg									
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg									
naphthalene, 1,2,3-trimethyl	- -	µg/kg									
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg									
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg									
Naphthalene, 1,2-Dimethyl-	- -	µg/kg									
Naphthalene, 1,3-dimethyl-	- -	µg/kg									
Naphthalene, 1,4-dimethyl-	- -	µg/kg									
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg									
Naphthalene, 1-ethyl-	- -	µg/kg									
Naphthalene, 1-methyl-	- -	µg/kg									
Naphthalene, 1-phenyl-	- -	µg/kg									
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg									
Naphthalene, 2,3-dimethyl-	- -	µg/kg									
Naphthalene, 2,6-dimethyl-	- -	µg/kg									
Naphthalene, 2,7-dimethyl-	- -	µg/kg									
Naphthalene, 2-Ethyl-	- -	µg/kg									
Naphthalene, 2-phenyl-	- -	µg/kg	**210 NJ**	**130 NJ**							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT
Naphthalene, decahydro-, trans-	- -	µg/kg									
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg									
Naphtho[2,3-b]thiophene	- -	µg/kg									
Nonadecane, 9-Methyl-	- -	µg/kg									
Octadecanal	- -	µg/kg									
Octadecanoic acid	- -	µg/kg		**240 NJ**							
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg			**190 NJ**						
Octadecanoic acid, butyl ester	- -	µg/kg								**160 NJ [140 NJ]**	**100 NJ**
Olean-12-ene	- -	µg/kg									
Organic acid	- -	µg/kg									
Organic acid 1	- -	µg/kg									
Organic acid 2	- -	µg/kg									
Organic acid 3	- -	µg/kg									
Organic acid 4	- -	µg/kg									
Organic acid 5	- -	µg/kg									
o-Terphenyl	- -	µg/kg									
Oxirane, hexadecyl-	- -	µg/kg									
p-Dicyclohexylbenzene	- -	µg/kg	**1,600 NJ**								
Pentadecanal-	- -	µg/kg									
Pentadecanoic acid	- -	µg/kg									
Pentasiloxane, dodecamethyl-	- -	µg/kg									
Perylene	- -	µg/kg									
Perylene isomer C20H12	- -	µg/kg									
Phenanthrene, 1,7-dimethyl-	- -	µg/kg									
Phenanthrene, 1-methyl-	- -	µg/kg									
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg									
Phenanthrene, 2,3-dimethyl-	- -	µg/kg		**310 NJ**							
Phenanthrene, 2,5-dimethyl-	- -	µg/kg									
Phenanthrene, 2,7-dimethyl-	- -	µg/kg									
Phenanthrene, 2-methyl-	- -	µg/kg									
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg									
Phenanthrene, 3,6-dimethyl-	- -	µg/kg									
Phenanthrene, 3-methyl-	- -	µg/kg									
Phenanthrene, 4-methyl-	- -	µg/kg									
Phenanthridine	- -	µg/kg									
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg									
Phenylated naphthalene	- -	µg/kg									
Phthalic anhydride	- -	µg/kg	**160 NJ**	**160 NJ**							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-057-NP 0 - 1 09/09/04 SO-057-NP	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT
Propanoic acid, 3-mercapto-	- -	µg/kg					**220 NJ**				
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg									
Pyrene, 1-methyl-	- -	µg/kg									
Pyrene, 2-methyl-	- -	µg/kg	**150 NJ**								
Pyrene, 4-methyl-	- -	µg/kg									
Stigmast-4-en-3-one	- -	µg/kg				**220 NJ**					**150 NJ**
Stigmasta-3,5-dien-7-one	- -	µg/kg									
Stigmasterol, 22,23-dihydro-	- -	µg/kg									
Substituted Benzene	- -	µg/kg									
Substituted Naphthalene	- -	µg/kg									
Substituted Naphthalene 1	- -	µg/kg									
Substituted Naphthalene 2	- -	µg/kg									
Substituted Naphthalene 3	- -	µg/kg									
Substituted Naphthalene 4	- -	µg/kg									
Substituted PAH isomer	- -	µg/kg									
Sulfur hexamer	- -	µg/kg									
Sulfur, mol. (S8)	- -	µg/kg									
Testosterone	- -	µg/kg									
Tetradecanal	- -	µg/kg									
Tetradecanoic acid	- -	µg/kg									
Tetradecanoic acid, ethyl ester	- -	µg/kg									
Tetradecanoic acid, methyl ester	- -	µg/kg									
Thiophene, 2-(Methylselenyl)	- -	µg/kg									
tri(2-Ethylhexyl) trimellitate	- -	µg/kg									
Tridecanoic acid	- -	µg/kg									
Triphenylene	- -	µg/kg									
Triphenylene, 2-methyl-	- -	µg/kg									
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg									
Vanillin	- -	µg/kg									
Vitamin E	- -	µg/kg									
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg									
Trichlorobiphenyls	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-064-BR 0 - 1 09/08/04 SO-064-BR	SO-065-BR 0 - 1 09/08/04 SO-065-BR	SO-066-BR 0 - 1 09/08/04 SO-066-BR	SO-067-BR 0 - 1 09/08/04 SO-067-BR	SO-068-BR 0 - 1 09/08/04 SO-068-BR	SO-069-BR 0 - 1 09/08/04 SO-069-BR	SO-070-BR 0 - 1 09/08/04 SO-070-BR	SO-071-BR 0 - 1 09/08/04 SO-071-BR	SO-072-MF 0 - 1 09/10/04 SO-072-MF	SO-073-MF 0 - 1 09/10/04 SO-073-MF
SVOC TICS												
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg										
.alpha.-Methylstyrene	- -	µg/kg										
.beta.-iso-Methyl ionone	- -	µg/kg										
[3,4:9,10]Dibenzpyrene	- -	µg/kg										
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg										
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg										
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg										
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg										
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg										
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg										
1,2,7,8-Debenzphenanthrene	- -	µg/kg										
1,2:4,5-Dibenzopyrene	- -	µg/kg		**4,600 NJ**								
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg										
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg										
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg										
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg										
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg										
10-Methylnonadecene	- -	µg/kg										
11H-Benzo[a]fluoren-11-one	- -	µg/kg				**250 NJ**					**170 NJ**	**98 NJ**
11H-Benzo[a]fluorene	- -	µg/kg		**120 NJ**		**230 NJ**						
11H-Benzo[b]fluorene	- -	µg/kg	**110 NJ**	**150 NJ**					**120 NJ**		**150 NJ**	**120 NJ**
13-Docosenamide, (Z)-	- -	µg/kg										
17-Pentatriacontene	- -	µg/kg						**760 NJ**				
1-Decene	- -	µg/kg			**550 NJ**							
1-Docosene	- -	µg/kg			**350 NJ**							
1-Dodecanol	- -	µg/kg										
1-Dodecene	- -	µg/kg					**880 NJ**					
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-064-BR 0 - 1 09/08/04 SO-064-BR	SO-065-BR 0 - 1 09/08/04 SO-065-BR	SO-066-BR 0 - 1 09/08/04 SO-066-BR	SO-067-BR 0 - 1 09/08/04 SO-067-BR	SO-068-BR 0 - 1 09/08/04 SO-068-BR	SO-069-BR 0 - 1 09/08/04 SO-069-BR	SO-070-BR 0 - 1 09/08/04 SO-070-BR	SO-071-BR 0 - 1 09/08/04 SO-071-BR	SO-072-MF 0 - 1 09/10/04 SO-072-MF	SO-073-MF 0 - 1 09/10/04 SO-073-MF
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg										
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg										
1-Heneicosyl formate	- -	µg/kg										
1-Heptadecanol	- -	µg/kg										
1-Hexacosanol	- -	µg/kg					**280 NJ**					
1-Hexadecene	- -	µg/kg					**560 NJ**					
1H-Indene, 1-phenyl-	- -	µg/kg				**480 NJ**						
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-phenyl-	- -	µg/kg										
1-Nonadecane	- -	µg/kg										
1-Nonadecanol	- -	µg/kg				**670 NJ**						
1-Nonene	- -	µg/kg										**600 NJ**
1-Octadecanol	- -	µg/kg										
1-Pentadecene	- -	µg/kg										
1-Tridecanol	- -	µg/kg										
1-Tridecene	- -	µg/kg										
1-Undecanol	- -	µg/kg									860 UJ	
2 (3H)-Benzothiazolone	- -	µg/kg										
2',3,4-Trichlorobiphenyl	- -	µg/kg										
2,3,4-Trichlorobiphenyl	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										
2,4,6-Trichlorobiphenyl	- -	µg/kg										
2,4-Dichlorophenyl isocyanate	- -	µg/kg						**160 NJ**		**140 NJ**		
28-Nor-17.alpha.(H)-hopane	- -	µg/kg										
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg										
2-Dodecanol	- -	µg/kg										
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg										
2-Mercaptobenzothiazole	- -	µg/kg						**250 NJ**				
2-Napthalenamine, n-phenyl	- -	µg/kg										
2-Pentadecanone	- -	µg/kg										
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg										
2-Phenylnaphthalene	- -	µg/kg							**670 NJ**			**100 NJ**
2-Propenoic acid, pentadecyl ester	- -	µg/kg										
2-Propenoic acid, tridecyl	- -	µg/kg							**250 NJ**			
2-Undecanol	- -	µg/kg										
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-064-BR 0 - 1 09/08/04 SO-064-BR	SO-065-BR 0 - 1 09/08/04 SO-065-BR	SO-066-BR 0 - 1 09/08/04 SO-066-BR	SO-067-BR 0 - 1 09/08/04 SO-067-BR	SO-068-BR 0 - 1 09/08/04 SO-068-BR	SO-069-BR 0 - 1 09/08/04 SO-069-BR	SO-070-BR 0 - 1 09/08/04 SO-070-BR	SO-071-BR 0 - 1 09/08/04 SO-071-BR	SO-072-MF 0 - 1 09/10/04 SO-072-MF	SO-073-MF 0 - 1 09/10/04 SO-073-MF
3,4:8,9-Dibenzopyrene	- -	µg/kg										
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg										
3,5-Dichlorophenyl isocyanate	- -	µg/kg					**100 NJ**					
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg										
3-Eicosene, (E)-	- -	µg/kg										
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg										
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg										
4H-Cyclopenta[def]phenanthrene	- -	µg/kg	**760 NJ**	**600 NJ**	**560 NJ**	**610 NJ**	**360 NJ**	**580 NJ**		**370 NJ**	**1,000 NJ**	
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg										
5,12-Napthacenedione	- -	µg/kg										
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg										
5-Eicosene, (E)-	- -	µg/kg										
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg							**200 NJ**			
7H-Benz[de]anthracen-7-one	- -	µg/kg	**130 NJ**						**110 NJ**		**180 NJ**	**150 NJ**
7H-Benzo[C]fluorene	- -	µg/kg										
9,10-Anthracenedione	- -	µg/kg	**430 NJ**	**280 NJ**	**310 NJ**	**350 NJ**		**530 NJ**		**190 NJ**	**500 NJ**	**82 NJ**
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg										
9,10-Dimethylanthracene	- -	µg/kg	**470 NJ**						**870 NJ**		**540 NJ**	
9-Hexacosene	- -	µg/kg										
9-Hexadecenoic acid	- -	µg/kg										
9H-Fluoren-9-one	- -	µg/kg	**130 NJ**	**97 NJ**	**100 NJ**	**110 NJ**		**130 NJ**		**83 NJ**	**210 NJ**	
9H-Fluorene, 1-methyl-	- -	µg/kg							**270 NJ**			**430 NJ**
9H-Fluorene, 2-methyl-	- -	µg/kg										
9H-Fluorene, 9-methylene-	- -	µg/kg										
9-Octadecenamide, (Z)-	- -	µg/kg										
9-Octadecenoic acid, (E)-	- -	µg/kg										
Abieta-8,11,13-triene	- -	µg/kg										
Acridine	- -	µg/kg						**130 NJ**				
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg										
Anthracene, 1,4-dimethyl-	- -	µg/kg										
Anthracene, 1-methyl-	- -	µg/kg		**230 NJ**					**580 NJ**			**1,600 NJ**
Anthracene, 2-methyl-	- -	µg/kg	**410 NJ**		**370 NJ**	**530 NJ**	**230 NJ**	**580 NJ**				
Anthracene, 9-Ethenyl-	- -	µg/kg										
Anthracene, 9-methyl-	- -	µg/kg	**540 NJ**									
Benz[a]anthracene, 10-methyl-	- -	µg/kg										
Benz[a]anthracene, 7-methyl-	- -	µg/kg										
Benz[a]anthracene, 8-methyl-	- -	µg/kg										
Benzaldehyde, 2-hydroxy-	- -	µg/kg								**92 NJ**		

TABLE 4-15
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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-064-BR 0 - 1 09/08/04 SO-064-BR	SO-065-BR 0 - 1 09/08/04 SO-065-BR	SO-066-BR 0 - 1 09/08/04 SO-066-BR	SO-067-BR 0 - 1 09/08/04 SO-067-BR	SO-068-BR 0 - 1 09/08/04 SO-068-BR	SO-069-BR 0 - 1 09/08/04 SO-069-BR	SO-070-BR 0 - 1 09/08/04 SO-070-BR	SO-071-BR 0 - 1 09/08/04 SO-071-BR	SO-072-MF 0 - 1 09/10/04 SO-072-MF	SO-073-MF 0 - 1 09/10/04 SO-073-MF
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg										
Benzenamine, 4-methyl-2-nitro	- -	µg/kg										
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg										
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg										
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg										
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg										
Benzene, 1,2,4-trimethyl-	- -	µg/kg										
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg										
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg			**130 NJ**							
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg			**85 NJ**					**82 NJ**		
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg										
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg										
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg										
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg										
Benzene, tert-butyl-	- -	µg/kg										
Benzeneacetic acid	- -	µg/kg	**100 NJ**									
Benzenemethanol, α,α-dimethyl-	- -	µg/kg										
Benzenesulfonamide, 2-methyl-	- -	µg/kg	**100 NJ**									
Benzenesulfonamide, 4-methyl-	- -	µg/kg										
Benzo(e)pyrene	- -	µg/kg						**450 NJ**				
Benzo[b]chrysene	- -	µg/kg										
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg										
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg										
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg										
Benzo[b]triphenylene	- -	µg/kg										
Benzo[c]phenanthrene	- -	µg/kg										
Benzo[f]quinoline	- -	µg/kg										
Benzo[ghi]fluoranthene	- -	µg/kg										
Benzo[h]quinoline	- -	µg/kg		**100 NJ**								
Benzo[j]fluoranthene	- -	µg/kg		**2,300 NJ**								
Benzo[kl]xanthene	- -	µg/kg										
Benzocycloheptatriene	- -	µg/kg										
Benzoic acid	- -	µg/kg										
Benzothiazole	- -	µg/kg						**120 NJ**				
Benzothiazole, 2-(methylthio)-	- -	µg/kg										

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beta-Sitosterol	- -	µg/kg										
Bicyclohexyl, 4-phenyl-	- -	µg/kg										
Butane, 2-methoxy-2-methyl-	- -	µg/kg										
Butylated hydroxytoluene	- -	µg/kg										
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg										
Cholesta-3,5-dien-7-one	- -	µg/kg										
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg										
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg										
Cholesterol	- -	µg/kg										
Chrysene, 1-methyl-	- -	µg/kg										
Chrysene, 3-methyl-	- -	µg/kg										
Chrysene, 4-methyl-	- -	µg/kg										**180 NJ**
Chrysene, 5-methyl-	- -	µg/kg										
Chrysene, 6-methyl-	- -	µg/kg										
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg										
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg										
Clorophene	- -	µg/kg										
Coprostan-3-one	- -	µg/kg										
Cyclohexane, isothiocyanato-	- -	µg/kg										
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg										
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg										
Cyclopenta(def)phenanthrenone	- -	µg/kg	**240 NJ**	**200 NJ**		**190 NJ**						
Cyclopenta[cd]pyrene	- -	µg/kg										
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg										
Cyclopentasiloxane, decamethyl-	- -	µg/kg										
Cyclopropanenonanoic Acid, 2	- -	µg/kg										
D:C-friedoolean-8-en-3-one	- -	µg/kg										
dapsone	- -	µg/kg										
Decanoic Acid	- -	µg/kg										
D-Friedoolean-14-en-3-one	- -	µg/kg										
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg										
Dibenz(a,e)aceanthrylene	- -	µg/kg										
Dibenzo[def,mno]chrysene	- -	µg/kg										
Dibenzofuran, 4-methyl-	- -	µg/kg										
Dibenzothiophene	- -	µg/kg	**190 NJ**	**120 NJ**	**220 NJ**	**230 NJ**	**200 NJ**	**360 NJ**	**300 NJ**	**150 NJ**	**250 NJ**	
Dibenzothiophene, 3-methyl	- -	µg/kg										
Diethyltoluamide	- -	µg/kg										
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg										
Diphenyl ether	- -	µg/kg										

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D-Limonene	- -	µg/kg										
Dodecanoic acid	- -	µg/kg										
Dodecanoic acid, methyl ester	- -	µg/kg										
Dodecanoic acid, undecyl ester	- -	µg/kg									2,100 UJ	
Dodecyl acrylate	- -	µg/kg										
Dotriacontane	- -	µg/kg										
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg										
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg										
Fluoranthene, 2-methyl-	- -	µg/kg		**130 NJ**	**180 NJ**				**92 NJ**			
Gamma-Sitosterol	- -	µg/kg										
Hexadecanal	- -	µg/kg										
Hexadecanoic acid	- -	µg/kg			**610 NJ**	**830 NJ**	**190 NJ**	**980 NJ**		**400 NJ**	**270 NJ**	
Hexadecanoic acid, butyl ester	- -	µg/kg										
Hexadecanoic acid, ethyl ester	- -	µg/kg			**190 NJ**	**200 NJ**	**230 NJ**	**350 NJ**		**160 NJ**		
Indene	- -	µg/kg										
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg										
Lup-20-(29)-en-3-one	- -	µg/kg										
Manool	- -	µg/kg										
matrine	- -	µg/kg										
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg										
Methylated Naphthalene	- -	µg/kg										
Methylated Phenol	- -	µg/kg										
Methyldibenzothiophene	- -	µg/kg										
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg										
naphthalene, 1,2,3-trimethyl	- -	µg/kg										
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg			**490 NJ**							
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg										
Naphthalene, 1,2-Dimethyl-	- -	µg/kg										
Naphthalene, 1,3-dimethyl-	- -	µg/kg										
Naphthalene, 1,4-dimethyl-	- -	µg/kg										
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg	**110 NJ**		**110 NJ**	**100 NJ**	**120 NJ**					
Naphthalene, 1-phenyl-	- -	µg/kg										**630 NJ**
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, 2,7-dimethyl-	- -	µg/kg										
Naphthalene, 2-Ethyl-	- -	µg/kg										
Naphthalene, 2-phenyl-	- -	µg/kg	**350 NJ**	**220 NJ**		**270 NJ**		**300 NJ**			**370 NJ**	

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-064-BR 0 - 1 09/08/04 SO-064-BR	SO-065-BR 0 - 1 09/08/04 SO-065-BR	SO-066-BR 0 - 1 09/08/04 SO-066-BR	SO-067-BR 0 - 1 09/08/04 SO-067-BR	SO-068-BR 0 - 1 09/08/04 SO-068-BR	SO-069-BR 0 - 1 09/08/04 SO-069-BR	SO-070-BR 0 - 1 09/08/04 SO-070-BR	SO-071-BR 0 - 1 09/08/04 SO-071-BR	SO-072-MF 0 - 1 09/10/04 SO-072-MF	SO-073-MF 0 - 1 09/10/04 SO-073-MF
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg										
Naphtho[2,3-b]thiophene	- -	µg/kg										**740 NJ**
Nonadecane, 9-Methyl-	- -	µg/kg										
Octadecanal	- -	µg/kg										
Octadecanoic acid	- -	µg/kg						**190 NJ**				
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg										
Octadecanoic acid, butyl ester	- -	µg/kg										
Olean-12-ene	- -	µg/kg										
Organic acid	- -	µg/kg										
Organic acid 1	- -	µg/kg										
Organic acid 2	- -	µg/kg										
Organic acid 3	- -	µg/kg										
Organic acid 4	- -	µg/kg										
Organic acid 5	- -	µg/kg										
o-Terphenyl	- -	µg/kg										
Oxirane, hexadecyl-	- -	µg/kg										
p-Dicyclohexylbenzene	- -	µg/kg							**760 NJ**			
Pentadecanal-	- -	µg/kg										
Pentadecanoic acid	- -	µg/kg										
Pentasiloxane, dodecamethyl-	- -	µg/kg										
Perylene	- -	µg/kg							**950 NJ**			**2,400 NJ**
Perylene isomer C20H12	- -	µg/kg										
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								**140 NJ**		
Phenanthrene, 1-methyl-	- -	µg/kg							**1,200 NJ**		**460 NJ**	**2,100 NJ**
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg										
Phenanthrene, 2,3-dimethyl-	- -	µg/kg										
Phenanthrene, 2,5-dimethyl-	- -	µg/kg		**270 NJ**								
Phenanthrene, 2,7-dimethyl-	- -	µg/kg										
Phenanthrene, 2-methyl-	- -	µg/kg		**380 NJ**	**330 NJ**	**220 NJ**		**390 NJ**		**220 NJ**	**640 NJ**	**80 NJ**
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg										
Phenanthrene, 3,6-dimethyl-	- -	µg/kg										
Phenanthrene, 3-methyl-	- -	µg/kg										
Phenanthrene, 4-methyl-	- -	µg/kg										
Phenanthridine	- -	µg/kg										
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg										
Phenylated naphthalene	- -	µg/kg										
Phthalic anhydride	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-064-BR 0 - 1 09/08/04 SO-064-BR	SO-065-BR 0 - 1 09/08/04 SO-065-BR	SO-066-BR 0 - 1 09/08/04 SO-066-BR	SO-067-BR 0 - 1 09/08/04 SO-067-BR	SO-068-BR 0 - 1 09/08/04 SO-068-BR	SO-069-BR 0 - 1 09/08/04 SO-069-BR	SO-070-BR 0 - 1 09/08/04 SO-070-BR	SO-071-BR 0 - 1 09/08/04 SO-071-BR	SO-072-MF 0 - 1 09/10/04 SO-072-MF	SO-073-MF 0 - 1 09/10/04 SO-073-MF
Propanoic acid, 3-mercapto-	- -	µg/kg										
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg										
Pyrene, 1-methyl-	- -	µg/kg			**120 NJ**	**140 NJ**			**110 NJ**		**140 NJ**	**230 NJ**
Pyrene, 2-methyl-	- -	µg/kg										
Pyrene, 4-methyl-	- -	µg/kg						**180 NJ**				
Stigmast-4-en-3-one	- -	µg/kg										
Stigmasta-3,5-dien-7-one	- -	µg/kg										
Stigmasterol, 22,23-dihydro-	- -	µg/kg										
Substituted Benzene	- -	µg/kg										
Substituted Naphthalene	- -	µg/kg										
Substituted Naphthalene 1	- -	µg/kg										
Substituted Naphthalene 2	- -	µg/kg										
Substituted Naphthalene 3	- -	µg/kg										
Substituted Naphthalene 4	- -	µg/kg										
Substituted PAH isomer	- -	µg/kg										
Sulfur hexamer	- -	µg/kg			**200 NJ**	**200 NJ**	**210 NJ**	**290 NJ**		**140 NJ**		
Sulfur, mol. (S8)	- -	µg/kg										
Testosterone	- -	µg/kg										
Tetradecanal	- -	µg/kg										
Tetradecanoic acid	- -	µg/kg										
Tetradecanoic acid, ethyl ester	- -	µg/kg										
Tetradecanoic acid, methyl ester	- -	µg/kg										
Thiophene, 2-(Methylselenyl)	- -	µg/kg										
tri(2-Ethylhexyl) trimellitate	- -	µg/kg										
Tridecanoic acid	- -	µg/kg										
Triphenylene	- -	µg/kg										
Triphenylene, 2-methyl-	- -	µg/kg									**130 NJ**	
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg										
Vanillin	- -	µg/kg	**110 NJ**									
Vitamin E	- -	µg/kg										
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg						**910 NJ**				
Trichlorobiphenyls	- -	µg/kg										

TABLE 4-15
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REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-074-MF 0 - 1 09/10/04 SO-074-MF	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI	SO-078-UI 0 - 1 09/10/04 SO-078-UI	SO-079-UI 0 - 1 09/10/04 SO-079-UI	SO-080-UI 0 - 1 09/10/04 SO-080-UI	SO-081-UI 0 - 1 09/10/04 SO-081-UI	SO-082-UI 0 - 1 09/10/04 SO-082-UI	SO-083-UI 0 - 1 09/10/04 SO-083-UI
SVOC TICS												
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg										
.alpha.-Methylstyrene	- -	µg/kg										
.beta.-iso-Methyl ionone	- -	µg/kg										
[3,4:9,10]Dibenzpyrene	- -	µg/kg	**1,100 NJ**									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg										
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg										
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg										
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg										
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg										
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg										
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg										
1,2,7,8-Debenzphenanthrene	- -	µg/kg										
1,2:4,5-Dibenzopyrene	- -	µg/kg										
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg										
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg										
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg										
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg										
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg										
10-Methylnonadecene	- -	µg/kg										
11H-Benzo[a]fluoren-11-one	- -	µg/kg										
11H-Benzo[a]fluorene	- -	µg/kg					**130 NJ**					
11H-Benzo[b]fluorene	- -	µg/kg	**120 NJ**		**87 NJ [91 NJ]**					**83 NJ**		
13-Docosenamide, (Z)-	- -	µg/kg										
17-Pentatriacontene	- -	µg/kg										
1-Decene	- -	µg/kg	**280 NJ**			**360 NJ**			**400 NJ**		**350 NJ**	
1-Docosene	- -	µg/kg										
1-Dodecanol	- -	µg/kg										
1-Dodecene	- -	µg/kg										
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-074-MF 0 - 1 09/10/04 SO-074-MF	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI	SO-078-UI 0 - 1 09/10/04 SO-078-UI	SO-079-UI 0 - 1 09/10/04 SO-079-UI	SO-080-UI 0 - 1 09/10/04 SO-080-UI	SO-081-UI 0 - 1 09/10/04 SO-081-UI	SO-082-UI 0 - 1 09/10/04 SO-082-UI	SO-083-UI 0 - 1 09/10/04 SO-083-UI
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg										
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg										
1-Heneicosyl formate	- -	µg/kg										
1-Heptadecanol	- -	µg/kg				**83 NJ**						
1-Hexacosanol	- -	µg/kg										
1-Hexadecene	- -	µg/kg										
1H-Indene, 1-phenyl-	- -	µg/kg										
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg										
1H-Indene, 2-phenyl-	- -	µg/kg	**130 NJ**									
1-Nonadecane	- -	µg/kg										
1-Nonadecanol	- -	µg/kg									**73 NJ**	
1-Nonene	- -	µg/kg								**690 NJ**		
1-Octadecanol	- -	µg/kg										
1-Pentadecene	- -	µg/kg										
1-Tridecanol	- -	µg/kg					**320 NJ**					
1-Tridecene	- -	µg/kg		**93 NJ**								
1-Undecanol	- -	µg/kg			640 UJ [620 UJ]			650 UJ	640 UJ		610 UJ	
2 (3H)-Benzothiazolone	- -	µg/kg										
2',3,4-Trichlorobiphenyl	- -	µg/kg										
2,3,4-Trichlorobiphenyl	- -	µg/kg										
2,3-Dihydro-1-methylindene	- -	µg/kg										**110 NJ**
2,4,6-Trichlorobiphenyl	- -	µg/kg										
2,4-Dichlorophenyl isocyanate	- -	µg/kg										
28-Nor-17.alpha.(H)-hopane	- -	µg/kg										
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg										
2-Dodecanol	- -	µg/kg		**110 NJ**	**110 NJ**							
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg										
2-Mercaptobenzothiazole	- -	µg/kg										
2-Napthalenamine, n-phenyl	- -	µg/kg										
2-Pentadecanone	- -	µg/kg										
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg										
2-Phenylnaphthalene	- -	µg/kg	**170 NJ**					**82 NJ**				
2-Propenoic acid, pentadecyl ester	- -	µg/kg										
2-Propenoic acid, tridecyl	- -	µg/kg										
2-Undecanol	- -	µg/kg				110 UJ		87 UJ				
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg										

TABLE 4-15
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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-074-MF 0 - 1 09/10/04 SO-074-MF	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI	SO-078-UI 0 - 1 09/10/04 SO-078-UI	SO-079-UI 0 - 1 09/10/04 SO-079-UI	SO-080-UI 0 - 1 09/10/04 SO-080-UI	SO-081-UI 0 - 1 09/10/04 SO-081-UI	SO-082-UI 0 - 1 09/10/04 SO-082-UI	SO-083-UI 0 - 1 09/10/04 SO-083-UI
3,4:8,9-Dibenzopyrene	- -	µg/kg										
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg										
3,5-Dichlorophenyl isocyanate	- -	µg/kg										
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg										
3-Eicosene, (E)-	- -	µg/kg										
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg					**120 NJ**					
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg										
4H-Cyclopenta[def]phenanthrene	- -	µg/kg	**380 NJ**		**200 NJ**				**370 NJ**			
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg										
5,12-Napthacenedione	- -	µg/kg										
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg										
5-Eicosene, (E)-	- -	µg/kg										
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg										
7H-Benz[de]anthracen-7-one	- -	µg/kg	**78 NJ**				**110 NJ**					
7H-Benzo[C]fluorene	- -	µg/kg										
9,10-Anthracenedione	- -	µg/kg	**180 NJ**		**120 NJ [160 NJ]**		**320 NJ**	**150 NJ**	**220 NJ**	**140 NJ**		**260 NJ**
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg										
9,10-Dimethylanthracene	- -	µg/kg			**140 NJ**							
9-Hexacosene	- -	µg/kg										
9-Hexadecenoic acid	- -	µg/kg										
9H-Fluoren-9-one	- -	µg/kg	**89 NJ**				**180 NJ**					**140 NJ**
9H-Fluorene, 1-methyl-	- -	µg/kg										
9H-Fluorene, 2-methyl-	- -	µg/kg										
9H-Fluorene, 9-methylene-	- -	µg/kg										
9-Octadecenamide, (Z)-	- -	µg/kg				220 UJ		340 UJ			200 UJ	
9-Octadecenoic acid, (E)-	- -	µg/kg										
Abieta-8,11,13-triene	- -	µg/kg										
Acridine	- -	µg/kg										
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg										
Anthracene, 1,4-dimethyl-	- -	µg/kg										
Anthracene, 1-methyl-	- -	µg/kg					**230 NJ**					
Anthracene, 2-methyl-	- -	µg/kg	**220 NJ**		**110 NJ [160 NJ]**		**480 NJ**	**110 NJ**	**390 NJ**	**170 NJ**		**390 NJ**
Anthracene, 9-Ethenyl-	- -	µg/kg										
Anthracene, 9-methyl-	- -	µg/kg										
Benz[a]anthracene, 10-methyl-	- -	µg/kg										
Benz[a]anthracene, 7-methyl-	- -	µg/kg										
Benz[a]anthracene, 8-methyl-	- -	µg/kg										
Benzaldehyde, 2-hydroxy-	- -	µg/kg										

TABLE 4-15
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Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg										
Benzenamine, 4-methyl-2-nitro	- -	µg/kg										
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg										
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg			**90 NJ**				**100 NJ**			
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg										
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg										
Benzene, 1,2,4-trimethyl-	- -	µg/kg										
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg										
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg										
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg										
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg										
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									**80 NJ**	
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg		120 UJ		100 UJ		110 UJ		90 UJ		
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg										
Benzene, tert-butyl-	- -	µg/kg										
Benzeneacetic acid	- -	µg/kg										
Benzenemethanol, α,α-dimethyl-	- -	µg/kg										
Benzenesulfonamide, 2-methyl-	- -	µg/kg										
Benzenesulfonamide, 4-methyl-	- -	µg/kg										
Benzo(e)pyrene	- -	µg/kg				**120 NJ**					**130 NJ**	
Benzo[b]chrysene	- -	µg/kg										
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg										
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg										
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg										
Benzo[b]triphenylene	- -	µg/kg										
Benzo[c]phenanthrene	- -	µg/kg										
Benzo[f]quinoline	- -	µg/kg										
Benzo[ghi]fluoranthene	- -	µg/kg			**100 NJ**							
Benzo[h]quinoline	- -	µg/kg										
Benzo[j]fluoranthene	- -	µg/kg										
Benzo[kl]xanthene	- -	µg/kg										
Benzocycloheptatriene	- -	µg/kg					**190 NJ**					
Benzoic acid	- -	µg/kg										
Benzothiazole	- -	µg/kg										
Benzothiazole, 2-(methylthio)-	- -	µg/kg										

TABLE 4-15
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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-074-MF 0 - 1 09/10/04 SO-074-MF	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI	SO-078-UI 0 - 1 09/10/04 SO-078-UI	SO-079-UI 0 - 1 09/10/04 SO-079-UI	SO-080-UI 0 - 1 09/10/04 SO-080-UI	SO-081-UI 0 - 1 09/10/04 SO-081-UI	SO-082-UI 0 - 1 09/10/04 SO-082-UI	SO-083-UI 0 - 1 09/10/04 SO-083-UI
beta-Sitosterol	- -	µg/kg										
Bicyclohexyl, 4-phenyl-	- -	µg/kg										
Butane, 2-methoxy-2-methyl-	- -	µg/kg										
Butylated hydroxytoluene	- -	µg/kg										
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg										
Cholesta-3,5-dien-7-one	- -	µg/kg										
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg										
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg										
Cholesterol	- -	µg/kg										
Chrysene, 1-methyl-	- -	µg/kg										
Chrysene, 3-methyl-	- -	µg/kg										
Chrysene, 4-methyl-	- -	µg/kg										
Chrysene, 5-methyl-	- -	µg/kg	**91 NJ**									
Chrysene, 6-methyl-	- -	µg/kg			**78 NJ**							
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg										
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								**78 NJ**		
Clorophene	- -	µg/kg										
Coprostan-3-one	- -	µg/kg										
Cyclohexane, isothiocyanato-	- -	µg/kg										
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg										
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg										
Cyclopenta(def)phenanthrenone	- -	µg/kg					**390 NJ**					
Cyclopenta[cd]pyrene	- -	µg/kg										
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg										
Cyclopentasiloxane, decamethyl-	- -	µg/kg										
Cyclopropanenonanoic Acid, 2	- -	µg/kg										
D:C-friedoolean-8-en-3-one	- -	µg/kg										
dapsone	- -	µg/kg										
Decanoic Acid	- -	µg/kg										
D-Friedoolean-14-en-3-one	- -	µg/kg										
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg						**2,200 NJ**				
Dibenz(a,e)aceanthrylene	- -	µg/kg										
Dibenzo[def,mno]chrysene	- -	µg/kg										
Dibenzofuran, 4-methyl-	- -	µg/kg										
Dibenzothiophene	- -	µg/kg	**110 NJ**				**190 NJ**		**110 NJ**			**130 NJ**
Dibenzothiophene, 3-methyl	- -	µg/kg										
Diethyltoluamide	- -	µg/kg										
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg										
Diphenyl ether	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-074-MF 0 - 1 09/10/04 SO-074-MF	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI	SO-078-UI 0 - 1 09/10/04 SO-078-UI	SO-079-UI 0 - 1 09/10/04 SO-079-UI	SO-080-UI 0 - 1 09/10/04 SO-080-UI	SO-081-UI 0 - 1 09/10/04 SO-081-UI	SO-082-UI 0 - 1 09/10/04 SO-082-UI	SO-083-UI 0 - 1 09/10/04 SO-083-UI
D-Limonene	- -	µg/kg										
Dodecanoic acid	- -	µg/kg										
Dodecanoic acid, methyl ester	- -	µg/kg		110 UJ	110 UJ [100 UJ]	110 UJ		120 UJ		130 UJ	100 UJ	120 UJ
Dodecanoic acid, undecyl ester	- -	µg/kg	2,500 UJ									
Dodecyl acrylate	- -	µg/kg										
Dotriacontane	- -	µg/kg								**660 NJ**		
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg										
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg										
Fluoranthene, 2-methyl-	- -	µg/kg										
Gamma-Sitosterol	- -	µg/kg						**1,400 NJ**				
Hexadecanal	- -	µg/kg						**190 NJ**				
Hexadecanoic acid	- -	µg/kg		**91 NJ**			**220 NJ**					
Hexadecanoic acid, butyl ester	- -	µg/kg										
Hexadecanoic acid, ethyl ester	- -	µg/kg										
Indene	- -	µg/kg										
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg										
Lup-20-(29)-en-3-one	- -	µg/kg										
Manool	- -	µg/kg										
matrine	- -	µg/kg										
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg										
Methylated Naphthalene	- -	µg/kg										
Methylated Phenol	- -	µg/kg										
Methyldibenzothiophene	- -	µg/kg										
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg										
naphthalene, 1,2,3-trimethyl	- -	µg/kg										
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg										
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg					**530 NJ**					
Naphthalene, 1,2-Dimethyl-	- -	µg/kg										
Naphthalene, 1,3-dimethyl-	- -	µg/kg										
Naphthalene, 1,4-dimethyl-	- -	µg/kg										
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg										
Naphthalene, 1-ethyl-	- -	µg/kg										
Naphthalene, 1-methyl-	- -	µg/kg										**100 NJ**
Naphthalene, 1-phenyl-	- -	µg/kg										
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg										
Naphthalene, 2,3-dimethyl-	- -	µg/kg										
Naphthalene, 2,6-dimethyl-	- -	µg/kg										
Naphthalene, 2,7-dimethyl-	- -	µg/kg										
Naphthalene, 2-Ethyl-	- -	µg/kg										
Naphthalene, 2-phenyl-	- -	µg/kg							**160 NJ**			

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-074-MF 0 - 1 09/10/04 SO-074-MF	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI	SO-078-UI 0 - 1 09/10/04 SO-078-UI	SO-079-UI 0 - 1 09/10/04 SO-079-UI	SO-080-UI 0 - 1 09/10/04 SO-080-UI	SO-081-UI 0 - 1 09/10/04 SO-081-UI	SO-082-UI 0 - 1 09/10/04 SO-082-UI	SO-083-UI 0 - 1 09/10/04 SO-083-UI
Naphthalene, decahydro-, trans-	- -	µg/kg										
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg										
Naphtho[2,3-b]thiophene	- -	µg/kg										
Nonadecane, 9-Methyl-	- -	µg/kg										
Octadecanal	- -	µg/kg										
Octadecanoic acid	- -	µg/kg										
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								**89 NJ**	**350 NJ**	
Octadecanoic acid, butyl ester	- -	µg/kg				**280 NJ**		**100 NJ**				
Olean-12-ene	- -	µg/kg										
Organic acid	- -	µg/kg										
Organic acid 1	- -	µg/kg										
Organic acid 2	- -	µg/kg										
Organic acid 3	- -	µg/kg										
Organic acid 4	- -	µg/kg										
Organic acid 5	- -	µg/kg										
o-Terphenyl	- -	µg/kg										
Oxirane, hexadecyl-	- -	µg/kg										
p-Dicyclohexylbenzene	- -	µg/kg										
Pentadecanal-	- -	µg/kg										
Pentadecanoic acid	- -	µg/kg										
Pentasiloxane, dodecamethyl-	- -	µg/kg										
Perylene	- -	µg/kg	**320 NJ**				**830 NJ**					
Perylene isomer C20H12	- -	µg/kg										
Phenanthrene, 1,7-dimethyl-	- -	µg/kg										
Phenanthrene, 1-methyl-	- -	µg/kg							**190 NJ**			
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg										
Phenanthrene, 2,3-dimethyl-	- -	µg/kg										
Phenanthrene, 2,5-dimethyl-	- -	µg/kg										**190 NJ**
Phenanthrene, 2,7-dimethyl-	- -	µg/kg										
Phenanthrene, 2-methyl-	- -	µg/kg										
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg										
Phenanthrene, 3,6-dimethyl-	- -	µg/kg										
Phenanthrene, 3-methyl-	- -	µg/kg										
Phenanthrene, 4-methyl-	- -	µg/kg	**340 NJ**									
Phenanthridine	- -	µg/kg										
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg										
Phenylated naphthalene	- -	µg/kg										
Phthalic anhydride	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-074-MF 0 - 1 09/10/04 SO-074-MF	SO-075-QW 0 - 1 09/10/04 SO-075-QW	SO-076-QW 0 - 1 09/10/04 SO-076-QW	SO-077-UI 0 - 1 09/10/04 SO-077-UI	SO-078-UI 0 - 1 09/10/04 SO-078-UI	SO-079-UI 0 - 1 09/10/04 SO-079-UI	SO-080-UI 0 - 1 09/10/04 SO-080-UI	SO-081-UI 0 - 1 09/10/04 SO-081-UI	SO-082-UI 0 - 1 09/10/04 SO-082-UI	SO-083-UI 0 - 1 09/10/04 SO-083-UI
Propanoic acid, 3-mercapto-	- -	µg/kg										
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg										
Pyrene, 1-methyl-	- -	µg/kg	**75 NJ**									
Pyrene, 2-methyl-	- -	µg/kg	**87 NJ**									
Pyrene, 4-methyl-	- -	µg/kg										
Stigmast-4-en-3-one	- -	µg/kg					**1,700 NJ**					
Stigmasta-3,5-dien-7-one	- -	µg/kg										
Stigmasterol, 22,23-dihydro-	- -	µg/kg										
Substituted Benzene	- -	µg/kg										
Substituted Naphthalene	- -	µg/kg										
Substituted Naphthalene 1	- -	µg/kg										
Substituted Naphthalene 2	- -	µg/kg										
Substituted Naphthalene 3	- -	µg/kg										
Substituted Naphthalene 4	- -	µg/kg										
Substituted PAH isomer	- -	µg/kg										
Sulfur hexamer	- -	µg/kg										
Sulfur, mol. (S8)	- -	µg/kg										
Testosterone	- -	µg/kg						**1,100 NJ**				
Tetradecanal	- -	µg/kg										
Tetradecanoic acid	- -	µg/kg										
Tetradecanoic acid, ethyl ester	- -	µg/kg										
Tetradecanoic acid, methyl ester	- -	µg/kg										
Thiophene, 2-(Methylselenyl)	- -	µg/kg										
tri(2-Ethylhexyl) trimellitate	- -	µg/kg										
Tridecanoic acid	- -	µg/kg										
Triphenylene	- -	µg/kg					**420 NJ**					
Triphenylene, 2-methyl-	- -	µg/kg					**110 NJ**					
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg										
Vanillin	- -	µg/kg										
Vitamin E	- -	µg/kg										
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg										
Trichlorobiphenyls	- -	µg/kg										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI	SO-086-UI 0 - 1 09/09/04 SO-086-UI	SO-087-UI 0 - 1 09/09/04 SO-087-UI	SO-088-UI 0 - 1 09/10/04 SO-088-UI	SO-100-NP 2 - 7 11/01/06 SO-100-NP (2-7')	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')
SVOC TICS											
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg									
.alpha.-Methylstyrene	- -	µg/kg					**840 NJ**				
.beta.-iso-Methyl ionone	- -	µg/kg									
[3,4:9,10]Dibenzpyrene	- -	µg/kg									
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg									
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg									
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg									
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg									
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg									
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg									
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg									
1,2,7,8-Debenzphenanthrene	- -	µg/kg									
1,2:4,5-Dibenzopyrene	- -	µg/kg									
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg									
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg									
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								**540 JN**	
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg									
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg									
10-Methylnonadecene	- -	µg/kg									
11H-Benzo[a]fluoren-11-one	- -	µg/kg									
11H-Benzo[a]fluorene	- -	µg/kg									
11H-Benzo[b]fluorene	- -	µg/kg			**97 NJ**						
13-Docosenamide, (Z)-	- -	µg/kg	620 UJ		260 UJ			400 UJ			
17-Pentatriacontene	- -	µg/kg									
1-Decene	- -	µg/kg	**530 NJ**		**490 NJ**				**350 NJ**		
1-Docosene	- -	µg/kg									
1-Dodecanol	- -	µg/kg									
1-Dodecene	- -	µg/kg									
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI	SO-086-UI 0 - 1 09/09/04 SO-086-UI	SO-087-UI 0 - 1 09/09/04 SO-087-UI	SO-088-UI 0 - 1 09/10/04 SO-088-UI	SO-100-NP 2 - 7 11/01/06 SO-100-NP (2-7')	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg									
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg			**84 NJ**						
1-Heneicosyl formate	- -	µg/kg									
1-Heptadecanol	- -	µg/kg									
1-Hexacosanol	- -	µg/kg									
1-Hexadecene	- -	µg/kg									
1H-Indene, 1-phenyl-	- -	µg/kg									
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg					**230 NJ**				
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg									
1H-Indene, 2-phenyl-	- -	µg/kg									
1-Nonadecane	- -	µg/kg								**320 JN**	
1-Nonadecanol	- -	µg/kg									
1-Nonene	- -	µg/kg									
1-Octadecanol	- -	µg/kg									
1-Pentadecene	- -	µg/kg									
1-Tridecanol	- -	µg/kg									
1-Tridecene	- -	µg/kg									
1-Undecanol	- -	µg/kg									
2 (3H)-Benzothiazolone	- -	µg/kg									
2',3,4-Trichlorobiphenyl	- -	µg/kg									
2,3,4-Trichlorobiphenyl	- -	µg/kg									
2,3-Dihydro-1-methylindene	- -	µg/kg							**81 NJ**		
2,4,6-Trichlorobiphenyl	- -	µg/kg									
2,4-Dichlorophenyl isocyanate	- -	µg/kg									
28-Nor-17.alpha.(H)-hopane	- -	µg/kg									
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg									
2-Dodecanol	- -	µg/kg									
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg									
2-Mercaptobenzothiazole	- -	µg/kg									
2-Napthalenamine, n-phenyl	- -	µg/kg									
2-Pentadecanone	- -	µg/kg									
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg								43,000 UJ	29,000 UJ
2-Phenylnaphthalene	- -	µg/kg									
2-Propenoic acid, pentadecyl ester	- -	µg/kg									
2-Propenoic acid, tridecyl	- -	µg/kg									
2-Undecanol	- -	µg/kg							110 UJ		
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg					**890 NJ**				

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI	SO-086-UI 0 - 1 09/09/04 SO-086-UI	SO-087-UI 0 - 1 09/09/04 SO-087-UI	SO-088-UI 0 - 1 09/10/04 SO-088-UI	SO-100-NP 2 - 7 11/01/06 SO-100-NP (2-7')	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')
3,4:8,9-Dibenzopyrene	- -	µg/kg									
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg									
3,5-Dichlorophenyl isocyanate	- -	µg/kg									
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg									**180 JN**
3-Eicosene, (E)-	- -	µg/kg									
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg									
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg									
4H-Cyclopenta[def]phenanthrene	- -	µg/kg			**170 NJ**						
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg									
5,12-Napthacenedione	- -	µg/kg									
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg									
5-Eicosene, (E)-	- -	µg/kg									
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg									
7H-Benz[de]anthracen-7-one	- -	µg/kg									
7H-Benzo[C]fluorene	- -	µg/kg									
9,10-Anthracenedione	- -	µg/kg							**100 NJ**		
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg									
9,10-Dimethylanthracene	- -	µg/kg									
9-Hexacosene	- -	µg/kg									
9-Hexadecenoic acid	- -	µg/kg									
9H-Fluoren-9-one	- -	µg/kg									
9H-Fluorene, 1-methyl-	- -	µg/kg									
9H-Fluorene, 2-methyl-	- -	µg/kg									
9H-Fluorene, 9-methylene-	- -	µg/kg									
9-Octadecenamide, (Z)-	- -	µg/kg							220 UJ		
9-Octadecenoic acid, (E)-	- -	µg/kg									
Abieta-8,11,13-triene	- -	µg/kg									
Acridine	- -	µg/kg									
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg									
Anthracene, 1,4-dimethyl-	- -	µg/kg			**97 NJ**						
Anthracene, 1-methyl-	- -	µg/kg									
Anthracene, 2-methyl-	- -	µg/kg									
Anthracene, 9-Ethenyl-	- -	µg/kg									
Anthracene, 9-methyl-	- -	µg/kg									
Benz[a]anthracene, 10-methyl-	- -	µg/kg									
Benz[a]anthracene, 7-methyl-	- -	µg/kg									
Benz[a]anthracene, 8-methyl-	- -	µg/kg									
Benzaldehyde, 2-hydroxy-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI	SO-086-UI 0 - 1 09/09/04 SO-086-UI	SO-087-UI 0 - 1 09/09/04 SO-087-UI	SO-088-UI 0 - 1 09/10/04 SO-088-UI	SO-100-NP 2 - 7 11/01/06 SO-100-NP (2-7')	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg									
Benzenamine, 4-methyl-2-nitro	- -	µg/kg									
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg									
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg									
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg									
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg									
Benzene, 1,2,4-trimethyl-	- -	µg/kg									
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg									
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg									
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg									
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg									
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg									
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg									
Benzene, 1-ethyl-3-methyl-	- -	µg/kg									
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg									
Benzene, tert-butyl-	- -	µg/kg					**550 NJ**				
Benzeneacetic acid	- -	µg/kg									
Benzenemethanol, α,α-dimethyl-	- -	µg/kg									
Benzenesulfonamide, 2-methyl-	- -	µg/kg									
Benzenesulfonamide, 4-methyl-	- -	µg/kg									
Benzo(e)pyrene	- -	µg/kg			**710 NJ**						
Benzo[b]chrysene	- -	µg/kg									
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg									
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg									
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg									
Benzo[b]triphenylene	- -	µg/kg									
Benzo[c]phenanthrene	- -	µg/kg									
Benzo[f]quinoline	- -	µg/kg									
Benzo[ghi]fluoranthene	- -	µg/kg									
Benzo[h]quinoline	- -	µg/kg									
Benzo[j]fluoranthene	- -	µg/kg									
Benzo[kl]xanthene	- -	µg/kg									
Benzocycloheptatriene	- -	µg/kg									
Benzoic acid	- -	µg/kg									
Benzothiazole	- -	µg/kg									
Benzothiazole, 2-(methylthio)-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI	SO-086-UI 0 - 1 09/09/04 SO-086-UI	SO-087-UI 0 - 1 09/09/04 SO-087-UI	SO-088-UI 0 - 1 09/10/04 SO-088-UI	SO-100-NP 2 - 7 11/01/06 SO-100-NP (2-7')	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')
beta-Sitosterol	- -	µg/kg									
Bicyclohexyl, 4-phenyl-	- -	µg/kg									
Butane, 2-methoxy-2-methyl-	- -	µg/kg								4,500 UJ	3,500 UJ
Butylated hydroxytoluene	- -	µg/kg									
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg									
Cholesta-3,5-dien-7-one	- -	µg/kg								**590 JN**	
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg								**680 JN**	
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg									
Cholesterol	- -	µg/kg									
Chrysene, 1-methyl-	- -	µg/kg									
Chrysene, 3-methyl-	- -	µg/kg									
Chrysene, 4-methyl-	- -	µg/kg									
Chrysene, 5-methyl-	- -	µg/kg									
Chrysene, 6-methyl-	- -	µg/kg									
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg									
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg									
Clorophene	- -	µg/kg									
Coprostan-3-one	- -	µg/kg									
Cyclohexane, isothiocyanato-	- -	µg/kg	**100 NJ**		**110 NJ**		**220 NJ**	**100 NJ**			
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg									
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg									
Cyclopenta(def)phenanthrenone	- -	µg/kg									
Cyclopenta[cd]pyrene	- -	µg/kg									
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg									
Cyclopentasiloxane, decamethyl-	- -	µg/kg								**300 JN**	
Cyclopropanenonanoic Acid, 2	- -	µg/kg									
D:C-friedoolean-8-en-3-one	- -	µg/kg									
dapsone	- -	µg/kg									
Decanoic Acid	- -	µg/kg									
D-Friedoolean-14-en-3-one	- -	µg/kg								**250 JN**	
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg							**4,900 NJ**		
Dibenz(a,e)aceanthrylene	- -	µg/kg									
Dibenzo[def,mno]chrysene	- -	µg/kg									
Dibenzofuran, 4-methyl-	- -	µg/kg									
Dibenzothiophene	- -	µg/kg									
Dibenzothiophene, 3-methyl	- -	µg/kg									
Diethyltoluamide	- -	µg/kg									
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg									
Diphenyl ether	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI	SO-086-UI 0 - 1 09/09/04 SO-086-UI	SO-087-UI 0 - 1 09/09/04 SO-087-UI	SO-088-UI 0 - 1 09/10/04 SO-088-UI	SO-100-NP 2 - 7 11/01/06 SO-100-NP (2-7')	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')
D-Limonene	- -	µg/kg									
Dodecanoic acid	- -	µg/kg									
Dodecanoic acid, methyl ester	- -	µg/kg							120 UJ		
Dodecanoic acid, undecyl ester	- -	µg/kg							5,400 UJ		
Dodecyl acrylate	- -	µg/kg									
Dotriacontane	- -	µg/kg									
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg									
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg									
Fluoranthene, 2-methyl-	- -	µg/kg									
Gamma-Sitosterol	- -	µg/kg	**420 NJ**								
Hexadecanal	- -	µg/kg									
Hexadecanoic acid	- -	µg/kg						**97 NJ**	**290 NJ**	**190 JN**	
Hexadecanoic acid, butyl ester	- -	µg/kg									
Hexadecanoic acid, ethyl ester	- -	µg/kg									
Indene	- -	µg/kg									
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg									
Lup-20-(29)-en-3-one	- -	µg/kg									
Manool	- -	µg/kg									
matrine	- -	µg/kg									
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg									
Methylated Naphthalene	- -	µg/kg									
Methylated Phenol	- -	µg/kg									
Methyldibenzothiophene	- -	µg/kg									
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg									
naphthalene, 1,2,3-trimethyl	- -	µg/kg									
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg									
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg									
Naphthalene, 1,2-Dimethyl-	- -	µg/kg									
Naphthalene, 1,3-dimethyl-	- -	µg/kg									
Naphthalene, 1,4-dimethyl-	- -	µg/kg									
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg									
Naphthalene, 1-ethyl-	- -	µg/kg									
Naphthalene, 1-methyl-	- -	µg/kg									
Naphthalene, 1-phenyl-	- -	µg/kg									
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg									
Naphthalene, 2,3-dimethyl-	- -	µg/kg									
Naphthalene, 2,6-dimethyl-	- -	µg/kg									
Naphthalene, 2,7-dimethyl-	- -	µg/kg									
Naphthalene, 2-Ethyl-	- -	µg/kg									
Naphthalene, 2-phenyl-	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI	SO-086-UI 0 - 1 09/09/04 SO-086-UI	SO-087-UI 0 - 1 09/09/04 SO-087-UI	SO-088-UI 0 - 1 09/10/04 SO-088-UI	SO-100-NP 2 - 7 11/01/06 SO-100-NP (2-7')	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')
Naphthalene, decahydro-, trans-	- -	µg/kg									
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg									
Naphtho[2,3-b]thiophene	- -	µg/kg									
Nonadecane, 9-Methyl-	- -	µg/kg									
Octadecanal	- -	µg/kg									
Octadecanoic acid	- -	µg/kg					**3,600 NJ**				
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg			**170 NJ**						
Octadecanoic acid, butyl ester	- -	µg/kg						**95 NJ**	**96 NJ**		
Olean-12-ene	- -	µg/kg									
Organic acid	- -	µg/kg									
Organic acid 1	- -	µg/kg									
Organic acid 2	- -	µg/kg									
Organic acid 3	- -	µg/kg									
Organic acid 4	- -	µg/kg									
Organic acid 5	- -	µg/kg									
o-Terphenyl	- -	µg/kg									
Oxirane, hexadecyl-	- -	µg/kg									
p-Dicyclohexylbenzene	- -	µg/kg									
Pentadecanal-	- -	µg/kg									
Pentadecanoic acid	- -	µg/kg									
Pentasiloxane, dodecamethyl-	- -	µg/kg									**280 JN**
Perylene	- -	µg/kg	**540 NJ**								
Perylene isomer C20H12	- -	µg/kg									
Phenanthrene, 1,7-dimethyl-	- -	µg/kg					**160 NJ**				
Phenanthrene, 1-methyl-	- -	µg/kg			**91 NJ**						
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg									
Phenanthrene, 2,3-dimethyl-	- -	µg/kg									
Phenanthrene, 2,5-dimethyl-	- -	µg/kg									
Phenanthrene, 2,7-dimethyl-	- -	µg/kg									
Phenanthrene, 2-methyl-	- -	µg/kg									
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg									
Phenanthrene, 3,6-dimethyl-	- -	µg/kg									
Phenanthrene, 3-methyl-	- -	µg/kg									
Phenanthrene, 4-methyl-	- -	µg/kg									
Phenanthridine	- -	µg/kg									
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg									
Phenylated naphthalene	- -	µg/kg									
Phthalic anhydride	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-084-UI 0 - 1 09/09/04 SO-084-UI	SO-084-UI 0 - 1 11/27/04 SO-089-UI	SO-085-UI 0 - 1 09/09/04 SO-085-UI	SO-085-UI 0 - 1 11/27/04 SO-090-UI	SO-086-UI 0 - 1 09/09/04 SO-086-UI	SO-087-UI 0 - 1 09/09/04 SO-087-UI	SO-088-UI 0 - 1 09/10/04 SO-088-UI	SO-100-NP 2 - 7 11/01/06 SO-100-NP (2-7')	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')
Propanoic acid, 3-mercapto-	- -	µg/kg	**180 NJ**		**230 NJ**						
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg									
Pyrene, 1-methyl-	- -	µg/kg									
Pyrene, 2-methyl-	- -	µg/kg									
Pyrene, 4-methyl-	- -	µg/kg									
Stigmast-4-en-3-one	- -	µg/kg	**430 NJ**								
Stigmasta-3,5-dien-7-one	- -	µg/kg									
Stigmasterol, 22,23-dihydro-	- -	µg/kg								**240 JN**	
Substituted Benzene	- -	µg/kg									
Substituted Naphthalene	- -	µg/kg									
Substituted Naphthalene 1	- -	µg/kg									
Substituted Naphthalene 2	- -	µg/kg									
Substituted Naphthalene 3	- -	µg/kg									
Substituted Naphthalene 4	- -	µg/kg									
Substituted PAH isomer	- -	µg/kg									
Sulfur hexamer	- -	µg/kg									
Sulfur, mol. (S8)	- -	µg/kg									
Testosterone	- -	µg/kg									
Tetradecanal	- -	µg/kg									
Tetradecanoic acid	- -	µg/kg									
Tetradecanoic acid, ethyl ester	- -	µg/kg									
Tetradecanoic acid, methyl ester	- -	µg/kg									
Thiophene, 2-(Methylselenyl)	- -	µg/kg									
tri(2-Ethylhexyl) trimellitate	- -	µg/kg									
Tridecanoic acid	- -	µg/kg									
Triphenylene	- -	µg/kg									
Triphenylene, 2-methyl-	- -	µg/kg									
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg									
Vanillin	- -	µg/kg									
Vitamin E	- -	µg/kg									
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg									
Trichlorobiphenyls	- -	µg/kg									

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
SVOC TICS									
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg							
.alpha.-Methylstyrene	- -	µg/kg							
.beta.-iso-Methyl ionone	- -	µg/kg				**330 JN**			
[3,4:9,10]Dibenzpyrene	- -	µg/kg							
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg	**320 JN**						
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg							
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg							
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg							
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg							
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg							
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg							
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg							
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg							
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg							
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg							
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg							
1,2,7,8-Debenzphenanthrene	- -	µg/kg						**520 JN**	
1,2:4,5-Dibenzopyrene	- -	µg/kg						**380 JN**	
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg							
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg							
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg							
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg							
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg							
10-Methylnonadecene	- -	µg/kg							
11H-Benzo[a]fluoren-11-one	- -	µg/kg							
11H-Benzo[a]fluorene	- -	µg/kg						**410 JN**	
11H-Benzo[b]fluorene	- -	µg/kg						**400 JN**	
13-Docosenamide, (Z)-	- -	µg/kg							
17-Pentatriacontene	- -	µg/kg							
1-Decene	- -	µg/kg							
1-Docosene	- -	µg/kg							
1-Dodecanol	- -	µg/kg							
1-Dodecene	- -	µg/kg							
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg							
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg							
1-Heneicosyl formate	- -	µg/kg							
1-Heptadecanol	- -	µg/kg							
1-Hexacosanol	- -	µg/kg							
1-Hexadecene	- -	µg/kg							
1H-Indene, 1-phenyl-	- -	µg/kg							
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg							
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg							
1H-Indene, 2-phenyl-	- -	µg/kg							
1-Nonadecane	- -	µg/kg							
1-Nonadecanol	- -	µg/kg							
1-Nonene	- -	µg/kg							
1-Octadecanol	- -	µg/kg							
1-Pentadecene	- -	µg/kg							
1-Tridecanol	- -	µg/kg							
1-Tridecene	- -	µg/kg							
1-Undecanol	- -	µg/kg							
2 (3H)-Benzothiazolone	- -	µg/kg							
2',3,4-Trichlorobiphenyl	- -	µg/kg							
2,3,4-Trichlorobiphenyl	- -	µg/kg							
2,3-Dihydro-1-methylindene	- -	µg/kg							
2,4,6-Trichlorobiphenyl	- -	µg/kg							
2,4-Dichlorophenyl isocyanate	- -	µg/kg							
28-Nor-17.alpha.(H)-hopane	- -	µg/kg							
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg							
2-Dodecanol	- -	µg/kg							
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg							
2-Mercaptobenzothiazole	- -	µg/kg							
2-Napthalenamine, n-phenyl	- -	µg/kg							
2-Pentadecanone	- -	µg/kg							
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg	33,000 UJ	35,000 UJ	37,000 UJ	33,000 UJ	35,000 UJ	34,000 UJ	35,000 UJ
2-Phenylnaphthalene	- -	µg/kg							
2-Propenoic acid, pentadecyl ester	- -	µg/kg							
2-Propenoic acid, tridecyl	- -	µg/kg							
2-Undecanol	- -	µg/kg							
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
3,4:8,9-Dibenzopyrene	- -	µg/kg							
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg						**260 JN**	
3,5-Dichlorophenyl isocyanate	- -	µg/kg							
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg			**290 JN**				
3-Eicosene, (E)-	- -	µg/kg							
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg							
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg						**240 JN**	
4H-Cyclopenta[def]phenanthrene	- -	µg/kg						**400 JN**	
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg							
5,12-Napthacenedione	- -	µg/kg							
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg							
5-Eicosene, (E)-	- -	µg/kg							
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg							
7H-Benz[de]anthracen-7-one	- -	µg/kg							
7H-Benzo[C]fluorene	- -	µg/kg							
9,10-Anthracenedione	- -	µg/kg							
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg							
9,10-Dimethylanthracene	- -	µg/kg							
9-Hexacosene	- -	µg/kg							
9-Hexadecenoic acid	- -	µg/kg							
9H-Fluoren-9-one	- -	µg/kg							
9H-Fluorene, 1-methyl-	- -	µg/kg							
9H-Fluorene, 2-methyl-	- -	µg/kg							
9H-Fluorene, 9-methylene-	- -	µg/kg							
9-Octadecenamide, (Z)-	- -	µg/kg							
9-Octadecenoic acid, (E)-	- -	µg/kg						**240 JN**	
Abieta-8,11,13-triene	- -	µg/kg							
Acridine	- -	µg/kg							
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg							
Anthracene, 1,4-dimethyl-	- -	µg/kg							
Anthracene, 1-methyl-	- -	µg/kg						**260 JN**	
Anthracene, 2-methyl-	- -	µg/kg							
Anthracene, 9-Ethenyl-	- -	µg/kg							
Anthracene, 9-methyl-	- -	µg/kg							
Benz[a]anthracene, 10-methyl-	- -	µg/kg							
Benz[a]anthracene, 7-methyl-	- -	µg/kg						**290 JN**	
Benz[a]anthracene, 8-methyl-	- -	µg/kg							
Benzaldehyde, 2-hydroxy-	- -	µg/kg							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg							
Benzenamine, 4-methyl-2-nitro	- -	µg/kg							
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg							
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg							
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg							
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg							
Benzene, 1,2,4-trimethyl-	- -	µg/kg							
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg							
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg							
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg							
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg							
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg							
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg							
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg							
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg							
Benzene, 1-ethyl-3-methyl-	- -	µg/kg							
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg							
Benzene, tert-butyl-	- -	µg/kg							
Benzeneacetic acid	- -	µg/kg							
Benzenemethanol, α,α-dimethyl-	- -	µg/kg							
Benzenesulfonamide, 2-methyl-	- -	µg/kg							
Benzenesulfonamide, 4-methyl-	- -	µg/kg							
Benzo(e)pyrene	- -	µg/kg		**330 JN**					
Benzo[b]chrysene	- -	µg/kg							
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg							
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg							
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg						**270 JN**	
Benzo[b]triphenylene	- -	µg/kg							
Benzo[c]phenanthrene	- -	µg/kg						**310 JN**	
Benzo[f]quinoline	- -	µg/kg							
Benzo[ghi]fluoranthene	- -	µg/kg							
Benzo[h]quinoline	- -	µg/kg							
Benzo[j]fluoranthene	- -	µg/kg							
Benzo[kl]xanthene	- -	µg/kg							
Benzocycloheptatriene	- -	µg/kg							
Benzoic acid	- -	µg/kg							
Benzothiazole	- -	µg/kg							
Benzothiazole, 2-(methylthio)-	- -	µg/kg							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
beta-Sitosterol	- -	µg/kg							
Bicyclohexyl, 4-phenyl-	- -	µg/kg							
Butane, 2-methoxy-2-methyl-	- -	µg/kg	3,900 UJ	3,900 UJ	5,100 UJ	3,900 UJ	4,700 UJ	4,900 UJ	3,800 UJ
Butylated hydroxytoluene	- -	µg/kg							
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg							
Cholesta-3,5-dien-7-one	- -	µg/kg							**170 JN**
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg							
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg							
Cholesterol	- -	µg/kg							
Chrysene, 1-methyl-	- -	µg/kg							
Chrysene, 3-methyl-	- -	µg/kg							
Chrysene, 4-methyl-	- -	µg/kg							
Chrysene, 5-methyl-	- -	µg/kg							
Chrysene, 6-methyl-	- -	µg/kg							
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg							
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg							
Clorophene	- -	µg/kg							
Coprostan-3-one	- -	µg/kg							
Cyclohexane, isothiocyanato-	- -	µg/kg							
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg	**430 JN**	**400 JN**					
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg							
Cyclopenta(def)phenanthrenone	- -	µg/kg							
Cyclopenta[cd]pyrene	- -	µg/kg						**240 JN**	
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg							
Cyclopentasiloxane, decamethyl-	- -	µg/kg	**500 JN**	**500 JN**			**200 JN**		
Cyclopropanenonanoic Acid, 2	- -	µg/kg							
D:C-friedoolean-8-en-3-one	- -	µg/kg							
dapsone	- -	µg/kg							
Decanoic Acid	- -	µg/kg							
D-Friedoolean-14-en-3-one	- -	µg/kg							
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg							
Dibenz(a,e)aceanthrylene	- -	µg/kg							
Dibenzo[def,mno]chrysene	- -	µg/kg						**250 JN**	
Dibenzofuran, 4-methyl-	- -	µg/kg							
Dibenzothiophene	- -	µg/kg							
Dibenzothiophene, 3-methyl	- -	µg/kg							
Diethyltoluamide	- -	µg/kg							
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg							
Diphenyl ether	- -	µg/kg							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
D-Limonene	- -	µg/kg							
Dodecanoic acid	- -	µg/kg							**280 JN**
Dodecanoic acid, methyl ester	- -	µg/kg							
Dodecanoic acid, undecyl ester	- -	µg/kg							
Dodecyl acrylate	- -	µg/kg							
Dotriacontane	- -	µg/kg							
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg							
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg							
Fluoranthene, 2-methyl-	- -	µg/kg							
Gamma-Sitosterol	- -	µg/kg							
Hexadecanal	- -	µg/kg							
Hexadecanoic acid	- -	µg/kg							
Hexadecanoic acid, butyl ester	- -	µg/kg							
Hexadecanoic acid, ethyl ester	- -	µg/kg							
Indene	- -	µg/kg						**1,600 JN**	
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg							
Lup-20-(29)-en-3-one	- -	µg/kg							
Manool	- -	µg/kg							
matrine	- -	µg/kg							
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg		**150 JN**		**260 JN**			**210 JN**
Methylated Naphthalene	- -	µg/kg							
Methylated Phenol	- -	µg/kg							
Methyldibenzothiophene	- -	µg/kg							
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg							**220 JN**
naphthalene, 1,2,3-trimethyl	- -	µg/kg							
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg							
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg							
Naphthalene, 1,2-Dimethyl-	- -	µg/kg							
Naphthalene, 1,3-dimethyl-	- -	µg/kg							
Naphthalene, 1,4-dimethyl-	- -	µg/kg							
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg							
Naphthalene, 1-ethyl-	- -	µg/kg							
Naphthalene, 1-methyl-	- -	µg/kg							
Naphthalene, 1-phenyl-	- -	µg/kg							
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg							
Naphthalene, 2,3-dimethyl-	- -	µg/kg							
Naphthalene, 2,6-dimethyl-	- -	µg/kg							
Naphthalene, 2,7-dimethyl-	- -	µg/kg							
Naphthalene, 2-Ethyl-	- -	µg/kg							
Naphthalene, 2-phenyl-	- -	µg/kg							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
Naphthalene, decahydro-, trans-	- -	µg/kg							
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg							**220 JN**
Naphtho[2,3-b]thiophene	- -	µg/kg							
Nonadecane, 9-Methyl-	- -	µg/kg							
Octadecanal	- -	µg/kg							
Octadecanoic acid	- -	µg/kg							
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg							
Octadecanoic acid, butyl ester	- -	µg/kg							
Olean-12-ene	- -	µg/kg							
Organic acid	- -	µg/kg							
Organic acid 1	- -	µg/kg							
Organic acid 2	- -	µg/kg							
Organic acid 3	- -	µg/kg							
Organic acid 4	- -	µg/kg							
Organic acid 5	- -	µg/kg							
o-Terphenyl	- -	µg/kg							
Oxirane, hexadecyl-	- -	µg/kg							
p-Dicyclohexylbenzene	- -	µg/kg							
Pentadecanal-	- -	µg/kg							
Pentadecanoic acid	- -	µg/kg							
Pentasiloxane, dodecamethyl-	- -	µg/kg	**370 JN**			**300 JN**			**200 JN**
Perylene	- -	µg/kg						**540 JN**	
Perylene isomer C20H12	- -	µg/kg							
Phenanthrene, 1,7-dimethyl-	- -	µg/kg							
Phenanthrene, 1-methyl-	- -	µg/kg		**160 JN**					
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg							
Phenanthrene, 2,3-dimethyl-	- -	µg/kg							
Phenanthrene, 2,5-dimethyl-	- -	µg/kg							
Phenanthrene, 2,7-dimethyl-	- -	µg/kg							
Phenanthrene, 2-methyl-	- -	µg/kg						**330 JN**	
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg							
Phenanthrene, 3,6-dimethyl-	- -	µg/kg							
Phenanthrene, 3-methyl-	- -	µg/kg							
Phenanthrene, 4-methyl-	- -	µg/kg							
Phenanthridine	- -	µg/kg							
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg							
Phenylated naphthalene	- -	µg/kg							
Phthalic anhydride	- -	µg/kg							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
Propanoic acid, 3-mercapto-	- -	µg/kg							
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg							
Pyrene, 1-methyl-	- -	µg/kg							
Pyrene, 2-methyl-	- -	µg/kg						**320 JN**	
Pyrene, 4-methyl-	- -	µg/kg							
Stigmast-4-en-3-one	- -	µg/kg							
Stigmasta-3,5-dien-7-one	- -	µg/kg							
Stigmasterol, 22,23-dihydro-	- -	µg/kg							
Substituted Benzene	- -	µg/kg							
Substituted Naphthalene	- -	µg/kg							
Substituted Naphthalene 1	- -	µg/kg							
Substituted Naphthalene 2	- -	µg/kg							
Substituted Naphthalene 3	- -	µg/kg							
Substituted Naphthalene 4	- -	µg/kg							
Substituted PAH isomer	- -	µg/kg							
Sulfur hexamer	- -	µg/kg							
Sulfur, mol. (S8)	- -	µg/kg							
Testosterone	- -	µg/kg							
Tetradecanal	- -	µg/kg							
Tetradecanoic acid	- -	µg/kg							
Tetradecanoic acid, ethyl ester	- -	µg/kg							
Tetradecanoic acid, methyl ester	- -	µg/kg							
Thiophene, 2-(Methylselenyl)	- -	µg/kg							
tri(2-Ethylhexyl) trimellitate	- -	µg/kg			**52,000 JN**				
Tridecanoic acid	- -	µg/kg							
Triphenylene	- -	µg/kg							
Triphenylene, 2-methyl-	- -	µg/kg							
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg	**240 JN**	**220 JN**		**230 JN**			
Vanillin	- -	µg/kg							
Vitamin E	- -	µg/kg							
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg							
Trichlorobiphenyls	- -	µg/kg							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
SVOC TICS										
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg								
.alpha.-Methylstyrene	- -	µg/kg								
.beta.-iso-Methyl ionone	- -	µg/kg								
[3,4:9,10]Dibenzpyrene	- -	µg/kg			**1,400 JN [590 JN]**					
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg								
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg								
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg								
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg								
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg								
1,2,7,8-Debenzphenanthrene	- -	µg/kg								
1,2:4,5-Dibenzopyrene	- -	µg/kg			**660 JN**					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg								
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg								
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg								
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg								
10-Methylnonadecene	- -	µg/kg								
11H-Benzo[a]fluoren-11-one	- -	µg/kg								
11H-Benzo[a]fluorene	- -	µg/kg								
11H-Benzo[b]fluorene	- -	µg/kg								
13-Docosenamide, (Z)-	- -	µg/kg								
17-Pentatriacontene	- -	µg/kg								
1-Decene	- -	µg/kg								
1-Docosene	- -	µg/kg								
1-Dodecanol	- -	µg/kg								
1-Dodecene	- -	µg/kg								
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg			**510 JN [2,300 JN]**					

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg								
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								
1-Heneicosyl formate	- -	µg/kg								
1-Heptadecanol	- -	µg/kg								
1-Hexacosanol	- -	µg/kg								
1-Hexadecene	- -	µg/kg								
1H-Indene, 1-phenyl-	- -	µg/kg								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-phenyl-	- -	µg/kg								
1-Nonadecane	- -	µg/kg								
1-Nonadecanol	- -	µg/kg								
1-Nonene	- -	µg/kg								
1-Octadecanol	- -	µg/kg								
1-Pentadecene	- -	µg/kg								
1-Tridecanol	- -	µg/kg								
1-Tridecene	- -	µg/kg								
1-Undecanol	- -	µg/kg								
2 (3H)-Benzothiazolone	- -	µg/kg								**356 JN**
2',3,4-Trichlorobiphenyl	- -	µg/kg								
2,3,4-Trichlorobiphenyl	- -	µg/kg								
2,3-Dihydro-1-methylindene	- -	µg/kg								
2,4,6-Trichlorobiphenyl	- -	µg/kg								
2,4-Dichlorophenyl isocyanate	- -	µg/kg								
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								
2-Dodecanol	- -	µg/kg								
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg								
2-Mercaptobenzothiazole	- -	µg/kg								
2-Napthalenamine, n-phenyl	- -	µg/kg								
2-Pentadecanone	- -	µg/kg								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg	34,000 UJ	35,000 UJ	39,000 UJ [38,000 UJ]					
2-Phenylnaphthalene	- -	µg/kg			**510 JN**					
2-Propenoic acid, pentadecyl ester	- -	µg/kg								
2-Propenoic acid, tridecyl	- -	µg/kg								
2-Undecanol	- -	µg/kg								
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
3,4:8,9-Dibenzopyrene	- -	µg/kg			**760 JN [790 JN]**					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg								
3,5-Dichlorophenyl isocyanate	- -	µg/kg								
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg		**470 JN**						
3-Eicosene, (E)-	- -	µg/kg								
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg								
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg								
4H-Cyclopenta[def]phenanthrene	- -	µg/kg			**1,300 JN [1,700 JN]**					
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg								
5,12-Napthacenedione	- -	µg/kg								
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg								
5-Eicosene, (E)-	- -	µg/kg								
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg								
7H-Benz[de]anthracen-7-one	- -	µg/kg								
7H-Benzo[C]fluorene	- -	µg/kg								
9,10-Anthracenedione	- -	µg/kg			**640 JN [720 JN]**					
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg			**470 JN**					
9,10-Dimethylanthracene	- -	µg/kg								
9-Hexacosene	- -	µg/kg								
9-Hexadecenoic acid	- -	µg/kg								
9H-Fluoren-9-one	- -	µg/kg			**430 JN**					
9H-Fluorene, 1-methyl-	- -	µg/kg								
9H-Fluorene, 2-methyl-	- -	µg/kg								
9H-Fluorene, 9-methylene-	- -	µg/kg								
9-Octadecenamide, (Z)-	- -	µg/kg								
9-Octadecenoic acid, (E)-	- -	µg/kg								
Abieta-8,11,13-triene	- -	µg/kg								
Acridine	- -	µg/kg								
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg								
Anthracene, 1,4-dimethyl-	- -	µg/kg								
Anthracene, 1-methyl-	- -	µg/kg								
Anthracene, 2-methyl-	- -	µg/kg			**870 JN [930 JN]**					
Anthracene, 9-Ethenyl-	- -	µg/kg								
Anthracene, 9-methyl-	- -	µg/kg								
Benz[a]anthracene, 10-methyl-	- -	µg/kg								
Benz[a]anthracene, 7-methyl-	- -	µg/kg								
Benz[a]anthracene, 8-methyl-	- -	µg/kg								
Benzaldehyde, 2-hydroxy-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg								
Benzenamine, 4-methyl-2-nitro	- -	µg/kg								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg								
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg								
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg								
Benzene, 1,2,4-trimethyl-	- -	µg/kg								
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg								
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg								
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg								
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg								
Benzene, 1-ethyl-3-methyl-	- -	µg/kg								
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg								
Benzene, tert-butyl-	- -	µg/kg								
Benzeneacetic acid	- -	µg/kg								
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								
Benzenesulfonamide, 2-methyl-	- -	µg/kg						**619 JN**		
Benzenesulfonamide, 4-methyl-	- -	µg/kg						**628 JN**		
Benzo(e)pyrene	- -	µg/kg	**280 JN**							
Benzo[b]chrysene	- -	µg/kg			**890 JN**					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								
Benzo[b]triphenylene	- -	µg/kg								
Benzo[c]phenanthrene	- -	µg/kg								
Benzo[f]quinoline	- -	µg/kg								
Benzo[ghi]fluoranthene	- -	µg/kg								
Benzo[h]quinoline	- -	µg/kg								
Benzo[j]fluoranthene	- -	µg/kg								
Benzo[kl]xanthene	- -	µg/kg								
Benzocycloheptatriene	- -	µg/kg								
Benzoic acid	- -	µg/kg								
Benzothiazole	- -	µg/kg								
Benzothiazole, 2-(methylthio)-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
beta-Sitosterol	- -	µg/kg								
Bicyclohexyl, 4-phenyl-	- -	µg/kg								
Butane, 2-methoxy-2-methyl-	- -	µg/kg	3,600 UJ	2,900 UJ	3,800 UJ [4,600 UJ]					
Butylated hydroxytoluene	- -	µg/kg								
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg								
Cholesta-3,5-dien-7-one	- -	µg/kg								
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg						**628 JN**		
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg								
Cholesterol	- -	µg/kg								
Chrysene, 1-methyl-	- -	µg/kg								
Chrysene, 3-methyl-	- -	µg/kg								
Chrysene, 4-methyl-	- -	µg/kg								
Chrysene, 5-methyl-	- -	µg/kg								
Chrysene, 6-methyl-	- -	µg/kg								
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg								
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								
Clorophene	- -	µg/kg								
Coprostan-3-one	- -	µg/kg								
Cyclohexane, isothiocyanato-	- -	µg/kg								
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg								
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								
Cyclopenta(def)phenanthrenone	- -	µg/kg								
Cyclopenta[cd]pyrene	- -	µg/kg								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg								
Cyclopentasiloxane, decamethyl-	- -	µg/kg								
Cyclopropanenonanoic Acid, 2	- -	µg/kg								
D:C-friedoolean-8-en-3-one	- -	µg/kg								
dapsone	- -	µg/kg								
Decanoic Acid	- -	µg/kg								
D-Friedoolean-14-en-3-one	- -	µg/kg								
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								
Dibenz(a,e)aceanthrylene	- -	µg/kg								
Dibenzo[def,mno]chrysene	- -	µg/kg			**840 JN**					
Dibenzofuran, 4-methyl-	- -	µg/kg								
Dibenzothiophene	- -	µg/kg			**450 JN**					
Dibenzothiophene, 3-methyl	- -	µg/kg								
Diethyltoluamide	- -	µg/kg						**2,470 JN**		
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg								
Diphenyl ether	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
D-Limonene	- -	µg/kg								
Dodecanoic acid	- -	µg/kg								
Dodecanoic acid, methyl ester	- -	µg/kg								
Dodecanoic acid, undecyl ester	- -	µg/kg								
Dodecyl acrylate	- -	µg/kg								
Dotriacontane	- -	µg/kg								
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg								
Fluoranthene, 2-methyl-	- -	µg/kg								
Gamma-Sitosterol	- -	µg/kg								
Hexadecanal	- -	µg/kg								
Hexadecanoic acid	- -	µg/kg								
Hexadecanoic acid, butyl ester	- -	µg/kg								
Hexadecanoic acid, ethyl ester	- -	µg/kg								
Indene	- -	µg/kg								
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg								
Lup-20-(29)-en-3-one	- -	µg/kg								
Manool	- -	µg/kg								
matrine	- -	µg/kg								
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg		**230 JN**						
Methylated Naphthalene	- -	µg/kg								
Methylated Phenol	- -	µg/kg								
Methyldibenzothiophene	- -	µg/kg								
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg								
naphthalene, 1,2,3-trimethyl	- -	µg/kg								
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg								
Naphthalene, 1,2-Dimethyl-	- -	µg/kg								
Naphthalene, 1,3-dimethyl-	- -	µg/kg								
Naphthalene, 1,4-dimethyl-	- -	µg/kg								
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg								
Naphthalene, 1-ethyl-	- -	µg/kg								
Naphthalene, 1-methyl-	- -	µg/kg								
Naphthalene, 1-phenyl-	- -	µg/kg								
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg								
Naphthalene, 2,3-dimethyl-	- -	µg/kg								
Naphthalene, 2,6-dimethyl-	- -	µg/kg								
Naphthalene, 2,7-dimethyl-	- -	µg/kg								
Naphthalene, 2-Ethyl-	- -	µg/kg								
Naphthalene, 2-phenyl-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
Naphthalene, decahydro-, trans-	- -	µg/kg								
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg								
Naphtho[2,3-b]thiophene	- -	µg/kg								
Nonadecane, 9-Methyl-	- -	µg/kg								
Octadecanal	- -	µg/kg								
Octadecanoic acid	- -	µg/kg								
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								
Octadecanoic acid, butyl ester	- -	µg/kg								
Olean-12-ene	- -	µg/kg								
Organic acid	- -	µg/kg						**912 J**		**383 J**
Organic acid 1	- -	µg/kg								
Organic acid 2	- -	µg/kg								
Organic acid 3	- -	µg/kg								
Organic acid 4	- -	µg/kg								
Organic acid 5	- -	µg/kg								
o-Terphenyl	- -	µg/kg								
Oxirane, hexadecyl-	- -	µg/kg								
p-Dicyclohexylbenzene	- -	µg/kg								
Pentadecanal-	- -	µg/kg								
Pentadecanoic acid	- -	µg/kg								
Pentasiloxane, dodecamethyl-	- -	µg/kg								
Perylene	- -	µg/kg								
Perylene isomer C20H12	- -	µg/kg								
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								
Phenanthrene, 1-methyl-	- -	µg/kg								
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg								
Phenanthrene, 2,3-dimethyl-	- -	µg/kg								
Phenanthrene, 2,5-dimethyl-	- -	µg/kg			**640 JN [750 JN]**					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg								
Phenanthrene, 2-methyl-	- -	µg/kg			**900 JN [910 JN]**					
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg								
Phenanthrene, 3,6-dimethyl-	- -	µg/kg								
Phenanthrene, 3-methyl-	- -	µg/kg			**510 JN**					
Phenanthrene, 4-methyl-	- -	µg/kg								
Phenanthridine	- -	µg/kg								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg								
Phenylated naphthalene	- -	µg/kg								
Phthalic anhydride	- -	µg/kg						**433 JN**		

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
Propanoic acid, 3-mercapto-	- -	µg/kg								
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg								
Pyrene, 1-methyl-	- -	µg/kg								
Pyrene, 2-methyl-	- -	µg/kg								
Pyrene, 4-methyl-	- -	µg/kg								
Stigmast-4-en-3-one	- -	µg/kg						**1,970 JN**		
Stigmasta-3,5-dien-7-one	- -	µg/kg								
Stigmasterol, 22,23-dihydro-	- -	µg/kg								
Substituted Benzene	- -	µg/kg								**1,220 J**
Substituted Naphthalene	- -	µg/kg								
Substituted Naphthalene 1	- -	µg/kg								
Substituted Naphthalene 2	- -	µg/kg								
Substituted Naphthalene 3	- -	µg/kg								
Substituted Naphthalene 4	- -	µg/kg								
Substituted PAH isomer	- -	µg/kg								
Sulfur hexamer	- -	µg/kg								
Sulfur, mol. (S8)	- -	µg/kg								
Testosterone	- -	µg/kg								
Tetradecanal	- -	µg/kg								
Tetradecanoic acid	- -	µg/kg								
Tetradecanoic acid, ethyl ester	- -	µg/kg								
Tetradecanoic acid, methyl ester	- -	µg/kg								
Thiophene, 2-(Methylselenyl)	- -	µg/kg								
tri(2-Ethylhexyl) trimellitate	- -	µg/kg								
Tridecanoic acid	- -	µg/kg								
Triphenylene	- -	µg/kg								
Triphenylene, 2-methyl-	- -	µg/kg								
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg		**630 JN**						
Vanillin	- -	µg/kg								
Vitamin E	- -	µg/kg								
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg								
Trichlorobiphenyls	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')
SVOC TICS										
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg								
.alpha.-Methylstyrene	- -	µg/kg								
.beta.-iso-Methyl ionone	- -	µg/kg								
[3,4:9,10]Dibenzpyrene	- -	µg/kg								
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg								
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg								
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg								
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg								
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg								
1,2,7,8-Debenzphenanthrene	- -	µg/kg								
1,2:4,5-Dibenzopyrene	- -	µg/kg								
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg								
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg								
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg								
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg								
10-Methylnonadecene	- -	µg/kg								
11H-Benzo[a]fluoren-11-one	- -	µg/kg								
11H-Benzo[a]fluorene	- -	µg/kg								
11H-Benzo[b]fluorene	- -	µg/kg								
13-Docosenamide, (Z)-	- -	µg/kg								
17-Pentatriacontene	- -	µg/kg								
1-Decene	- -	µg/kg								
1-Docosene	- -	µg/kg								
1-Dodecanol	- -	µg/kg								
1-Dodecene	- -	µg/kg								
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg								
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								
1-Heneicosyl formate	- -	µg/kg								
1-Heptadecanol	- -	µg/kg								
1-Hexacosanol	- -	µg/kg								
1-Hexadecene	- -	µg/kg								
1H-Indene, 1-phenyl-	- -	µg/kg								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-phenyl-	- -	µg/kg								
1-Nonadecane	- -	µg/kg								
1-Nonadecanol	- -	µg/kg								
1-Nonene	- -	µg/kg								
1-Octadecanol	- -	µg/kg								
1-Pentadecene	- -	µg/kg								
1-Tridecanol	- -	µg/kg								
1-Tridecene	- -	µg/kg								
1-Undecanol	- -	µg/kg								
2 (3H)-Benzothiazolone	- -	µg/kg								
2',3,4-Trichlorobiphenyl	- -	µg/kg								
2,3,4-Trichlorobiphenyl	- -	µg/kg								
2,3-Dihydro-1-methylindene	- -	µg/kg								
2,4,6-Trichlorobiphenyl	- -	µg/kg								
2,4-Dichlorophenyl isocyanate	- -	µg/kg								
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								
2-Dodecanol	- -	µg/kg								
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg								
2-Mercaptobenzothiazole	- -	µg/kg								
2-Napthalenamine, n-phenyl	- -	µg/kg								
2-Pentadecanone	- -	µg/kg								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg								
2-Phenylnaphthalene	- -	µg/kg								
2-Propenoic acid, pentadecyl ester	- -	µg/kg								
2-Propenoic acid, tridecyl	- -	µg/kg								
2-Undecanol	- -	µg/kg								
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')
3,4:8,9-Dibenzopyrene	- -	µg/kg								
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg								
3,5-Dichlorophenyl isocyanate	- -	µg/kg								
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg								
3-Eicosene, (E)-	- -	µg/kg								
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg								
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg								
4H-Cyclopenta[def]phenanthrene	- -	µg/kg								
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg								
5,12-Napthacenedione	- -	µg/kg								
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg								
5-Eicosene, (E)-	- -	µg/kg								
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg								
7H-Benz[de]anthracen-7-one	- -	µg/kg								
7H-Benzo[C]fluorene	- -	µg/kg								
9,10-Anthracenedione	- -	µg/kg								
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg								
9,10-Dimethylanthracene	- -	µg/kg								
9-Hexacosene	- -	µg/kg								
9-Hexadecenoic acid	- -	µg/kg								
9H-Fluoren-9-one	- -	µg/kg								
9H-Fluorene, 1-methyl-	- -	µg/kg								
9H-Fluorene, 2-methyl-	- -	µg/kg								
9H-Fluorene, 9-methylene-	- -	µg/kg								
9-Octadecenamide, (Z)-	- -	µg/kg								
9-Octadecenoic acid, (E)-	- -	µg/kg								
Abieta-8,11,13-triene	- -	µg/kg								
Acridine	- -	µg/kg								
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg								
Anthracene, 1,4-dimethyl-	- -	µg/kg								
Anthracene, 1-methyl-	- -	µg/kg								
Anthracene, 2-methyl-	- -	µg/kg								
Anthracene, 9-Ethenyl-	- -	µg/kg								
Anthracene, 9-methyl-	- -	µg/kg								
Benz[a]anthracene, 10-methyl-	- -	µg/kg								
Benz[a]anthracene, 7-methyl-	- -	µg/kg								
Benz[a]anthracene, 8-methyl-	- -	µg/kg								
Benzaldehyde, 2-hydroxy-	- -	µg/kg								

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg								
Benzenamine, 4-methyl-2-nitro	- -	µg/kg								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg								
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg								
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg								
Benzene, 1,2,4-trimethyl-	- -	µg/kg								
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg								
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg								
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg								
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg								
Benzene, 1-ethyl-3-methyl-	- -	µg/kg								
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg								
Benzene, tert-butyl-	- -	µg/kg								
Benzeneacetic acid	- -	µg/kg								
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								
Benzenesulfonamide, 2-methyl-	- -	µg/kg								
Benzenesulfonamide, 4-methyl-	- -	µg/kg								
Benzo(e)pyrene	- -	µg/kg						**3,800 JN**		**751 JN**
Benzo[b]chrysene	- -	µg/kg								
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								
Benzo[b]triphenylene	- -	µg/kg								
Benzo[c]phenanthrene	- -	µg/kg								
Benzo[f]quinoline	- -	µg/kg								
Benzo[ghi]fluoranthene	- -	µg/kg								
Benzo[h]quinoline	- -	µg/kg								
Benzo[j]fluoranthene	- -	µg/kg								
Benzo[kl]xanthene	- -	µg/kg								
Benzocycloheptatriene	- -	µg/kg								
Benzoic acid	- -	µg/kg								
Benzothiazole	- -	µg/kg								
Benzothiazole, 2-(methylthio)-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')
beta-Sitosterol	- -	µg/kg								
Bicyclohexyl, 4-phenyl-	- -	µg/kg								
Butane, 2-methoxy-2-methyl-	- -	µg/kg								
Butylated hydroxytoluene	- -	µg/kg								
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg								
Cholesta-3,5-dien-7-one	- -	µg/kg				**11,000 JN**				
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg						**2,840 JN**		**228 JN**
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg								
Cholesterol	- -	µg/kg								
Chrysene, 1-methyl-	- -	µg/kg								
Chrysene, 3-methyl-	- -	µg/kg								
Chrysene, 4-methyl-	- -	µg/kg								
Chrysene, 5-methyl-	- -	µg/kg								
Chrysene, 6-methyl-	- -	µg/kg								
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg								
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								
Clorophene	- -	µg/kg								
Coprostan-3-one	- -	µg/kg								
Cyclohexane, isothiocyanato-	- -	µg/kg								
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg								
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								
Cyclopenta(def)phenanthrenone	- -	µg/kg								
Cyclopenta[cd]pyrene	- -	µg/kg								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg								
Cyclopentasiloxane, decamethyl-	- -	µg/kg								
Cyclopropanenonanoic Acid, 2	- -	µg/kg								
D:C-friedoolean-8-en-3-one	- -	µg/kg								
dapsone	- -	µg/kg								
Decanoic Acid	- -	µg/kg								
D-Friedoolean-14-en-3-one	- -	µg/kg								
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								
Dibenz(a,e)aceanthrylene	- -	µg/kg								
Dibenzo[def,mno]chrysene	- -	µg/kg								
Dibenzofuran, 4-methyl-	- -	µg/kg								
Dibenzothiophene	- -	µg/kg								
Dibenzothiophene, 3-methyl	- -	µg/kg								
Diethyltoluamide	- -	µg/kg								
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg								
Diphenyl ether	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')
D-Limonene	- -	µg/kg								
Dodecanoic acid	- -	µg/kg								
Dodecanoic acid, methyl ester	- -	µg/kg								
Dodecanoic acid, undecyl ester	- -	µg/kg								
Dodecyl acrylate	- -	µg/kg								
Dotriacontane	- -	µg/kg								
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg								
Fluoranthene, 2-methyl-	- -	µg/kg								
Gamma-Sitosterol	- -	µg/kg								
Hexadecanal	- -	µg/kg								
Hexadecanoic acid	- -	µg/kg								
Hexadecanoic acid, butyl ester	- -	µg/kg								
Hexadecanoic acid, ethyl ester	- -	µg/kg								
Indene	- -	µg/kg								
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg				**17,900 JN**				
Lup-20-(29)-en-3-one	- -	µg/kg								
Manool	- -	µg/kg								
matrine	- -	µg/kg								
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg								
Methylated Naphthalene	- -	µg/kg								
Methylated Phenol	- -	µg/kg								
Methyldibenzothiophene	- -	µg/kg								
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg								
naphthalene, 1,2,3-trimethyl	- -	µg/kg								
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg								
Naphthalene, 1,2-Dimethyl-	- -	µg/kg								
Naphthalene, 1,3-dimethyl-	- -	µg/kg								
Naphthalene, 1,4-dimethyl-	- -	µg/kg								
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg								
Naphthalene, 1-ethyl-	- -	µg/kg								
Naphthalene, 1-methyl-	- -	µg/kg				**1,080 JN**				
Naphthalene, 1-phenyl-	- -	µg/kg								
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg								
Naphthalene, 2,3-dimethyl-	- -	µg/kg								
Naphthalene, 2,6-dimethyl-	- -	µg/kg								
Naphthalene, 2,7-dimethyl-	- -	µg/kg								
Naphthalene, 2-Ethyl-	- -	µg/kg								
Naphthalene, 2-phenyl-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')
Naphthalene, decahydro-, trans-	- -	µg/kg								
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg								
Naphtho[2,3-b]thiophene	- -	µg/kg								
Nonadecane, 9-Methyl-	- -	µg/kg								
Octadecanal	- -	µg/kg								
Octadecanoic acid	- -	µg/kg								
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								
Octadecanoic acid, butyl ester	- -	µg/kg								
Olean-12-ene	- -	µg/kg								
Organic acid	- -	µg/kg				**600 J**		**551 J**	**1,430 J**	**488 J**
Organic acid 1	- -	µg/kg						**362 J**	**1,930 J**	
Organic acid 2	- -	µg/kg						**340 J**		
Organic acid 3	- -	µg/kg								
Organic acid 4	- -	µg/kg								
Organic acid 5	- -	µg/kg								
o-Terphenyl	- -	µg/kg								
Oxirane, hexadecyl-	- -	µg/kg								
p-Dicyclohexylbenzene	- -	µg/kg								
Pentadecanal-	- -	µg/kg								
Pentadecanoic acid	- -	µg/kg								
Pentasiloxane, dodecamethyl-	- -	µg/kg								
Perylene	- -	µg/kg								
Perylene isomer C20H12	- -	µg/kg								
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								
Phenanthrene, 1-methyl-	- -	µg/kg								
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg								
Phenanthrene, 2,3-dimethyl-	- -	µg/kg								
Phenanthrene, 2,5-dimethyl-	- -	µg/kg								
Phenanthrene, 2,7-dimethyl-	- -	µg/kg								
Phenanthrene, 2-methyl-	- -	µg/kg								
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg								
Phenanthrene, 3,6-dimethyl-	- -	µg/kg								
Phenanthrene, 3-methyl-	- -	µg/kg								
Phenanthrene, 4-methyl-	- -	µg/kg								
Phenanthridine	- -	µg/kg								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg								
Phenylated naphthalene	- -	µg/kg								
Phthalic anhydride	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')	SO-204-UI 2 - 4 11/19/09 SO-204-UI (2-4')	SO-205-U1 3 - 4.5 11/19/09 SO-205-U1-3-4.5	SO-205-UI 2 - 4 11/19/09 SO-205-UI (2-4')	SO-206-UI 2 - 3 11/19/09 SO-206-UI (2-3')	SO-207B-UI 1 - 2 11/19/09 SO-207B-UI (1-2')
Propanoic acid, 3-mercapto-	- -	µg/kg								
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg								
Pyrene, 1-methyl-	- -	µg/kg								
Pyrene, 2-methyl-	- -	µg/kg								
Pyrene, 4-methyl-	- -	µg/kg								
Stigmast-4-en-3-one	- -	µg/kg								
Stigmasta-3,5-dien-7-one	- -	µg/kg								
Stigmasterol, 22,23-dihydro-	- -	µg/kg								
Substituted Benzene	- -	µg/kg								
Substituted Naphthalene	- -	µg/kg				**777 J**		**732 J**		
Substituted Naphthalene 1	- -	µg/kg				**667 J**		**598 J**		
Substituted Naphthalene 2	- -	µg/kg				**581 J**		**529 J**		
Substituted Naphthalene 3	- -	µg/kg				**543 J**		**516 J**		
Substituted Naphthalene 4	- -	µg/kg						**409 J**		
Substituted PAH isomer	- -	µg/kg								
Sulfur hexamer	- -	µg/kg								
Sulfur, mol. (S8)	- -	µg/kg								
Testosterone	- -	µg/kg								
Tetradecanal	- -	µg/kg								
Tetradecanoic acid	- -	µg/kg								
Tetradecanoic acid, ethyl ester	- -	µg/kg								
Tetradecanoic acid, methyl ester	- -	µg/kg								
Thiophene, 2-(Methylselenyl)	- -	µg/kg								
tri(2-Ethylhexyl) trimellitate	- -	µg/kg								
Tridecanoic acid	- -	µg/kg								
Triphenylene	- -	µg/kg								
Triphenylene, 2-methyl-	- -	µg/kg								
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg								
Vanillin	- -	µg/kg								
Vitamin E	- -	µg/kg								
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg								
Trichlorobiphenyls	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-207B-UI 2 - 3 11/19/09 SO-207B-UI (2-3')	SO-208B-UI 0 - 1 11/19/09 SO-208B-UI (0-1')	SO-208B-UI 1 - 5 11/19/09 SO-208B-UI (1-5')	SO-209-UI 0 - 1 11/20/09 SO-209-UI (0-1')	SO-210B-UI 1.25 - 4 11/20/09 SO-210B-UI (1.25-4')	SO-211-UI 0 - 1 11/20/09 SO-211-UI (0-1')	SO-212-UI 1 - 4.5 11/20/09 SO-212-UI (1-4.5')	SO-213-U1 0 - 1 11/20/09 SO-213-U1-0-1'
SVOC TICS										
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg								
.alpha.-Methylstyrene	- -	µg/kg								
.beta.-iso-Methyl ionone	- -	µg/kg								
[3,4:9,10]Dibenzpyrene	- -	µg/kg								
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg								
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg								
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg								
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg								
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg								
1,2,7,8-Debenzphenanthrene	- -	µg/kg								
1,2:4,5-Dibenzopyrene	- -	µg/kg								
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg								
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg								
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg								
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg								
10-Methylnonadecene	- -	µg/kg								
11H-Benzo[a]fluoren-11-one	- -	µg/kg								
11H-Benzo[a]fluorene	- -	µg/kg								
11H-Benzo[b]fluorene	- -	µg/kg								
13-Docosenamide, (Z)-	- -	µg/kg								
17-Pentatriacontene	- -	µg/kg								
1-Decene	- -	µg/kg								
1-Docosene	- -	µg/kg								
1-Dodecanol	- -	µg/kg								
1-Dodecene	- -	µg/kg								
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-207B-UI 2 - 3 11/19/09 SO-207B-UI (2-3')	SO-208B-UI 0 - 1 11/19/09 SO-208B-UI (0-1')	SO-208B-UI 1 - 5 11/19/09 SO-208B-UI (1-5')	SO-209-UI 0 - 1 11/20/09 SO-209-UI (0-1')	SO-210B-UI 1.25 - 4 11/20/09 SO-210B-UI (1.25-4')	SO-211-UI 0 - 1 11/20/09 SO-211-UI (0-1')	SO-212-UI 1 - 4.5 11/20/09 SO-212-UI (1-4.5')	SO-213-U1 0 - 1 11/20/09 SO-213-U1-0-1'
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg								
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								
1-Heneicosyl formate	- -	µg/kg								
1-Heptadecanol	- -	µg/kg								
1-Hexacosanol	- -	µg/kg								
1-Hexadecene	- -	µg/kg								
1H-Indene, 1-phenyl-	- -	µg/kg								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-phenyl-	- -	µg/kg								
1-Nonadecane	- -	µg/kg								
1-Nonadecanol	- -	µg/kg								
1-Nonene	- -	µg/kg								
1-Octadecanol	- -	µg/kg								
1-Pentadecene	- -	µg/kg								
1-Tridecanol	- -	µg/kg								
1-Tridecene	- -	µg/kg								
1-Undecanol	- -	µg/kg								
2 (3H)-Benzothiazolone	- -	µg/kg								
2',3,4-Trichlorobiphenyl	- -	µg/kg								
2,3,4-Trichlorobiphenyl	- -	µg/kg								
2,3-Dihydro-1-methylindene	- -	µg/kg								
2,4,6-Trichlorobiphenyl	- -	µg/kg								
2,4-Dichlorophenyl isocyanate	- -	µg/kg								
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								
2-Dodecanol	- -	µg/kg								
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg								
2-Mercaptobenzothiazole	- -	µg/kg								
2-Napthalenamine, n-phenyl	- -	µg/kg								
2-Pentadecanone	- -	µg/kg								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg								
2-Phenylnaphthalene	- -	µg/kg								
2-Propenoic acid, pentadecyl ester	- -	µg/kg								
2-Propenoic acid, tridecyl	- -	µg/kg								
2-Undecanol	- -	µg/kg								
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

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3,4:8,9-Dibenzopyrene	- -	µg/kg								
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg								
3,5-Dichlorophenyl isocyanate	- -	µg/kg								
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg								
3-Eicosene, (E)-	- -	µg/kg								
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg								
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg								
4H-Cyclopenta[def]phenanthrene	- -	µg/kg								
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg								
5,12-Napthacenedione	- -	µg/kg								
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg								
5-Eicosene, (E)-	- -	µg/kg								
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg								
7H-Benz[de]anthracen-7-one	- -	µg/kg								
7H-Benzo[C]fluorene	- -	µg/kg								
9,10-Anthracenedione	- -	µg/kg							**452 JN**	
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg								
9,10-Dimethylanthracene	- -	µg/kg								
9-Hexacosene	- -	µg/kg								
9-Hexadecenoic acid	- -	µg/kg								
9H-Fluoren-9-one	- -	µg/kg								
9H-Fluorene, 1-methyl-	- -	µg/kg								
9H-Fluorene, 2-methyl-	- -	µg/kg								
9H-Fluorene, 9-methylene-	- -	µg/kg								
9-Octadecenamide, (Z)-	- -	µg/kg								
9-Octadecenoic acid, (E)-	- -	µg/kg								
Abieta-8,11,13-triene	- -	µg/kg								
Acridine	- -	µg/kg								
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg								
Anthracene, 1,4-dimethyl-	- -	µg/kg								
Anthracene, 1-methyl-	- -	µg/kg								
Anthracene, 2-methyl-	- -	µg/kg								
Anthracene, 9-Ethenyl-	- -	µg/kg								
Anthracene, 9-methyl-	- -	µg/kg								
Benz[a]anthracene, 10-methyl-	- -	µg/kg								
Benz[a]anthracene, 7-methyl-	- -	µg/kg								
Benz[a]anthracene, 8-methyl-	- -	µg/kg								
Benzaldehyde, 2-hydroxy-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-207B-UI 2 - 3 11/19/09 SO-207B-UI (2-3')	SO-208B-UI 0 - 1 11/19/09 SO-208B-UI (0-1')	SO-208B-UI 1 - 5 11/19/09 SO-208B-UI (1-5')	SO-209-UI 0 - 1 11/20/09 SO-209-UI (0-1')	SO-210B-UI 1.25 - 4 11/20/09 SO-210B-UI (1.25-4')	SO-211-UI 0 - 1 11/20/09 SO-211-UI (0-1')	SO-212-UI 1 - 4.5 11/20/09 SO-212-UI (1-4.5')	SO-213-U1 0 - 1 11/20/09 SO-213-U1-0-1'
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg								
Benzenamine, 4-methyl-2-nitro	- -	µg/kg								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg								
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg								
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg								
Benzene, 1,2,4-trimethyl-	- -	µg/kg								
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg								
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg								
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg								
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg								
Benzene, 1-ethyl-3-methyl-	- -	µg/kg								
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg								
Benzene, tert-butyl-	- -	µg/kg								
Benzeneacetic acid	- -	µg/kg								
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								
Benzenesulfonamide, 2-methyl-	- -	µg/kg								
Benzenesulfonamide, 4-methyl-	- -	µg/kg								
Benzo(e)pyrene	- -	µg/kg	**651 JN**	**421 JN**		**13,600 JN**		**2,120 JN**	**2,940 JN [2,700 JN]**	
Benzo[b]chrysene	- -	µg/kg								
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								
Benzo[b]triphenylene	- -	µg/kg								
Benzo[c]phenanthrene	- -	µg/kg								
Benzo[f]quinoline	- -	µg/kg								
Benzo[ghi]fluoranthene	- -	µg/kg								
Benzo[h]quinoline	- -	µg/kg								
Benzo[j]fluoranthene	- -	µg/kg								
Benzo[kl]xanthene	- -	µg/kg								
Benzocycloheptatriene	- -	µg/kg								
Benzoic acid	- -	µg/kg								
Benzothiazole	- -	µg/kg								
Benzothiazole, 2-(methylthio)-	- -	µg/kg								

TABLE 4-15
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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

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beta-Sitosterol	- -	µg/kg								
Bicyclohexyl, 4-phenyl-	- -	µg/kg								
Butane, 2-methoxy-2-methyl-	- -	µg/kg								
Butylated hydroxytoluene	- -	µg/kg								
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg								
Cholesta-3,5-dien-7-one	- -	µg/kg								
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg								
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg				**3,260 JN**			**2,630 JN**	
Cholesterol	- -	µg/kg								
Chrysene, 1-methyl-	- -	µg/kg								
Chrysene, 3-methyl-	- -	µg/kg								
Chrysene, 4-methyl-	- -	µg/kg								
Chrysene, 5-methyl-	- -	µg/kg								
Chrysene, 6-methyl-	- -	µg/kg								
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg								
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								
Clorophene	- -	µg/kg								
Coprostan-3-one	- -	µg/kg								
Cyclohexane, isothiocyanato-	- -	µg/kg								
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg								
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								
Cyclopenta(def)phenanthrenone	- -	µg/kg								
Cyclopenta[cd]pyrene	- -	µg/kg								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg								
Cyclopentasiloxane, decamethyl-	- -	µg/kg								
Cyclopropanenonanoic Acid, 2	- -	µg/kg								
D:C-friedoolean-8-en-3-one	- -	µg/kg								
dapsone	- -	µg/kg								
Decanoic Acid	- -	µg/kg								
D-Friedoolean-14-en-3-one	- -	µg/kg								
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								
Dibenz(a,e)aceanthrylene	- -	µg/kg								
Dibenzo[def,mno]chrysene	- -	µg/kg								
Dibenzofuran, 4-methyl-	- -	µg/kg								
Dibenzothiophene	- -	µg/kg								
Dibenzothiophene, 3-methyl	- -	µg/kg								
Diethyltoluamide	- -	µg/kg								
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg								
Diphenyl ether	- -	µg/kg								

TABLE 4-15
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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

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D-Limonene	- -	µg/kg								
Dodecanoic acid	- -	µg/kg								
Dodecanoic acid, methyl ester	- -	µg/kg								
Dodecanoic acid, undecyl ester	- -	µg/kg								
Dodecyl acrylate	- -	µg/kg								
Dotriacontane	- -	µg/kg								
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg								
Fluoranthene, 2-methyl-	- -	µg/kg								
Gamma-Sitosterol	- -	µg/kg								
Hexadecanal	- -	µg/kg								
Hexadecanoic acid	- -	µg/kg								
Hexadecanoic acid, butyl ester	- -	µg/kg								
Hexadecanoic acid, ethyl ester	- -	µg/kg								
Indene	- -	µg/kg								
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg								
Lup-20-(29)-en-3-one	- -	µg/kg								
Manool	- -	µg/kg								
matrine	- -	µg/kg								
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg								
Methylated Naphthalene	- -	µg/kg								
Methylated Phenol	- -	µg/kg								
Methyldibenzothiophene	- -	µg/kg								
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg								
naphthalene, 1,2,3-trimethyl	- -	µg/kg								
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg								
Naphthalene, 1,2-Dimethyl-	- -	µg/kg								
Naphthalene, 1,3-dimethyl-	- -	µg/kg								
Naphthalene, 1,4-dimethyl-	- -	µg/kg								
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg								
Naphthalene, 1-ethyl-	- -	µg/kg								
Naphthalene, 1-methyl-	- -	µg/kg								
Naphthalene, 1-phenyl-	- -	µg/kg								
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg								
Naphthalene, 2,3-dimethyl-	- -	µg/kg								
Naphthalene, 2,6-dimethyl-	- -	µg/kg								
Naphthalene, 2,7-dimethyl-	- -	µg/kg								
Naphthalene, 2-Ethyl-	- -	µg/kg								
Naphthalene, 2-phenyl-	- -	µg/kg								

TABLE 4-15
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Naphthalene, decahydro-, trans-	- -	µg/kg								
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg								
Naphtho[2,3-b]thiophene	- -	µg/kg								
Nonadecane, 9-Methyl-	- -	µg/kg								
Octadecanal	- -	µg/kg								
Octadecanoic acid	- -	µg/kg								
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								
Octadecanoic acid, butyl ester	- -	µg/kg								
Olean-12-ene	- -	µg/kg								
Organic acid	- -	µg/kg	**1,160 J**	**593 J**	**373 J**			**682 J**	**3,110 J [529 J]**	
Organic acid 1	- -	µg/kg	**300 J**	**206 J**				**797 J**	**728 J [457 J]**	
Organic acid 2	- -	µg/kg	**237 J**					**1,300 J**	**519 J [349 J]**	
Organic acid 3	- -	µg/kg						**1,780 J**	**850 J [381 J]**	
Organic acid 4	- -	µg/kg						**556 J**		
Organic acid 5	- -	µg/kg								
o-Terphenyl	- -	µg/kg								
Oxirane, hexadecyl-	- -	µg/kg								
p-Dicyclohexylbenzene	- -	µg/kg								
Pentadecanal-	- -	µg/kg								
Pentadecanoic acid	- -	µg/kg								
Pentasiloxane, dodecamethyl-	- -	µg/kg								
Perylene	- -	µg/kg								
Perylene isomer C20H12	- -	µg/kg								
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								
Phenanthrene, 1-methyl-	- -	µg/kg								
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg								
Phenanthrene, 2,3-dimethyl-	- -	µg/kg								
Phenanthrene, 2,5-dimethyl-	- -	µg/kg								
Phenanthrene, 2,7-dimethyl-	- -	µg/kg								
Phenanthrene, 2-methyl-	- -	µg/kg								
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg								
Phenanthrene, 3,6-dimethyl-	- -	µg/kg								
Phenanthrene, 3-methyl-	- -	µg/kg								
Phenanthrene, 4-methyl-	- -	µg/kg			**183 JN**			**876 JN**		
Phenanthridine	- -	µg/kg								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg								
Phenylated naphthalene	- -	µg/kg								
Phthalic anhydride	- -	µg/kg	**354 JN**							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-207B-UI 2 - 3 11/19/09 SO-207B-UI (2-3')	SO-208B-UI 0 - 1 11/19/09 SO-208B-UI (0-1')	SO-208B-UI 1 - 5 11/19/09 SO-208B-UI (1-5')	SO-209-UI 0 - 1 11/20/09 SO-209-UI (0-1')	SO-210B-UI 1.25 - 4 11/20/09 SO-210B-UI (1.25-4')	SO-211-UI 0 - 1 11/20/09 SO-211-UI (0-1')	SO-212-UI 1 - 4.5 11/20/09 SO-212-UI (1-4.5')	SO-213-U1 0 - 1 11/20/09 SO-213-U1-0-1'
Propanoic acid, 3-mercapto-	- -	µg/kg								
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg								
Pyrene, 1-methyl-	- -	µg/kg								
Pyrene, 2-methyl-	- -	µg/kg								
Pyrene, 4-methyl-	- -	µg/kg								
Stigmast-4-en-3-one	- -	µg/kg								
Stigmasta-3,5-dien-7-one	- -	µg/kg						**2,950 JN**		
Stigmasterol, 22,23-dihydro-	- -	µg/kg								
Substituted Benzene	- -	µg/kg								
Substituted Naphthalene	- -	µg/kg				**381 J**			**620 J [357 J]**	
Substituted Naphthalene 1	- -	µg/kg				**260 J**			**519 J**	
Substituted Naphthalene 2	- -	µg/kg				**541 J**				
Substituted Naphthalene 3	- -	µg/kg				**307 J**				
Substituted Naphthalene 4	- -	µg/kg				**277 J**				
Substituted PAH isomer	- -	µg/kg								
Sulfur hexamer	- -	µg/kg								
Sulfur, mol. (S8)	- -	µg/kg								
Testosterone	- -	µg/kg								
Tetradecanal	- -	µg/kg								
Tetradecanoic acid	- -	µg/kg								
Tetradecanoic acid, ethyl ester	- -	µg/kg								
Tetradecanoic acid, methyl ester	- -	µg/kg								
Thiophene, 2-(Methylselenyl)	- -	µg/kg								
tri(2-Ethylhexyl) trimellitate	- -	µg/kg								
Tridecanoic acid	- -	µg/kg								
Triphenylene	- -	µg/kg								
Triphenylene, 2-methyl-	- -	µg/kg								
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg								
Vanillin	- -	µg/kg						**450 JN**		
Vitamin E	- -	µg/kg								
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg								
Trichlorobiphenyls	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'
SVOC TICS										
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg								
.alpha.-Methylstyrene	- -	µg/kg								
.beta.-iso-Methyl ionone	- -	µg/kg								
[3,4:9,10]Dibenzpyrene	- -	µg/kg								
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg								
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg								
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg								
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg								
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg								
1,2,7,8-Debenzphenanthrene	- -	µg/kg								
1,2:4,5-Dibenzopyrene	- -	µg/kg								
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg								
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg								
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg								
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg								
10-Methylnonadecene	- -	µg/kg								
11H-Benzo[a]fluoren-11-one	- -	µg/kg								
11H-Benzo[a]fluorene	- -	µg/kg								
11H-Benzo[b]fluorene	- -	µg/kg								
13-Docosenamide, (Z)-	- -	µg/kg								
17-Pentatriacontene	- -	µg/kg								
1-Decene	- -	µg/kg								
1-Docosene	- -	µg/kg								
1-Dodecanol	- -	µg/kg								
1-Dodecene	- -	µg/kg								
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg								
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								
1-Heneicosyl formate	- -	µg/kg								
1-Heptadecanol	- -	µg/kg								
1-Hexacosanol	- -	µg/kg								
1-Hexadecene	- -	µg/kg								
1H-Indene, 1-phenyl-	- -	µg/kg								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-phenyl-	- -	µg/kg								
1-Nonadecane	- -	µg/kg								
1-Nonadecanol	- -	µg/kg								
1-Nonene	- -	µg/kg								
1-Octadecanol	- -	µg/kg								
1-Pentadecene	- -	µg/kg								
1-Tridecanol	- -	µg/kg								
1-Tridecene	- -	µg/kg								
1-Undecanol	- -	µg/kg								
2 (3H)-Benzothiazolone	- -	µg/kg								
2',3,4-Trichlorobiphenyl	- -	µg/kg								
2,3,4-Trichlorobiphenyl	- -	µg/kg								
2,3-Dihydro-1-methylindene	- -	µg/kg								
2,4,6-Trichlorobiphenyl	- -	µg/kg								
2,4-Dichlorophenyl isocyanate	- -	µg/kg								
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								
2-Dodecanol	- -	µg/kg								
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg								
2-Mercaptobenzothiazole	- -	µg/kg								
2-Napthalenamine, n-phenyl	- -	µg/kg								
2-Pentadecanone	- -	µg/kg								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg								
2-Phenylnaphthalene	- -	µg/kg				**404 JN**				
2-Propenoic acid, pentadecyl ester	- -	µg/kg								
2-Propenoic acid, tridecyl	- -	µg/kg								
2-Undecanol	- -	µg/kg								
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'
3,4:8,9-Dibenzopyrene	- -	µg/kg								
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg								
3,5-Dichlorophenyl isocyanate	- -	µg/kg								
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg								
3-Eicosene, (E)-	- -	µg/kg								
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg								
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg								
4H-Cyclopenta[def]phenanthrene	- -	µg/kg								
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg								
5,12-Napthacenedione	- -	µg/kg								
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg								
5-Eicosene, (E)-	- -	µg/kg								
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg								
7H-Benz[de]anthracen-7-one	- -	µg/kg								
7H-Benzo[C]fluorene	- -	µg/kg								
9,10-Anthracenedione	- -	µg/kg				**383 JN**				
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg								
9,10-Dimethylanthracene	- -	µg/kg								
9-Hexacosene	- -	µg/kg								
9-Hexadecenoic acid	- -	µg/kg								
9H-Fluoren-9-one	- -	µg/kg								
9H-Fluorene, 1-methyl-	- -	µg/kg								
9H-Fluorene, 2-methyl-	- -	µg/kg								
9H-Fluorene, 9-methylene-	- -	µg/kg								
9-Octadecenamide, (Z)-	- -	µg/kg								
9-Octadecenoic acid, (E)-	- -	µg/kg								
Abieta-8,11,13-triene	- -	µg/kg								
Acridine	- -	µg/kg								
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg								
Anthracene, 1,4-dimethyl-	- -	µg/kg								
Anthracene, 1-methyl-	- -	µg/kg								
Anthracene, 2-methyl-	- -	µg/kg								
Anthracene, 9-Ethenyl-	- -	µg/kg								
Anthracene, 9-methyl-	- -	µg/kg								
Benz[a]anthracene, 10-methyl-	- -	µg/kg								
Benz[a]anthracene, 7-methyl-	- -	µg/kg								
Benz[a]anthracene, 8-methyl-	- -	µg/kg								
Benzaldehyde, 2-hydroxy-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg								
Benzenamine, 4-methyl-2-nitro	- -	µg/kg								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg								
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg								
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg								
Benzene, 1,2,4-trimethyl-	- -	µg/kg								
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg								
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg								
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg								
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg								
Benzene, 1-ethyl-3-methyl-	- -	µg/kg								
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg								
Benzene, tert-butyl-	- -	µg/kg								
Benzeneacetic acid	- -	µg/kg								
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								
Benzenesulfonamide, 2-methyl-	- -	µg/kg								
Benzenesulfonamide, 4-methyl-	- -	µg/kg								
Benzo(e)pyrene	- -	µg/kg				**3,500 JN**				
Benzo[b]chrysene	- -	µg/kg								
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								
Benzo[b]triphenylene	- -	µg/kg								
Benzo[c]phenanthrene	- -	µg/kg								
Benzo[f]quinoline	- -	µg/kg								
Benzo[ghi]fluoranthene	- -	µg/kg								
Benzo[h]quinoline	- -	µg/kg								
Benzo[j]fluoranthene	- -	µg/kg								
Benzo[kl]xanthene	- -	µg/kg								
Benzocycloheptatriene	- -	µg/kg								
Benzoic acid	- -	µg/kg								
Benzothiazole	- -	µg/kg								
Benzothiazole, 2-(methylthio)-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'
beta-Sitosterol	- -	µg/kg								
Bicyclohexyl, 4-phenyl-	- -	µg/kg								
Butane, 2-methoxy-2-methyl-	- -	µg/kg								
Butylated hydroxytoluene	- -	µg/kg								
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg								
Cholesta-3,5-dien-7-one	- -	µg/kg					**1,120 JN**			
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg								
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg				**3,890 JN**				
Cholesterol	- -	µg/kg								
Chrysene, 1-methyl-	- -	µg/kg								
Chrysene, 3-methyl-	- -	µg/kg								
Chrysene, 4-methyl-	- -	µg/kg								
Chrysene, 5-methyl-	- -	µg/kg								
Chrysene, 6-methyl-	- -	µg/kg								
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg								
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								
Clorophene	- -	µg/kg								
Coprostan-3-one	- -	µg/kg								
Cyclohexane, isothiocyanato-	- -	µg/kg								
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg								
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								
Cyclopenta(def)phenanthrenone	- -	µg/kg								
Cyclopenta[cd]pyrene	- -	µg/kg								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg								
Cyclopentasiloxane, decamethyl-	- -	µg/kg								
Cyclopropanenonanoic Acid, 2	- -	µg/kg								
D:C-friedoolean-8-en-3-one	- -	µg/kg								
dapsone	- -	µg/kg								
Decanoic Acid	- -	µg/kg								
D-Friedoolean-14-en-3-one	- -	µg/kg								
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								
Dibenz(a,e)aceanthrylene	- -	µg/kg								
Dibenzo[def,mno]chrysene	- -	µg/kg								
Dibenzofuran, 4-methyl-	- -	µg/kg								
Dibenzothiophene	- -	µg/kg								
Dibenzothiophene, 3-methyl	- -	µg/kg								
Diethyltoluamide	- -	µg/kg								
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg								
Diphenyl ether	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'
D-Limonene	- -	µg/kg								
Dodecanoic acid	- -	µg/kg								
Dodecanoic acid, methyl ester	- -	µg/kg								
Dodecanoic acid, undecyl ester	- -	µg/kg								
Dodecyl acrylate	- -	µg/kg								
Dotriacontane	- -	µg/kg								
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg								
Fluoranthene, 2-methyl-	- -	µg/kg								
Gamma-Sitosterol	- -	µg/kg								
Hexadecanal	- -	µg/kg								
Hexadecanoic acid	- -	µg/kg								
Hexadecanoic acid, butyl ester	- -	µg/kg								
Hexadecanoic acid, ethyl ester	- -	µg/kg								
Indene	- -	µg/kg								
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg								
Lup-20-(29)-en-3-one	- -	µg/kg								
Manool	- -	µg/kg								
matrine	- -	µg/kg								
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg								
Methylated Naphthalene	- -	µg/kg						**163 J**		
Methylated Phenol	- -	µg/kg								
Methyldibenzothiophene	- -	µg/kg								
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg								
naphthalene, 1,2,3-trimethyl	- -	µg/kg								
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg								
Naphthalene, 1,2-Dimethyl-	- -	µg/kg								
Naphthalene, 1,3-dimethyl-	- -	µg/kg								
Naphthalene, 1,4-dimethyl-	- -	µg/kg								
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg								
Naphthalene, 1-ethyl-	- -	µg/kg								
Naphthalene, 1-methyl-	- -	µg/kg								
Naphthalene, 1-phenyl-	- -	µg/kg								
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg								
Naphthalene, 2,3-dimethyl-	- -	µg/kg								
Naphthalene, 2,6-dimethyl-	- -	µg/kg								
Naphthalene, 2,7-dimethyl-	- -	µg/kg								
Naphthalene, 2-Ethyl-	- -	µg/kg								
Naphthalene, 2-phenyl-	- -	µg/kg							**382 JN**	

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'
Naphthalene, decahydro-, trans-	- -	µg/kg								
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg								
Naphtho[2,3-b]thiophene	- -	µg/kg								
Nonadecane, 9-Methyl-	- -	µg/kg								
Octadecanal	- -	µg/kg								
Octadecanoic acid	- -	µg/kg								
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								
Octadecanoic acid, butyl ester	- -	µg/kg								
Olean-12-ene	- -	µg/kg								
Organic acid	- -	µg/kg				**804 J**	**350 J**	**338 J**	**666 J**	
Organic acid 1	- -	µg/kg				**591 J**	**552 J**	**194 J**	**622 J**	
Organic acid 2	- -	µg/kg				**498 J**	**214 J**		**244 J**	
Organic acid 3	- -	µg/kg				**1,510 J**			**203 J**	
Organic acid 4	- -	µg/kg				**255 J**			**193 J**	
Organic acid 5	- -	µg/kg				**1,170 J**				
o-Terphenyl	- -	µg/kg								
Oxirane, hexadecyl-	- -	µg/kg								
p-Dicyclohexylbenzene	- -	µg/kg								
Pentadecanal-	- -	µg/kg								
Pentadecanoic acid	- -	µg/kg								
Pentasiloxane, dodecamethyl-	- -	µg/kg								
Perylene	- -	µg/kg								
Perylene isomer C20H12	- -	µg/kg					**1,540 J**			
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								
Phenanthrene, 1-methyl-	- -	µg/kg								
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg								
Phenanthrene, 2,3-dimethyl-	- -	µg/kg								
Phenanthrene, 2,5-dimethyl-	- -	µg/kg								
Phenanthrene, 2,7-dimethyl-	- -	µg/kg								
Phenanthrene, 2-methyl-	- -	µg/kg								
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg								
Phenanthrene, 3,6-dimethyl-	- -	µg/kg								
Phenanthrene, 3-methyl-	- -	µg/kg								
Phenanthrene, 4-methyl-	- -	µg/kg								
Phenanthridine	- -	µg/kg								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg								
Phenylated naphthalene	- -	µg/kg					**284 J**	**236 J**		
Phthalic anhydride	- -	µg/kg				**702 JN**				

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'
Propanoic acid, 3-mercapto-	- -	µg/kg								
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg								
Pyrene, 1-methyl-	- -	µg/kg								
Pyrene, 2-methyl-	- -	µg/kg								
Pyrene, 4-methyl-	- -	µg/kg								
Stigmast-4-en-3-one	- -	µg/kg								
Stigmasta-3,5-dien-7-one	- -	µg/kg								
Stigmasterol, 22,23-dihydro-	- -	µg/kg								
Substituted Benzene	- -	µg/kg								
Substituted Naphthalene	- -	µg/kg								
Substituted Naphthalene 1	- -	µg/kg								
Substituted Naphthalene 2	- -	µg/kg								
Substituted Naphthalene 3	- -	µg/kg								
Substituted Naphthalene 4	- -	µg/kg								
Substituted PAH isomer	- -	µg/kg								
Sulfur hexamer	- -	µg/kg								
Sulfur, mol. (S8)	- -	µg/kg								
Testosterone	- -	µg/kg								
Tetradecanal	- -	µg/kg								
Tetradecanoic acid	- -	µg/kg					**412 JN**			
Tetradecanoic acid, ethyl ester	- -	µg/kg								
Tetradecanoic acid, methyl ester	- -	µg/kg								
Thiophene, 2-(Methylselenyl)	- -	µg/kg								
tri(2-Ethylhexyl) trimellitate	- -	µg/kg								
Tridecanoic acid	- -	µg/kg								
Triphenylene	- -	µg/kg								
Triphenylene, 2-methyl-	- -	µg/kg								
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg								
Vanillin	- -	µg/kg				**336 JN**	**195 JN**	**236 JN**		
Vitamin E	- -	µg/kg								
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg								
Trichlorobiphenyls	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'	SO-223F-UI 11 - 12 11/23/09 SO-223F-UI-11-12'	SO-224A-UI 1 - 5 11/23/09 SO-224A-UI-1-5'	SO-225A-UI 0 - 1 11/24/09 SO-225A-UI-0-1'	SO-225A-UI 1.5 - 5 11/24/09 SO-225A-UI-1.5-5'	SO-226A-UI 6 - 8 11/24/09 SO-226A-UI-6-8'	SO-227B-UI 1 - 5 11/24/09 SO-227B-UI-1-5'	SO-228-UI 12 - 14 11/24/09 SO-228-UI-12-14'
SVOC TICS										
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg								
.alpha.-Methylstyrene	- -	µg/kg								
.beta.-iso-Methyl ionone	- -	µg/kg								
[3,4:9,10]Dibenzpyrene	- -	µg/kg								
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg								
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg								
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg								
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg								
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg								
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg								
1,2,7,8-Debenzphenanthrene	- -	µg/kg								
1,2:4,5-Dibenzopyrene	- -	µg/kg								
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg								
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg								
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg								
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg								
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg								
10-Methylnonadecene	- -	µg/kg								
11H-Benzo[a]fluoren-11-one	- -	µg/kg								
11H-Benzo[a]fluorene	- -	µg/kg								
11H-Benzo[b]fluorene	- -	µg/kg								
13-Docosenamide, (Z)-	- -	µg/kg								
17-Pentatriacontene	- -	µg/kg								
1-Decene	- -	µg/kg								
1-Docosene	- -	µg/kg								
1-Dodecanol	- -	µg/kg								
1-Dodecene	- -	µg/kg								
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'	SO-223F-UI 11 - 12 11/23/09 SO-223F-UI-11-12'	SO-224A-UI 1 - 5 11/23/09 SO-224A-UI-1-5'	SO-225A-UI 0 - 1 11/24/09 SO-225A-UI-0-1'	SO-225A-UI 1.5 - 5 11/24/09 SO-225A-UI-1.5-5'	SO-226A-UI 6 - 8 11/24/09 SO-226A-UI-6-8'	SO-227B-UI 1 - 5 11/24/09 SO-227B-UI-1-5'	SO-228-UI 12 - 14 11/24/09 SO-228-UI-12-14'
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg								
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg								
1-Heneicosyl formate	- -	µg/kg								
1-Heptadecanol	- -	µg/kg								
1-Hexacosanol	- -	µg/kg								
1-Hexadecene	- -	µg/kg								
1H-Indene, 1-phenyl-	- -	µg/kg								
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg								
1H-Indene, 2-phenyl-	- -	µg/kg								
1-Nonadecane	- -	µg/kg								
1-Nonadecanol	- -	µg/kg								
1-Nonene	- -	µg/kg								
1-Octadecanol	- -	µg/kg								
1-Pentadecene	- -	µg/kg								
1-Tridecanol	- -	µg/kg								
1-Tridecene	- -	µg/kg								
1-Undecanol	- -	µg/kg								
2 (3H)-Benzothiazolone	- -	µg/kg		**157 JN**	**27,800 JN**					
2',3,4-Trichlorobiphenyl	- -	µg/kg								
2,3,4-Trichlorobiphenyl	- -	µg/kg								
2,3-Dihydro-1-methylindene	- -	µg/kg								
2,4,6-Trichlorobiphenyl	- -	µg/kg								
2,4-Dichlorophenyl isocyanate	- -	µg/kg								
28-Nor-17.alpha.(H)-hopane	- -	µg/kg								
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								
2-Dodecanol	- -	µg/kg								
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg								
2-Mercaptobenzothiazole	- -	µg/kg								
2-Napthalenamine, n-phenyl	- -	µg/kg								
2-Pentadecanone	- -	µg/kg								
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg								
2-Phenylnaphthalene	- -	µg/kg						**3,300 JN**		
2-Propenoic acid, pentadecyl ester	- -	µg/kg								
2-Propenoic acid, tridecyl	- -	µg/kg								
2-Undecanol	- -	µg/kg								
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg								

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PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'	SO-223F-UI 11 - 12 11/23/09 SO-223F-UI-11-12'	SO-224A-UI 1 - 5 11/23/09 SO-224A-UI-1-5'	SO-225A-UI 0 - 1 11/24/09 SO-225A-UI-0-1'	SO-225A-UI 1.5 - 5 11/24/09 SO-225A-UI-1.5-5'	SO-226A-UI 6 - 8 11/24/09 SO-226A-UI-6-8'	SO-227B-UI 1 - 5 11/24/09 SO-227B-UI-1-5'	SO-228-UI 12 - 14 11/24/09 SO-228-UI-12-14'
3,4:8,9-Dibenzopyrene	- -	µg/kg								
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg								
3,5-Dichlorophenyl isocyanate	- -	µg/kg								
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg								
3-Eicosene, (E)-	- -	µg/kg								
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg								
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg								
4H-Cyclopenta[def]phenanthrene	- -	µg/kg								
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg								
5,12-Napthacenedione	- -	µg/kg								
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg								
5-Eicosene, (E)-	- -	µg/kg								
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg								
7H-Benz[de]anthracen-7-one	- -	µg/kg								
7H-Benzo[C]fluorene	- -	µg/kg								
9,10-Anthracenedione	- -	µg/kg								
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg								
9,10-Dimethylanthracene	- -	µg/kg								
9-Hexacosene	- -	µg/kg								
9-Hexadecenoic acid	- -	µg/kg								
9H-Fluoren-9-one	- -	µg/kg								
9H-Fluorene, 1-methyl-	- -	µg/kg								
9H-Fluorene, 2-methyl-	- -	µg/kg								
9H-Fluorene, 9-methylene-	- -	µg/kg								
9-Octadecenamide, (Z)-	- -	µg/kg								
9-Octadecenoic acid, (E)-	- -	µg/kg								
Abieta-8,11,13-triene	- -	µg/kg								
Acridine	- -	µg/kg								
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg								
Anthracene, 1,4-dimethyl-	- -	µg/kg								
Anthracene, 1-methyl-	- -	µg/kg								
Anthracene, 2-methyl-	- -	µg/kg								
Anthracene, 9-Ethenyl-	- -	µg/kg								
Anthracene, 9-methyl-	- -	µg/kg								
Benz[a]anthracene, 10-methyl-	- -	µg/kg								
Benz[a]anthracene, 7-methyl-	- -	µg/kg								
Benz[a]anthracene, 8-methyl-	- -	µg/kg								
Benzaldehyde, 2-hydroxy-	- -	µg/kg								

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Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg								
Benzenamine, 4-methyl-2-nitro	- -	µg/kg								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg								
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg								
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg								
Benzene, 1,2,4-trimethyl-	- -	µg/kg								
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg								
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg								
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg								
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg								
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg								
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg								
Benzene, 1-ethyl-3-methyl-	- -	µg/kg								
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg								
Benzene, tert-butyl-	- -	µg/kg								
Benzeneacetic acid	- -	µg/kg								
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								
Benzenesulfonamide, 2-methyl-	- -	µg/kg								
Benzenesulfonamide, 4-methyl-	- -	µg/kg								
Benzo(e)pyrene	- -	µg/kg	**2,090 JN**				**3,780 JN**	**7,710 JN**	**1,130 JN**	
Benzo[b]chrysene	- -	µg/kg								
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg								
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg								
Benzo[b]triphenylene	- -	µg/kg								
Benzo[c]phenanthrene	- -	µg/kg								
Benzo[f]quinoline	- -	µg/kg								
Benzo[ghi]fluoranthene	- -	µg/kg								
Benzo[h]quinoline	- -	µg/kg								
Benzo[j]fluoranthene	- -	µg/kg								
Benzo[kl]xanthene	- -	µg/kg								
Benzocycloheptatriene	- -	µg/kg								
Benzoic acid	- -	µg/kg								
Benzothiazole	- -	µg/kg								
Benzothiazole, 2-(methylthio)-	- -	µg/kg								

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beta-Sitosterol	- -	µg/kg								
Bicyclohexyl, 4-phenyl-	- -	µg/kg								
Butane, 2-methoxy-2-methyl-	- -	µg/kg								
Butylated hydroxytoluene	- -	µg/kg			**14,300 JN**					
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg								
Cholesta-3,5-dien-7-one	- -	µg/kg								
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg								
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg						**6,710 JN**		
Cholesterol	- -	µg/kg								
Chrysene, 1-methyl-	- -	µg/kg								
Chrysene, 3-methyl-	- -	µg/kg								
Chrysene, 4-methyl-	- -	µg/kg								
Chrysene, 5-methyl-	- -	µg/kg								
Chrysene, 6-methyl-	- -	µg/kg								
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg								
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg								
Clorophene	- -	µg/kg								
Coprostan-3-one	- -	µg/kg					**2,910 JN**			
Cyclohexane, isothiocyanato-	- -	µg/kg								
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg								
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg								
Cyclopenta(def)phenanthrenone	- -	µg/kg								
Cyclopenta[cd]pyrene	- -	µg/kg								
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg								
Cyclopentasiloxane, decamethyl-	- -	µg/kg								
Cyclopropanenonanoic Acid, 2	- -	µg/kg								
D:C-friedoolean-8-en-3-one	- -	µg/kg								
dapsone	- -	µg/kg								
Decanoic Acid	- -	µg/kg								
D-Friedoolean-14-en-3-one	- -	µg/kg								
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								
Dibenz(a,e)aceanthrylene	- -	µg/kg								
Dibenzo[def,mno]chrysene	- -	µg/kg								
Dibenzofuran, 4-methyl-	- -	µg/kg								
Dibenzothiophene	- -	µg/kg								
Dibenzothiophene, 3-methyl	- -	µg/kg								
Diethyltoluamide	- -	µg/kg								
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg								
Diphenyl ether	- -	µg/kg								

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'	SO-223F-UI 11 - 12 11/23/09 SO-223F-UI-11-12'	SO-224A-UI 1 - 5 11/23/09 SO-224A-UI-1-5'	SO-225A-UI 0 - 1 11/24/09 SO-225A-UI-0-1'	SO-225A-UI 1.5 - 5 11/24/09 SO-225A-UI-1.5-5'	SO-226A-UI 6 - 8 11/24/09 SO-226A-UI-6-8'	SO-227B-UI 1 - 5 11/24/09 SO-227B-UI-1-5'	SO-228-UI 12 - 14 11/24/09 SO-228-UI-12-14'
D-Limonene	- -	µg/kg								
Dodecanoic acid	- -	µg/kg								
Dodecanoic acid, methyl ester	- -	µg/kg								
Dodecanoic acid, undecyl ester	- -	µg/kg								
Dodecyl acrylate	- -	µg/kg								
Dotriacontane	- -	µg/kg								
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg								
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg								
Fluoranthene, 2-methyl-	- -	µg/kg								
Gamma-Sitosterol	- -	µg/kg								
Hexadecanal	- -	µg/kg								
Hexadecanoic acid	- -	µg/kg								
Hexadecanoic acid, butyl ester	- -	µg/kg								
Hexadecanoic acid, ethyl ester	- -	µg/kg								
Indene	- -	µg/kg								
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg								
Lup-20-(29)-en-3-one	- -	µg/kg								
Manool	- -	µg/kg								
matrine	- -	µg/kg								
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg								
Methylated Naphthalene	- -	µg/kg								
Methylated Phenol	- -	µg/kg			**13,100 J**					
Methyldibenzothiophene	- -	µg/kg								
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg								
naphthalene, 1,2,3-trimethyl	- -	µg/kg								
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg								
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg								
Naphthalene, 1,2-Dimethyl-	- -	µg/kg								
Naphthalene, 1,3-dimethyl-	- -	µg/kg								
Naphthalene, 1,4-dimethyl-	- -	µg/kg								
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg								
Naphthalene, 1-ethyl-	- -	µg/kg								
Naphthalene, 1-methyl-	- -	µg/kg								
Naphthalene, 1-phenyl-	- -	µg/kg								
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg								
Naphthalene, 2,3-dimethyl-	- -	µg/kg								
Naphthalene, 2,6-dimethyl-	- -	µg/kg								
Naphthalene, 2,7-dimethyl-	- -	µg/kg								
Naphthalene, 2-Ethyl-	- -	µg/kg								
Naphthalene, 2-phenyl-	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'	SO-223F-UI 11 - 12 11/23/09 SO-223F-UI-11-12'	SO-224A-UI 1 - 5 11/23/09 SO-224A-UI-1-5'	SO-225A-UI 0 - 1 11/24/09 SO-225A-UI-0-1'	SO-225A-UI 1.5 - 5 11/24/09 SO-225A-UI-1.5-5'	SO-226A-UI 6 - 8 11/24/09 SO-226A-UI-6-8'	SO-227B-UI 1 - 5 11/24/09 SO-227B-UI-1-5'	SO-228-UI 12 - 14 11/24/09 SO-228-UI-12-14'
Naphthalene, decahydro-, trans-	- -	µg/kg								
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg								
Naphtho[2,3-b]thiophene	- -	µg/kg								
Nonadecane, 9-Methyl-	- -	µg/kg								
Octadecanal	- -	µg/kg								
Octadecanoic acid	- -	µg/kg								
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg								
Octadecanoic acid, butyl ester	- -	µg/kg								
Olean-12-ene	- -	µg/kg								
Organic acid	- -	µg/kg	**1,920 J**				**1,360 J**			
Organic acid 1	- -	µg/kg	**572 J**							
Organic acid 2	- -	µg/kg	**508 J**							
Organic acid 3	- -	µg/kg	**405 J**							
Organic acid 4	- -	µg/kg								
Organic acid 5	- -	µg/kg								
o-Terphenyl	- -	µg/kg								
Oxirane, hexadecyl-	- -	µg/kg								
p-Dicyclohexylbenzene	- -	µg/kg								
Pentadecanal-	- -	µg/kg								
Pentadecanoic acid	- -	µg/kg								
Pentasiloxane, dodecamethyl-	- -	µg/kg								
Perylene	- -	µg/kg								
Perylene isomer C20H12	- -	µg/kg								
Phenanthrene, 1,7-dimethyl-	- -	µg/kg								
Phenanthrene, 1-methyl-	- -	µg/kg								
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg								
Phenanthrene, 2,3-dimethyl-	- -	µg/kg								
Phenanthrene, 2,5-dimethyl-	- -	µg/kg								
Phenanthrene, 2,7-dimethyl-	- -	µg/kg								
Phenanthrene, 2-methyl-	- -	µg/kg								
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg								
Phenanthrene, 3,6-dimethyl-	- -	µg/kg								
Phenanthrene, 3-methyl-	- -	µg/kg								
Phenanthrene, 4-methyl-	- -	µg/kg								
Phenanthridine	- -	µg/kg								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg								
Phenylated naphthalene	- -	µg/kg								
Phthalic anhydride	- -	µg/kg	**977 JN**							

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'	SO-223F-UI 11 - 12 11/23/09 SO-223F-UI-11-12'	SO-224A-UI 1 - 5 11/23/09 SO-224A-UI-1-5'	SO-225A-UI 0 - 1 11/24/09 SO-225A-UI-0-1'	SO-225A-UI 1.5 - 5 11/24/09 SO-225A-UI-1.5-5'	SO-226A-UI 6 - 8 11/24/09 SO-226A-UI-6-8'	SO-227B-UI 1 - 5 11/24/09 SO-227B-UI-1-5'	SO-228-UI 12 - 14 11/24/09 SO-228-UI-12-14'
Propanoic acid, 3-mercapto-	- -	µg/kg								
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg								
Pyrene, 1-methyl-	- -	µg/kg								
Pyrene, 2-methyl-	- -	µg/kg								
Pyrene, 4-methyl-	- -	µg/kg								
Stigmast-4-en-3-one	- -	µg/kg								
Stigmasta-3,5-dien-7-one	- -	µg/kg	**466 JN**							
Stigmasterol, 22,23-dihydro-	- -	µg/kg								
Substituted Benzene	- -	µg/kg			**13,600 J**					
Substituted Naphthalene	- -	µg/kg			**37,700 J**			**6,470 J**		
Substituted Naphthalene 1	- -	µg/kg								
Substituted Naphthalene 2	- -	µg/kg								
Substituted Naphthalene 3	- -	µg/kg								
Substituted Naphthalene 4	- -	µg/kg								
Substituted PAH isomer	- -	µg/kg						**7,920 J**		
Sulfur hexamer	- -	µg/kg								
Sulfur, mol. (S8)	- -	µg/kg		**828 JN**						
Testosterone	- -	µg/kg								
Tetradecanal	- -	µg/kg								
Tetradecanoic acid	- -	µg/kg								
Tetradecanoic acid, ethyl ester	- -	µg/kg								
Tetradecanoic acid, methyl ester	- -	µg/kg								
Thiophene, 2-(Methylselenyl)	- -	µg/kg								
tri(2-Ethylhexyl) trimellitate	- -	µg/kg								
Tridecanoic acid	- -	µg/kg								
Triphenylene	- -	µg/kg								
Triphenylene, 2-methyl-	- -	µg/kg								
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg								
Vanillin	- -	µg/kg								
Vitamin E	- -	µg/kg						**3,720 JN**		
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg								
Trichlorobiphenyls	- -	µg/kg								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb
SVOC TICS													
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg											
.alpha.-Methylstyrene	- -	µg/kg											
.beta.-iso-Methyl ionone	- -	µg/kg											
[3,4:9,10]Dibenzpyrene	- -	µg/kg											
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg											
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg			**120 NJ**								
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg	**240 NJ**										
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg	**2,000 NJD**										
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg	**130 NJ**										
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg	**340 NJ**										
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg	**280 NJ**										
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg			**100 NJ**								
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg			**310 NJ**								
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg	**1,700 NJD**										
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg	**570 NJ**										
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg	**2,400 NJD**										
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg	**2,000 NJD**		**120 NJ**								
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg	**2,000 NJD**										
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg	**330 NJ**										
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg	**5,400 NJD**										
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg	**2,500 NJD**										
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg	**810 NJ**										
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg											
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg											
1,2,7,8-Debenzphenanthrene	- -	µg/kg											
1,2:4,5-Dibenzopyrene	- -	µg/kg											
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg	**390 NJ**							**830 NJD**			
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg											
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg											
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg											
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg											
10-Methylnonadecene	- -	µg/kg											
11H-Benzo[a]fluoren-11-one	- -	µg/kg											
11H-Benzo[a]fluorene	- -	µg/kg								**450 NJD**			
11H-Benzo[b]fluorene	- -	µg/kg								**290 NJ**			
13-Docosenamide, (Z)-	- -	µg/kg											
17-Pentatriacontene	- -	µg/kg											
1-Decene	- -	µg/kg	**680 NJ**					**610 NJ**		**1,100 NJD**		**370 NJ**	
1-Docosene	- -	µg/kg										**930 NJ**	
1-Dodecanol	- -	µg/kg				**440 NJ**		**400 NJ**					
1-Dodecene	- -	µg/kg											
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg											
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg											
1-Heneicosyl formate	- -	µg/kg											
1-Heptadecanol	- -	µg/kg											
1-Hexacosanol	- -	µg/kg											
1-Hexadecene	- -	µg/kg											
1H-Indene, 1-phenyl-	- -	µg/kg											
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg											
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg											
1H-Indene, 2-phenyl-	- -	µg/kg											
1-Nonadecane	- -	µg/kg								**1,400 NJD**			
1-Nonadecanol	- -	µg/kg										**230 NJ**	
1-Nonene	- -	µg/kg											
1-Octadecanol	- -	µg/kg	**320 NJ**										
1-Pentadecene	- -	µg/kg											
1-Tridecanol	- -	µg/kg											
1-Tridecene	- -	µg/kg											
1-Undecanol	- -	µg/kg								**660 NJ**			
2 (3H)-Benzothiazolone	- -	µg/kg											
2',3,4-Trichlorobiphenyl	- -	µg/kg	**1,500 NJ**										
2,3,4-Trichlorobiphenyl	- -	µg/kg	**470 NJ**										
2,3-Dihydro-1-methylindene	- -	µg/kg											
2,4,6-Trichlorobiphenyl	- -	µg/kg	**1,800 NJD**										
2,4-Dichlorophenyl isocyanate	- -	µg/kg											
28-Nor-17.alpha.(H)-hopane	- -	µg/kg											
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg								**490 NJD**			
2-Dodecanol	- -	µg/kg											
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg											
2-Mercaptobenzothiazole	- -	µg/kg											
2-Napthalenamine, n-phenyl	- -	µg/kg											
2-Pentadecanone	- -	µg/kg											
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg											
2-Phenylnaphthalene	- -	µg/kg											
2-Propenoic acid, pentadecyl ester	- -	µg/kg											
2-Propenoic acid, tridecyl	- -	µg/kg											
2-Undecanol	- -	µg/kg											
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg											

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb
3,4:8,9-Dibenzopyrene	- -	µg/kg											
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg											
3,5-Dichlorophenyl isocyanate	- -	µg/kg											
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg											
3-Eicosene, (E)-	- -	µg/kg										**370 NJ**	
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg											
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg											
4H-Cyclopenta[def]phenanthrene	- -	µg/kg								**670 NJD**			
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg											
5,12-Napthacenedione	- -	µg/kg											
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg											
5-Eicosene, (E)-	- -	µg/kg											
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg											
7H-Benz[de]anthracen-7-one	- -	µg/kg								**360 NJD**			
7H-Benzo[C]fluorene	- -	µg/kg											
9,10-Anthracenedione	- -	µg/kg								**120 NJ**			
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg											
9,10-Dimethylanthracene	- -	µg/kg											
9-Hexacosene	- -	µg/kg											
9-Hexadecenoic acid	- -	µg/kg											
9H-Fluoren-9-one	- -	µg/kg								**84 NJ**			
9H-Fluorene, 1-methyl-	- -	µg/kg											
9H-Fluorene, 2-methyl-	- -	µg/kg											
9H-Fluorene, 9-methylene-	- -	µg/kg											
9-Octadecenamide, (Z)-	- -	µg/kg										**120 NJ**	
9-Octadecenoic acid, (E)-	- -	µg/kg											
Abieta-8,11,13-triene	- -	µg/kg											
Acridine	- -	µg/kg											
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg											
Anthracene, 1,4-dimethyl-	- -	µg/kg											
Anthracene, 1-methyl-	- -	µg/kg								**300 NJ**			
Anthracene, 2-methyl-	- -	µg/kg								**390 NJD**			
Anthracene, 9-Ethenyl-	- -	µg/kg											
Anthracene, 9-methyl-	- -	µg/kg											
Benz[a]anthracene, 10-methyl-	- -	µg/kg											
Benz[a]anthracene, 7-methyl-	- -	µg/kg											
Benz[a]anthracene, 8-methyl-	- -	µg/kg											
Benzaldehyde, 2-hydroxy-	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg											
Benzenamine, 4-methyl-2-nitro	- -	µg/kg			**85 NJ**								
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg											
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg								**290 NJD**			
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg											
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg											
Benzene, 1,2,4-trimethyl-	- -	µg/kg											
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg											
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg											
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg											
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg											
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg											
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg											
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg											
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg											
Benzene, 1-ethyl-3-methyl-	- -	µg/kg											
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg											
Benzene, tert-butyl-	- -	µg/kg											
Benzeneacetic acid	- -	µg/kg											
Benzenemethanol, α,α-dimethyl-	- -	µg/kg											
Benzenesulfonamide, 2-methyl-	- -	µg/kg											
Benzenesulfonamide, 4-methyl-	- -	µg/kg											
Benzo(e)pyrene	- -	µg/kg	**630 NJ**							**2,700 NJD**			
Benzo[b]chrysene	- -	µg/kg											
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg											
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg								**340 NJD**			
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg											
Benzo[b]triphenylene	- -	µg/kg											
Benzo[c]phenanthrene	- -	µg/kg											
Benzo[f]quinoline	- -	µg/kg											
Benzo[ghi]fluoranthene	- -	µg/kg											
Benzo[h]quinoline	- -	µg/kg											
Benzo[j]fluoranthene	- -	µg/kg											
Benzo[kl]xanthene	- -	µg/kg											
Benzocycloheptatriene	- -	µg/kg											
Benzoic acid	- -	µg/kg			**84 NJ**								
Benzothiazole	- -	µg/kg											
Benzothiazole, 2-(methylthio)-	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb
beta-Sitosterol	- -	µg/kg											
Bicyclohexyl, 4-phenyl-	- -	µg/kg											
Butane, 2-methoxy-2-methyl-	- -	µg/kg											
Butylated hydroxytoluene	- -	µg/kg											
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg											
Cholesta-3,5-dien-7-one	- -	µg/kg											
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg											
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg											
Cholesterol	- -	µg/kg								**1,500 NJD**			
Chrysene, 1-methyl-	- -	µg/kg											
Chrysene, 3-methyl-	- -	µg/kg											
Chrysene, 4-methyl-	- -	µg/kg											
Chrysene, 5-methyl-	- -	µg/kg											
Chrysene, 6-methyl-	- -	µg/kg											
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg											
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg											
Clorophene	- -	µg/kg											
Coprostan-3-one	- -	µg/kg											
Cyclohexane, isothiocyanato-	- -	µg/kg											
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg											
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg											
Cyclopenta(def)phenanthrenone	- -	µg/kg								**210 NJD**			
Cyclopenta[cd]pyrene	- -	µg/kg											
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg	**480 NJ**			**540 NJ**				**550 NJ**			
Cyclopentasiloxane, decamethyl-	- -	µg/kg											
Cyclopropanenonanoic Acid, 2	- -	µg/kg											
D:C-friedoolean-8-en-3-one	- -	µg/kg											
dapsone	- -	µg/kg											
Decanoic Acid	- -	µg/kg											
D-Friedoolean-14-en-3-one	- -	µg/kg											
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg								**7,100 NJD**		**1,400 NJ**	
Dibenz(a,e)aceanthrylene	- -	µg/kg											
Dibenzo[def,mno]chrysene	- -	µg/kg											
Dibenzofuran, 4-methyl-	- -	µg/kg											
Dibenzothiophene	- -	µg/kg								**82 NJ**			
Dibenzothiophene, 3-methyl	- -	µg/kg											
Diethyltoluamide	- -	µg/kg											
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg											
Diphenyl ether	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb
D-Limonene	- -	µg/kg											
Dodecanoic acid	- -	µg/kg											
Dodecanoic acid, methyl ester	- -	µg/kg											
Dodecanoic acid, undecyl ester	- -	µg/kg											
Dodecyl acrylate	- -	µg/kg											
Dotriacontane	- -	µg/kg											
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg											
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg										**350 NJ**	
Fluoranthene, 2-methyl-	- -	µg/kg											
Gamma-Sitosterol	- -	µg/kg			**420 NJ**	**730 NJ**							
Hexadecanal	- -	µg/kg											
Hexadecanoic acid	- -	µg/kg			**410 NJ**			**240 NJ**				**250 NJ**	
Hexadecanoic acid, butyl ester	- -	µg/kg											
Hexadecanoic acid, ethyl ester	- -	µg/kg											
Indene	- -	µg/kg											
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg											
Lup-20-(29)-en-3-one	- -	µg/kg											
Manool	- -	µg/kg											
matrine	- -	µg/kg											
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg											
Methylated Naphthalene	- -	µg/kg											
Methylated Phenol	- -	µg/kg											
Methyldibenzothiophene	- -	µg/kg											
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg											
naphthalene, 1,2,3-trimethyl	- -	µg/kg											
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg											
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg											
Naphthalene, 1,2-Dimethyl-	- -	µg/kg											
Naphthalene, 1,3-dimethyl-	- -	µg/kg											
Naphthalene, 1,4-dimethyl-	- -	µg/kg											
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg											
Naphthalene, 1-ethyl-	- -	µg/kg											
Naphthalene, 1-methyl-	- -	µg/kg											
Naphthalene, 1-phenyl-	- -	µg/kg											
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg											
Naphthalene, 2,3-dimethyl-	- -	µg/kg											
Naphthalene, 2,6-dimethyl-	- -	µg/kg											
Naphthalene, 2,7-dimethyl-	- -	µg/kg											
Naphthalene, 2-Ethyl-	- -	µg/kg											
Naphthalene, 2-phenyl-	- -	µg/kg								**140 NJ**			

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb
Naphthalene, decahydro-, trans-	- -	µg/kg											
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg											
Naphtho[2,3-b]thiophene	- -	µg/kg											
Nonadecane, 9-Methyl-	- -	µg/kg											
Octadecanal	- -	µg/kg											
Octadecanoic acid	- -	µg/kg			**500 NJ**								
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg			**440 NJ**								
Octadecanoic acid, butyl ester	- -	µg/kg	**360 NJ**									**120 NJ**	
Olean-12-ene	- -	µg/kg											
Organic acid	- -	µg/kg											
Organic acid 1	- -	µg/kg											
Organic acid 2	- -	µg/kg											
Organic acid 3	- -	µg/kg											
Organic acid 4	- -	µg/kg											
Organic acid 5	- -	µg/kg											
o-Terphenyl	- -	µg/kg											
Oxirane, hexadecyl-	- -	µg/kg											
p-Dicyclohexylbenzene	- -	µg/kg											
Pentadecanal-	- -	µg/kg											
Pentadecanoic acid	- -	µg/kg											
Pentasiloxane, dodecamethyl-	- -	µg/kg											
Perylene	- -	µg/kg											
Perylene isomer C20H12	- -	µg/kg											
Phenanthrene, 1,7-dimethyl-	- -	µg/kg											
Phenanthrene, 1-methyl-	- -	µg/kg								**580 NJD**			
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg											
Phenanthrene, 2,3-dimethyl-	- -	µg/kg											
Phenanthrene, 2,5-dimethyl-	- -	µg/kg											
Phenanthrene, 2,7-dimethyl-	- -	µg/kg											
Phenanthrene, 2-methyl-	- -	µg/kg											
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg											
Phenanthrene, 3,6-dimethyl-	- -	µg/kg											
Phenanthrene, 3-methyl-	- -	µg/kg											
Phenanthrene, 4-methyl-	- -	µg/kg								**170 NJ**			
Phenanthridine	- -	µg/kg											
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg											
Phenylated naphthalene	- -	µg/kg											
Phthalic anhydride	- -	µg/kg			**84 NJ**								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF	SO-W05-DF 0 - 1 09/20/03 SO-W05-DFb	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb
Propanoic acid, 3-mercapto-	- -	µg/kg											
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg											
Pyrene, 1-methyl-	- -	µg/kg											
Pyrene, 2-methyl-	- -	µg/kg											
Pyrene, 4-methyl-	- -	µg/kg											
Stigmast-4-en-3-one	- -	µg/kg			**850 NJ**								
Stigmasta-3,5-dien-7-one	- -	µg/kg											
Stigmasterol, 22,23-dihydro-	- -	µg/kg											
Substituted Benzene	- -	µg/kg											
Substituted Naphthalene	- -	µg/kg											
Substituted Naphthalene 1	- -	µg/kg											
Substituted Naphthalene 2	- -	µg/kg											
Substituted Naphthalene 3	- -	µg/kg											
Substituted Naphthalene 4	- -	µg/kg											
Substituted PAH isomer	- -	µg/kg											
Sulfur hexamer	- -	µg/kg											
Sulfur, mol. (S8)	- -	µg/kg											
Testosterone	- -	µg/kg											
Tetradecanal	- -	µg/kg								**490 NJD**			
Tetradecanoic acid	- -	µg/kg											
Tetradecanoic acid, ethyl ester	- -	µg/kg											
Tetradecanoic acid, methyl ester	- -	µg/kg											
Thiophene, 2-(Methylselenyl)	- -	µg/kg											
tri(2-Ethylhexyl) trimellitate	- -	µg/kg											
Tridecanoic acid	- -	µg/kg											
Triphenylene	- -	µg/kg											
Triphenylene, 2-methyl-	- -	µg/kg											
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg											
Vanillin	- -	µg/kg											
Vitamin E	- -	µg/kg											
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg											
Trichlorobiphenyls	- -	µg/kg	**1,900 NJ**										

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W10-DF	SO-W10-DF	SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			08/27/03	09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W10-DF	SO-W10-DFb	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
SVOC TICS													
(1H) 2,3-dihydroindene, 1,1,3	- -	µg/kg											**230 NJ**
.alpha.-Methylstyrene	- -	µg/kg											
.beta.-iso-Methyl ionone	- -	µg/kg											
[3,4:9,10]Dibenzpyrene	- -	µg/kg											
1,1,1,5,7,7,7-Heptamethyl-3,3-bis(	- -	µg/kg											
1,1'-Biphenyl, 2,2',4,4',5-pentachloro-	- -	µg/kg											
1,1'-biphenyl, 2,2',4,4',6-p	- -	µg/kg											
1,1'-Biphenyl, 2,2',4,5'-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 2,2',4,6-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 2,2',5,6-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 2,2',6,6'-tetrachloro-	- -	µg/kg											
1,1'-biphenyl, 2,3,3',4,5,6-	- -	µg/kg											
1,1'-Biphenyl, 2,3,3',4',6-pentachloro-	- -	µg/kg											
1,1'-Biphenyl, 2,3,3',4'-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 2,3',4',5-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 2,3,4',6-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 2,3',5,5'-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 2,3',5-trichloro-	- -	µg/kg											
1,1'-biphenyl, 2,4,4',6-tetr	- -	µg/kg											
1,1'-Biphenyl, 2,4',5-trichloro-	- -	µg/kg											
1,1'-Biphenyl, 3,3',4,4'-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 3,3',5,5'-tetrachloro-	- -	µg/kg											
1,1'-Biphenyl, 3,4,4'-trichloro-	- -	µg/kg											**360 NJ**
1,2,3,4,10,10-Hexachloro-6,7	- -	µg/kg											
1,2,7,8-Debenzphenanthrene	- -	µg/kg	**490 NJD**										
1,2:4,5-Dibenzopyrene	- -	µg/kg											
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg											
1,4-Cyclohexadiene, 1-methyl-	- -	µg/kg											
1,4-Dimethyl-8-isopropylidenetricy	- -	µg/kg											
1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1S-(1α,3aβ,4α,8aβ)]-	- -	µg/kg											
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/kg											
10-Methylnonadecene	- -	µg/kg											
11H-Benzo[a]fluoren-11-one	- -	µg/kg											
11H-Benzo[a]fluorene	- -	µg/kg					**300 NJD**						
11H-Benzo[b]fluorene	- -	µg/kg	**280 NJ**				**220 NJ**			**390 NJ**			
13-Docosenamide, (Z)-	- -	µg/kg											
17-Pentatriacontene	- -	µg/kg											
1-Decene	- -	µg/kg	**510 NJD**		**830 NJ**				**870 NJ**		**380 NJ**		
1-Docosene	- -	µg/kg											
1-Dodecanol	- -	µg/kg					**900 NJD**			**320 NJ**			
1-Dodecene	- -	µg/kg											
1H-Cyclooctapyrazole, 4,5,6,7,8,9-	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF	SO-W10-DF 0 - 1 09/20/03 SO-W10-DFb	SO-W11-DF 0 - 1 08/27/03 SO-W11-DF	SO-W11-DF 0 - 1 09/20/03 SO-W11-DFb	SO-W12-DF 0 - 1 08/27/03 SO-W12-DF	SO-W12-DF 0 - 1 09/20/03 SO-W12-DFb	UI-TT-01,02 08/20/03 SO-W03-UI	UI-TT-03 08/20/03 SO-FD02	UI-TT-03 08/20/03 SO-W04-UI	UI-TT-06 08/19/03 SO-W01-UI	UI-TT-10 08/19/03 SO-W02-UI
1h-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1ar-(1aα,4aα,7α,7aβ,7bα)]-	- -	µg/kg											
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	- -	µg/kg											
1-Heneicosyl formate	- -	µg/kg											
1-Heptadecanol	- -	µg/kg											
1-Hexacosanol	- -	µg/kg											
1-Hexadecene	- -	µg/kg											
1H-Indene, 1-phenyl-	- -	µg/kg											
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	- -	µg/kg											
1H-Indene, 2-methyl-3-phenyl-	- -	µg/kg											
1H-Indene, 2-phenyl-	- -	µg/kg											
1-Nonadecane	- -	µg/kg	**370 NJ**										
1-Nonadecanol	- -	µg/kg											
1-Nonene	- -	µg/kg											
1-Octadecanol	- -	µg/kg											
1-Pentadecene	- -	µg/kg											
1-Tridecanol	- -	µg/kg	**630 NJ**		**640 NJ**								
1-Tridecene	- -	µg/kg											
1-Undecanol	- -	µg/kg											
2 (3H)-Benzothiazolone	- -	µg/kg											
2',3,4-Trichlorobiphenyl	- -	µg/kg											
2,3,4-Trichlorobiphenyl	- -	µg/kg											
2,3-Dihydro-1-methylindene	- -	µg/kg											
2,4,6-Trichlorobiphenyl	- -	µg/kg											
2,4-Dichlorophenyl isocyanate	- -	µg/kg											
28-Nor-17.alpha.(H)-hopane	- -	µg/kg											
2-Cyclopropen-1-one, 2,3-diphenyl-	- -	µg/kg											
2-Dodecanol	- -	µg/kg											
2H-1,3-Thiazine-6-carboxylic	- -	µg/kg											
2-Mercaptobenzothiazole	- -	µg/kg											
2-Napthalenamine, n-phenyl	- -	µg/kg										**1,600 NJD**	
2-Pentadecanone	- -	µg/kg											
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg											
2-Phenylnaphthalene	- -	µg/kg					**120 NJ**						
2-Propenoic acid, pentadecyl ester	- -	µg/kg											
2-Propenoic acid, tridecyl	- -	µg/kg											
2-Undecanol	- -	µg/kg											
3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-quinazolinone	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF	SO-W10-DF 0 - 1 09/20/03 SO-W10-DFb	SO-W11-DF 0 - 1 08/27/03 SO-W11-DF	SO-W11-DF 0 - 1 09/20/03 SO-W11-DFb	SO-W12-DF 0 - 1 08/27/03 SO-W12-DF	SO-W12-DF 0 - 1 09/20/03 SO-W12-DFb	UI-TT-01,02 08/20/03 SO-W03-UI	UI-TT-03 08/20/03 SO-FD02	UI-TT-03 08/20/03 SO-W04-UI	UI-TT-06 08/19/03 SO-W01-UI	UI-TT-10 08/19/03 SO-W02-UI
3,4:8,9-Dibenzopyrene	- -	µg/kg											
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg											
3,5-Dichlorophenyl isocyanate	- -	µg/kg											
3,6-Dioxa-2,4,5,7-tetrasilaoctane,	- -	µg/kg											
3-Eicosene, (E)-	- -	µg/kg											
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olide	- -	µg/kg											
4H-1-Benzopyran-4-one, 3-hydroxy-6	- -	µg/kg											
4H-Cyclopenta[def]phenanthrene	- -	µg/kg											
4-Hepatnone, 2,6-dimethyl-	- -	µg/kg											
5,12-Napthacenedione	- -	µg/kg	**720 NJD**										
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg											
5-Eicosene, (E)-	- -	µg/kg											
5-Methyl-2-(p-tolylimino)-1,3-thiazolidine	- -	µg/kg											
7H-Benz[de]anthracen-7-one	- -	µg/kg	**750 NJD**		**250 NJ**								
7H-Benzo[C]fluorene	- -	µg/kg											
9,10-Anthracenedione	- -	µg/kg			**130 NJ**					**97 NJ**			
9,10-Anthracenedione, 1,8-dimethox	- -	µg/kg											
9,10-Dimethylanthracene	- -	µg/kg	**360 NJ**										
9-Hexacosene	- -	µg/kg											
9-Hexadecenoic acid	- -	µg/kg			**200 NJ**								
9H-Fluoren-9-one	- -	µg/kg								**100 NJ**			
9H-Fluorene, 1-methyl-	- -	µg/kg											
9H-Fluorene, 2-methyl-	- -	µg/kg											
9H-Fluorene, 9-methylene-	- -	µg/kg											
9-Octadecenamide, (Z)-	- -	µg/kg											
9-Octadecenoic acid, (E)-	- -	µg/kg											
Abieta-8,11,13-triene	- -	µg/kg											
Acridine	- -	µg/kg											
Acridine, 9,10-Dihydro-9,9-D	- -	µg/kg										**1,300 NJD**	
Anthracene, 1,4-dimethyl-	- -	µg/kg											
Anthracene, 1-methyl-	- -	µg/kg	**310 NJ**				**300 NJD**						
Anthracene, 2-methyl-	- -	µg/kg											
Anthracene, 9-Ethenyl-	- -	µg/kg	**120 NJ**				**75 NJ**						
Anthracene, 9-methyl-	- -	µg/kg											
Benz[a]anthracene, 10-methyl-	- -	µg/kg											
Benz[a]anthracene, 7-methyl-	- -	µg/kg											
Benz[a]anthracene, 8-methyl-	- -	µg/kg											
Benzaldehyde, 2-hydroxy-	- -	µg/kg								**96 NJ**			

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF	SO-W10-DF 0 - 1 09/20/03 SO-W10-DFb	SO-W11-DF 0 - 1 08/27/03 SO-W11-DF	SO-W11-DF 0 - 1 09/20/03 SO-W11-DFb	SO-W12-DF 0 - 1 08/27/03 SO-W12-DF	SO-W12-DF 0 - 1 09/20/03 SO-W12-DFb	UI-TT-01,02 08/20/03 SO-W03-UI	UI-TT-03 08/20/03 SO-FD02	UI-TT-03 08/20/03 SO-W04-UI	UI-TT-06 08/19/03 SO-W01-UI	UI-TT-10 08/19/03 SO-W02-UI
Benzenamine, 3,3'-sulfonylbis-	- -	µg/kg							**7,700 NJ**			**77,000 NJD**	**95,000 NJD**
Benzenamine, 4-methyl-2-nitro	- -	µg/kg											
Benzene, (2-methylene-phenylcyclopropyl)-	- -	µg/kg											
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg					**480 NJD**						
Benzene, 1,1'-(1,3-propanediyl)bis-	- -	µg/kg										**1,100 NJD**	
Benzene, 1,2,3,5-tetramethyl-	- -	µg/kg										**280 NJ**	
Benzene, 1,2,4-trimethyl-	- -	µg/kg										**630 NJ**	
Benzene, 1,2-dichloro-3-isocyanato-	- -	µg/kg											
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg											
Benzene, 1,4-dichloro-2-isocyanato-	- -	µg/kg											
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg											
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg											
Benzene, 1-chloro-4-isocyanato-	- -	µg/kg											
Benzene, 1-ethenyl-3-ethyl-,mixed with 1-ethenyl-4-ethylbenzene	- -	µg/kg											
Benzene, 1-ethenyl-4-ethyl-	- -	µg/kg											
Benzene, 1-ethyl-3-methyl-	- -	µg/kg										**1,100 NJD**	
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/kg										**310 NJ**	
Benzene, tert-butyl-	- -	µg/kg											
Benzeneacetic acid	- -	µg/kg											
Benzenemethanol, α,α-dimethyl-	- -	µg/kg								**200 NJ**			
Benzenesulfonamide, 2-methyl-	- -	µg/kg											
Benzenesulfonamide, 4-methyl-	- -	µg/kg											
Benzo(e)pyrene	- -	µg/kg	**2,400 NJD**				**980 NJ**		**500 NJ**				
Benzo[b]chrysene	- -	µg/kg											
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg											
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg											
Benzo[b]naphtho[2,3-d]thiophene	- -	µg/kg											
Benzo[b]triphenylene	- -	µg/kg											
Benzo[c]phenanthrene	- -	µg/kg											
Benzo[f]quinoline	- -	µg/kg											
Benzo[ghi]fluoranthene	- -	µg/kg											
Benzo[h]quinoline	- -	µg/kg											
Benzo[j]fluoranthene	- -	µg/kg	**780 NJD**				**2,700 NJ**						
Benzo[kl]xanthene	- -	µg/kg											
Benzocycloheptatriene	- -	µg/kg											
Benzoic acid	- -	µg/kg			**130 NJ**								
Benzothiazole	- -	µg/kg											
Benzothiazole, 2-(methylthio)-	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF	SO-W10-DF 0 - 1 09/20/03 SO-W10-DFb	SO-W11-DF 0 - 1 08/27/03 SO-W11-DF	SO-W11-DF 0 - 1 09/20/03 SO-W11-DFb	SO-W12-DF 0 - 1 08/27/03 SO-W12-DF	SO-W12-DF 0 - 1 09/20/03 SO-W12-DFb	UI-TT-01,02 08/20/03 SO-W03-UI	UI-TT-03 08/20/03 SO-FD02	UI-TT-03 08/20/03 SO-W04-UI	UI-TT-06 08/19/03 SO-W01-UI	UI-TT-10 08/19/03 SO-W02-UI
beta-Sitosterol	- -	µg/kg											
Bicyclohexyl, 4-phenyl-	- -	µg/kg											**1,200 JD**
Butane, 2-methoxy-2-methyl-	- -	µg/kg											
Butylated hydroxytoluene	- -	µg/kg										**800 NJ**	
Butyramide, 3-(2-furyl)-N-phenyl-	- -	µg/kg											
Cholesta-3,5-dien-7-one	- -	µg/kg											
Cholesta-4,6-dien-3-ol, (3.beta.)-	- -	µg/kg											
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg											
Cholesterol	- -	µg/kg											
Chrysene, 1-methyl-	- -	µg/kg	**590 NJD**										
Chrysene, 3-methyl-	- -	µg/kg											
Chrysene, 4-methyl-	- -	µg/kg											
Chrysene, 5-methyl-	- -	µg/kg											
Chrysene, 6-methyl-	- -	µg/kg	**160 NJ**										
Cis-(-)-2, 4A, 5, 6, 9A-hexahydr	- -	µg/kg											
cis,trans,cis-1-Isobutyl-2,5-dimethylcyclohexane	- -	µg/kg											
Clorophene	- -	µg/kg			**110 NJ**								
Coprostan-3-one	- -	µg/kg											
Cyclohexane, isothiocyanato-	- -	µg/kg											
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg											
Cyclohexene, 1-Methyl-4-(5-M)	- -	µg/kg											
Cyclopenta(def)phenanthrenone	- -	µg/kg											
Cyclopenta[cd]pyrene	- -	µg/kg											
Cyclopentane, 1-ethyl-2-methyl-, cis-	- -	µg/kg					**460 NJD**						
Cyclopentasiloxane, decamethyl-	- -	µg/kg											
Cyclopropanenonanoic Acid, 2	- -	µg/kg								**390 NJ**			**1,700 NJ**
D:C-friedoolean-8-en-3-one	- -	µg/kg			**3,700 NJ**								
dapsone	- -	µg/kg											**16,000 NJ**
Decanoic Acid	- -	µg/kg											
D-Friedoolean-14-en-3-one	- -	µg/kg											
D-Friedoolean-14-ene, 3-methoxy-, (3.beta.)-	- -	µg/kg											
Dibenz(a,e)aceanthrylene	- -	µg/kg											
Dibenzo[def,mno]chrysene	- -	µg/kg											
Dibenzofuran, 4-methyl-	- -	µg/kg											
Dibenzothiophene	- -	µg/kg											
Dibenzothiophene, 3-methyl	- -	µg/kg											
Diethyltoluamide	- -	µg/kg											
Dinaphtho[1,2-b:1',2'-d]furan	- -	µg/kg											
Diphenyl ether	- -	µg/kg			**87 NJ**								

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF	SO-W10-DF 0 - 1 09/20/03 SO-W10-DFb	SO-W11-DF 0 - 1 08/27/03 SO-W11-DF	SO-W11-DF 0 - 1 09/20/03 SO-W11-DFb	SO-W12-DF 0 - 1 08/27/03 SO-W12-DF	SO-W12-DF 0 - 1 09/20/03 SO-W12-DFb	UI-TT-01,02 08/20/03 SO-W03-UI	UI-TT-03 08/20/03 SO-FD02	UI-TT-03 08/20/03 SO-W04-UI	UI-TT-06 08/19/03 SO-W01-UI	UI-TT-10 08/19/03 SO-W02-UI
D-Limonene	- -	µg/kg											
Dodecanoic acid	- -	µg/kg								**160 NJ**			
Dodecanoic acid, methyl ester	- -	µg/kg											
Dodecanoic acid, undecyl ester	- -	µg/kg											
Dodecyl acrylate	- -	µg/kg											
Dotriacontane	- -	µg/kg											
Ethanol, 2-(2-ethoxyethoxy)-	- -	µg/kg											
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg											
Fluoranthene, 2-methyl-	- -	µg/kg											
Gamma-Sitosterol	- -	µg/kg											
Hexadecanal	- -	µg/kg											
Hexadecanoic acid	- -	µg/kg			**820 NJ**				**2,200 NJ**	**750 NJ**			**5,700 NJ**
Hexadecanoic acid, butyl ester	- -	µg/kg											
Hexadecanoic acid, ethyl ester	- -	µg/kg											
Indene	- -	µg/kg											
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg											
Lup-20-(29)-en-3-one	- -	µg/kg											
Manool	- -	µg/kg											
matrine	- -	µg/kg	**880 NJ**										
Mercaptoacetic acid, bis(trimethyl	- -	µg/kg											
Methylated Naphthalene	- -	µg/kg											
Methylated Phenol	- -	µg/kg											
Methyldibenzothiophene	- -	µg/kg											
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg											
naphthalene, 1,2,3-trimethyl	- -	µg/kg	**130 NJ**										
Naphthalene, 1,2-dihydro-1-phenyl-	- -	µg/kg											
Naphthalene, 1,2-dihydro-4-phenyl-	- -	µg/kg											
Naphthalene, 1,2-Dimethyl-	- -	µg/kg			**91 NJ**								
Naphthalene, 1,3-dimethyl-	- -	µg/kg											
Naphthalene, 1,4-dimethyl-	- -	µg/kg											
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg											
Naphthalene, 1-ethyl-	- -	µg/kg											
Naphthalene, 1-methyl-	- -	µg/kg			**110 NJ**							**240 NJ**	
Naphthalene, 1-phenyl-	- -	µg/kg											
Naphthalene, 2,3,6-trimethyl-	- -	µg/kg											
Naphthalene, 2,3-dimethyl-	- -	µg/kg											
Naphthalene, 2,6-dimethyl-	- -	µg/kg											
Naphthalene, 2,7-dimethyl-	- -	µg/kg											
Naphthalene, 2-Ethyl-	- -	µg/kg											
Naphthalene, 2-phenyl-	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF	SO-W10-DF 0 - 1 09/20/03 SO-W10-DFb	SO-W11-DF 0 - 1 08/27/03 SO-W11-DF	SO-W11-DF 0 - 1 09/20/03 SO-W11-DFb	SO-W12-DF 0 - 1 08/27/03 SO-W12-DF	SO-W12-DF 0 - 1 09/20/03 SO-W12-DFb	UI-TT-01,02 08/20/03 SO-W03-UI	UI-TT-03 08/20/03 SO-FD02	UI-TT-03 08/20/03 SO-W04-UI	UI-TT-06 08/19/03 SO-W01-UI	UI-TT-10 08/19/03 SO-W02-UI
Naphthalene, decahydro-, trans-	- -	µg/kg										**330 NJ**	
Naphthalene, decahydro-4a-methyl-1	- -	µg/kg											
Naphtho[2,3-b]thiophene	- -	µg/kg											
Nonadecane, 9-Methyl-	- -	µg/kg											
Octadecanal	- -	µg/kg											
Octadecanoic acid	- -	µg/kg			**670 NJ**				**1,100 NJ**	**480 NJ**			**5,500 NJ**
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg	**360 NJ**		**150 NJ**					**440 NJ**			
Octadecanoic acid, butyl ester	- -	µg/kg							**270 NJ**				**410 J**
Olean-12-ene	- -	µg/kg											
Organic acid	- -	µg/kg											
Organic acid 1	- -	µg/kg											
Organic acid 2	- -	µg/kg											
Organic acid 3	- -	µg/kg											
Organic acid 4	- -	µg/kg											
Organic acid 5	- -	µg/kg											
o-Terphenyl	- -	µg/kg											
Oxirane, hexadecyl-	- -	µg/kg											
p-Dicyclohexylbenzene	- -	µg/kg											
Pentadecanal-	- -	µg/kg											
Pentadecanoic acid	- -	µg/kg			**110 NJ**								
Pentasiloxane, dodecamethyl-	- -	µg/kg											
Perylene	- -	µg/kg	**3,100 NJ**				**2,000 NJD**						
Perylene isomer C20H12	- -	µg/kg											
Phenanthrene, 1,7-dimethyl-	- -	µg/kg											
Phenanthrene, 1-methyl-	- -	µg/kg			**160 NJ**		**180 NJ**						
Phenanthrene, 1-methyl-7-(1-methylethyl)-	- -	µg/kg											
Phenanthrene, 2,3-dimethyl-	- -	µg/kg											
Phenanthrene, 2,5-dimethyl-	- -	µg/kg					**140 NJ**						
Phenanthrene, 2,7-dimethyl-	- -	µg/kg	**110 NJ**							**130 NJ**			
Phenanthrene, 2-methyl-	- -	µg/kg					**270 NJ**						
Phenanthrene, 3,4,5,6-tetramethyl-	- -	µg/kg										**1,400 NJD**	
Phenanthrene, 3,6-dimethyl-	- -	µg/kg	**140 NJ**										
Phenanthrene, 3-methyl-	- -	µg/kg											
Phenanthrene, 4-methyl-	- -	µg/kg					**370 NJD**						
Phenanthridine	- -	µg/kg											
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg											
Phenylated naphthalene	- -	µg/kg											
Phthalic anhydride	- -	µg/kg											

TABLE 4-15
SOIL RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF	SO-W10-DF 0 - 1 09/20/03 SO-W10-DFb	SO-W11-DF 0 - 1 08/27/03 SO-W11-DF	SO-W11-DF 0 - 1 09/20/03 SO-W11-DFb	SO-W12-DF 0 - 1 08/27/03 SO-W12-DF	SO-W12-DF 0 - 1 09/20/03 SO-W12-DFb	UI-TT-01,02 08/20/03 SO-W03-UI	UI-TT-03 08/20/03 SO-FD02	UI-TT-03 08/20/03 SO-W04-UI	UI-TT-06 08/19/03 SO-W01-UI	UI-TT-10 08/19/03 SO-W02-UI
Propanoic acid, 3-mercapto-	- -	µg/kg											
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg											
Pyrene, 1-methyl-	- -	µg/kg	**420 JD**										
Pyrene, 2-methyl-	- -	µg/kg	**400 NJD**				**810 NJD**						
Pyrene, 4-methyl-	- -	µg/kg											
Stigmast-4-en-3-one	- -	µg/kg											
Stigmasta-3,5-dien-7-one	- -	µg/kg											
Stigmasterol, 22,23-dihydro-	- -	µg/kg											
Substituted Benzene	- -	µg/kg											
Substituted Naphthalene	- -	µg/kg											
Substituted Naphthalene 1	- -	µg/kg											
Substituted Naphthalene 2	- -	µg/kg											
Substituted Naphthalene 3	- -	µg/kg											
Substituted Naphthalene 4	- -	µg/kg											
Substituted PAH isomer	- -	µg/kg											
Sulfur hexamer	- -	µg/kg											
Sulfur, mol. (S8)	- -	µg/kg											
Testosterone	- -	µg/kg											
Tetradecanal	- -	µg/kg											
Tetradecanoic acid	- -	µg/kg			**200 NJ**				**99 NJ**				**660 NJ**
Tetradecanoic acid, ethyl ester	- -	µg/kg											
Tetradecanoic acid, methyl ester	- -	µg/kg											
Thiophene, 2-(Methylselenyl)	- -	µg/kg											
tri(2-Ethylhexyl) trimellitate	- -	µg/kg											
Tridecanoic acid	- -	µg/kg											
Triphenylene	- -	µg/kg											
Triphenylene, 2-methyl-	- -	µg/kg					**1,500 NJ**						
Trisiloxane, 1,1,1,5,5,5-hexamethy	- -	µg/kg											
Vanillin	- -	µg/kg											
Vitamin E	- -	µg/kg											
Z-11-Tetradecen-1-ol trifluoroacetate	- -	µg/kg											
Trichlorobiphenyls	- -	µg/kg											

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LLF-002	LLF-003	LLF-004	LNP-007	LNP-008	LOU-001	LQW-009	LQW-010	LQW-011	LQW-012	LQW-012
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	11/30/05	12/01/05	12/02/05	11/30/05	12/02/05
Sample Name:	PAL	Units	LLF-002(0-1)	LLF-003(0-1)	LLF-004(0-1)	LNP-007(0-1)	LNP-008(0-1)	LOU-001(0-1)	LQW-009 (0-1)	LQW-010 (0-1)	LQW-011	LQW-012 (0-1)	LQW-012B
Pesticides													
4,4'-DDD	2,000	µg/kg	NA	NA	NA	NA	NA	NA	**4.4 J [4]**	**58 J**	**22**	**6.4 J**	NA
4,4'-DDE	1,000	µg/kg	NA	NA	NA	NA	NA	NA	**16 J [13 J]**	**62 J**	**83 J**	**22 J**	NA
4,4'-DDT	1,700	µg/kg	NA	NA	NA	NA	NA	NA	**17 J [14 J]**	**66 J**	**55 J**	**27 J**	NA
Aldrin	29	µg/kg	NA	NA	NA	NA	NA	NA	11 U [11 U]	13 U	10 U	8.1 U	NA
alpha-BHC	77	µg/kg	NA	NA	NA	NA	NA	NA	1.1 U [1.1 U]	1.3 U	1 U	1.6 U	NA
alpha-Chlordane	500	µg/kg	NA	NA	NA	NA	NA	NA	**4.6 [4]**	**26 J**	**19 J**	**7**	NA
beta-BHC	270	µg/kg	NA	NA	NA	NA	NA	NA	11 U [11 U]	13 U	10 U	8.1 U	NA
Delta-BHC	270	µg/kg	NA	NA	NA	NA	NA	NA	1.1 U [1.1 U]	1.3 U	1 U	1.6 U	NA
Dieldrin	0.032	µg/kg	NA	NA	NA	NA	NA	NA	**72 [51]**	**700**	**570**	**400**	NA
Endosulfan I	37,000	µg/kg	NA	NA	NA	NA	NA	NA	1.1 U [1.1 U]	1.3 U	1 U	1.6 U	NA
Endosulfan II	37,000	µg/kg	NA	NA	NA	NA	NA	NA	**3.8 J [3.2 J]**	**26 J**	**9.4 J**	**9 J**	NA
Endosulfan Sulfate	37,000	µg/kg	NA	NA	NA	NA	NA	NA	**2.7 J [3.1]**	**3.1 J**	**4.6 J**	**4.6 J**	NA
Endrin	1,800	µg/kg	NA	NA	NA	NA	NA	NA	1.1 U [1.1 U]	1.3 U	10 U	1.6 U	NA
Endrin Aldehyde	1,800	µg/kg	NA	NA	NA	NA	NA	NA	1.1 U [1.1 U]	13 U	10 U	1.6 U	NA
Endrin Ketone	1,800	µg/kg	NA	NA	NA	NA	NA	NA	1.1 U [1.1 U]	13 U	10 U	8.1 U	NA
Gamma-BHC	520	µg/kg	NA	NA	NA	NA	NA	NA	1.1 U [1.1 U]	1.3 U	1 U	1.6 U	NA
Gamma-Chlordane	500	µg/kg	NA	NA	NA	NA	NA	NA	**2.9 J [2.9 J]**	**18 J**	**19 J**	8.1 U	NA
Heptachlor	110	µg/kg	NA	NA	NA	NA	NA	NA	1.1 U [1.1 U]	1.3 U	1 U	1.6 U	NA
Heptachlor Epoxide	53	µg/kg	NA	NA	NA	NA	NA	NA	11 U [11 U]	13 U	10 U	8.1 U	NA
Methoxychlor	31,000	µg/kg	NA	NA	NA	NA	NA	NA	**4.8 J [7.7 J]**	1.3 U	1 U	1.6 U	NA
Toxaphene	440	µg/kg	NA	NA	NA	NA	NA	NA	110 U [110 U]	130 U	100 U	160 U	NA
PCBs													
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	NA	NA	NA	NA	NA	NA	21 U [22 U]	26 U	21 U	32 U	NA
Aroclor-1221	170	µg/kg	NA	NA	NA	NA	NA	NA	21 U [22 U]	26 U	21 U	32 U	NA
Aroclor-1232	170	µg/kg	NA	NA	NA	NA	NA	NA	21 U [22 U]	26 U	21 U	32 U	NA
Aroclor-1242	220	µg/kg	NA	NA	NA	NA	NA	NA	21 U [22 U]	26 U	21 U	32 U	NA
Aroclor-1248	220	µg/kg	NA	NA	NA	NA	NA	NA	21 U [22 U]	26 U	21 U	32 U	NA
Aroclor-1254	110	µg/kg	NA	NA	NA	NA	NA	NA	21 U [22 U]	26 U	21 U	32 U	NA
Aroclor-1260	220	µg/kg	NA	NA	NA	NA	NA	NA	**340 [300]**	**1,600**	**710**	**580**	NA
Total PCBs	- -	µg/kg	NA	NA	NA	NA	NA	NA	**340 [300]**	**1,600**	**710**	**580**	NA

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-013	LQW-014	LQW-015	LQW-015	LQW-016	LQW-016	LQW-017	LQW-017	LQW-018	LQW-018	LUI-005
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	
Date Collected:			12/01/05	12/01/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	12/08/05
Sample Name:	PAL	Units	LQW-013 (0-1)	LQW-014 (0-1)	LQW-015 (0-1)	LQW-015B	LQW-016 (0-1)	LQW-016B	LQW-017 (0-1)	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005
Pesticides													
4,4'-DDD	2,000	µg/kg	**10**	**7.1**	0.8 U	NA	**2.7 J**	NA	**1**	NA	0.8 U	NA	NA
4,4'-DDE	1,000	µg/kg	**23 J**	**12 J**	**1.9 J**	NA	**7.2 J**	NA	**8.3**	NA	**2.9 J**	NA	NA
4,4'-DDT	1,700	µg/kg	**28 J**	**22 J**	**1.9 J**	NA	**6.9 J**	NA	**28**	NA	**1.7 J**	NA	NA
Aldrin	29	µg/kg	11 U	4.1 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
alpha-BHC	77	µg/kg	1.1 U	0.82 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
alpha-Chlordane	500	µg/kg	**13 J**	**6.6**	0.8 U	NA	**1**	NA	0.85 U	NA	0.8 U	NA	NA
beta-BHC	270	µg/kg	11 U	4.1 U	0.8 U	NA	9.1 U	NA	0.85 U	NA	0.8 U	NA	NA
Delta-BHC	270	µg/kg	1.1 U	0.82 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
Dieldrin	0.032	µg/kg	**640**	**280**	0.8 U	NA	**36**	NA	0.85 U	NA	0.8 U	NA	NA
Endosulfan I	37,000	µg/kg	1.1 U	0.82 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
Endosulfan II	37,000	µg/kg	**13 J**	4.1 U	0.8 U	NA	**2.1 J**	NA	0.85 U	NA	0.8 U	NA	NA
Endosulfan Sulfate	37,000	µg/kg	**2.6 J**	**1.6 J**	0.8 U	NA	**1.3**	NA	0.85 U	NA	0.8 U	NA	NA
Endrin	1,800	µg/kg	11 U	4.1 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
Endrin Aldehyde	1,800	µg/kg	1.1 U	0.82 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
Endrin Ketone	1,800	µg/kg	11 U	0.82 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
Gamma-BHC	520	µg/kg	1.1 U	0.82 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
Gamma-Chlordane	500	µg/kg	**7.5 J**	4.1 U	0.8 U	NA	**0.94 J**	NA	0.85 U	NA	0.8 U	NA	NA
Heptachlor	110	µg/kg	1.1 U	0.82 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
Heptachlor Epoxide	53	µg/kg	1.1 U	0.82 U	0.8 U	NA	0.91 U	NA	0.85 U	NA	0.8 U	NA	NA
Methoxychlor	31,000	µg/kg	**6.9 J**	**6.3 J**	0.8 U	NA	**2.7**	NA	0.85 U	NA	0.8 U	NA	NA
Toxaphene	440	µg/kg	110 U	82 U	80 U	NA	91 U	NA	85 U	NA	80 U	NA	NA
PCBs													
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	22 U	16 U	16 U	NA	18 U	NA	17 U	NA	16 U	NA	NA
Aroclor-1221	170	µg/kg	22 U	16 U	16 U	NA	18 U	NA	17 U	NA	16 U	NA	NA
Aroclor-1232	170	µg/kg	22 U	16 U	16 U	NA	18 U	NA	17 U	NA	16 U	NA	NA
Aroclor-1242	220	µg/kg	22 U	16 U	16 U	NA	18 U	NA	17 U	NA	16 U	NA	NA
Aroclor-1248	220	µg/kg	22 U	16 U	16 U	NA	18 U	NA	17 U	NA	16 U	NA	NA
Aroclor-1254	110	µg/kg	22 U	16 U	16 U	NA	18 U	NA	17 U	NA	16 U	NA	NA
Aroclor-1260	220	µg/kg	**770**	**350**	16 U	NA	**120**	NA	17 U	NA	16 U	NA	NA
Total PCBs	- -	µg/kg	**770**	**350**	ND	NA	**120**	NA	ND	NA	ND	NA	NA

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LUI-006	SEA-601	SEA-601	SEA-601	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-602B
Sample Depth (Feet):				4 - 6	8 - 10	14 - 16	10 - 12	14 - 16	18 - 20	24 - 26	30 - 32
Date Collected:			12/08/05	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03
Sample Name:	PAL	Units	LUI-006	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF	SSO-SPT5-15-LF	SSO-SPT5-20-LF	SSO-SPT5-25-LF	SSO-SPT5-30-LF
Pesticides											
4,4'-DDD	2,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	1,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	29	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	77	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	270	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	270	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	0.032	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC	520	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	110	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	53	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	440	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	170	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	170	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	110	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SEA-603 4 - 6 09/21/03 SSO-SPT2-5-LF	SEA-603 8 - 10 09/21/03 SSO-SPT2-10-LF	SEA-603 14 - 16 09/21/03 SSO-SPT2-15-LF	SEA-604 4 - 6 09/18/03 SSO-SPT3-5-LF	SEA-604 8 - 10 09/18/03 SSO-SPT3-10-LF	SEA-604 14 - 16 09/18/03 SSO-SPT3-15-LF	SEA-605 5 - 7 09/18/03 SSO-SPT4-5-LF	SEA-605 9 - 11 09/18/03 SSO-SPT4-10-LF	SEA-605 15 - 17 09/18/03 SSO-SPT4-15-LF
Pesticides											
4,4'-DDD	2,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	1,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	29	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	77	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	270	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	270	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	0.032	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC	520	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	110	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	53	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	440	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	170	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	170	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	110	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	10 - 12	14 - 16	4 - 6	8 - 10	14 - 16
Date Collected:			09/21/03	09/21/03	09/21/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03
Sample Name:	PAL	Units	SSO-SPT8-5-NP	SSO-SPT8-10-NP	SSO-SPT8-15-NP	SSO-SPT6-5-UI	SSO-SPT6-10-UI	SSO-SPT6-15-UI	SSO-SPT7-5-UI	SSO-SPT7-10-UI	SSO-SPT7-15-UI
Pesticides											
4,4'-DDD	2,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	1,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	1,700	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	29	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	77	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	270	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	270	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	0.032	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	37,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	1,800	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC	520	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	500	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	110	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	53	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	31,000	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	440	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	170	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	170	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	110	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	220	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/18/03	08/18/03	08/18/03	08/18/03	08/18/03	08/19/03	08/19/03	08/19/03	08/19/03	08/20/03	08/20/03	08/20/03
Sample Name:	PAL	Units	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI
Pesticides														
4,4'-DDD	2,000	µg/kg	**2.3 J**	**3.3 J**	**6 J**	**4 J [5.3 J]**	4.2 U	3.7 U	**4.2 J**	R	R	**28 J**	3.8 U	**2.7 J**
4,4'-DDE	1,000	µg/kg	**4 J**	**4.8**	**9.4**	**6.2 [6.2 J]**	**4.6**	**4.9**	**4.5 J**	**5.5 J**	**7.1**	**70**	**3.4 J**	3.9 U
4,4'-DDT	1,700	µg/kg	21 U	41 U	38 U	38 U [39 U]	42 U	R	4.4 U	R	R	52 U	3.8 U	3.9 U
Aldrin	29	µg/kg	2.2 U	2.1 U	2 U	2 U [2 U]	2.2 U	1.9 U	2.3 U	2.4 U	2.2 U	2.7 U	2 U	2 U
alpha-BHC	77	µg/kg	2.2 U	2.1 U	2 U	2 U [2 U]	2.2 U	1.9 U	2.3 U	2.4 U	2.2 U	2.7 U	2 U	2 U
alpha-Chlordane	500	µg/kg	2.2 U	21 U	**4.5 J**	**4.7 J [5.6 J]**	**4.7 J**	**2.2 J**	2.3 U	R	R	**12 J**	**2.2 J**	2 U
beta-BHC	270	µg/kg	2.2 U	2.1 U	2 U	2 U [2 U]	2.2 U	1.9 U	2.3 U	2.4 U	2.2 U	2.7 U	2 U	2 U
Delta-BHC	270	µg/kg	2.2 U	2.1 U	2 U	2 U [2 U]	2.2 U	1.9 U	2.3 U	2.4 U	2.2 U	2.7 U	2 U	2 U
Dieldrin	0.032	µg/kg	**77**	**260**	**480**	**230 [160]**	**230**	**58**	**35**	**16**	**56**	**810**	**58**	**22**
Endosulfan I	37,000	µg/kg	2.2 U	2.1 U	2 U	2 U [2 U]	2.2 U	1.9 U	2.3 U	2.4 U	2.2 U	2.7 U	2 U	2 U
Endosulfan II	37,000	µg/kg	4.2 U	4.1 U	3.8 U	3.8 U [3.9 U]	4.2 U	3.7 U	4.4 U	4.6 U	4.3 U	5.2 U	3.8 U	3.9 U
Endosulfan Sulfate	37,000	µg/kg	21 U	4.1 U	38 U	38 U [39 U]	42 U	7.3 U	**6 J**	R	R	52 U	3.8 U	3.9 U
Endrin	1,800	µg/kg	4.2 U	4.1 U	3.8 U	3.8 U [3.9 U]	4.2 U	3.7 U	4.4 U	4.6 U	4.3 U	5.2 U	3.8 U	3.9 U
Endrin Aldehyde	1,800	µg/kg	**5.6**	4.1 U	3.8 U	38 U [39 U]	42 U	**6 J**	4.4 U	R	R	**13 J**	R	3.9 U
Endrin Ketone	1,800	µg/kg	4.2 U	4.1 U	3.8 U	3.8 U [3.9 U]	4.2 U	3.7 U	4.4 U	4.6 U	4.3 U	5.2 U	3.8 U	3.9 U
Gamma-BHC	520	µg/kg	2.2 U	2.1 U	2 U	2 U [2 U]	2.2 U	1.9 U	2.3 U	2.4 U	2.2 U	2.7 U	2 U	2 U
Gamma-Chlordane	500	µg/kg	2.2 U	21 U	**7.6 J**	**5.6 J [6.5 J]**	**5.5 J**	R	2.3 U	**6 J**	**7.6 J**	**18 J**	R	2 U
Heptachlor	110	µg/kg	2.2 U	2.1 U	2 U	2 U [2 U]	2.2 U	1.9 U	2.3 U	2.4 U	2.2 U	2.7 U	2 U	2 U
Heptachlor Epoxide	53	µg/kg	2.2 U	2.1 U	2 U	2 U [2 U]	2.2 U	1.9 U	2.3 U	2.4 U	2.2 U	2.7 U	R	2 U
Methoxychlor	31,000	µg/kg	22 U	21 U	20 U	20 U [20 U]	22 U	19 U	23 U	24 U	22 U	27 U	20 U	20 U
Toxaphene	440	µg/kg	220 U	210 U	200 U	200 U [200 U]	220 U	190 U	230 U	240 U	220 U	270 U	200 U	200 U
PCBs														
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	42 U	41 U	38 U	38 U [39 U]	42 U	37 U	44 U	46 U	43 U	52 U	38 U	39 U
Aroclor-1221	170	µg/kg	85 U	83 U	77 U	77 U [79 U]	86 U	74 U	89 U	93 U	88 U	100 U	78 U	78 U
Aroclor-1232	170	µg/kg	42 U	41 U	38 U	38 U [39 U]	42 U	37 U	44 U	46 U	43 U	52 U	38 U	39 U
Aroclor-1242	220	µg/kg	42 U	41 U	38 U	38 U [39 U]	42 U	37 U	44 U	46 U	43 U	52 U	38 U	39 U
Aroclor-1248	220	µg/kg	42 U	41 U	38 U	38 U [39 U]	42 U	37 U	44 U	46 U	43 U	52 U	38 U	39 U
Aroclor-1254	110	µg/kg	42 U	41 U	38 U	38 U [39 U]	42 U	37 U	44 U	46 U	43 U	52 U	38 U	39 U
Aroclor-1260	220	µg/kg	**210**	**180**	**290**	**240 [260]**	**230**	**200**	**130 J**	**290 J**	**370**	**720**	**150 J**	**87**
Total PCBs	- -	µg/kg	**210**	**180**	**290**	**240 [260]**	**230**	**200**	**130 J**	**290 J**	**370**	**720**	**150 J**	**87**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-013-UI 0 - 1 08/20/03 SO-013-UI	SO-014-UI 0 - 1 08/20/03 SO-014-UI	SO-015-UI 0 - 1 08/20/03 SO-015-UI	SO-016-UI 0 - 1 08/20/03 SO-016-UI	SO-017-NP 0 - 1 08/21/03 SO-017-NP	SO-018-LF 0 - 1 08/21/03 SO-018-LF	SO-019-LF 0 - 1 08/21/03 SO-019-LF	SO-020-LF 0 - 1 08/21/03 SO-020-LF	SO-021-LF 0 - 1 08/21/03 SO-021-LF	SO-022-LF 0 - 1 08/21/03 SO-022-LF	SO-022-LF 0 - 1 08/21/03 SO-FD-03	SO-023-LF 0 - 1 08/22/03 SO-023-LF
Pesticides														
4,4'-DDD	2,000	µg/kg	3.8 U	**5**	4.3 U	3.4 U	4.1 U	3.4 U	**19**	4.1 U	3.8 U	R	R	3.9 U
4,4'-DDE	1,000	µg/kg	3.8 U	**3.8 J**	4.3 U	**4.1**	**5.3 J**	3.4 U	**9.6 J**	**5**	3.8 U	**15 J**	**12 J**	**4.1**
4,4'-DDT	1,700	µg/kg	3.8 U	3.8 U	4.3 U	3.4 U	20 U	R	**25**	4.1 U	3.8 U	R	R	R
Aldrin	29	µg/kg	2 U	2 U	2.2 U	1.8 U	2.1 U	1.8 U	1.8 U	2.1 U	2 U	2.2 U	2.2 U	2 U
alpha-BHC	77	µg/kg	2 U	2 U	2.2 U	1.8 U	2.1 U	1.8 U	1.8 U	2.1 U	2 U	2.2 U	2.2 U	2 U
alpha-Chlordane	500	µg/kg	2 U	**3.4 J**	2.2 U	1.8 U	**8.2 J**	1.8 U	R	R	2 U	**4.3 J**	**3.4 J**	R
beta-BHC	270	µg/kg	2 U	2 U	2.2 U	1.8 U	2.1 U	1.8 U	1.8 U	2.1 U	2 U	2.2 U	2.2 U	2 U
Delta-BHC	270	µg/kg	2 U	2 U	2.2 U	1.8 U	2.1 U	1.8 U	1.8 U	2.1 U	2 U	2.2 U	2.2 U	2 U
Dieldrin	0.032	µg/kg	**71**	**28**	**42**	**29**	**92 J**	**9 J**	**4.8**	**16**	**38**	**32**	**25 J**	**12**
Endosulfan I	37,000	µg/kg	2 U	2 U	2.2 U	1.8 U	2.1 U	1.8 U	1.8 U	2.1 U	2 U	2.2 U	2.2 U	2 U
Endosulfan II	37,000	µg/kg	3.8 U	3.8 U	4.3 U	3.4 U	4.1 U	3.4 U	3.6 U	4.1 U	3.8 U	4.3 U	4.3 U	3.9 U
Endosulfan Sulfate	37,000	µg/kg	3.8 U	**10 J**	4.3 U	**3.6 J**	**8**	3.4 U	R	R	R	**11 J**	**10 J**	R
Endrin	1,800	µg/kg	3.8 U	3.8 U	4.3 U	3.4 U	4.1 U	3.4 U	3.6 U	4.1 U	3.8 U	4.3 U	4.3 U	3.9 U
Endrin Aldehyde	1,800	µg/kg	3.8 U	R	4.3 U	**4.4**	20 U	3.4 U	3.6 U	4.1 U	3.8 U	**21**	**17**	3.9 U
Endrin Ketone	1,800	µg/kg	3.8 U	3.8 U	4.3 U	**14 J**	4.1 U	3.4 U	R	R	R	R	4.3 U	R
Gamma-BHC	520	µg/kg	2 U	2 U	2.2 U	1.8 U	2.1 U	1.8 U	1.8 U	2.1 U	2 U	2.2 U	2.2 U	2 U
Gamma-Chlordane	500	µg/kg	2 U	R	2.2 U	1.8 U	**7.2 J**	1.8 U	R	R	R	R	R	R
Heptachlor	110	µg/kg	2 U	2 U	2.2 U	1.8 U	2.1 U	1.8 U	1.8 U	2.1 U	2 U	2.2 U	2.2 U	2 U
Heptachlor Epoxide	53	µg/kg	2 U	2 U	2.2 U	1.8 U	2.1 U	1.8 U	1.8 U	2.1 U	2 U	2.2 U	2.2 U	2 U
Methoxychlor	31,000	µg/kg	20 U	20 U	22 U	18 U	21 U	18 U	18 U	21 U	20 U	22 U	22 U	20 U
Toxaphene	440	µg/kg	200 U	200 U	220 U	180 U	210 U	180 U	180 U	210 U	200 U	220 U	220 U	200 U
PCBs														
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	38 U	38 U	43 U	34 U	41 U	34 U	36 U	41 U	38 U	43 U	43 U	39 U
Aroclor-1221	170	µg/kg	78 U	77 U	88 U	70 U	83 U	70 U	73 U	83 U	78 U	87 U	86 U	80 U
Aroclor-1232	170	µg/kg	38 U	38 U	43 U	34 U	41 U	34 U	36 U	41 U	38 U	43 U	43 U	39 U
Aroclor-1242	220	µg/kg	38 U	38 U	43 U	34 U	41 U	34 U	36 U	41 U	38 U	43 U	43 U	39 U
Aroclor-1248	220	µg/kg	38 U	38 U	43 U	34 U	41 U	34 U	36 U	41 U	38 U	43 U	43 U	39 U
Aroclor-1254	110	µg/kg	38 U	38 U	43 U	34 U	41 U	**130 J**	36 U	41 U	38 U	**1,100**	**790 J**	39 U
Aroclor-1260	220	µg/kg	**82**	**230 J**	**45**	**120 J**	**300 J**	34 U	**69 J**	**190**	**130 J**	43 U	43 U	**230**
Total PCBs	- -	µg/kg	**82**	**230 J**	**45**	**120 J**	**300 J**	**130 J**	**69 J**	**190**	**130 J**	**1,100**	**790 J**	**230**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-033-NP	SO-034-NP	SO-034-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	1 - 5	0 - 1	6 - 10
Date Collected:			08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/28/03	09/05/03	09/05/03	09/05/03	09/05/03
Sample Name:	PAL	Units	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-W14-NP	SO-034-NP	SO-W13-NP
Pesticides														
4,4'-DDD	2,000	µg/kg	3.7 U	3.8 U	4.4 U	3.6 U	5.8 U	5 U	4.5 U	R	**20 J**	**6.6**	**8.4 J**	**37**
4,4'-DDE	1,000	µg/kg	**3.8**	3.8 U	**4.9**	**3.8**	5.8 U	**6.6**	4.5 U	**5.1 J**	**23 J**	**9.3**	R	**21 J**
4,4'-DDT	1,700	µg/kg	3.7 U	3.8 U	R	3.6 U	5.8 U	R	4.5 U	4.1 UJ	**87**	3.9 U	R	4.2 U
Aldrin	29	µg/kg	1.9 U	2 U	2.2 U	1.8 U	3 U	2.6 U	2.3 U	2.1 UJ	2 U	2 U	1.9 U	2.2 U
alpha-BHC	77	µg/kg	1.9 U	2 U	2.2 U	1.8 U	3 U	2.6 U	2.3 U	2.1 UJ	2 U	2 U	1.9 U	2.2 U
alpha-Chlordane	500	µg/kg	**2.4 J**	**3 J**	**5.1 J**	1.8 U	**5.4 J**	**5.5 J**	**4.4 J**	**5.5 J**	**1.8 J**	2 U	**6.2 J**	2.2 U
beta-BHC	270	µg/kg	1.9 U	2 U	2.2 U	1.8 U	3 U	2.6 U	2.3 U	2.1 UJ	2 U	2 U	1.9 U	2.2 U
Delta-BHC	270	µg/kg	1.9 U	2 U	2.2 U	1.8 U	3 U	2.6 U	2.3 U	2.1 UJ	2 U	2 U	1.9 U	2.2 U
Dieldrin	0.032	µg/kg	**9.4**	**16**	**12**	**5.7**	**14**	**29**	**12**	**36 J**	**6.2 J**	3.9 U	**13 J**	4.2 U
Endosulfan I	37,000	µg/kg	1.9 U	2 U	2.2 U	1.8 U	3 U	2.6 U	2.3 U	2.1 UJ	2 U	2 U	1.9 U	2.2 U
Endosulfan II	37,000	µg/kg	3.7 U	3.8 U	4.4 U	3.6 U	5.8 U	5 U	4.5 U	4.1 UJ	3.8 U	3.9 U	3.7 U	4.2 U
Endosulfan Sulfate	37,000	µg/kg	R	R	R	R	**9.1 J**	R	R	R	19 U	3.9 U	R	4.2 U
Endrin	1,800	µg/kg	3.7 U	3.8 U	4.4 U	3.6 U	5.8 U	5 U	4.5 U	4.1 UJ	3.8 U	3.9 U	3.7 U	**7.1 J**
Endrin Aldehyde	1,800	µg/kg	3.7 U	3.8 U	4.4 U	3.6 U	5.8 U	R	4.5 U	4.1 UJ	3.8 U	3.9 U	3.7 U	**13**
Endrin Ketone	1,800	µg/kg	3.7 U	3.8 U	4.4 U	3.6 U	5.8 U	5 U	4.5 U	4.1 UJ	**10 J**	3.9 U	R	4.2 U
Gamma-BHC	520	µg/kg	1.9 U	2 U	R	1.8 U	3 U	2.6 U	2.3 U	2.1 UJ	2 U	2 U	1.9 U	2.2 U
Gamma-Chlordane	500	µg/kg	R	R	**7.4 J**	R	**4.4 J**	R	R	**5.3 J**	9.9 U	2 U	R	R
Heptachlor	110	µg/kg	1.9 U	2 U	2.2 U	1.8 U	3 U	2.6 U	2.3 U	2.1 UJ	2 U	2 U	1.9 U	2.2 U
Heptachlor Epoxide	53	µg/kg	1.9 U	2 U	2.2 U	1.8 U	3 U	2.6 U	2.3 U	2.1 UJ	2 U	2 U	1.9 U	2.2 U
Methoxychlor	31,000	µg/kg	19 U	20 U	22 U	18 U	30 U	26 U	23 U	21 UJ	20 U	20 U	R	22 U
Toxaphene	440	µg/kg	190 U	200 U	220 U	180 U	300 U	260 U	230 U	210 UJ	200 U	200 U	190 U	220 U
PCBs														
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	37 U	38 U	44 U	36 U	58 U	50 U	45 U	41 UJ	38 U	39 U	37 U	42 U
Aroclor-1221	170	µg/kg	76 U	78 U	88 U	73 U	120 U	100 U	91 U	84 UJ	78 U	79 U	76 U	85 U
Aroclor-1232	170	µg/kg	37 U	38 U	44 U	36 U	58 U	50 U	45 U	41 UJ	38 U	39 U	37 U	42 U
Aroclor-1242	220	µg/kg	37 U	38 U	44 U	36 U	58 U	50 U	45 U	41 UJ	38 U	39 U	37 U	42 U
Aroclor-1248	220	µg/kg	37 U	38 U	44 U	36 U	58 U	50 U	45 U	41 UJ	38 U	39 U	37 U	42 U
Aroclor-1254	110	µg/kg	37 U	38 U	44 U	36 U	58 U	50 U	45 U	41 UJ	38 U	39 U	37 U	**1,000 J**
Aroclor-1260	220	µg/kg	**140 J**	**140**	**250**	**130**	**270**	**300**	**200**	41 UJ	38 U	39 U	37 U	42 U
Total PCBs	- -	µg/kg	**140 J**	**140**	**250**	**130**	**270**	**300**	**200**	ND	ND	ND	ND	**1,000 J**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-035-NP	SO-035-NP	SO-036-NP	SO-036-NP	SO-036-NP	SO-037-NP	SO-037-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW
Sample Depth (Feet):			0 - 1	5 - 9	0 - 1	1 - 5	1 - 5	0 - 1	5 - 9	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/09/04	09/09/04	09/09/04	09/10/04	09/10/04
Sample Name:	PAL	Units	SO-035-NP	SO-W15-NP	SO-036-NP	SSO-FD01	SSO-01-NP	SO-037-NP	SO-W16-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW
Pesticides														
4,4'-DDD	2,000	µg/kg	**5.7**	**59 J**	3.5 U	**6.2**	**6.2 J**	3.7 U	3.5 U	**4.9 J**	R	**6.1 J**	4.2 U	**7 J**
4,4'-DDE	1,000	µg/kg	**8.3**	R	3.5 U	**3.3 J**	**3 J**	**3.5 J**	3.5 U	**5.3**	R	**5.9 J**	**5.5 J**	**6.4 J**
4,4'-DDT	1,700	µg/kg	3.9 U	**14 J**	3.5 U	3.9 U	3.8 U	**23**	3.5 U	R	R	5.1 U	4.2 U	4.7 U
Aldrin	29	µg/kg	2 U	2 U	1.8 U	2 U	1.9 U	1.9 U	1.8 U	2.4 U	2 U	2.6 U	2.2 U	2.4 U
alpha-BHC	77	µg/kg	2 U	2 U	1.8 U	2 U	1.9 U	1.9 U	1.8 U	2.4 U	2 U	2.6 U	2.2 U	2.4 U
alpha-Chlordane	500	µg/kg	**11 J**	**10 J**	1.8 U	2 U	1.9 U	**6 J**	1.8 U	**8.4 J**	**2.8 J**	R	R	R
beta-BHC	270	µg/kg	2 U	2 U	1.8 U	2 U	1.9 U	1.9 U	1.8 U	2.4 U	2 U	2.6 U	2.2 U	2.4 U
Delta-BHC	270	µg/kg	2 U	2 U	1.8 U	2 U	1.9 U	1.9 U	1.8 U	2.4 U	2 U	2.6 U	2.2 U	2.4 U
Dieldrin	0.032	µg/kg	**3.2 J**	3.9 U	3.5 U	**5.1**	**5.2**	**3.1 J**	3.5 U	**29**	**10 J**	**11**	**15**	**9.2**
Endosulfan I	37,000	µg/kg	2 U	2 U	1.8 U	2 U	1.9 U	1.9 U	1.8 U	2.4 U	2 U	2.6 U	**4.2 J**	2.4 U
Endosulfan II	37,000	µg/kg	3.9 U	3.9 U	3.5 U	3.9 U	3.8 U	3.7 U	3.5 U	4.7 U	3.8 U	5.1 U	4.2 U	4.7 U
Endosulfan Sulfate	37,000	µg/kg	3.9 U	**29 J**	3.5 U	3.9 U	3.8 U	R	3.5 U	R	R	5.1 U	R	R
Endrin	1,800	µg/kg	3.9 U	3.9 U	3.5 U	3.9 U	3.8 U	3.7 U	3.5 U	4.7 U	3.8 U	5.1 U	4.2 U	4.7 U
Endrin Aldehyde	1,800	µg/kg	3.9 U	3.9 U	3.5 U	3.9 U	3.8 U	3.7 U	3.5 U	R	**11**	5.1 U	4.2 U	R
Endrin Ketone	1,800	µg/kg	3.9 U	R	3.5 U	3.9 U	3.8 U	3.7 U	3.5 U	4.7 U	3.8 U	5.1 U	4.2 U	4.7 U
Gamma-BHC	520	µg/kg	2 U	2 U	1.8 U	2 U	1.9 U	1.9 U	1.8 U	2.4 U	2 U	2.6 U	2.2 U	2.4 UJ
Gamma-Chlordane	500	µg/kg	**12**	2 U	1.8 U	R	R	R	1.8 U	R	R	R	R	R
Heptachlor	110	µg/kg	2 U	2 U	1.8 U	2 U	1.9 U	1.9 U	1.8 U	2.4 U	2 U	2.6 U	2.2 U	2.4 U
Heptachlor Epoxide	53	µg/kg	2 U	2 U	1.8 U	2 U	1.9 U	1.9 U	1.8 U	2.4 U	2 U	2.6 U	2.2 U	2.4 U
Methoxychlor	31,000	µg/kg	20 U	R	18 U	20 U	19 U	19 U	18 U	24 U	20 U	26 U	22 U	24 U
Toxaphene	440	µg/kg	200 U	200 U	180 U	200 U	190 U	190 U	180 U	240 U	200 U	260 U	220 U	240 U
PCBs														
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	39 U	39 U	35 U	39 U	38 U	37 U	35 U	47 U	38 U	51 U	42 U	47 U
Aroclor-1221	170	µg/kg	79 U	80 U	71 U	79 U	77 U	74 U	71 U	95 U	78 U	100 U	85 U	96 U
Aroclor-1232	170	µg/kg	39 U	39 U	35 U	39 U	38 U	37 U	35 U	47 U	38 U	51 U	42 U	47 U
Aroclor-1242	220	µg/kg	39 U	39 U	35 U	39 U	38 U	37 U	35 U	47 U	38 U	51 U	42 U	47 U
Aroclor-1248	220	µg/kg	39 U	39 U	35 U	39 U	38 U	37 U	35 U	47 U	38 U	51 U	42 U	47 U
Aroclor-1254	110	µg/kg	**100 J**	**300 J**	**65**	**70 J**	**78**	**100 J**	35 U	47 U	**480**	51 U	42 U	47 U
Aroclor-1260	220	µg/kg	39 U	39 U	35 U	39 U	38 U	37 U	35 U	**270 J**	38 U	**190 J**	**170 J**	**260 J**
Total PCBs	- -	µg/kg	**100 J**	**300 J**	**65**	**70 J**	**78**	**100 J**	ND	**270 J**	**480**	**190 J**	**170 J**	**260 J**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP	SO-051-NP	SO-052-NP	SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/09/04	09/09/04	09/09/04	09/09/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/09/04
Sample Name:	PAL	Units	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP	SO-051-NP	SO-052-NP	SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP
Pesticides														
4,4'-DDD	2,000	µg/kg	**R [7.1 J]**	**8.4**	**4.4 J**	4 U	**10**	**14**	**19**	**7 J**	**4.7**	**7.1 J**	**16 [13]**	**4.8 J**
4,4'-DDE	1,000	µg/kg	**5.4 J [6.2 J]**	**5.1 J**	**3.4 J**	**3 J**	**9.3**	**8.3**	**9.6**	**7.8**	**3.1 J**	**11**	**6.8 [7.9 J]**	**4.1 J**
4,4'-DDT	1,700	µg/kg	R [R]	**12**	R	R	R	R	R	4.5 U	3.8 U	R	R [R]	4 U
Aldrin	29	µg/kg	2.2 U [2.2 U]	1.8 U	2.1 U	2.1 U	2.1 U	2.8 U	2.1 U	2.3 U	1.9 U	2 U	2 U [2 U]	2.1 U
alpha-BHC	77	µg/kg	2.2 U [2.2 U]	1.8 U	2.1 U	2.1 U	2.1 U	2.8 U	2.1 U	2.3 U	1.9 U	2 U	2 U [2 U]	2.1 U
alpha-Chlordane	500	µg/kg	**R [9.5 J]**	**12**	**5.6 J**	**3 J**	**15 J**	**13 J**	**18 J**	**16 J**	**4.4 J**	R	**14 J [16 J]**	**9 J**
beta-BHC	270	µg/kg	2.2 U [2.2 U]	1.8 U	2.1 U	2.1 U	2.1 U	2.8 U	2.1 U	2.3 U	1.9 U	2 U	2 U [2 U]	2.1 U
Delta-BHC	270	µg/kg	2.2 U [2.2 U]	1.8 U	2.1 U	2.1 U	2.1 U	2.8 U	2.1 U	2.3 U	1.9 U	2 U	2 U [2 U]	2.1 U
Dieldrin	0.032	µg/kg	**39 [48]**	**120 J**	**44**	**20**	**60**	**20**	**310**	**50**	**11**	**160**	**29 [39]**	**21**
Endosulfan I	37,000	µg/kg	2.2 U [2.2 U]	1.8 U	2.1 U	2.1 U	2.1 U	2.8 U	2.1 U	2.3 U	1.9 U	2 U	2 U [2 U]	2.1 U
Endosulfan II	37,000	µg/kg	4.3 U [4.3 U]	3.5 U	4 U	4 U	4.1 U	**6.8**	4 U	4.5 U	**2.5 J**	3.8 U	3.8 U [3.9 U]	4 U
Endosulfan Sulfate	37,000	µg/kg	R [R]	3.5 U	R	R	R	R	R	R	R	3.8 U	R [R]	R
Endrin	1,800	µg/kg	4.3 U [4.3 U]	3.5 U	4 U	4 U	4.1 U	5.4 U	4 U	4.5 U	3.8 U	3.8 UJ	3.8 U [3.9 U]	4 U
Endrin Aldehyde	1,800	µg/kg	**6.5 J [R]**	3.5 U	**5.1 J**	**5.8**	R	R	R	R	R	R	R [R]	R
Endrin Ketone	1,800	µg/kg	4.3 U [R]	3.5 U	4 U	4 U	R	R	R	R	R	R	R [R]	4 U
Gamma-BHC	520	µg/kg	2.2 U [2.2 U]	1.8 UJ	2.1 U	2.1 U	2.1 U	2.8 U	2.1 U	2.3 U	1.9 U	2 U	2 U [2 U]	2.1 U
Gamma-Chlordane	500	µg/kg	R [R]	**16**	R	R	**10 J**	R	**16 J**	**11 J**	R	**9.3 J**	R [R]	**6.5 J**
Heptachlor	110	µg/kg	2.2 U [2.2 U]	1.8 U	2.1 U	2.1 U	2.1 U	2.8 U	2.1 U	2.3 U	1.9 U	2 U	2 U [2 U]	2.1 U
Heptachlor Epoxide	53	µg/kg	**2.3 J [2.2 U]**	1.8 U	2.1 U	2.1 U	2.1 U	2.8 U	2.1 U	2.3 U	1.9 U	2 U	2 U [2 U]	2.1 U
Methoxychlor	31,000	µg/kg	22 U [22 U]	18 U	21 U	21 U	21 U	28 U	21 U	23 U	19 U	20 U	20 U [20 U]	R
Toxaphene	440	µg/kg	220 U [220 U]	180 U	210 U	210 U	210 U	280 U	210 U	230 U	190 U	200 U	200 U [200 U]	210 U
PCBs														
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	43 U [43 U]	35 U	40 U	40 U	41 U	54 U	40 U	45 U	38 U	38 U	38 U [39 U]	40 U
Aroclor-1221	170	µg/kg	87 U [87 U]	71 U	82 U	81 U	82 U	110 U	82 U	91 U	76 U	77 U	78 U [80 U]	81 U
Aroclor-1232	170	µg/kg	43 U [43 U]	35 U	40 U	40 U	41 U	54 U	40 U	45 U	38 U	38 U	38 U [39 U]	40 U
Aroclor-1242	220	µg/kg	43 U [43 U]	35 U	40 U	40 U	41 U	54 U	40 U	45 U	38 U	38 U	38 U [39 U]	40 U
Aroclor-1248	220	µg/kg	43 U [43 U]	35 U	40 U	40 U	41 U	54 U	40 U	45 U	38 U	38 U	38 U [39 U]	40 U
Aroclor-1254	110	µg/kg	43 U [43 U]	**240 J**	40 U	40 U	41 U	54 U	40 U	45 U	38 U	38 U	38 U [39 U]	40 U
Aroclor-1260	220	µg/kg	**320 J [350 J]**	35 U	**180 J**	**160 J**	**470 J**	**460 J**	**370 J**	**410 J**	**140 J**	**550 J**	**460 J [470 J]**	**240 J**
Total PCBs	- -	µg/kg	**320 J [350 J]**	**240 J**	**180 J**	**160 J**	**470 J**	**460 J**	**370 J**	**410 J**	**140 J**	**550 J**	**460 J [470 J]**	**240 J**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: / Sample Depth (Feet): / Date Collected: / Sample Name:	PAL	Units	SO-058-WT 0 - 1 09/08/04 SO-058-WT	SO-059-WT 0 - 1 09/09/04 SO-059-WT	SO-060-WT 0 - 1 09/08/04 SO-060-WT	SO-061-WT 0 - 1 09/09/04 SO-061-WT	SO-061-WT 0 - 1 11/27/04 SO-091-WT	SO-062-WT 0 - 1 09/09/04 SO-062-WT	SO-062-WT 0 - 1 11/27/04 SO-092-WT	SO-063-WT 0 - 1 09/09/04 SO-063-WT	SO-064-BR 0 - 1 09/08/04 SO-064-BR	SO-065-BR 0 - 1 09/08/04 SO-065-BR	SO-066-BR 0 - 1 09/08/04 SO-066-BR	SO-067-BR 0 - 1 09/08/04 SO-067-BR
Pesticides														
4,4'-DDD	2,000	µg/kg	**10**	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	**6.9**	4.3 U	**4.4 J**	**7.9 J**
4,4'-DDE	1,000	µg/kg	**6.1 J**	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	**4.5 J**	**7.6**	**5.2 J**	**8.6**
4,4'-DDT	1,700	µg/kg	R	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	R	R	R	R
Aldrin	29	µg/kg	2.4 U	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	2.4 U	2.2 U	2 U	2 U
alpha-BHC	77	µg/kg	2.4 U	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	2.4 U	2.2 U	2 U	2 U
alpha-Chlordane	500	µg/kg	R	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	**8.3 J**	**7.8 J**	**11 J**	**8.9 J**
beta-BHC	270	µg/kg	2.4 U	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	2.4 U	2.2 U	2 U	2 U
Delta-BHC	270	µg/kg	2.4 U	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	2.4 U	2.2 U	2 U	2 U
Dieldrin	0.032	µg/kg	**26**	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	**19**	**100**	**140**	**190**
Endosulfan I	37,000	µg/kg	2.4 U	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	2.4 U	2.2 U	2 U	2 U
Endosulfan II	37,000	µg/kg	4.7 U	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	4.6 U	4.3 U	3.8 U	3.9 U
Endosulfan Sulfate	37,000	µg/kg	R	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	R	R	R	R
Endrin	1,800	µg/kg	4.7 U	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	4.6 U	4.3 U	3.8 U	3.9 U
Endrin Aldehyde	1,800	µg/kg	R	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	R	R	R	R
Endrin Ketone	1,800	µg/kg	R	3.8 U	3.4 U	3.9 U	NA	3.8 U	NA	3.7 U	R	R	R	R
Gamma-BHC	520	µg/kg	2.4 U	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	2.4 U	2.2 U	2 U	2 U
Gamma-Chlordane	500	µg/kg	**13**	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	R	R	**5.4 J**	R
Heptachlor	110	µg/kg	2.4 U	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	2.4 U	2.2 U	2 U	2 U
Heptachlor Epoxide	53	µg/kg	2.4 U	1.9 U	1.8 U	2 U	NA	2 U	NA	1.9 U	2.4 U	2.2 U	2 U	2 U
Methoxychlor	31,000	µg/kg	24 U	19 U	18 U	20 U	NA	20 U	NA	19 U	24 U	22 U	20 U	20 U
Toxaphene	440	µg/kg	240 U	190 U	180 U	200 U	NA	200 U	NA	190 U	240 U	220 U	200 U	200 U
PCBs														
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	47 U	38 U	34 U	39 U	NA	38 U	NA	37 U	46 U	43 U	38 U	39 U
Aroclor-1221	170	µg/kg	96 U	76 U	69 U	79 U	NA	78 U	NA	75 U	94 U	87 U	78 U	79 U
Aroclor-1232	170	µg/kg	47 U	38 U	34 U	39 U	NA	38 U	NA	37 U	46 U	43 U	38 U	39 U
Aroclor-1242	220	µg/kg	47 U	38 U	34 U	39 U	NA	38 U	NA	37 U	46 U	43 U	38 U	39 U
Aroclor-1248	220	µg/kg	47 U	38 U	34 U	39 U	NA	38 U	NA	37 U	46 U	43 U	38 U	39 U
Aroclor-1254	110	µg/kg	47 U	38 U	34 U	39 U	NA	38 U	NA	37 U	46 U	43 U	38 U	39 U
Aroclor-1260	220	µg/kg	**390 J**	38 U	34 U	39 U	NA	38 U	NA	37 U	**270 J**	**260 J**	**360 J**	**290 J**
Total PCBs	- -	µg/kg	**390 J**	ND	ND	ND	NA	ND	NA	ND	**270 J**	**260 J**	**360 J**	**290 J**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF	SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/08/04	09/08/04	09/08/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04
Sample Name:	PAL	Units	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF	SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI
Pesticides														
4,4'-DDD	2,000	µg/kg	**5.1 J**	**6.8 J**	**7.7 J**	18 U	**8.1 J**	**2.5 J**	**1.9 J**	3.9 U	**6.9 [6.8 J]**	3.6 U	**19 J**	3.5 UJ
4,4'-DDE	1,000	µg/kg	**5 J**	**6.4 J**	**7.4**	18 U	R	**5.9**	**4.7**	**2.3 J**	**6 [4.7 J]**	3.6 U	**13**	3.5 UJ
4,4'-DDT	1,700	µg/kg	5.1 U	5 U	**11 J**	18 U	**9.8**	R	3.7 U	**5.3 J**	**15 J [50 J]**	**1.8 J**	**25 J**	3.5 UJ
Aldrin	29	µg/kg	2.6 U	2.6 U	1.7 U	9.2 U	2.5 U	2 U	1.9 U	2 U	1.9 U [2 U]	1.9 U	1.8 U	1.8 UJ
alpha-BHC	77	µg/kg	2.6 U	2.6 U	1.7 U	9.2 U	2.5 U	2 U	1.9 U	2 U	1.9 U [2 U]	1.9 U	1.8 U	1.8 UJ
alpha-Chlordane	500	µg/kg	**9.9 J**	**7.4 J**	1.7 U	**10 J**	2.5 U	2 U	1.9 U	**4.2**	**5.3 [4.6 J]**	1.9 U	**5.2 J**	1.8 UJ
beta-BHC	270	µg/kg	2.6 U	2.6 U	1.7 U	9.2 U	2.5 U	2 U	1.9 U	2 U	1.9 U [2 U]	1.9 U	1.8 U	1.8 UJ
Delta-BHC	270	µg/kg	2.6 U	2.6 U	1.7 U	9.2 U	2.5 U	2 U	1.9 U	2 U	1.9 U [2 U]	1.9 U	1.8 U	1.8 UJ
Dieldrin	0.032	µg/kg	**180**	**21**	**23**	**500**	**33**	**12**	**7.3 J**	**14**	**100 [140]**	**31**	**270**	3.5 UJ
Endosulfan I	37,000	µg/kg	2.6 U	2.6 U	1.7 U	9.2 U	2.5 U	2 U	1.9 U	2 U	1.9 U [2 U]	1.9 U	1.8 U	1.8 UJ
Endosulfan II	37,000	µg/kg	5.1 U	**3.8 J**	R	18 U	4.9 U	3.9 U	3.7 U	3.9 U	3.7 U [3.8 U]	3.6 U	**6.1 J**	3.5 UJ
Endosulfan Sulfate	37,000	µg/kg	R	R	3.4 U	18 U	R	R	3.7 U	**4.3**	R [R]	3.6 U	R	3.5 UJ
Endrin	1,800	µg/kg	5.1 U	5 U	3.4 U	18 U	4.9 U	3.9 U	3.7 U	3.9 U	3.7 U [3.8 U]	3.6 U	3.6 U	3.5 UJ
Endrin Aldehyde	1,800	µg/kg	R	R	**4.1 J**	R	**7.1 J**	3.9 U	3.7 U	**5.4**	R [R]	3.6 U	R	3.5 UJ
Endrin Ketone	1,800	µg/kg	R	R	R	18 U	4.9 U	3.9 U	3.7 U	3.9 U	3.7 U [3.8 U]	3.6 U	R	3.5 UJ
Gamma-BHC	520	µg/kg	2.6 U	2.6 U	1.7 U	9.2 U	2.5 U	2 U	1.9 U	2 U	1.9 U [2 U]	1.9 U	1.8 U	1.8 UJ
Gamma-Chlordane	500	µg/kg	**5.7 J**	R	R	R	R	2 U	1.9 U	**2.1 J**	R [R]	1.9 U	R	1.8 UJ
Heptachlor	110	µg/kg	2.6 U	2.6 U	1.7 U	9.2 U	2.5 U	2 U	1.9 U	2 U	1.9 U [2 U]	1.9 U	1.8 U	1.8 UJ
Heptachlor Epoxide	53	µg/kg	2.6 U	2.6 U	1.7 U	9.2 U	2.5 U	2 U	1.9 U	2 U	1.9 U [2 U]	1.9 U	1.8 U	1.8 UJ
Methoxychlor	31,000	µg/kg	26 U	26 U	17 U	92 U	**34**	**19 J**	19 U	20 U	19 U [20 U]	19 U	**28 J**	18 UJ
Toxaphene	440	µg/kg	260 U	260 U	170 U	920 U	250 U	200 U	190 U	200 U	190 U [200 U]	190 U	180 U	180 UJ
PCBs														
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	51 U	50 U	34 U	180 U	49 U	39 U	37 U	39 U	37 U [38 U]	36 U	36 U	35 UJ
Aroclor-1221	170	µg/kg	100 U	100 U	69 U	360 U	99 U	80 U	75 U	79 U	76 U [77 U]	74 U	73 U	71 UJ
Aroclor-1232	170	µg/kg	51 U	50 U	34 U	180 U	49 U	39 U	37 U	39 U	37 U [38 U]	36 U	36 U	35 UJ
Aroclor-1242	220	µg/kg	51 U	50 U	34 U	180 U	49 U	39 U	37 U	39 U	37 U [38 U]	36 U	36 U	35 UJ
Aroclor-1248	220	µg/kg	51 U	50 U	34 U	180 U	49 U	39 U	37 U	39 U	37 U [38 U]	36 U	36 U	35 UJ
Aroclor-1254	110	µg/kg	51 U	50 U	34 U	180 U	49 U	39 U	37 U	39 U	37 U [38 U]	**77 J**	36 U	35 UJ
Aroclor-1260	220	µg/kg	**280 J**	**280 J**	**170 J**	**550 J**	49 UJ	39 U	37 U	**99 J**	**170 J [180 J]**	36 UJ	**320 J**	35 UJ
Total PCBs	- -	µg/kg	**280 J**	**280 J**	**170 J**	**550 J**	ND	ND	ND	**99 J**	**170 J [180 J]**	**77 J**	**320 J**	ND

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI	SO-084-UI	SO-084-UI	SO-085-UI	SO-085-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	2 - 7
Date Collected:			09/10/04	09/10/04	09/10/04	09/10/04	09/09/04	11/27/04	09/09/04	11/27/04	09/09/04	09/09/04	09/10/04	11/01/06
Sample Name:	PAL	Units	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI	SO-084-UI	SO-089-UI	SO-085-UI	SO-090-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP (2-7')
Pesticides														
4,4'-DDD	2,000	µg/kg	R	R	3.5 U	R	3.6 U	NA	**2.3 J**	NA	3.8 U	3.5 U	3.8 U	**3 J**
4,4'-DDE	1,000	µg/kg	R	**5**	**6.5 J**	**4.3 J**	3.6 U	NA	**3.9**	NA	3.8 U	**1.6 J**	3.8 U	**3.9**
4,4'-DDT	1,700	µg/kg	R	**8.3**	**14**	**4.2 J**	3.6 U	NA	**6.6 J**	NA	R	3.5 U	3.8 U	**2.2 J**
Aldrin	29	µg/kg	1.8 U	2 U	1.8 U	1.9 U	1.8 U	NA	1.9 U	NA	1.9 U	1.8 U	2 U	0.81 U
alpha-BHC	77	µg/kg	1.8 U	2 U	1.8 U	1.9 U	1.8 U	NA	1.9 U	NA	1.9 U	1.8 U	2 U	0.81 U
alpha-Chlordane	500	µg/kg	1.8 U	**4.7 J**	**3.3 J**	1.9 U	1.8 U	NA	**2.9 J**	NA	1.9 U	1.8 U	2 U	**3.2 J**
beta-BHC	270	µg/kg	1.8 U	2 U	1.8 U	1.9 U	1.8 U	NA	1.9 U	NA	1.9 U	1.8 U	2 U	0.81 U
Delta-BHC	270	µg/kg	1.8 U	2 U	1.8 U	1.9 U	1.8 U	NA	1.9 U	NA	1.9 U	1.8 U	2 U	0.81 U
Dieldrin	0.032	µg/kg	**88**	**39**	**230**	**43**	**16**	NA	**200**	NA	3.8 U	**13**	3.8 U	**250**
Endosulfan I	37,000	µg/kg	1.8 U	2 U	1.8 U	R	1.8 U	NA	1.9 U	NA	1.9 U	1.8 U	2 U	0.81 U
Endosulfan II	37,000	µg/kg	3.6 U	3.8 U	3.5 U	3.8 U	3.6 U	NA	3.6 U	NA	3.8 U	3.5 U	3.8 U	0.81 U
Endosulfan Sulfate	37,000	µg/kg	R	R	**7.1**	**6.3 J**	3.6 U	NA	3.6 U	NA	3.8 U	3.5 U	3.8 U	0.81 U
Endrin	1,800	µg/kg	3.6 U	3.8 U	3.5 U	3.8 U	3.6 U	NA	3.6 U	NA	3.8 U	3.5 U	3.8 U	**4.4**
Endrin Aldehyde	1,800	µg/kg	**22 J**	**5 J**	R	3.8 U	3.6 U	NA	3.6 U	NA	3.8 U	3.5 U	3.8 U	0.81 U
Endrin Ketone	1,800	µg/kg	3.6 U	3.8 U	3.5 U	3.8 U	3.6 U	NA	3.6 U	NA	3.8 U	3.5 U	3.8 U	**4.8 J**
Gamma-BHC	520	µg/kg	1.8 U	2 U	1.8 U	1.9 U	1.8 U	NA	1.9 U	NA	1.9 U	1.8 U	2 U	0.81 U
Gamma-Chlordane	500	µg/kg	R	R	R	R	1.8 U	NA	**2.8 J**	NA	1.9 U	1.8 U	2 U	**2.8**
Heptachlor	110	µg/kg	1.8 U	2 U	1.8 U	1.9 U	1.8 U	NA	1.9 U	NA	1.9 U	1.8 U	2 U	0.81 U
Heptachlor Epoxide	53	µg/kg	1.8 U	2 U	1.8 U	**13 J**	1.8 U	NA	1.9 U	NA	1.9 U	1.8 U	2 U	0.81 U
Methoxychlor	31,000	µg/kg	18 U	20 U	18 U	19 U	18 U	NA	19 U	NA	19 U	18 U	20 U	4.5 U
Toxaphene	440	µg/kg	180 U	200 U	180 U	190 U	180 U	NA	190 U	NA	190 U	180 U	200 U	20 U
PCBs														
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	36 U	38 U	35 U	38 U	36 U	NA	36 U	NA	38 U	35 U	38 U	16 U
Aroclor-1221	170	µg/kg	73 U	78 U	71 U	76 U	73 U	NA	74 U	NA	76 U	72 U	77 U	16 U
Aroclor-1232	170	µg/kg	36 U	38 U	35 U	38 U	36 U	NA	36 U	NA	38 U	35 U	38 U	16 U
Aroclor-1242	220	µg/kg	36 U	38 U	35 U	38 U	36 U	NA	36 U	NA	38 U	35 U	38 U	16 U
Aroclor-1248	220	µg/kg	36 U	38 U	35 U	38 U	36 U	NA	36 U	NA	38 U	35 U	38 U	16 U
Aroclor-1254	110	µg/kg	**1,200**	**180 J**	35 U	38 U	36 U	NA	36 U	NA	**1,000 J**	35 U	38 U	**110**
Aroclor-1260	220	µg/kg	36 U	38 UJ	**210 J**	**140 J**	**48 J**	NA	**130 J**	NA	38 U	**49 J**	38 U	**160**
Total PCBs	- -	µg/kg	**1,200**	**180 J**	**210 J**	**140 J**	**48 J**	NA	**130 J**	NA	**1,000 J**	**49 J**	ND	**270**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-101-NP 0 - 1 11/01/06 SO-101-NP (0-1')	SO-101-NP 2 - 9 11/01/06 SO-101-NP (2-9')	SO-102-NP 0 - 1 10/31/06 SO-102-NP (0-1')	SO-102-NP 2 - 8.5 10/31/06 SO-102-NP (2-8.5')	SO-103-NP 2 - 7 11/01/06 SO-103-NP (2-7')	SO-104-NP 2 - 3.4 11/02/06 SO-104-NP (2-3.4')	SO-105-NP 2 - 3.4 11/02/06 SO-105-NP (2-3.4')	SO-106-NP 2 - 5 11/02/06 SO-106-NP (2-5')
Pesticides										
4,4'-DDD	2,000	µg/kg	NA	NA	NA	NA	0.72 U	**1.3**	**4 J**	**1.5**
4,4'-DDE	1,000	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	**3.5 J**	**0.8 J**
4,4'-DDT	1,700	µg/kg	NA	NA	NA	NA	0.72 U	**5.3 J**	**4 J**	**1.2 J**
Aldrin	29	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	0.77 U	0.74 U
alpha-BHC	77	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	0.77 U	0.74 U
alpha-Chlordane	500	µg/kg	NA	NA	NA	NA	0.72 U	**1.1**	**2.6 J**	**0.8**
beta-BHC	270	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	0.77 U	0.74 U
Delta-BHC	270	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	0.77 U	0.74 U
Dieldrin	0.032	µg/kg	NA	NA	NA	NA	0.72 U	**12**	**90 J**	**20**
Endosulfan I	37,000	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	**2 J**	0.74 U
Endosulfan II	37,000	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	0.77 U	0.74 U
Endosulfan Sulfate	37,000	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	3.8 U	0.74 U
Endrin	1,800	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	0.77 U	0.74 U
Endrin Aldehyde	1,800	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	3.8 U	0.74 U
Endrin Ketone	1,800	µg/kg	NA	NA	NA	NA	0.72 U	3.5 U	**14 J**	0.74 U
Gamma-BHC	520	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	0.77 U	0.74 U
Gamma-Chlordane	500	µg/kg	NA	NA	NA	NA	0.72 U	**0.85 J**	**1.7**	0.74 U
Heptachlor	110	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	0.77 U	0.74 U
Heptachlor Epoxide	53	µg/kg	NA	NA	NA	NA	0.72 U	0.71 U	3.8 U	0.74 U
Methoxychlor	31,000	µg/kg	NA	NA	NA	NA	2.7 U	3.2 U	**35 J**	2.4 U
Toxaphene	440	µg/kg	NA	NA	NA	NA	18 U	18 U	19 U	19 U
PCBs										
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	14 U	15 U	15 U	16 U	14 U	14 U	15 U	15 U
Aroclor-1221	170	µg/kg	14 U	15 U	15 U	16 U	14 U	14 U	15 U	15 U
Aroclor-1232	170	µg/kg	14 U	15 U	15 U	16 U	14 U	14 U	15 U	15 U
Aroclor-1242	220	µg/kg	14 U	15 U	15 U	16 U	14 U	14 U	15 U	15 U
Aroclor-1248	220	µg/kg	14 U	15 U	15 U	**360**	14 U	14 U	15 U	15 U
Aroclor-1254	110	µg/kg	14 U	**79**	15 U	**440**	14 U	**60**	15 U	**72**
Aroclor-1260	220	µg/kg	14 U	**36**	15 U	**120**	14 U	**80**	**290**	**71**
Total PCBs	- -	µg/kg	ND	**115**	ND	**920**	ND	**140**	**290**	**143**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-107-NP 0 - 1 11/02/06 SO-107-NP (0-1')	SO-107-NP 2 - 10 11/02/06 SO-107-NP (2-10')	SO-108-NP 3 - 8 11/02/06 SO-108-NP (3-8')	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')
Pesticides										
4,4'-DDD	2,000	µg/kg	NA	NA	**2 [2]**	NA	NA	**8.32**	0.325 U	**24.7**
4,4'-DDE	1,000	µg/kg	NA	NA	**1.3 J [3 J]**	NA	NA	R	0.325 U	R
4,4'-DDT	1,700	µg/kg	NA	NA	**5.6 J [12 J]**	NA	NA	R	0.325 U	R
Aldrin	29	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	1.5 U
alpha-BHC	77	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
alpha-Chlordane	500	µg/kg	NA	NA	**1.4 [1.8 J]**	NA	NA	**7.9**	0.325 U	**96.4**
beta-BHC	270	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
Delta-BHC	270	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
Dieldrin	0.032	µg/kg	NA	NA	**26 J [7.4 J]**	NA	NA	**23**	**1.35**	1.5 U
Endosulfan I	37,000	µg/kg	NA	NA	**0.75 U [1.5]**	NA	NA	0.466 U	0.325 U	0.301 U
Endosulfan II	37,000	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
Endosulfan Sulfate	37,000	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
Endrin	1,800	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	R
Endrin Aldehyde	1,800	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
Endrin Ketone	1,800	µg/kg	NA	NA	**6.9 J [16 J]**	NA	NA	0.466 U	0.325 U	1.5 U
Gamma-BHC	520	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
Gamma-Chlordane	500	µg/kg	NA	NA	**1.2 J [0.77 U]**	NA	NA	**7.58**	0.325 U	**152**
Heptachlor	110	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
Heptachlor Epoxide	53	µg/kg	NA	NA	0.75 U [0.77 U]	NA	NA	0.466 U	0.325 U	0.301 U
Methoxychlor	31,000	µg/kg	NA	NA	**13 UJ [26 J]**	NA	NA	0.466 U	0.325 U	0.301 U
Toxaphene	440	µg/kg	NA	NA	19 U [19 U]	NA	NA	23.3 U	16.2 U	15 U
PCBs										
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	18.6 U	13 U	24.1 U
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	18.6 U	13 U	24.1 U
Aroclor-1016	390	µg/kg	14 U	15 U	15 U [15 U]	NA	NA	18.6 U	13 U	24.1 U
Aroclor-1221	170	µg/kg	14 U	15 U	15 U [15 U]	NA	NA	18.6 U	13 U	24.1 U
Aroclor-1232	170	µg/kg	14 U	15 U	15 U [15 U]	NA	NA	18.6 U	13 U	24.1 U
Aroclor-1242	220	µg/kg	14 U	15 U	15 U [15 U]	NA	NA	18.6 U	13 U	24.1 U
Aroclor-1248	220	µg/kg	14 U	15 U	15 U [15 U]	NA	NA	18.6 U	13 U	24.1 U
Aroclor-1254	110	µg/kg	14 U	15 U	**76 J [160 J]**	NA	NA	**416**	13 U	**2,180 J**
Aroclor-1260	220	µg/kg	**150 J**	15 U	**140 J [70 J]**	NA	NA	**457**	13 U	**308 J**
Total PCBs	- -	µg/kg	**150 J**	ND	**216 J [230 J]**	NA	NA	**873**	ND	**2,488 J**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-201-UI	SO-203-U1	SO-203-UI	SO-204-UI	SO-205-U1	SO-205-UI	SO-206-UI	SO-207B-UI	SO-207B-UI
Sample Depth (Feet):			4 - 6	0 - 1	5 - 7	2 - 4	3 - 4.5	2 - 4	2 - 3	1 - 2	2 - 3
Date Collected:			11/24/09	11/18/09	11/18/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09
Sample Name:	PAL	Units	SO-201-UI-4-6'	SO-203-U1-0-1'	SO-203-UI (5-7')	SO-204-UI (2-4')	SO-205-U1-3-4.5	SO-205-UI (2-4')	SO-206-UI (2-3')	SO-207B-UI (1-2')	SO-207B-UI (2-3')
Pesticides											
4,4'-DDD	2,000	µg/kg	NA	NA	**1.21 J**	0.472 U	NA	**4.87**	**5.54**	**5.48**	**3.64**
4,4'-DDE	1,000	µg/kg	NA	NA	**1.32**	0.472 U	NA	0.451 U	0.32 U	**5.15**	0.313 U
4,4'-DDT	1,700	µg/kg	NA	NA	R	**1.58**	NA	0.451 U	**59.6 J**	**10.6 J**	R
Aldrin	29	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
alpha-BHC	77	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	**1.97**	0.346 U	0.313 U
alpha-Chlordane	500	µg/kg	NA	NA	0.341 U	0.472 U	NA	**1.12**	**4.05**	**3.17**	**2.44**
beta-BHC	270	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Delta-BHC	270	µg/kg	NA	NA	0.341 U	0.472 U	NA	**1.32 J**	0.32 U	0.346 U	0.313 U
Dieldrin	0.032	µg/kg	NA	NA	**2.71**	0.472 U	NA	**2.59**	**14.2**	**20.3 J**	**42.2 J**
Endosulfan I	37,000	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Endosulfan II	37,000	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Endosulfan Sulfate	37,000	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Endrin	1,800	µg/kg	NA	NA	0.341 U	**1.8**	NA	0.451 U	0.32 U	0.346 U	**3.37 J**
Endrin Aldehyde	1,800	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Endrin Ketone	1,800	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Gamma-BHC	520	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	**0.739**	0.346 U	0.313 U
Gamma-Chlordane	500	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	**3.94**	**3.34 J**	**2.2**
Heptachlor	110	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Heptachlor Epoxide	53	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Methoxychlor	31,000	µg/kg	NA	NA	0.341 U	0.472 U	NA	0.451 U	0.32 U	0.346 U	0.313 U
Toxaphene	440	µg/kg	NA	NA	17.1 U	23.6 U	NA	22.5 U	16 U	17.3 U	15.6 U
PCBs											
Aroclor 1262	- -	µg/kg	NA	NA	13.6 U	18.9 U	NA	18 U	25.6 U	27.7 U	62.6 U
Aroclor 1268	- -	µg/kg	NA	NA	13.6 U	18.9 U	NA	18 U	25.6 U	**93.8 J**	62.6 U
Aroclor-1016	390	µg/kg	NA	NA	13.6 U	18.9 U	NA	18 U	25.6 U	27.7 U	62.6 U
Aroclor-1221	170	µg/kg	NA	NA	13.6 U	18.9 U	NA	18 U	25.6 U	27.7 U	62.6 U
Aroclor-1232	170	µg/kg	NA	NA	13.6 U	18.9 U	NA	18 U	25.6 U	27.7 U	62.6 U
Aroclor-1242	220	µg/kg	NA	NA	13.6 U	18.9 U	NA	18 U	25.6 U	27.7 U	62.6 U
Aroclor-1248	220	µg/kg	NA	NA	13.6 U	18.9 U	NA	18 U	25.6 U	27.7 U	62.6 U
Aroclor-1254	110	µg/kg	NA	NA	**71.3**	18.9 U	NA	18 U	25.6 U	**237 J**	**190 J**
Aroclor-1260	220	µg/kg	NA	NA	**41.8**	18.9 U	NA	**46.7 J**	**858 J**	**253 J**	**205 J**
Total PCBs	- -	µg/kg	NA	NA	**113.1**	ND	NA	**46.7 J**	**858 J**	**583.8**	**395 J**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-208B-UI 0 - 1 11/19/09 SO-208B-UI (0-1')	SO-208B-UI 1 - 5 11/19/09 SO-208B-UI (1-5')	SO-209-UI 0 - 1 11/20/09 SO-209-UI (0-1')	SO-210B-UI 1.25 - 4 11/20/09 SO-210B-UI (1.25-4')	SO-211-UI 0 - 1 11/20/09 SO-211-UI (0-1')	SO-212-UI 1 - 4.5 11/20/09 SO-212-UI (1-4.5')	SO-213-U1 0 - 1 11/20/09 SO-213-U1-0-1'	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'
Pesticides											
4,4'-DDD	2,000	µg/kg	**3.18**	**1.3**	0.336 U	0.284 U	**53.7**	0.422 U [0.408 U]	NA	NA	NA
4,4'-DDE	1,000	µg/kg	R	**2.57**	**4.59 J**	0.284 U	**68.3**	0.422 U [0.408 U]	NA	NA	NA
4,4'-DDT	1,700	µg/kg	R	**3.75**	**15.6 J**	0.284 U	R	0.422 U [0.408 U]	NA	NA	NA
Aldrin	29	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
alpha-BHC	77	µg/kg	0.334 U	0.328 U	**1.25**	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
alpha-Chlordane	500	µg/kg	**2.12**	**1.02**	**1.29 J**	0.284 U	**19.5 J**	0.422 U [0.408 U]	NA	NA	NA
beta-BHC	270	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Delta-BHC	270	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Dieldrin	0.032	µg/kg	**16.8**	**1.29**	**6.85**	0.284 U	**221**	**0.422 UJ [1.2 J]**	NA	NA	NA
Endosulfan I	37,000	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Endosulfan II	37,000	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Endosulfan Sulfate	37,000	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [2.04 U]	NA	NA	NA
Endrin	1,800	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Endrin Aldehyde	1,800	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Endrin Ketone	1,800	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Gamma-BHC	520	µg/kg	0.334 U	**0.708 J**	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Gamma-Chlordane	500	µg/kg	1.67 U	**3.24 J**	**2.28**	0.284 U	**13.3**	0.422 U [0.408 U]	NA	NA	NA
Heptachlor	110	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Heptachlor Epoxide	53	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Methoxychlor	31,000	µg/kg	0.334 U	0.328 U	0.336 U	0.284 U	0.383 U	0.422 U [0.408 U]	NA	NA	NA
Toxaphene	440	µg/kg	16.7 U	16.4 U	16.8 U	14.2 U	19.2 U	21.1 U [20.4 U]	NA	NA	NA
PCBs											
Aroclor 1262	- -	µg/kg	13.3 U	26.2 U	67.3 U	56.8 U	76.7 U	84.5 U [16.3 U]	NA	NA	NA
Aroclor 1268	- -	µg/kg	**33 J**	26.2 U	67.3 U	56.8 U	**196 J**	84.5 U [16.3 U]	NA	NA	NA
Aroclor-1016	390	µg/kg	13.3 U	26.2 U	67.3 U	56.8 U	76.7 U	84.5 U [16.3 U]	NA	NA	NA
Aroclor-1221	170	µg/kg	13.3 U	26.2 U	67.3 U	56.8 U	76.7 U	84.5 U [16.3 U]	NA	NA	NA
Aroclor-1232	170	µg/kg	13.3 U	26.2 U	67.3 U	56.8 U	76.7 U	84.5 U [16.3 U]	NA	NA	NA
Aroclor-1242	220	µg/kg	**240 J**	**138 J**	67.3 U	56.8 U	76.7 U	84.5 U [16.3 U]	NA	NA	NA
Aroclor-1248	220	µg/kg	13.3 U	26.2 U	67.3 U	56.8 U	76.7 U	84.5 U [16.3 U]	NA	NA	NA
Aroclor-1254	110	µg/kg	**257 J**	26.2 U	67.3 U	56.8 U	**1,340 J**	84.5 U [16.3 U]	NA	NA	NA
Aroclor-1260	220	µg/kg	**146 J**	26.2 U	**334 J**	56.8 U	**1,260 J**	84.5 U [16.3 U]	NA	NA	NA
Total PCBs	- -	µg/kg	**676 J**	**138 J**	**334 J**	ND	**2,796 J**	ND [ND]	NA	NA	NA

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'	SO-223F-UI 11 - 12 11/23/09 SO-223F-UI-11-12'
Pesticides										
4,4'-DDD	2,000	µg/kg	NA	**7.31 J**	**1.82**	**7.41**	**29.7 J**	0.319 U	**6.15**	**1.63**
4,4'-DDE	1,000	µg/kg	NA	**6.4 J**	0.361 U	**3.79**	**42.3 J**	0.319 U	R	0.278 U
4,4'-DDT	1,700	µg/kg	NA	R	0.361 U	0.318 U	0.358 U	0.319 U	R	0.278 U
Aldrin	29	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
alpha-BHC	77	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	**0.607**
alpha-Chlordane	500	µg/kg	NA	**7.46 J**	**1.6 J**	**3.16**	**9.55 J**	0.319 U	**3.07**	0.278 U
beta-BHC	270	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Delta-BHC	270	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Dieldrin	0.032	µg/kg	NA	**292 J**	**118 J**	**56.5**	**426 J**	0.319 U	**40.2 J**	**1.82**
Endosulfan I	37,000	µg/kg	NA	**4.12 J**	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Endosulfan II	37,000	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	**7.54 J**	**0.504**
Endosulfan Sulfate	37,000	µg/kg	NA	0.844 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Endrin	1,800	µg/kg	NA	0.422 UJ	**2.72 J**	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Endrin Aldehyde	1,800	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Endrin Ketone	1,800	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Gamma-BHC	520	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Gamma-Chlordane	500	µg/kg	NA	**6.26 J**	**1.21**	**3.07**	**9.75 J**	0.319 U	**1.35 J**	0.278 U
Heptachlor	110	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Heptachlor Epoxide	53	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Methoxychlor	31,000	µg/kg	NA	0.422 UJ	0.361 U	0.318 U	0.358 U	0.319 U	0.34 U	0.278 U
Toxaphene	440	µg/kg	NA	21.1 UJ	18 U	15.9 U	17.9 U	16 U	17 U	13.9 U
PCBs										
Aroclor 1262	- -	µg/kg	NA	33.8 U	14.4 U	12.7 U	14.3 U	12.8 U	27.2 U	11.1 U
Aroclor 1268	- -	µg/kg	NA	33.8 U	14.4 U	12.7 U	14.3 U	12.8 U	27.2 U	11.1 U
Aroclor-1016	390	µg/kg	NA	33.8 U	14.4 U	12.7 U	14.3 U	12.8 U	27.2 U	11.1 U
Aroclor-1221	170	µg/kg	NA	33.8 U	14.4 U	12.7 U	14.3 U	12.8 U	27.2 U	11.1 U
Aroclor-1232	170	µg/kg	NA	33.8 U	14.4 U	12.7 U	14.3 U	12.8 U	27.2 U	11.1 U
Aroclor-1242	220	µg/kg	NA	33.8 U	14.4 U	12.7 U	14.3 U	12.8 U	27.2 U	**38.6**
Aroclor-1248	220	µg/kg	NA	33.8 U	14.4 U	12.7 U	14.3 U	12.8 U	27.2 U	11.1 U
Aroclor-1254	110	µg/kg	NA	**1,330 J**	**101 J**	**135 J**	**465 J**	12.8 U	**363**	**16.5 J**
Aroclor-1260	220	µg/kg	NA	**1,470 J**	**144 J**	**171 J**	**468 J**	12.8 U	**213**	11.1 U
Total PCBs	- -	µg/kg	NA	**2,800 J**	**245 J**	**306 J**	**933 J**	ND	**576**	**55.1 J**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-224A-UI	SO-225A-UI	SO-225A-UI	SO-226A-UI	SO-227B-UI	SO-228-UI	SO-W05-DF	SO-W05-DF
Sample Depth (Feet):			1 - 5	0 - 1	1.5 - 5	6 - 8	1 - 5	12 - 14	0 - 1	0 - 1
Date Collected:			11/23/09	11/24/09	11/24/09	11/24/09	11/24/09	11/24/09	08/26/03	09/20/03
Sample Name:	PAL	Units	SO-224A-UI-1-5'	SO-225A-UI-0-1'	SO-225A-UI-1.5-5'	SO-226A-UI-6-8'	SO-227B-UI-1-5'	SO-228-UI-12-14'	SO-W05-DF	SO-W05-DFb
Pesticides										
4,4'-DDD	2,000	µg/kg	4.84 U	**5.1 [4.41]**	**82.5 J**	0.6 U	**1.43 J**	**0.414**	NA	17 U
4,4'-DDE	1,000	µg/kg	4.84 U	**R [6.44 J]**	**46.3 J**	0.6 U	0.293 U	0.288 U	NA	**43**
4,4'-DDT	1,700	µg/kg	4.84 U	R [R]	R	0.6 U	0.293 U	0.288 U	NA	17 U
Aldrin	29	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	1.7 U
alpha-BHC	77	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	1.7 U
alpha-Chlordane	500	µg/kg	**17.7 J**	**3.14 [3.21]**	**11.1 J**	0.6 U	**0.644**	0.288 U	NA	8.7 U
beta-BHC	270	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	8.7 U
Delta-BHC	270	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	1.7 U
Dieldrin	0.032	µg/kg	**204 J**	**98.9 [95.2 J]**	**139 J**	**2.21 J**	**6.24**	**0.879 J**	NA	17 U
Endosulfan I	37,000	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	8.7 U
Endosulfan II	37,000	µg/kg	4.84 U	0.29 U [0.3 UJ]	0.411 U	0.6 U	0.293 U	0.288 U	NA	3.4 U
Endosulfan Sulfate	37,000	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	17 U
Endrin	1,800	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	3.4 U
Endrin Aldehyde	1,800	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	17 U
Endrin Ketone	1,800	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	3.4 U
Gamma-BHC	520	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	1.7 U
Gamma-Chlordane	500	µg/kg	4.84 U	**2.11 [2.56 J]**	**12.5 J**	0.6 U	**0.35**	0.288 U	NA	8.7 U
Heptachlor	110	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	1.7 U
Heptachlor Epoxide	53	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	1.7 U
Methoxychlor	31,000	µg/kg	4.84 U	0.29 U [0.3 U]	0.411 U	0.6 U	0.293 U	0.288 U	NA	17 U
Toxaphene	440	µg/kg	242 U	14.5 U [15 U]	20.5 U	30 U	14.7 U	14.4 U	NA	170 U
PCBs										
Aroclor 1262	- -	µg/kg	96.8 U	23.2 U [24 U]	32.9 U	48 U	23.5 U	23 U	NA	NA
Aroclor 1268	- -	µg/kg	96.8 U	**44.6 J [24 U]**	**147 J**	48 U	23.5 U	23 U	NA	NA
Aroclor-1016	390	µg/kg	96.8 U	23.2 U [24 U]	32.9 U	48 U	23.5 U	23 U	NA	34 U
Aroclor-1221	170	µg/kg	96.8 U	23.2 U [24 U]	32.9 U	48 U	23.5 U	23 U	NA	69 U
Aroclor-1232	170	µg/kg	96.8 U	23.2 U [24 U]	32.9 U	48 U	23.5 U	23 U	NA	34 U
Aroclor-1242	220	µg/kg	**2,440 J**	23.2 U [24 U]	32.9 U	48 U	23.5 U	**30.6**	NA	34 U
Aroclor-1248	220	µg/kg	96.8 U	23.2 U [24 U]	32.9 U	48 U	23.5 U	23 U	NA	**6,200 J**
Aroclor-1254	110	µg/kg	**5,330 J**	**259 J [221]**	**539 J**	48 U	23.5 U	23 U	NA	34 U
Aroclor-1260	220	µg/kg	**4,570 J**	**150 J [153]**	**575 J**	48 U	23.5 U	23 U	NA	34 U
Total PCBs	- -	µg/kg	**12,340 J**	**453.6 J [374]**	**1,261 J**	ND	ND	**30.6**	NA	**6,200 J**

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W06-DF 0 - 1 08/26/03 SO-W06-DF	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF
Pesticides												
4,4'-DDD	2,000	µg/kg	NA	3.4 UJ	3.9 U	NA	**7.5**	NA	3.8 U	NA	3.8 U	NA
4,4'-DDE	1,000	µg/kg	NA	3.4 UJ	R	NA	**12**	NA	**4.4 J**	NA	3.8 U	NA
4,4'-DDT	1,700	µg/kg	NA	3.4 UJ	20 U	NA	**46**	NA	R	NA	3.8 U	NA
Aldrin	29	µg/kg	NA	1.7 UJ	2 U	NA	2.1 U	NA	1.9 U	NA	2 U	NA
alpha-BHC	77	µg/kg	NA	**1.7 J**	2 U	NA	2.1 U	NA	1.9 U	NA	2 U	NA
alpha-Chlordane	500	µg/kg	NA	**5.7 J**	10 U	NA	**1.8 J**	NA	1.9 U	NA	2 U	NA
beta-BHC	270	µg/kg	NA	1.7 UJ	2 U	NA	2.1 U	NA	1.9 U	NA	2 U	NA
Delta-BHC	270	µg/kg	NA	1.7 UJ	2 U	NA	2.1 U	NA	1.9 U	NA	2 U	NA
Dieldrin	0.032	µg/kg	NA	3.4 UJ	3.9 U	NA	**55**	NA	**32 J**	NA	**12**	NA
Endosulfan I	37,000	µg/kg	NA	1.7 UJ	2 U	NA	2.1 U	NA	1.9 U	NA	2 U	NA
Endosulfan II	37,000	µg/kg	NA	3.4 UJ	3.9 U	NA	4 U	NA	3.8 U	NA	3.8 U	NA
Endosulfan Sulfate	37,000	µg/kg	NA	3.4 UJ	20 U	NA	**6 J**	NA	3.8 U	NA	3.8 U	NA
Endrin	1,800	µg/kg	NA	3.4 UJ	3.9 U	NA	4 U	NA	3.8 U	NA	3.8 U	NA
Endrin Aldehyde	1,800	µg/kg	NA	3.4 UJ	**58 J**	NA	4 U	NA	3.8 U	NA	3.8 U	NA
Endrin Ketone	1,800	µg/kg	NA	3.4 UJ	3.9 U	NA	4 U	NA	R	NA	3.8 U	NA
Gamma-BHC	520	µg/kg	NA	1.7 UJ	2 U	NA	2.1 U	NA	1.9 U	NA	2 U	NA
Gamma-Chlordane	500	µg/kg	NA	**7.2 J**	R	NA	R	NA	1.9 U	NA	2 U	NA
Heptachlor	110	µg/kg	NA	1.7 UJ	2 U	NA	2.1 U	NA	1.9 U	NA	2 U	NA
Heptachlor Epoxide	53	µg/kg	NA	1.7 UJ	2 U	NA	2.1 U	NA	1.9 U	NA	2 U	NA
Methoxychlor	31,000	µg/kg	NA	17 UJ	20 U	NA	21 U	NA	19 U	NA	20 U	NA
Toxaphene	440	µg/kg	NA	170 UJ	200 U	NA	210 U	NA	190 U	NA	200 U	NA
PCBs												
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	NA	34 UJ	39 U	NA	40 U	NA	38 U	NA	38 U	NA
Aroclor-1221	170	µg/kg	NA	69 UJ	79 U	NA	82 U	NA	77 U	NA	77 U	NA
Aroclor-1232	170	µg/kg	NA	34 UJ	39 U	NA	40 U	NA	38 U	NA	38 U	NA
Aroclor-1242	220	µg/kg	NA	34 UJ	39 U	NA	40 U	NA	38 U	NA	38 U	NA
Aroclor-1248	220	µg/kg	NA	34 UJ	39 U	NA	40 U	NA	38 U	NA	38 U	NA
Aroclor-1254	110	µg/kg	NA	**240 J**	**2,500**	NA	**150 J**	NA	38 U	NA	38 U	NA
Aroclor-1260	220	µg/kg	NA	34 UJ	39 U	NA	40 U	NA	38 U	NA	38 U	NA
Total PCBs	- -	µg/kg	NA	**240 J**	**2,500**	NA	**150 J**	NA	ND	NA	ND	NA

TABLE 4-16
SOIL RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PUTIAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W10-DF	SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W10-DFb	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
Pesticides												
4,4'-DDD	2,000	µg/kg	**2.6 J**	NA	20 U	NA	R	**3 J**	**6 J**	**4.3 J**	**26 J**	R
4,4'-DDE	1,000	µg/kg	3.9 U	NA	**12 J**	NA	**3.6 J**	**5.9 J**	**5.8 J**	4.1 U	42 U	**4.4 J**
4,4'-DDT	1,700	µg/kg	**52**	NA	**20 J**	NA	**7.9 J**	R	4.1 U	4.1 U	4.2 U	4.7 U
Aldrin	29	µg/kg	2 U	NA	11 U	NA	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.4 UJ
alpha-BHC	77	µg/kg	2 U	NA	11 U	NA	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.4 UJ
alpha-Chlordane	500	µg/kg	2 U	NA	**560 J**	NA	**3.6 J**	**2.3 J**	**2 J**	2.1 U	2.2 U	2.4 U
beta-BHC	270	µg/kg	2 U	NA	11 U	NA	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.4 UJ
Delta-BHC	270	µg/kg	2 U	NA	11 U	NA	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.4 UJ
Dieldrin	0.032	µg/kg	3.9 U	NA	200 U	NA	**7.9 J**	**4.7 J**	**11 J**	**7.7 J**	**3.1 J**	**26 J**
Endosulfan I	37,000	µg/kg	2 U	NA	**13 J**	NA	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.4 U
Endosulfan II	37,000	µg/kg	3.9 U	NA	20 U	NA	4.3 U	4 U	4.1 U	4.1 U	4.2 U	4.7 U
Endosulfan Sulfate	37,000	µg/kg	3.9 U	NA	20 U	NA	**7.5 J**	**3 J**	R	R	42 U	4.7 U
Endrin	1,800	µg/kg	3.9 U	NA	20 U	NA	4.3 U	4 U	4.1 U	4.1 U	4.2 U	4.7 U
Endrin Aldehyde	1,800	µg/kg	3.9 U	NA	20 U	NA	4.3 U	4 U	R	4.1 U	4.2 U	4.7 U
Endrin Ketone	1,800	µg/kg	3.9 U	NA	20 U	NA	**6.3 J**	4 U	R	4.1 U	4.2 U	4.7 U
Gamma-BHC	520	µg/kg	2 U	NA	11 U	NA	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.4 UJ
Gamma-Chlordane	500	µg/kg	2 U	NA	**600**	NA	R	R	R	R	22 U	2.4 U
Heptachlor	110	µg/kg	2 U	NA	11 U	NA	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.4 UJ
Heptachlor Epoxide	53	µg/kg	2 U	NA	110 U	NA	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.4 U
Methoxychlor	31,000	µg/kg	20 U	NA	110 U	NA	22 U	R	21 U	21 U	22 U	**28 J**
Toxaphene	440	µg/kg	200 U	NA	1,100 U	NA	220 U	210 U	210 U	210 U	220 U	240 U
PCBs												
Aroclor 1262	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	- -	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	390	µg/kg	39 U	NA	200 U	NA	43 U	40 U	41 U	41 U	42 U	47 U
Aroclor-1221	170	µg/kg	79 U	NA	410 U	NA	88 U	82 U	83 U	83 U	86 U	96 U
Aroclor-1232	170	µg/kg	39 U	NA	200 U	NA	43 U	40 U	41 U	41 U	42 U	47 U
Aroclor-1242	220	µg/kg	39 U	NA	200 U	NA	43 U	40 U	41 U	41 U	42 U	47 U
Aroclor-1248	220	µg/kg	39 U	NA	200 U	NA	43 U	40 U	41 U	41 U	42 U	47 U
Aroclor-1254	110	µg/kg	39 U	NA	200 U	NA	43 U	40 U	41 U	41 U	42 U	47 U
Aroclor-1260	220	µg/kg	39 U	NA	200 U	NA	43 U	**84 J**	**220 J**	**140 J**	**270 J**	**680 J**
Total PCBs	- -	µg/kg	ND	NA	ND	NA	ND	**84 J**	**220 J**	**140 J**	**270 J**	**680 J**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LLF-002	LLF-003	LLF-004	LNP-007	LNP-008	LOU-001	LQW-009	LQW-010	LQW-011	LQW-012	LQW-012
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	11/30/05	12/01/05	12/02/05	11/30/05	12/02/05
Sample Name:	PAL	Units	LLF-002(0-1)	LLF-003(0-1)	LLF-004(0-1)	LNP-007(0-1)	LNP-008(0-1)	LOU-001(0-1)	LQW-009 (0-1)	LQW-010 (0-1)	LQW-011	LQW-012 (0-1)	LQW-012B
Metals and Cyanide													
Aluminum	50	mg/kg	NA	NA	NA	NA	NA	NA	**8,800 [8,500]**	**12,000**	**9,900**	**11,000**	NA
Antimony	3.1	mg/kg	NA	NA	NA	NA	NA	NA	**0.59 J [0.58 J]**	**1.7 J**	**1.3 J**	**2.2 J**	NA
Arsenic	0.27	mg/kg	NA	NA	NA	NA	NA	NA	**10 [8.8]**	**26**	**20**	**26**	NA
Barium	1,500	mg/kg	NA	NA	NA	NA	NA	NA	**39 [36]**	**120**	**120**	**87**	NA
Beryllium	0.4	mg/kg	NA	NA	NA	NA	NA	NA	**0.45 [0.46]**	**0.58**	**0.43**	**0.44**	NA
Cadmium	0.36	mg/kg	NA	NA	NA	NA	NA	NA	**2.3 [2.4]**	**1.9**	**1.3**	**1.6**	NA
Calcium	- -	mg/kg	NA	NA	NA	NA	NA	NA	**640 J [620 J]**	**1,000 J**	**1,000 J**	**1,200 J**	NA
Chromium	0.4	mg/kg	NA	NA	NA	NA	NA	NA	**160 [140]**	**440**	**260**	**560**	NA
Cobalt	2.3	mg/kg	NA	NA	NA	NA	NA	NA	**3.6 [3.4]**	**5**	**4.2**	**4.4**	NA
Copper	50	mg/kg	NA	NA	NA	NA	NA	NA	**120 [110]**	**280**	**170**	**230**	NA
Cyanide	160	mg/kg	NA	NA	NA	NA	NA	NA	**0.38 U [0.57]**	**2.4**	**1.7**	**0.8**	NA
Iron	200	mg/kg	NA	NA	NA	NA	NA	NA	**14,000 [13,000]**	**28,000**	**25,000**	**22,000**	NA
Lead	11	mg/kg	NA	NA	NA	NA	NA	NA	**200 [180]**	**460**	**320**	**410**	NA
Magnesium	- -	mg/kg	NA	NA	NA	NA	NA	NA	**2,200 [2,200]**	**3,400**	**3,200**	**3,300**	NA
Manganese	100	mg/kg	NA	NA	NA	NA	NA	NA	**120 J [120 J]**	**190 J**	**200 J**	**170 J**	NA
Mercury	0.00051	mg/kg	NA	NA	NA	NA	NA	NA	**0.69 [0.61]**	**1.6**	**1.2**	**2.4**	NA
Nickel	30	mg/kg	NA	NA	NA	NA	NA	NA	**12 [12]**	**19**	**14**	**16**	NA
Potassium	- -	mg/kg	NA	NA	NA	NA	NA	NA	**570 J [560 J]**	**1,400 J**	**1,300 J**	**1,000 J**	NA
Selenium	0.21	mg/kg	NA	NA	NA	NA	NA	NA	**0.96 [0.97]**	**1.5**	**1.1**	**2.4**	NA
Silver	2	mg/kg	NA	NA	NA	NA	NA	NA	**1.2 [1.2]**	**5.5**	**2.8**	**2.9**	NA
Sodium	- -	mg/kg	NA	NA	NA	NA	NA	NA	**37 [38]**	**58**	**51**	**100**	NA
Thallium	0.51	mg/kg	NA	NA	NA	NA	NA	NA	**0.14 [0.14]**	**0.22**	**0.19**	**0.26**	NA
Vanadium	2	mg/kg	NA	NA	NA	NA	NA	NA	**23 [20]**	**39**	**30**	**41**	NA
Zinc	8.5	mg/kg	NA	NA	NA	NA	NA	NA	**74 [71]**	**120**	**89**	**89**	NA

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-013	LQW-014	LQW-015	LQW-015	LQW-016	LQW-016	LQW-017	LQW-017	LQW-018	LQW-018	LUI-005
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	
Date Collected:			12/01/05	12/01/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	12/08/05
Sample Name:	PAL	Units	LQW-013 (0-1)	LQW-014 (0-1)	LQW-015 (0-1)	LQW-015B	LQW-016 (0-1)	LQW-016B	LQW-017 (0-1)	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005
Metals and Cyanide													
Aluminum	50	mg/kg	**7,100**	**5,000**	**5,100**	NA	**7,000**	NA	**7,800**	NA	**4,200**	NA	NA
Antimony	3.1	mg/kg	**0.77 J**	**0.45 J**	**0.1 J**	NA	**0.28 J**	NA	0.1 UJ	NA	**0.21 J**	NA	NA
Arsenic	0.27	mg/kg	**11**	**5.4**	**4.7**	NA	**5.6**	NA	**4.5**	NA	**7.6**	NA	NA
Barium	1,500	mg/kg	**50**	**40**	**19**	NA	**36**	NA	**35**	NA	**18**	NA	NA
Beryllium	0.4	mg/kg	**0.34**	**0.27**	**0.21**	NA	**0.34**	NA	**0.27**	NA	**0.17**	NA	NA
Cadmium	0.36	mg/kg	**1.6**	**1.4**	**0.15**	NA	**2.3**	NA	**0.56**	NA	**0.13**	NA	NA
Calcium	- -	mg/kg	**1,100 J**	**640 J**	**940 J**	NA	**730 J**	NA	**1,300 J**	NA	**1,300 J**	NA	NA
Chromium	0.4	mg/kg	**140**	**60**	**14**	NA	**48**	NA	**23**	NA	**16**	NA	NA
Cobalt	2.3	mg/kg	**3.2**	**2.5**	**3.2**	NA	**3.1**	NA	**6.3**	NA	**2.3**	NA	NA
Copper	50	mg/kg	**120**	**73**	**17**	NA	**46**	NA	**22**	NA	**21**	NA	NA
Cyanide	160	mg/kg	**0.93**	**0.31**	0.29 U	NA	**0.36**	NA	0.28 U	NA	0.27 U	NA	NA
Iron	200	mg/kg	**17,000**	**9,800**	**8,900**	NA	**11,000**	NA	**11,000**	NA	**5,200**	NA	NA
Lead	11	mg/kg	**190**	**100**	**16**	NA	**68**	NA	**11**	NA	**27**	NA	NA
Magnesium	- -	mg/kg	**2,300**	**1,600**	**1,700**	NA	**1,600**	NA	**3,900**	NA	**1,400**	NA	NA
Manganese	100	mg/kg	**140 J**	**130 J**	**150 J**	NA	**150 J**	NA	**260 J**	NA	**110 J**	NA	NA
Mercury	0.00051	mg/kg	**0.54**	**0.26**	**0.05**	NA	**0.22**	NA	**0.021**	NA	**0.054**	NA	NA
Nickel	30	mg/kg	**11**	**8.6**	**8.4**	NA	**10**	NA	**22**	NA	**5**	NA	NA
Potassium	- -	mg/kg	**900 J**	**650 J**	**690 J**	NA	**380 J**	NA	**1,200 J**	NA	**560 J**	NA	NA
Selenium	0.21	mg/kg	**0.68**	**0.26**	**0.094**	NA	**0.56**	NA	0.11 U	NA	**0.59**	NA	NA
Silver	2	mg/kg	**2.1**	**1**	**0.066**	NA	**0.5**	NA	**0.074**	NA	**0.081**	NA	NA
Sodium	- -	mg/kg	**42**	**29**	**21**	NA	**30**	NA	**29**	NA	**45**	NA	NA
Thallium	0.51	mg/kg	**0.13**	**0.08**	**0.064**	NA	**0.1**	NA	**0.095**	NA	**0.16**	NA	NA
Vanadium	2	mg/kg	**22**	**12**	**48**	NA	**16**	NA	**18**	NA	**9.4**	NA	NA
Zinc	8.5	mg/kg	**72**	**59**	**27**	NA	**62**	NA	**49**	NA	**19**	NA	NA

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LUI-006	SEA-601	SEA-601	SEA-601	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-602B
Sample Depth (Feet):				4 - 6	8 - 10	14 - 16	10 - 12	14 - 16	18 - 20	24 - 26	30 - 32
Date Collected:			12/08/05	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03
Sample Name:	PAL	Units	LUI-006	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF	SSO-SPT5-15-LF	SSO-SPT5-20-LF	SSO-SPT5-25-LF	SSO-SPT5-30-LF
Metals and Cyanide											
Aluminum	50	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	3.1	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.27	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,500	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.4	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.36	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.4	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	2.3	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	50	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	160	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	200	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	11	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	100	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00051	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	30	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.21	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.51	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	2	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	8.5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-603	SEA-603	SEA-603	SEA-604	SEA-604	SEA-604	SEA-605	SEA-605
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	8 - 10	14 - 16	5 - 7	9 - 11
Date Collected:			09/21/03	09/21/03	09/21/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03
Sample Name:	PAL	Units	SSO-SPT2-5-LF	SSO-SPT2-10-LF	SSO-SPT2-15-LF	SSO-SPT3-5-LF	SSO-SPT3-10-LF	SSO-SPT3-15-LF	SSO-SPT4-5-LF	SSO-SPT4-10-LF
Metals and Cyanide										
Aluminum	50	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	3.1	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.27	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,500	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.4	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.36	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.4	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	2.3	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Copper	50	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	160	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Iron	200	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Lead	11	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	100	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00051	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	30	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.21	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.51	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	2	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	8.5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-605	SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-607	SEA-608
Sample Depth (Feet):			15 - 17	4 - 6	8 - 10	14 - 16	4 - 6	10 - 12	14 - 16	4 - 6
Date Collected:			09/18/03	09/21/03	09/21/03	09/21/03	09/19/03	09/19/03	09/19/03	09/19/03
Sample Name:	PAL	Units	SSO-SPT4-15-LF	SSO-SPT8-5-NP	SSO-SPT8-10-NP	SSO-SPT8-15-NP	SSO-SPT6-5-UI	SSO-SPT6-10-UI	SSO-SPT6-15-UI	SSO-SPT7-5-UI
Metals and Cyanide										
Aluminum	50	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	3.1	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.27	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,500	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.4	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.36	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.4	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	2.3	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Copper	50	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	160	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Iron	200	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Lead	11	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	100	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.00051	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	30	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.21	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.51	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	2	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	8.5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-608	SEA-608	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI
Sample Depth (Feet):			8 - 10	14 - 16	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/19/03	09/19/03	08/18/03	08/18/03	08/18/03	08/18/03	08/18/03	08/19/03	08/19/03	08/19/03	08/19/03	08/20/03
Sample Name:	PAL	Units	SSO-SPT7-10-UI	SSO-SPT7-15-UI	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI
Metals and Cyanide														
Aluminum	50	mg/kg	NA	NA	**4,350**	**5,530**	**7,020**	**5,120 [4,990]**	**5,120**	**4,720**	**7,600**	**11,200**	**10,800**	**10,100**
Antimony	3.1	mg/kg	NA	NA	14 U	14 U	13 U	12 U [13 U]	14 U	12 U	13 U	16 U	14 U	15 U
Arsenic	0.27	mg/kg	NA	NA	**3.3**	**5.3**	**7.4**	**7.4 [6.3]**	**5.2**	**5.3**	**22.5**	**20.5**	**18.6**	**26.1**
Barium	1,500	mg/kg	NA	NA	45 U	**51.6**	**71.2**	**61.1 [53.1]**	45 U	40 U	**106**	**182**	**136**	**183**
Beryllium	0.4	mg/kg	NA	NA	**0.19 J**	**0.27 J**	**0.22 J**	**0.19 J [0.22 J]**	**0.27 J**	**0.22 J**	**0.35 J**	**0.89 J**	**0.76 J**	**0.42 J**
Cadmium	0.36	mg/kg	NA	NA	**1.5**	**4**	**1.7**	**1 [1 J]**	**1.7**	**0.92 J**	**1.8**	**10**	**9.3**	**3.1**
Calcium	- -	mg/kg	NA	NA	**673 J**	**683 J**	**1,010 J**	**559 J [552 J]**	**754 J**	**557 J**	**833 J**	**2,210**	**2,060**	**938 J**
Chromium	0.4	mg/kg	NA	NA	**36.4 J**	**49.3 J**	**94.9 J**	**95.6 J [75.7 J]**	**59.6 J**	**60.8 J**	**370 J**	**170 J**	**208 J**	**354 J**
Cobalt	2.3	mg/kg	NA	NA	**2.8 J**	**3.5 J**	**4.4 J**	**3.5 J [3.7 J]**	**4.2 J**	**2.6 J**	**3.4 J**	**10.7 J**	**10.7 J**	**5.3 J**
Copper	50	mg/kg	NA	NA	**41.1**	**71.4**	**91.1**	**103 [97.8]**	**77.3**	**59.9**	**184**	**246**	**232**	**208**
Cyanide	160	mg/kg	NA	NA	0.24 U	**0.26 J**	**0.32 J**	**0.38 J [0.64]**	**0.47 J**	**0.23 J**	**0.38 J**	**1.6**	**1.4**	**2.1**
Iron	200	mg/kg	NA	NA	**7,170**	**8,790**	**12,200**	**10,400 [9,560]**	**10,100**	**8,290**	**13,300**	**27,300**	**23,600**	**21,500**
Lead	11	mg/kg	NA	NA	**50.7 J**	**69.8 J**	**119 J**	**125 J [116 J]**	**100 J**	**99.4 J**	**281 J**	**255 J**	**267 J**	**342 J**
Magnesium	- -	mg/kg	NA	NA	**1,510**	**1,790**	**2,780**	**1,900 [1,820]**	**1,940**	**1,730**	**2,480**	**3,890**	**3,660**	**3,420**
Manganese	100	mg/kg	NA	NA	**487 J**	**234 J**	**170 J**	**144 J [159 J]**	**226 J**	**114 J**	**137 J**	**1,020 J**	**985 J**	**314 J**
Mercury	0.00051	mg/kg	NA	NA	**0.12**	**0.2**	**0.35**	**0.33 [0.44]**	**0.29**	**0.27**	**1.1**	**0.74**	**0.85**	**1.4**
Nickel	30	mg/kg	NA	NA	**10.4**	**12.3**	**13.3**	**8.4 [8.6 J]**	**10.8**	**7.8 J**	**11.8**	**35**	**32.9**	**15.9**
Potassium	- -	mg/kg	NA	NA	1,130 U	1,160 U	1,060 U	1,010 U [1,090 U]	1,130 U	1,000 U	1,080 U	1,360 U	**1,170**	**1,360**
Selenium	0.21	mg/kg	NA	NA	0.68 UJ	0.69 UJ	0.64 UJ	0.6 UJ [0.66 UJ]	0.68 UJ	0.6 UJ	0.65 UJ	0.82 UJ	0.7 UJ	0.77 UJ
Silver	2	mg/kg	NA	NA	2.3 U	2.3 U	2.1 U	2 U [2.2 U]	2.3 U	2 U	2.2 U	0.163 U	**4.4**	**4.9**
Sodium	- -	mg/kg	NA	NA	1,130 U	1,160 U	1,060 U	1,010 U [1,090 U]	1,130 U	1,000 U	**122 J**	1,360 U	1,160 U	1,290 U
Thallium	0.51	mg/kg	NA	NA	0.9 U	0.93 U	0.85 U	0.81 U [0.87 U]	0.9 U	0.8 U	0.86 U	1.1 U	0.93 U	1 U
Vanadium	2	mg/kg	NA	NA	**11.6**	**14.3**	**21.2**	**17 [13.9]**	**13.3**	**12.9**	**21.9**	**27.3**	**28.4**	**33.3**
Zinc	8.5	mg/kg	NA	NA	**72.7**	**87**	**82**	**54.2 [54.9]**	**80.8**	**59.9**	**89.3**	**300**	**243**	**116**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-011-UI	SO-012-UI	SO-013-UI	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/20/03	08/20/03	08/20/03	08/20/03	08/20/03	08/20/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03
Sample Name:	PAL	Units	SO-011-UI	SO-012-UI	SO-013-UI	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF
Metals and Cyanide														
Aluminum	50	mg/kg	**5,410**	**5,110**	**4,840**	**4,150**	**4,070**	**4,950**	**8,180**	**5,340**	**6,180**	**8,890**	**8,100**	**9,920**
Antimony	3.1	mg/kg	13 U	12 U	12 U	12 U	15 U	12 U	15 UJ	12 UJ	11 UJ	15 UJ	13 UJ	15 UJ
Arsenic	0.27	mg/kg	**8.6**	**4.3**	**4.3**	**8.4**	**2.9**	**7.1**	**12.9**	**4.3**	**7.1**	**16.2**	**9.4**	**11.2**
Barium	1,500	mg/kg	**61.4**	39 U	41 U	**61.9**	50 U	39 U	**103**	**59.3**	**90.1**	**152**	**89.6**	**99.5**
Beryllium	0.4	mg/kg	**0.31 J**	**0.26 J**	**0.26 J**	**0.3 J**	**0.15 J**	**0.18 J**	**0.64 J**	**0.18 J**	**0.2 J**	**0.69 J**	**0.35 J**	**0.77 J**
Cadmium	0.36	mg/kg	**2.3**	**2.7**	**2.5**	**3.6**	**0.31 J**	**0.43 J**	**6**	**1.4**	**4**	**12.4**	**3.7**	**3.6**
Calcium	- -	mg/kg	**744 J**	**601 J**	**473 J**	**789 J**	**336 J**	**429 J**	**1,430 J**	1,030 U	**1,220 J**	**1,810 J**	**2,710 J**	**1,570 J**
Chromium	0.4	mg/kg	**87.5 J**	**40.1 J**	**34.2 J**	**42.2 J**	**21.4 J**	**69.1 J**	**173**	**18.5**	**30.4**	**129**	**105**	**111**
Cobalt	2.3	mg/kg	**3.9 J**	**3.4 J**	**3.4 J**	**4 J**	**2 J**	**2.8 J**	12.3 U	10.3 U	9.1 U	12.5 U	10.8 U	12.9 U
Copper	50	mg/kg	**92.2**	**53.8**	**38.2**	**75.3**	**18.8**	**47.7**	**185**	**19.6**	**89**	**192**	**107**	**121**
Cyanide	160	mg/kg	**1.1**	**0.69**	**0.37 J**	**0.43 J**	0.24 U	0.2 U	**1.5**	**0.2 J**	**0.31 J**	**2.1**	**0.59**	**1**
Iron	200	mg/kg	**11,000**	**8,440**	**7,790**	**10,300**	**6,130**	**8,920**	**19,100**	**8,800**	**10,600**	**20,600**	**14,400**	**17,800**
Lead	11	mg/kg	**108 J**	**51.1 J**	**39 J**	**95.7 J**	**19.1 J**	**58.6 J**	**240**	**43.9**	**161**	**206**	**176**	**139**
Magnesium	- -	mg/kg	**2,030**	**1,730**	**1,640**	**1,610**	**1,380**	**1,810**	**2,850**	**2,190**	**2,320**	**3,010**	**3,690**	**3,440**
Manganese	100	mg/kg	**373 J**	**234 J**	**193 J**	**371 J**	**86.1 J**	**118 J**	**455**	**123**	**201**	**981**	**287**	**443**
Mercury	0.00051	mg/kg	**0.29**	**0.16**	**0.12**	**0.24**	**0.077**	**0.2**	**0.47 J**	**0.1**	**0.19**	**0.84 J**	**0.48 J**	**0.43**
Nickel	30	mg/kg	**11**	**10.1**	**9**	**13**	**4.6 J**	**6.4 J**	**22.4**	**9.5**	**13.5**	**35.8**	**19.6**	**19.2**
Potassium	- -	mg/kg	1,050 U	980 U	1,030 U	977 U	1,240 U	969 U	1,230 U	1,030 U	913 U	1,250 U	**1,320**	1,290 U
Selenium	0.21	mg/kg	0.63 UJ	0.59 UJ	0.62 UJ	0.59 UJ	0.74 UJ	0.58 UJ	0.74 UJ	0.62 UJ	0.55 UJ	0.75 UJ	0.65 UJ	0.77 UJ
Silver	2	mg/kg	2.1 U	2 U	2.1 U	2 U	2.5 U	1.9 U	**4.1**	**2.9**	1.8 U	**4.5**	**2.3**	**2.9**
Sodium	- -	mg/kg	1,050 U	980 U	1,030 U	977 U	1,240 U	969 U	1,230 U	1,030 U	913 U	1,250 U	1,080 U	1,290 U
Thallium	0.51	mg/kg	0.84 U	0.78 U	0.82 U	0.78 U	0.99 U	0.77 U	0.98 U	0.83 U	0.73 U	1 U	0.86 U	1 U
Vanadium	2	mg/kg	**14.1**	**11.5**	**10.2 J**	**11.1**	**8.7 J**	**12.5**	**22.6**	**14**	**15.9**	**21.3**	**19.3**	**22.9**
Zinc	8.5	mg/kg	**69.9**	**78.2**	**67.3**	**121**	**34.2**	**39.9**	**169**	**97**	**212**	**314**	**203**	**134**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-022-LF	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-033-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	1 - 5
Date Collected:			08/21/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/28/03	09/05/03	09/05/03
Sample Name:	PAL	Units	SO-FD-03	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-W14-NP
Metals and Cyanide														
Aluminum	50	mg/kg	**10,400**	**7,830**	**5,010**	**4,580**	**11,400**	**4,970**	**14,600**	**9,440**	**9,810**	**8,940**	**5,020**	**4,080**
Antimony	3.1	mg/kg	14 UJ	14 UJ	12 UJ	12 UJ	16 UJ	12 UJ	21 UJ	18 UJ	16 UJ	15 UJ	14 UJ	14 UJ
Arsenic	0.27	mg/kg	**11.3**	**11.7**	**11.5**	**5.5**	**19.8**	**8.3**	**22.9**	**16.6**	**17**	**15.7**	**8.1**	**5.7**
Barium	1,500	mg/kg	**99.7**	**135**	**87.8**	**95.9**	**208**	**88.8**	**351**	**178**	**154**	**139**	**546**	**1,050**
Beryllium	0.4	mg/kg	**0.79 J**	**0.6 J**	**0.36 J**	**0.32 J**	**0.94 J**	**0.37 J**	**1.2 J**	**0.74 J**	**0.8 J**	**0.7 J**	**0.29 J**	**0.29 J**
Cadmium	0.36	mg/kg	**3.8**	**8.7**	**5.4**	**3.1**	**16.3**	**4.6**	**23.5**	**12.2**	**10.6**	**8.1**	**1.5**	**1.5**
Calcium	- -	mg/kg	**1,590 J**	**1,720 J**	**1,230 J**	**1,220 J**	**2,250 J**	**1,460 J**	**2,500 J**	**2,230 J**	**1,810 J**	**1,450 J**	**12,500**	**38,700**
Chromium	0.4	mg/kg	**120**	**96.8**	**56.2**	**56.5**	**168**	**48.4**	**236**	**138**	**160**	**157**	**36.7 J**	**13.5 JEB**
Cobalt	2.3	mg/kg	11.9 U	11.8 U	9.7 U	10.1 U	13.3 U	10.3 U	17.3 U	14.9 U	13.4 U	12.5 U	12 U	11 U
Copper	50	mg/kg	**127**	**167**	**98.4**	**97.4**	**280**	**90.3**	**377**	**215**	**235**	**206**	**831**	**58.4**
Cyanide	160	mg/kg	**0.92**	**1.2**	**0.59**	**0.49 J**	**1.4**	**1.2**	**1.6**	**1.1**	**1.4**	**1**	0.22 U	**0.6**
Iron	200	mg/kg	**19,100**	**18,800**	**12,400**	**10,100**	**27,700**	**12,400**	**32,000**	**23,700**	**24,200**	**21,400**	**14,500**	**25,900**
Lead	11	mg/kg	**151**	**178**	**103**	**98.2**	**263**	**97**	**344**	**222**	**233**	**233**	**2,380**	**5,460**
Magnesium	- -	mg/kg	**3,660**	**2,680**	**1,770**	**1,620**	**3,750**	**1,850**	**4,630**	**3,130**	**3,320**	**3,010**	**2,720**	**4,270**
Manganese	100	mg/kg	**483**	**965**	**484**	**169**	**773**	**643**	**635**	**341**	**1,050**	**933**	**209 J**	**218 J**
Mercury	0.00051	mg/kg	**0.38**	**0.41**	**0.16 J**	**0.16**	**0.61 J**	**0.21 J**	**0.9**	**0.51**	**0.48 J**	**0.41**	**0.45 J**	**0.31 J**
Nickel	30	mg/kg	**20.3**	**28.7**	**17.8**	**14**	**58.9**	**18.6**	**55.1**	**33.2**	**36.3**	**28.8**	**10.9**	9 U
Potassium	- -	mg/kg	1,190 U	1,180 U	974 U	1,010 U	1,330 U	1,030 U	1,730 U	1,490 U	1,340 U	1,250 U	1,160 U	1,130 U
Selenium	0.21	mg/kg	0.71 UJ	0.71 UJ	0.58 UJ	0.61 UJ	0.8 UJ	0.62 UJ	1 UJ	0.89 UJ	0.81 UJ	0.75 UJ	**1.2**	**1.2**
Silver	2	mg/kg	**3.1**	**3.8**	**2.4**	**2.4**	**6.7**	**2.1**	**8.3**	**5.2**	**5.5**	**5.1**	**3.3 J**	**5.4**
Sodium	- -	mg/kg	1,190 U	1,180 U	974 U	1,010 U	1,330 U	1,030 U	1,730 U	1,490 U	1,340 U	1,250 U	1,160 U	1,130 U
Thallium	0.51	mg/kg	0.95 U	0.94 U	0.78 U	0.81 U	1.1 U	0.82 U	1.4 U	1.2 U	1.1 U	1 U	**2.3 J**	**4.6 J**
Vanadium	2	mg/kg	**24.3**	**19.3**	**12.1**	**11**	**26.6**	**11.8**	**33.6**	**22.1**	**24.7**	**23**	**15.6**	**18**
Zinc	8.5	mg/kg	**141**	**272**	**167**	**183**	**513**	**175**	**516**	**288**	**291**	**219**	**970 J**	**1,060 J**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-034-NP	SO-034-NP	SO-035-NP	SO-035-NP	SO-036-NP	SO-036-NP	SO-036-NP	SO-037-NP	SO-037-NP	SO-041-LF	SO-042-LF	SO-043-LF
Sample Depth (Feet):			0 - 1	6 - 10	0 - 1	5 - 9	0 - 1	1 - 5	1 - 5	0 - 1	5 - 9	0 - 1	0 - 1	0 - 1
Date Collected:			09/05/03	09/05/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/09/04	09/09/04	09/09/04
Sample Name:	PAL	Units	SO-034-NP	SO-W13-NP	SO-035-NP	SO-W15-NP	SO-036-NP	SSO-FD01	SSO-01-NP	SO-037-NP	SO-W16-NP	SO-041-LF	SO-042-LF	SO-043-LF
Metals and Cyanide														
Aluminum	50	mg/kg	**4,010**	**5,190**	**3,700**	**7,230**	**3,380**	**6,120**	**5,630**	**5,240**	**4,710**	**9,150**	**5,560**	**9,370**
Antimony	3.1	mg/kg	14 UJ	15 UJ	14 UJ	14 UJ	0.64 UJ	14 UJ	14 UJ	**0.94 J**	0.65 UJ	2 UJ	1.1 UJ	1.9 UJ
Arsenic	0.27	mg/kg	**6**	**9**	**4.7**	**10.9**	**3.9**	**6.1**	**7.3**	**6.5**	**4.4**	**15.8**	**11.6**	**17.5**
Barium	1,500	mg/kg	**58.2**	**125**	**75.4**	**390**	43 U	47 U	47 U	**45.4**	43 U	**155**	**92.4**	**215**
Beryllium	0.4	mg/kg	**0.23 J**	**0.33 J**	**0.9 J**	**0.22 J**	**0.18 J**	**0.39 J**	**0.33 J**	**0.27 J**	**0.2 J**	**1.3**	**0.81**	**1.4**
Cadmium	0.36	mg/kg	**0.96 J**	**6**	**0.88 J**	**4.8**	**1.6**	**1.1 J**	**1.3**	**1 J**	**0.057 J**	**8**	**5**	**8.6**
Calcium	- -	mg/kg	**1,530**	**6,970**	**12,800**	**15,000**	**690 J**	**1,860**	**1,200**	**1,640**	**444 J**	1,300 U	**1,260**	**3,040**
Chromium	0.4	mg/kg	**40.4 J**	**209 J**	**18.5 J**	**41.5 J**	**13.8 JEB**	**50 J**	**46.8 J**	**21.8 J**	**6.1 JEB**	**152**	**53.2**	**110**
Cobalt	2.3	mg/kg	11 U	13 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	13 U	9.5 U	15 U
Copper	50	mg/kg	**95.3**	**644**	**39.7**	**506**	**23.6**	**36.1**	**38.5**	**105**	**15**	**227**	**97.9**	**182**
Cyanide	160	mg/kg	0.18 U	**0.46 J**	0.23 U	**1.6**	0.18 U	**0.21 J**	**0.27 J**	**0.34 J**	0.19 U	**1.7**	0.56 U	**1.1**
Iron	200	mg/kg	**9,400**	**54,500**	**9,520**	**51,200**	**8,630**	**9,150**	**8,470**	**9,230**	**6,560**	**22,500**	**13,800**	**24,900**
Lead	11	mg/kg	**223**	**433**	**180**	**2,270**	**61.9**	**48.4**	**53.1**	**110**	**19.8**	**226**	**102**	**193**
Magnesium	- -	mg/kg	**1,610**	**2,290**	**2,400**	**3,790**	**1,280**	**2,180**	**1,740**	**2,210**	**1,320**	**3,070**	**1,950**	**3,210**
Manganese	100	mg/kg	**133 J**	**666 J**	**138 J**	**390 J**	**114 J**	**114 J**	**104 J**	**154 J**	**106 J**	**980**	**511**	**611**
Mercury	0.00051	mg/kg	**0.22 J**	**0.3 J**	**0.19 J**	0.012 UJ	**0.13 J**	**0.21 J**	**0.34 J**	**0.13 J**	**0.036 J**	**0.56**	**0.22**	**0.48**
Nickel	30	mg/kg	9 U	**122**	9 U	**38.3**	9 U	9 U	9 U	**43**	**10.4**	**28.9**	**18.1**	**32**
Potassium	- -	mg/kg	1,150 U	1,270 U	1,130 U	1,150 U	1,070 U	1,180 U	1,180 U	1,130 U	1,080 U	1,300 U	950 U	1,500 U
Selenium	0.21	mg/kg	**0.95 J**	**0.83 J**	**0.95 J**	0.69 U	**0.81 J**	**0.99 J**	**1.2 J**	**0.95 J**	**0.86 J**	R	R	R
Silver	2	mg/kg	**2.1 J**	**15.2**	2 UJ	**10.7**	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	**1.8 J**	0.38 UJ	0.58 UJ
Sodium	- -	mg/kg	1,150 U	1,270 U	1,130 U	1,150 U	1,070 U	1,180 U	1,180 U	1,130 U	1,080 U	1,300 U	950 U	1,500 U
Thallium	0.51	mg/kg	**1.3 J**	**6.6 J**	**1.5 J**	**7 J**	**1.4 J**	**1.4 J**	**1.1 J**	**1.2 J**	**1.1 J**	**1.5 J**	**0.93 J**	**1.8 J**
Vanadium	2	mg/kg	**12.6**	**28.8**	11 U	**101**	11 U	**13.7**	**13.5**	**12.9**	11 U	**23.8**	**14.2**	**24.7**
Zinc	8.5	mg/kg	**159 J**	**2,470 J**	**160 J**	**1,540 J**	**101 J**	**126 J**	**143 J**	**123 J**	**194 J**	**227**	**181**	**338**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-044-QW 0 - 1 09/10/04 SO-044-QW	SO-045-QW 0 - 1 09/10/04 SO-045-QW	SO-046-DF 0 - 1 09/09/04 SO-046-DF	SO-047-DF 0 - 1 09/09/04 SO-047-DF	SO-048-DF 0 - 1 09/09/04 SO-048-DF	SO-049-DF 0 - 1 09/09/04 SO-049-DF	SO-050-NP 0 - 1 09/08/04 SO-050-NP	SO-051-NP 0 - 1 09/08/04 SO-051-NP	SO-052-NP 0 - 1 09/08/04 SO-052-NP	SO-053-NP 0 - 1 09/08/04 SO-053-NP	SO-054-NP 0 - 1 09/08/04 SO-054-NP
Metals and Cyanide													
Aluminum	50	mg/kg	**5,730**	**8,000**	**10,200 [10,500]**	**5,100**	**7,580**	**4,340**	**15,800**	**11,100**	**13,800**	**13,800**	**7,440**
Antimony	3.1	mg/kg	2.8 UJ	4 UJ	2.6 UJ [2.9 UJ]	1.8 UJ	2.2 UJ	0.91 UJ	4.2 UJ	3 UJ	3.5 UJ	3.4 UJ	1.5 UJ
Arsenic	0.27	mg/kg	**4.4**	**8.5**	**15.5 [15.1]**	**6**	**8.7**	**5**	**25.2**	**18.4**	**14.1**	**20.4**	**11.4**
Barium	1,500	mg/kg	**87.4**	**138**	**184 [178]**	**76.5**	**80.2**	**79.9**	**224**	**194**	**218**	**212**	**116**
Beryllium	0.4	mg/kg	**0.68**	**1**	**1.4 [1.5]**	**0.66**	**1.1**	**0.6**	**2.2**	**1.6**	**1.9**	**1.9**	**1.1**
Cadmium	0.36	mg/kg	**6.9**	**11.1**	**8.9 [8.5]**	**1.6 J**	**5.3**	**1.5 J**	**15**	**11.6**	**13.6**	**16.4**	**4.1**
Calcium	- -	mg/kg	**1,280**	**1,710**	**1,650 [1,630]**	810 U	**2,510**	**1,070**	**3,010**	**2,060**	**2,740**	**1,920**	**1,280**
Chromium	0.4	mg/kg	**56.2**	**88.2**	**149 [167]**	**91.9**	**107**	**51**	**349**	**144**	**306**	**294**	**75**
Cobalt	2.3	mg/kg	12 U	14 U	12 U [12 U]	8.1 U	10 U	10 U	**17.4**	13 U	11 U	14 U	11 U
Copper	50	mg/kg	**101**	**146**	**226 [231]**	**114**	**154**	**70.5**	**382**	**251**	**389**	**369**	**127**
Cyanide	160	mg/kg	0.57 U	**1.2**	**2.2 [2.1]**	**1.1**	**0.83**	0.56 U	**3.2**	**1.8**	**1.4**	**5.1**	**0.97**
Iron	200	mg/kg	**13,200**	**19,500**	**25,100 [25,600]**	**11,900**	**16,700**	**9,520**	**37,800**	**27,400**	**29,600**	**31,800**	**17,700**
Lead	11	mg/kg	**111**	**151**	**228 [246]**	**175**	**177**	**89.9**	**447**	**233**	**424**	**374**	**132**
Magnesium	- -	mg/kg	**2,040**	**2,830**	**3,360 [3,520]**	**1,800**	**2,690**	**1,570**	**5,040**	**3,660**	**4,450**	**4,490**	**2,680**
Manganese	100	mg/kg	**552**	**991**	**962 [899]**	**295**	**233**	**99 EB**	**1,620**	**1,330**	**318**	**720**	**559**
Mercury	0.00051	mg/kg	**0.22**	**0.34**	**0.6 [0.58]**	**0.28**	**0.41**	**0.16**	**0.98 J**	**0.57 J**	**1 J**	**0.87 J**	**0.29 J**
Nickel	30	mg/kg	**17.8**	**28.2**	**31.4 [31.7]**	**10.4**	**23.2**	**10.3**	**50.6 J**	**37.9 J**	**45.8 J**	**46.8 J**	**20.4 J**
Potassium	- -	mg/kg	1,200 U	1,400 U	1,200 U [1,200 U]	810 U	1,000 U	1,000 U	**1,450**	1,300 U	**1,430**	**1,450**	1,100 U
Selenium	0.21	mg/kg	0.48 UJ	0.54 UJ	R [R]	R	R	R	R	R	R	R	R
Silver	2	mg/kg	**8.3**	**12.3**	**1.6 J [1.6 J]**	**0.9 J**	**0.69 J**	0.41 UJ	**3.8 J**	**2 J**	**1.9 J**	**2.2 J**	**0.51 J**
Sodium	- -	mg/kg	1,200 U	1,400 U	1,200 U [1,200 U]	810 U	1,000 U	1,000 U	1,200 U	1,300 U	1,100 U	1,400 U	1,100 U
Thallium	0.51	mg/kg	0.48 UJ	0.54 UJ	**1.8 J [1.5 J]**	**1.1 J**	**1.3 J**	**0.85 J**	**3.3 J**	**1.8 J**	**2.1 J**	**2.4 J**	**1.1 J**
Vanadium	2	mg/kg	**14.5**	**20.3**	**27.5 [28.7]**	**15.4**	**21.2**	**12.2**	**43.4**	**28**	**36.8**	**37.6**	**19.1**
Zinc	8.5	mg/kg	**179**	**289**	**265 [259]**	**86.8**	**200**	**86.7**	**417**	**395**	**325**	**331**	**191**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-061-WT	SO-062-WT	SO-062-WT	SO-063-WT
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/08/04	09/09/04	09/08/04	09/09/04	09/08/04	09/09/04	11/27/04	09/09/04	11/27/04	09/09/04
Sample Name:	PAL	Units	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-091-WT	SO-062-WT	SO-092-WT	SO-063-WT
Metals and Cyanide													
Aluminum	50	mg/kg	**11,400**	**11,700 [12,300]**	**10,800**	**16,300**	**4,290**	**3,050**	**7,570**	NA	**6,440**	NA	**4,980**
Antimony	3.1	mg/kg	3 UJ	3.4 UJ [3.7 UJ]	2.8 UJ	4.6 UJ	0.53 UJ	0.55 UJ	0.91 UJ	NA	0.8 UJ	NA	1.1 UJ
Arsenic	0.27	mg/kg	**16.6**	**19.5 [20.3]**	**15.7**	**27.7**	**2.8**	**2.1**	**4.4**	NA	**7.2**	NA	**3.6**
Barium	1,500	mg/kg	**146**	**169 [191]**	**158**	**274**	36 U	37 U	**34.6**	NA	43 U	NA	43 U
Beryllium	0.4	mg/kg	**1.5**	**1.6 [1.7]**	**1.5**	**2.2**	**0.48**	**0.32**	**0.84**	NA	**0.75**	NA	**0.57**
Cadmium	0.36	mg/kg	**9.3**	**11.9 [12.6]**	**6.9**	**18.7**	0.89 U	0.91 U	0.85 U	NA	1.1 U	NA	1.1 U
Calcium	- -	mg/kg	**2,430**	**2,240 [2,450]**	1,100 U	**2,550**	890 U	910 U	**905**	NA	1,100 U	NA	1,100 U
Chromium	0.4	mg/kg	**229**	**233 [208]**	**235**	**303**	**7.8**	**5.6**	**18.9**	NA	**16.9**	NA	**13.9**
Cobalt	2.3	mg/kg	**12.7**	**13.7 [13.9]**	11 U	**19.3**	8.9 U	9.1 U	8.5 U	NA	11 U	NA	11 U
Copper	50	mg/kg	**246**	**283 [290]**	**235**	**417**	**7.9**	**6.9**	**15.2**	NA	**17.4**	NA	**11.9**
Cyanide	160	mg/kg	**2.9**	**2.4 [2.5]**	**0.77**	**2.8**	0.45 U	0.45 U	0.54 U	NA	0.47 U	NA	0.5 U
Iron	200	mg/kg	**25,000**	**27,900 [29,100]**	**24,500**	**38,800**	**6,820**	**6,220**	**9,130**	NA	**9,470**	NA	**8,210**
Lead	11	mg/kg	**303**	**297 [293]**	**289**	**399**	**13.8**	**7.2**	**23.9**	NA	**20**	NA	**17.3**
Magnesium	- -	mg/kg	**3,740**	**3,830 [3,920]**	**3,490**	**5,110**	**1,400**	**1,200**	**2,210**	NA	**1,790**	NA	**1,710**
Manganese	100	mg/kg	**1,020**	**1,260 [1,430]**	**421**	**1,940**	**117 EB**	**83.7**	**114 EB**	NA	**102 EB**	NA	**95.4 EB**
Mercury	0.00051	mg/kg	**0.58 J**	**0.61 J [0.72 J]**	**0.59**	**0.92 J**	**0.028**	**0.025 J**	**0.081**	NA	**0.081**	NA	**0.044**
Nickel	30	mg/kg	**33.1 J**	**40.4 J [41.9 J]**	**28.7**	**56.4 J**	7.1 U	7.3 U	**8.2**	NA	8.6 U	NA	8.6 U
Potassium	- -	mg/kg	**1,190**	**1,220 [1,210]**	**1,170**	**1,660**	890 U	910 U	850 U	NA	1,100 U	NA	1,100 U
Selenium	0.21	mg/kg	R	R [R]	R	R	R	R	R	NA	R	NA	R
Silver	2	mg/kg	**2.1 J**	**2.4 J [2.4 J]**	**0.75 J**	**3.4 J**	0.36 UJ	**0.37 J**	0.34 UJ	NA	0.43 UJ	NA	0.43 UJ
Sodium	- -	mg/kg	1,000 U	1,100 U [1,000 U]	1,100 U	1,100 U	890 U	910 U	850 U	NA	1,100 U	NA	1,100 U
Thallium	0.51	mg/kg	**1.5 J**	**2.1 J [1.9 J]**	**2.1 J**	**2.4 J**	**0.81 J**	0.55 UJ	**0.98 J**	NA	**0.86 J**	NA	0.64 UJ
Vanadium	2	mg/kg	**31.4**	**30.8 [30.9]**	**29.6**	**42.1**	**10.1**	**6.8**	**16.3**	NA	**14.2**	NA	**10.9**
Zinc	8.5	mg/kg	**256**	**338 [354]**	**211**	**501**	**30.5**	**24**	**40.9**	NA	**37.5**	NA	**34.8**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF	SO-073-MF	SO-074-MF	SO-075-QW
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/10/04	09/10/04	09/10/04	09/10/04
Sample Name:	PAL	Units	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF	SO-073-MF	SO-074-MF	SO-075-QW
Metals and Cyanide														
Aluminum	50	mg/kg	**8,890**	**6,970**	**8,790**	**7,820**	**9,060**	**8,110**	**4,210**	**6,180**	**6,350**	**4,460**	**3,520**	**4,340**
Antimony	3.1	mg/kg	2.6 UJ	1.9 UJ	2 UJ	1.7 UJ	1.9 UJ	1.9 UJ	0.74 UJ	1.6 UJ	2.3 UJ	2 UJ	1.5 UJ	1.9 UJ
Arsenic	0.27	mg/kg	**12.3**	**8.6**	**10.2**	**9.2**	**12.7**	**13**	**6.8**	**6.5**	**9.5**	**4.9**	**3.9**	**3.3**
Barium	1,500	mg/kg	**125**	**80.8**	**121**	**110**	**103**	**138**	**41.2**	**125**	**49.6**	47 U	43 U	39 U
Beryllium	0.4	mg/kg	**1.2**	**0.86**	**1.2**	**1.1**	**1.3**	**1.2**	**0.51**	**0.76**	**0.5**	**0.4**	**0.29 J**	**0.46**
Cadmium	0.36	mg/kg	**6.3**	**1.8 J**	**8.4**	**5.9**	**4**	**9.2**	**1 J**	**2.7**	**1.9**	**1.4**	1.1 U	**3.6**
Calcium	- -	mg/kg	**2,300**	920 U	**2,060**	**1,780**	**1,790**	**1,570**	990 U	910 U	1,000 U	1,200 U	1,100 U	980 U
Chromium	0.4	mg/kg	**125**	**119**	**149**	**107**	**156**	**94.5**	**27.7**	**108**	**89.6**	**44.2**	**31.1**	**42.9**
Cobalt	2.3	mg/kg	14 U	9.2 U	9.2 U	9.9 U	13 U	14 U	9.9 U	9.1 U	10 U	12 U	11 U	9.8 U
Copper	50	mg/kg	**180**	**122**	**198**	**160**	**193**	**164**	**41.8**	**122**	**75.1**	**40.7**	**34**	**46.7**
Cyanide	160	mg/kg	**1.3**	**1**	**1.6**	**1.1**	**1.1**	**1.3**	0.45 U	0.45 U	0.63 U	0.15 U	0.15 U	0.15 U
Iron	200	mg/kg	**20,600**	**15,600**	**18,900**	**16,600**	**19,900**	**19,900**	**9,170**	**12,300**	**11,800**	**7,840**	**6,240**	**9,190**
Lead	11	mg/kg	**197**	**194**	**221**	**164**	**216**	**156**	**43.5**	**150**	**161**	**82.6**	**60**	**65.2**
Magnesium	- -	mg/kg	**3,120**	**2,420**	**3,060**	**2,800**	**3,030**	**2,800**	**1,810**	**2,260**	**2,070**	**1,510**	**1,220**	**1,570**
Manganese	100	mg/kg	**703**	**394**	**519**	**475**	**464**	**987**	**226**	**206**	**122**	**136**	**79.4**	**234**
Mercury	0.00051	mg/kg	**0.43 J**	**0.4 J**	**0.5 J**	**0.39 J**	**0.44 J**	**0.39 J**	**0.078 J**	**0.32 J**	**0.7**	**0.2**	**0.21**	**0.15**
Nickel	30	mg/kg	**25.3 J**	**13.2 J**	**26.8 J**	**23.3 J**	**23.1 J**	**27.5 J**	**11.1 J**	**12.3 J**	8.2 U	9.4 U	8.6 U	**13.4**
Potassium	- -	mg/kg	1,400 U	**992**	**1,100**	990 U	1,300 U	1,400 U	990 U	910 U	1,000 U	1,200 U	1,100 U	980 U
Selenium	0.21	mg/kg	R	R	R	R	R	R	R	R	0.41 UJ	0.47 UJ	0.43 UJ	0.39 UJ
Silver	2	mg/kg	**1.1 J**	**1.3 J**	**1.4 J**	**0.96 J**	**1.5 J**	**1 J**	**0.4 J**	**0.95 J**	**7.3**	**4.7**	**3.7**	**5.9**
Sodium	- -	mg/kg	1,400 U	920 U	920 U	990 U	1,300 U	1,400 U	990 U	910 U	1,000 U	1,200 U	1,100 U	980 U
Thallium	0.51	mg/kg	**1.5 J**	**1.2 J**	**1.5 J**	**0.97 J**	**1.2 J**	**1.5 J**	**0.67 J**	**1.2 J**	0.41 UJ	0.47 UJ	0.43 UJ	0.39 UJ
Vanadium	2	mg/kg	**22.9**	**19.4**	**24.3**	**20.9**	**24.4**	**20.5**	**9.7**	**18.7**	**21.2**	**12.7**	**9.8**	**11**
Zinc	8.5	mg/kg	**203**	**96.8**	**184**	**174**	**193**	**277**	**85.9**	**111**	**51.7**	**43.5**	**29.3**	**88.3**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI	SO-084-UI	SO-084-UI	SO-085-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/09/04	11/27/04	09/09/04
Sample Name:	PAL	Units	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI	SO-084-UI	SO-089-UI	SO-085-UI
Metals and Cyanide													
Aluminum	50	mg/kg	**5,500 [5,960]**	**4,570**	**6,140**	**4,740**	**4,160**	**5,610**	**3,370**	**5,150**	**5,200**	NA	**6,610**
Antimony	3.1	mg/kg	1.9 UJ [1.9 UJ]	1.5 UJ	2.3 UJ	2 UJ	1.9 UJ	2.5 UJ	1.5 UJ	2 UJ	1.1 UJ	NA	1.4 UJ
Arsenic	0.27	mg/kg	**3.7 [4.5]**	**2**	**6.1**	**4.3**	**4.1**	**3.3**	**2.7**	**7.6**	**2.7**	NA	**7.5**
Barium	1,500	mg/kg	**57 [62.8]**	31 U	**73.5**	**33.4**	**46.6**	45 U	35 U	**55.8**	42 U	NA	**43.6**
Beryllium	0.4	mg/kg	**0.55 [0.57]**	**0.42**	**0.56**	**0.42**	**0.37**	**0.55**	**0.23 J**	**0.46**	**0.46**	NA	**0.72**
Cadmium	0.36	mg/kg	**3.8 [3.7]**	**1.7**	**3.3**	**2.8**	**1.9**	**4.5**	**1.5**	**2**	1.1 U	NA	0.97 U
Calcium	- -	mg/kg	840 U [860 U]	770 U	960 U	**786**	810 U	1,100 U	870 U	1,100 U	1,100 U	NA	970 U
Chromium	0.4	mg/kg	**82 [95.2]**	**34.7**	**109**	**49.1**	**55.7**	**47.9**	**24.5**	**130**	**40**	NA	**99.6**
Cobalt	2.3	mg/kg	8.4 U [8.6 U]	7.7 U	9.6 U	7.2 U	8.1 U	11 U	8.7 U	11 U	11 U	NA	9.7 U
Copper	50	mg/kg	**98.1 [105]**	**33.4**	**110**	**45**	**60.3**	**69.9**	**15.7**	**68.8**	**29.5**	NA	**87.8**
Cyanide	160	mg/kg	0.5 U [0.52 U]	0.51 U	**0.65**	0.47 U	0.14 U	0.55 U	0.44 U	**3.8**	0.51 U	NA	0.51 U
Iron	200	mg/kg	**9,960 [10,600]**	**7,790**	**11,900**	**8,590**	**7,650**	**11,600**	**7,850**	**9,270**	**9,060**	NA	**11,600**
Lead	11	mg/kg	**122 [123]**	**42**	**151**	**53.9**	**87.3**	**77.3**	**40.9**	**109**	**30.6**	NA	**106**
Magnesium	- -	mg/kg	**1,880 [2,020]**	**1,660**	**2,370**	**1,980**	**1,430**	**2,190**	**1,770**	**1,820**	**3,130**	NA	**2,150**
Manganese	100	mg/kg	**187 [177]**	**115**	**190**	**218**	**87.9**	**322**	**104**	**115**	**107 EB**	NA	**192**
Mercury	0.00051	mg/kg	**0.38 [0.37]**	**0.12**	**0.46**	**0.22**	**0.18**	**0.18**	**0.037**	**0.49**	**0.076**	NA	**0.42**
Nickel	30	mg/kg	**12.3 [13]**	**7.1**	**11.8**	**10.2**	**7.8**	**13.9**	7 U	9 U	**9.9**	NA	**8.6**
Potassium	- -	mg/kg	840 U [860 U]	770 U	960 U	720 U	810 U	1,100 U	870 U	1,100 U	1,100 U	NA	970 U
Selenium	0.21	mg/kg	0.34 UJ [0.34 UJ]	0.31 UJ	0.38 UJ	0.29 UJ	0.32 UJ	0.45 UJ	0.35 UJ	0.45 UJ	R	NA	R
Silver	2	mg/kg	**6.5 [7.1]**	**4.8**	**8.1**	**5.2**	**4.8**	**7.1**	**4**	**5.8**	0.42 UJ	NA	0.39 UJ
Sodium	- -	mg/kg	840 U [860 U]	770 U	960 U	720 U	810 U	1,100 U	870 U	1,100 U	1,100 U	NA	970 U
Thallium	0.51	mg/kg	0.34 UJ [0.34 UJ]	0.31 UJ	0.38 UJ	0.29 UJ	0.32 UJ	0.45 UJ	0.35 UJ	0.45 UJ	0.63 UJ	NA	**1.2 J**
Vanadium	2	mg/kg	**14.4 [15.7]**	**10.9**	**18.3**	**11**	**10**	**14.6**	**8**	**13.8**	**14.6**	NA	**19.5**
Zinc	8.5	mg/kg	**80.4 [79.5]**	**50.4**	**85.7**	**66.6**	**58.5**	**99.6**	**33.3**	**50.9**	**25.9**	NA	**48.2**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-085-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP	SO-101-NP	SO-101-NP	SO-102-NP	SO-102-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	2 - 7	0 - 1	2 - 9	0 - 1	2 - 8.5
Date Collected:			11/27/04	09/09/04	09/09/04	09/10/04	11/01/06	11/01/06	11/01/06	10/31/06	10/31/06
Sample Name:	PAL	Units	SO-090-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP (2-7')	SO-101-NP (0-1')	SO-101-NP (2-9')	SO-102-NP (0-1')	SO-102-NP (2-8.5')
Metals and Cyanide											
Aluminum	50	mg/kg	NA	**4,510**	**4,550**	**6,080**	**7,100**	**4,200**	**4,200**	**6,600**	**5,400**
Antimony	3.1	mg/kg	NA	**39.4 J**	0.95 UJ	2.3 UJ	**0.27 J**	**0.19 J**	**0.2 J**	**0.37 J**	**0.62 J**
Arsenic	0.27	mg/kg	NA	**7.1**	**3.4**	**4.2**	**8.3**	**3.3**	**2.9**	**15**	**5.8**
Barium	1,500	mg/kg	NA	**119**	35 U	**54**	**29**	**21**	**15**	**31**	**160**
Beryllium	0.4	mg/kg	NA	**0.48**	**0.49**	**0.56**	**0.32 J**	**0.2 J**	**0.26 J**	**0.41**	**0.3**
Cadmium	0.36	mg/kg	NA	**1.8**	0.87 U	**2.7**	**0.79 J**	**0.22 J**	**0.3 J**	**0.13 J**	**1.8 J**
Calcium	- -	mg/kg	NA	**2,300**	870 U	1,100 U	**330**	**650**	**520**	**790**	**3,400**
Chromium	0.4	mg/kg	NA	**65.1**	**22**	**88.6**	**41**	**28**	**23**	**11**	**27**
Cobalt	2.3	mg/kg	NA	11 U	8.7 U	11 U	**2.9**	**2.7**	**3.2**	**6.8**	**4.2**
Copper	50	mg/kg	NA	**1,310**	**27.6**	**79.5**	**89 J**	**22 J**	**28 J**	**22 J**	**85 J**
Cyanide	160	mg/kg	NA	0.49 U	0.43 U	**0.53**	0.1 U	0.089 U	0.087 U	0.089 U	0.095 U
Iron	200	mg/kg	NA	**10,200**	**9,530**	**11,500**	**11,000**	**7,600**	**8,600**	**13,000**	**13,000**
Lead	11	mg/kg	NA	**1,570**	**45.6**	**113**	**51**	**35**	**24**	**28**	**410**
Magnesium	- -	mg/kg	NA	**1,710**	**1,920**	**2,330**	**2,000 J**	**1,800 J**	**1,700 J**	**2,700 J**	**1,900 J**
Manganese	100	mg/kg	NA	**174**	**117 EB**	**150**	**95**	**80**	**89**	**280**	**180**
Mercury	0.00051	mg/kg	NA	**0.27**	**0.084**	**0.28**	**0.08**	**0.12**	**0.052**	**0.03**	**0.093**
Nickel	30	mg/kg	NA	**21.8**	**9.4**	**10.5**	**8.6**	**7.1**	**7.4**	**11**	**11**
Potassium	- -	mg/kg	NA	1,100 U	870 U	1,100 U	**460**	**550**	**520**	**850**	**550**
Selenium	0.21	mg/kg	NA	R	R	0.43 UJ	0.4 U	0.35 U	0.37 U	0.37 U	**0.48**
Silver	2	mg/kg	NA	**1.2 J**	0.35 UJ	**7.7**	**0.39 J**	**0.11 J**	**0.091 J**	**0.071 J**	**0.3 J**
Sodium	- -	mg/kg	NA	1,100 U	870 U	1,100 U	**37 J**	**32 J**	**27 J**	**36 J**	**76 J**
Thallium	0.51	mg/kg	NA	**0.89 J**	**0.9 J**	0.43 UJ	0.1 U	0.088 U	0.091 U	0.093 U	0.096 U
Vanadium	2	mg/kg	NA	**12.4**	**11.1**	**16.7**	**15**	**9.8**	**9.5**	**12**	**14**
Zinc	8.5	mg/kg	NA	**699**	**53.8**	**68.3**	**49**	**40**	**46**	**37**	**600**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-103-NP	SO-104-NP	SO-105-NP	SO-106-NP	SO-107-NP	SO-107-NP	SO-108-NP
Sample Depth (Feet):			2 - 7	2 - 3.4	2 - 3.4	2 - 5	0 - 1	2 - 10	3 - 8
Date Collected:			11/01/06	11/02/06	11/02/06	11/02/06	11/02/06	11/02/06	11/02/06
Sample Name:	PAL	Units	SO-103-NP (2-7')	SO-104-NP (2-3.4')	SO-105-NP (2-3.4')	SO-106-NP (2-5')	SO-107-NP (0-1')	SO-107-NP (2-10')	SO-108-NP (3-8')
Metals and Cyanide									
Aluminum	50	mg/kg	**3,900**	**5,100**	**9,800**	**5,400**	**4,600**	**5,700**	**5,200 [6,800]**
Antimony	3.1	mg/kg	**0.13 J**	**0.17 J**	**0.45 J**	**0.18 J**	**1.6 J**	0.091 UJ	**0.41 J [0.74 J]**
Arsenic	0.27	mg/kg	**2.8**	**4.5**	**5.4**	**6.6**	**5.6**	**6.1**	**7.3 J [16 J]**
Barium	1,500	mg/kg	**12**	**21**	**330**	**19**	**240**	**15**	**140 [150]**
Beryllium	0.4	mg/kg	**0.15 J**	**0.27 J**	**0.98 J**	**0.33 J**	**0.22 J**	**0.24 J**	**0.28 J [0.38]**
Cadmium	0.36	mg/kg	**0.12 J**	**1.6 J**	**4.2 J**	**1.2 J**	**0.84 J**	0.036 UJ	**1.6 J [1.5 J]**
Calcium	- -	mg/kg	**540**	**610**	**14,000 J**	**430**	**3,500**	**550**	**2,100 [1,600]**
Chromium	0.4	mg/kg	**5.3**	**30**	**45**	**25**	**14**	**8.4**	**47 [64]**
Cobalt	2.3	mg/kg	**2.2**	**3.8**	**5**	**3.3**	**4**	**3.4**	**4.6 [3.7]**
Copper	50	mg/kg	**24 J**	**37 J**	**63 J**	**30 J**	**37 J**	**5.7 J**	**52 J [64 J]**
Cyanide	160	mg/kg	0.09 U	**0.19**	**0.31**	**0.16**	0.089 U	0.09 U	**0.15 [0.36]**
Iron	200	mg/kg	**6,200**	**8,600**	**11,000**	**11,000**	**9,900**	**8,600**	**14,000 [11,000]**
Lead	11	mg/kg	**10**	**34**	**200**	**24**	**1,200**	**10**	**1,200 J [350 J]**
Magnesium	- -	mg/kg	**1,300**	**2,000**	**3,200**	**1,700**	**2,300**	**1,700**	**2,400 [1,800]**
Manganese	100	mg/kg	**120**	**210**	**300**	**160**	**200**	**290**	**180 [130]**
Mercury	0.00051	mg/kg	**0.044**	**0.08**	**1.7**	**0.055**	**0.066**	**0.011**	**0.22 [0.28]**
Nickel	30	mg/kg	**4.6**	**9.8**	**24**	**9.6**	**11**	**6.1**	**15 [12]**
Potassium	- -	mg/kg	**430**	**510**	**800**	**450**	**670**	**480**	**560 [460]**
Selenium	0.21	mg/kg	0.35 U	0.36 U	**0.61**	0.36 U	0.35 U	0.36 U	**0.35 UJ [0.64 J]**
Silver	2	mg/kg	**0.039 J**	**0.48 J**	**0.71 J**	**0.54 J**	**0.27 J**	0.036 UJ	**0.53 J [0.88 J]**
Sodium	- -	mg/kg	**40 J**	**61 J**	**310 J**	**54 J**	**77 J**	**27 J**	**61 J [61 J]**
Thallium	0.51	mg/kg	0.087 U	0.089 U	0.095 U	0.091 U	0.086 U	0.09 U	0.089 U [0.097 U]
Vanadium	2	mg/kg	**6.5**	**10**	**19**	**12**	**13**	**9.4**	**15 [18]**
Zinc	8.5	mg/kg	**110**	**59**	**680**	**70**	**280**	**20**	**660 J [140 J]**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-200-U1 0 - 1 11/18/09 SO-200-U1-0-1'	SO-200-U1 5 - 6 11/18/09 SO-200-U1-5-6'	SO-200-UI 0 - 1 11/18/09 SO-200-UI (0-1')	SO-200-UI 5 - 6 11/18/09 SO-200-UI (5-6')	SO-201-UI 4 - 6 11/18/09 SO-201-UI (4-6')	SO-201-UI 4 - 6 11/24/09 SO-201-UI-4-6'	SO-203-U1 0 - 1 11/18/09 SO-203-U1-0-1'	SO-203-UI 5 - 7 11/18/09 SO-203-UI (5-7')
Metals and Cyanide										
Aluminum	50	mg/kg	NA	NA	**11,400**	**2,420**	**6,000**	NA	NA	**3,310**
Antimony	3.1	mg/kg	NA	NA	**0.718 J**	**0.0272 J**	**3.57 J**	NA	NA	**0.573 J**
Arsenic	0.27	mg/kg	NA	NA	**19.9**	**1.44**	**6.49**	NA	NA	**5.95**
Barium	1,500	mg/kg	NA	NA	**139 J**	**11.7 J**	**106 J**	NA	NA	**31 J**
Beryllium	0.4	mg/kg	NA	NA	**1.07**	**0.181**	**0.238**	NA	NA	**0.275**
Cadmium	0.36	mg/kg	NA	NA	**12.5**	**0.107**	**5.18**	NA	NA	**0.946**
Calcium	- -	mg/kg	NA	NA	**1,660 J**	**307 J**	**19,400 J**	NA	NA	**298 J**
Chromium	0.4	mg/kg	NA	NA	**119**	**6.11**	**20**	NA	NA	**30.1**
Cobalt	2.3	mg/kg	NA	NA	**10.9**	**1.91**	**7.99**	NA	NA	**2.17**
Copper	50	mg/kg	NA	NA	**190**	**2.9**	**71.4**	NA	NA	**65.5**
Cyanide	160	mg/kg	NA	NA	0.126 U	0.087 U	0.073 U	NA	NA	0.064 U
Iron	200	mg/kg	NA	NA	**33,700**	**5,400**	**39,000**	NA	NA	**13,500**
Lead	11	mg/kg	NA	NA	**170 J**	**2.49 J**	**1,230 J**	NA	NA	**30 J**
Magnesium	- -	mg/kg	NA	NA	**1,930 J**	**744 J**	**1,030 J**	NA	NA	**947 J**
Manganese	100	mg/kg	NA	NA	**1,680**	**85.5**	**237**	NA	NA	**93.6**
Mercury	0.00051	mg/kg	NA	NA	**0.693**	**0.0138 J**	**0.071**	NA	NA	**0.117**
Nickel	30	mg/kg	NA	NA	**33.1**	**4.44**	**17.1**	NA	NA	**7.44**
Potassium	- -	mg/kg	NA	NA	**569 J**	**138 J**	**316 J**	NA	NA	**226 J**
Selenium	0.21	mg/kg	NA	NA	**1.73**	**0.164**	**0.148**	NA	NA	**0.292**
Silver	2	mg/kg	NA	NA	**2.92**	**0.0272 J**	**0.72**	NA	NA	**0.243**
Sodium	- -	mg/kg	NA	NA	**58.1 J**	**26.8 J**	**138 J**	NA	NA	**21.6 J**
Thallium	0.51	mg/kg	NA	NA	**0.164**	**0.039**	**0.034**	NA	NA	**0.068**
Vanadium	2	mg/kg	NA	NA	**21.7**	**5.82**	**9.15**	NA	NA	**9.12**
Zinc	8.5	mg/kg	NA	NA	**340**	**85.7**	**248**	NA	NA	**94.1**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-204-UI	SO-205-U1	SO-205-UI	SO-206-UI	SO-207B-UI	SO-207B-UI	SO-208B-UI	SO-208B-UI
Sample Depth (Feet):			2 - 4	3 - 4.5	2 - 4	2 - 3	1 - 2	2 - 3	0 - 1	1 - 5
Date Collected:			11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09
Sample Name:	PAL	Units	SO-204-UI (2-4')	SO-205-U1-3-4.5	SO-205-UI (2-4')	SO-206-UI (2-3')	SO-207B-UI (1-2')	SO-207B-UI (2-3')	SO-208B-UI (0-1')	SO-208B-UI (1-5')
Metals and Cyanide										
Aluminum	50	mg/kg	**11,800**	NA	**10,800**	**6,430 J**	**10,800**	**3,350**	**3,670**	**3,040**
Antimony	3.1	mg/kg	**2.35 J**	NA	**2.04 J**	**66**	**159 J**	**2.02 J**	**1.24 J**	**3.01 J**
Arsenic	0.27	mg/kg	**50.4**	NA	**57.4**	**6.19**	**9.62**	**8.98**	**8.56**	**12.3**
Barium	1,500	mg/kg	**132 J**	NA	**89.7 J**	**61.4**	**706 J**	**124 J**	**286 J**	**1,010 J**
Beryllium	0.4	mg/kg	**1.01**	NA	**0.541**	**0.331 J**	**0.389**	**0.244**	**0.37**	**0.26**
Cadmium	0.36	mg/kg	**6.57**	NA	**3.32**	**2.69**	**12**	**2.75**	**9.13**	**2.45**
Calcium	- -	mg/kg	**905 J**	NA	**780 J**	**1,480 J**	**8,710 J**	**1,050 J**	**1,440 J**	**29,700 J**
Chromium	0.4	mg/kg	**776**	NA	**746**	**59.2 J**	**82**	**88.3**	**84.2**	**21.7**
Cobalt	2.3	mg/kg	**18.7**	NA	**3.58**	**2.76**	**9.06**	**2.9**	**5**	**4.98**
Copper	50	mg/kg	**292**	NA	**318**	**1,050**	**1,650**	**159**	**154**	**310**
Cyanide	160	mg/kg	0.118 U	NA	0.129 U	**0.2**	0.086 U	0.06 U	0.073 U	0.092 U
Iron	200	mg/kg	**17,500**	NA	**23,400**	**9,400**	**26,800**	**13,100**	**16,500**	**20,700**
Lead	11	mg/kg	**340 J**	NA	**278 J**	**375 J**	**2,380 J**	**360 J**	**1,250 J**	**9,640 J**
Magnesium	- -	mg/kg	**2,990 J**	NA	**2,900 J**	**2,030 J**	**2,290 J**	**1,090 J**	**1,320 J**	**2,350 J**
Manganese	100	mg/kg	**134**	NA	**124**	**134**	**389**	**179**	**444**	**279**
Mercury	0.00051	mg/kg	**2.42**	NA	**2.55**	**0.267**	**0.303**	**0.43**	**0.387**	**2.76**
Nickel	30	mg/kg	**51.4**	NA	**10.5**	**11.2 J**	**123**	**29.1**	**35.4**	**19.6**
Potassium	- -	mg/kg	**1,230 J**	NA	**1,430 J**	**534 J**	**366 J**	**405 J**	**359 J**	**468 J**
Selenium	0.21	mg/kg	**2.66**	NA	**2.69**	**0.991**	**2.1**	**0.486**	**0.552**	**0.632**
Silver	2	mg/kg	**1.91**	NA	**1.19**	**1.04**	**16.1**	**1.72**	**1.12**	**1**
Sodium	- -	mg/kg	**102 J**	NA	**89.2 J**	**47.2**	**177 J**	**51.4 J**	**85.8 J**	**256 J**
Thallium	0.51	mg/kg	**0.273**	NA	**0.235**	**0.115 J**	**0.07**	**0.082**	**0.074**	**0.059**
Vanadium	2	mg/kg	**23.4**	NA	**25.9**	**10.1**	**49.9**	**14**	**18.2**	**27.8**
Zinc	8.5	mg/kg	**2,210**	NA	**120**	**630**	**2,580**	**429**	**900**	**1,730**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-209-UI 0 - 1 11/20/09 SO-209-UI (0-1')	SO-210B-UI 1.25 - 4 11/20/09 SO-210B-UI (1.25-4')	SO-211-UI 0 - 1 11/20/09 SO-211-UI (0-1')	SO-212-UI 1 - 4.5 11/20/09 SO-212-UI (1-4.5')	SO-213-U1 0 - 1 11/20/09 SO-213-U1-0-1'	SO-214-U1 0 - 1 11/20/09 SO-214-U1-0-1'	SO-215-U1 0 - 1 11/20/09 SO-215-U1-0-1'	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'
Metals and Cyanide										
Aluminum	50	mg/kg	**5,470 J**	**6,700 J**	**10,500 J**	**9,850 J [9,180 J]**	NA	NA	NA	NA
Antimony	3.1	mg/kg	**5**	**1.4**	**1.28**	**1.14 [0.851]**	NA	NA	NA	NA
Arsenic	0.27	mg/kg	**10.6**	**4.03**	**18**	**26.3 [26.6]**	NA	NA	NA	NA
Barium	1,500	mg/kg	**570**	**33.5**	**162**	**106 [96.6]**	NA	NA	NA	NA
Beryllium	0.4	mg/kg	**0.271 J**	**0.315 J**	**0.635 J**	**0.352 J [0.323 J]**	NA	NA	NA	NA
Cadmium	0.36	mg/kg	**6.24**	**0.13**	**2.34**	**0.463 [0.426]**	NA	NA	NA	NA
Calcium	- -	mg/kg	**7,200 J**	**1,010 J**	**1,400 J**	**706 J [651 J]**	NA	NA	NA	NA
Chromium	0.4	mg/kg	**69.5 J**	**56.5 J**	**174 J**	**276 J [254 J]**	NA	NA	NA	NA
Cobalt	2.3	mg/kg	**4.53**	**3.41**	**5.6**	**3.21 [3.04]**	NA	NA	NA	NA
Copper	50	mg/kg	**632**	**25.3**	**266**	**202 [198]**	NA	NA	NA	NA
Cyanide	160	mg/kg	**0.09**	0.044 U	0.087 U	**0.14 [0.09 U]**	NA	NA	NA	NA
Iron	200	mg/kg	**23,300**	**16,900**	**24,100**	**16,400 [16,300]**	NA	NA	NA	NA
Lead	11	mg/kg	**1,860 J**	**8.47 J**	**291 J**	**245 J [256 J]**	NA	NA	NA	NA
Magnesium	- -	mg/kg	**2,490 J**	**2,710 J**	**3,270 J**	**2,860 J [2,620 J]**	NA	NA	NA	NA
Manganese	100	mg/kg	**274**	**144**	**461**	**108 [104]**	NA	NA	NA	NA
Mercury	0.00051	mg/kg	**0.379**	**0.02**	**0.827**	**1.5 [1.88]**	NA	NA	NA	NA
Nickel	30	mg/kg	**29.6 J**	**12.3 J**	**16.2 J**	**8.46 J [7.96 J]**	NA	NA	NA	NA
Potassium	- -	mg/kg	**570 J**	**903 J**	**1,080 J**	**939 J [851 J]**	NA	NA	NA	NA
Selenium	0.21	mg/kg	**0.584**	**0.17**	**1.23**	**1.24 [1.1]**	NA	NA	NA	NA
Silver	2	mg/kg	**1.68**	**0.083**	**2.49**	**0.472 [0.35]**	NA	NA	NA	NA
Sodium	- -	mg/kg	**170**	**60.5**	**97.1**	**79.8 [67.4]**	NA	NA	NA	NA
Thallium	0.51	mg/kg	**0.088 J**	**0.057 J**	**0.13 J**	**0.178 J [0.152 J]**	NA	NA	NA	NA
Vanadium	2	mg/kg	**19.9**	**10.3**	**22.5**	**15.9 [16.3]**	NA	NA	NA	NA
Zinc	8.5	mg/kg	**1,350**	**49.7**	**215**	**74.9 [70.1]**	NA	NA	NA	NA

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-217-UI	SO-218-UI	SO-219-UI	SO-220-UI	SO-222-UI	SO-223F-UI	SO-223F-UI	SO-224A-UI
Sample Depth (Feet):			0 - 1	1 - 5	1 - 5	1 - 4.5	1 - 3	0 - 1	11 - 12	1 - 5
Date Collected:			11/20/09	11/23/09	11/23/09	11/23/09	11/23/09	11/24/09	11/23/09	11/23/09
Sample Name:	PAL	Units	SO-217-UI (0-1')	SO-218-UI-1-5'	SO-219-UI-1-5'	SO-220-UI-1-4.5'	SO-222-UI-1-3'	SO-223F-UI-0-1'	SO-223F-UI-11-12'	SO-224A-UI-1-5'
Metals and Cyanide										
Aluminum	50	mg/kg	**10,900 J**	**8,060**	**4,160**	**6,950**	**5,010**	**5,720**	**5,630**	**5,970**
Antimony	3.1	mg/kg	**0.924**	**0.578 J**	**0.42 J**	**1.12 J**	**0.053 J**	**0.392 J**	**0.102 J**	**5.16 J**
Arsenic	0.27	mg/kg	**15.6**	**15.5**	**7.64**	**10**	**2.33**	**6.61**	**5.3**	**11.8**
Barium	1,500	mg/kg	**157**	**56.2 J**	**36.3 J**	**82.2 J**	**14.6 J**	**40.7 J**	**20.4 J**	**79.2 J**
Beryllium	0.4	mg/kg	**0.663 J**	**0.296 J**	**0.174 J**	**0.285 J**	**0.23 J**	**0.41 J**	**0.166 J**	**0.271 J**
Cadmium	0.36	mg/kg	**2.64**	**0.638**	**0.29**	**0.767**	**1.15**	**2.23 J**	**0.117 J**	**5.1**
Calcium	- -	mg/kg	**1,370 J**	**628 J**	941 U	**759 J**	982 U	**1,030 J**	**1,140 J**	**6,530 J**
Chromium	0.4	mg/kg	**196 J**	**202**	**127**	**166**	**10.7**	**70.4**	**18**	**460**
Cobalt	2.3	mg/kg	**5.97**	**2.86**	**1.76**	**2.97**	**2.1**	**4.13 J**	**9.07**	**15.3**
Copper	50	mg/kg	**257**	**107**	**59.5**	**131**	**16.3**	**80.7 J**	**61.5**	**1,030**
Cyanide	160	mg/kg	**1.08**	0.105 U	0.066 U	**0.238**	0.071 U	0.066 U	0.053 U	**0.654**
Iron	200	mg/kg	**23,800**	**12,800**	**7,530**	**13,100**	**7,020**	**11,600**	**92,500**	**91,500**
Lead	11	mg/kg	**331 J**	**168 J**	**92.3 J**	**144 J**	**3.94 J**	**102 J**	**6.15 J**	**182 J**
Magnesium	- -	mg/kg	**3,320 J**	**2,340 J**	**1,340 J**	**2,750 J**	**1,340 J**	**1,930 J**	**2,360 J**	**2,350 J**
Manganese	100	mg/kg	**564**	**103**	**71.4**	**95.9**	**94.1**	**260 J**	**396**	**561**
Mercury	0.00051	mg/kg	**0.828**	**0.963**	**0.474**	**0.532**	0.013 U	**0.31 J**	**0.0069 J**	**0.734**
Nickel	30	mg/kg	**25 J**	**7.32**	**5.22**	**11.8**	**7.18**	**12.5**	**26.9**	**248**
Potassium	- -	mg/kg	**1,160 J**	**712**	**449**	**855**	**253**	**744**	**1,640**	**1,710**
Selenium	0.21	mg/kg	**1.32**	**0.769**	**0.466**	**0.712**	**0.195**	**0.574 J**	**0.181 J**	0.624 U
Silver	2	mg/kg	**3.17**	**0.638**	**0.46**	**1.83**	**0.158**	**1.1 J**	**0.041**	**2.72**
Sodium	- -	mg/kg	**57.3**	201 U	188 U	212 U	196 U	**56.9**	158 U	**224 J**
Thallium	0.51	mg/kg	**0.134 J**	**0.137**	**0.073**	**0.097**	**0.046**	**0.091**	**0.138**	**0.12**
Vanadium	2	mg/kg	**26.8**	**17**	**11**	**19.4**	**9.02**	**14.6**	**10.2**	**18.7**
Zinc	8.5	mg/kg	**202**	**50**	**40.1**	**61.1**	**61.6**	**110 J**	**70**	**2,050**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-225A-UI	SO-225A-UI	SO-226A-UI	SO-227B-UI	SO-228-UI	SO-W05-DF	SO-W05-DF	SO-W06-DF
Sample Depth (Feet):			0 - 1	1.5 - 5	6 - 8	1 - 5	12 - 14	0 - 1	0 - 1	0 - 1
Date Collected:			11/24/09	11/24/09	11/24/09	11/24/09	11/24/09	08/26/03	09/20/03	08/26/03
Sample Name:	PAL	Units	SO-225A-UI-0-1'	SO-225A-UI-1.5-5'	SO-226A-UI-6-8'	SO-227B-UI-1-5'	SO-228-UI-12-14'	SO-W05-DF	SO-W05-DFb	SO-W06-DF
Metals and Cyanide										
Aluminum	50	mg/kg	**4,880 [4,600]**	**9,660**	**11,500**	**5,830**	**4,220**	**4,290**	NA	**3,620 J**
Antimony	3.1	mg/kg	**0.377 J [0.426 J]**	**1.99 J**	**1.83 J**	**0.193 J**	**0.109 J**	11 UJ	NA	**1.8 J**
Arsenic	0.27	mg/kg	**6.45 [5.68]**	**33.9**	**22.7**	**4.15**	**1.6**	**6**	NA	**24.9 J**
Barium	1,500	mg/kg	**29.4 J [27.5 J]**	**125 J**	**75.8 J**	**32.8 J**	**9.3 J**	**40.3**	NA	**184 J**
Beryllium	0.4	mg/kg	**0.245 [0.237 J]**	**0.663**	**0.642**	**0.294**	**0.129**	**0.19 J**	NA	0.06 U
Cadmium	0.36	mg/kg	**1.05 [0.982 J]**	**5.11**	**1.69**	**0.798**	**0.084**	**10.6**	NA	**8.7 J**
Calcium	- -	mg/kg	**626 J [527 J]**	**746 J**	**2,470 J**	**583 J**	**681 J**	**887 J**	NA	**1,440 J**
Chromium	0.4	mg/kg	**66.5 [62.3]**	**423**	**477**	**44.3**	**6.68**	**29.4**	NA	**40.5 J**
Cobalt	2.3	mg/kg	**3.1 [2.48 J]**	**8.49**	**10.1**	**2.86**	**2.72**	**3.6 J**	NA	10 UJ
Copper	50	mg/kg	**49.1 [47.4 J]**	**240**	**306**	**30**	**9.78**	**97 J**	NA	**340 J**
Cyanide	160	mg/kg	0.087 U [0.075 U]	0.054 U	0.114 U	0.071 U	0.065 U	0.19 U	NA	**1.5 J**
Iron	200	mg/kg	**10,400 [9,740]**	**16,700**	**22,400**	**11,200**	**9,120**	**15,200 J**	NA	**79,600 J**
Lead	11	mg/kg	**62.5 J [61.9 J]**	**278 J**	**1,130 J**	**49.2 J**	**4.4 J**	**76.6 J**	NA	**714 J**
Magnesium	- -	mg/kg	**1,900 J [1,810 J]**	**2,770 J**	**3,090 J**	**2,080 J**	**2,340 J**	**1,780**	NA	**1,430 J**
Manganese	100	mg/kg	**138 J [125 J]**	**89.2 J**	**412 J**	**101 J**	**86.7 J**	**143**	NA	**463 J**
Mercury	0.00051	mg/kg	**0.282 J [0.255 J]**	**1.81 J**	**3.43 J**	**0.186 J**	0.011 U	**0.18**	NA	**0.45 J**
Nickel	30	mg/kg	**7.96 [7.83]**	**24.3**	**13.5**	**8.51**	**7.78**	**21.1**	NA	**53 J**
Potassium	- -	mg/kg	**626 [740]**	**1,050**	**1,300**	**738**	**574**	945 U	NA	1,000 U
Selenium	0.21	mg/kg	**0.42 [0.324 J]**	**1.7**	**1.75**	**0.229**	**0.103**	0.57 UJ	NA	0.6 UJ
Silver	2	mg/kg	**0.584 [0.626 J]**	**2.36**	**0.675**	**0.191**	**0.052**	**1.4 J**	NA	**9.4 J**
Sodium	- -	mg/kg	**41 [39.9 J]**	**82.6**	**126**	**233**	**37.8**	945 U	NA	1,000 U
Thallium	0.51	mg/kg	**0.059 [0.074]**	**0.216**	**0.18**	**0.066**	**0.0298 J**	0.76 U	NA	0.8 U
Vanadium	2	mg/kg	**10.8 [11.7]**	**23.5**	**18.2**	**10**	**9.24**	**11.3**	NA	**10.5 J**
Zinc	8.5	mg/kg	**54 [52.3 J]**	**842**	**435**	**187**	**28.5**	**177**	NA	**2,560 J**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-W06-DF 0 - 1 08/27/03 SO-FD04	SO-W06-DF 0 - 1 09/20/03 SO-W06-DFb	SO-W07-DF 0 - 1 08/26/03 SO-W07-DF	SO-W07x-DF 0 - 1 09/20/03 SO-W07x-DF	SO-W08-DF 0 - 1 08/26/03 SO-W08-DF	SO-W08-DF 0 - 1 09/20/03 SO-W08-DFb	SO-W09-DF 0 - 1 08/26/03 SO-W09-DF	SO-W09-DF 0 - 1 09/20/03 SO-W09-DFb	SO-W10-DF 0 - 1 08/27/03 SO-W10-DF
Metals and Cyanide											
Aluminum	50	mg/kg	**4,500**	NA	**7,680 J**	NA	**7,270 J**	NA	**5,440**	NA	**4,340**
Antimony	3.1	mg/kg	11 UJ	NA	0.71 UJ	NA	0.73 UJ	NA	0.62 UJ	NA	12 UJ
Arsenic	0.27	mg/kg	**5.6 J**	NA	**10**	NA	**9**	NA	**5.1**	NA	**4.4**
Barium	1,500	mg/kg	**72.9 J**	NA	**56.8 J**	NA	49 U	NA	41 U	NA	39 U
Beryllium	0.4	mg/kg	**0.11 J**	NA	0.071 U	NA	0.073 U	NA	**0.2 J**	NA	**0.16 J**
Cadmium	0.36	mg/kg	**0.95 J**	NA	**2.3**	NA	**1.8**	NA	**0.56 J**	NA	**0.56 J**
Calcium	- -	mg/kg	**658 J**	NA	**2,450 J**	NA	**1,380 J**	NA	**713 J**	NA	**888 J**
Chromium	0.4	mg/kg	**34.5**	NA	**79.1 J**	NA	**74 J**	NA	**16.6**	NA	**17.1**
Cobalt	2.3	mg/kg	**3.6 J**	NA	12 U	NA	12 U	NA	**3.1 J**	NA	**3 J**
Copper	50	mg/kg	**127 J**	NA	**75.6 J**	NA	**57.3 J**	NA	**11.8 J**	NA	**17.5 J**
Cyanide	160	mg/kg	0.19 UJ	NA	**0.7**	NA	**0.47 J**	NA	0.21 U	NA	0.19 U
Iron	200	mg/kg	**14,000 J**	NA	**15,100 J**	NA	**10,200 J**	NA	**8,010 J**	NA	**7,660 J**
Lead	11	mg/kg	**123 J**	NA	**141 J**	NA	**104 J**	NA	**26.9 J**	NA	**33.7 J**
Magnesium	- -	mg/kg	**2,000**	NA	**2,600 J**	NA	**2,040 J**	NA	**1,910**	NA	**1,790**
Manganese	100	mg/kg	**151**	NA	**367 J**	NA	**218 J**	NA	**162**	NA	**158**
Mercury	0.00051	mg/kg	**0.086 J**	NA	**0.29 J**	NA	**0.23 J**	NA	**0.035**	NA	**0.12**
Nickel	30	mg/kg	**31.4**	NA	**16 J**	NA	**13 J**	NA	**9**	NA	**8.6**
Potassium	- -	mg/kg	940 U	NA	1,180 U	NA	1,220 U	NA	1,040 U	NA	981 U
Selenium	0.21	mg/kg	**0.56 J**	NA	**1.8 J**	NA	0.73 UJ	NA	0.62 UJ	NA	0.59 UJ
Silver	2	mg/kg	**2.6 J**	NA	**2.6 J**	NA	2 U	NA	0.12 UJ	NA	0.12 UJ
Sodium	- -	mg/kg	940 U	NA	1,180 U	NA	1,220 U	NA	1,040 U	NA	981 U
Thallium	0.51	mg/kg	0.75 U	NA	0.94 U	NA	0.98 U	NA	0.83 U	NA	0.78 U
Vanadium	2	mg/kg	**82.9 J**	NA	**31.2**	NA	**20.3**	NA	**12.1**	NA	**21.3**
Zinc	8.5	mg/kg	**289 J**	NA	**149 J**	NA	**96.4 J**	NA	**39.6**	NA	**67**

TABLE 4-17
SOIL RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W10-DF	SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W10-DFb	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
Metals and Cyanide												
Aluminum	50	mg/kg	NA	**5,300**	NA	**4,970**	NA	**6,880 J**	**8,850 J**	**6,800 J**	**4,730 J**	**6,330 J**
Antimony	3.1	mg/kg	NA	12 UJ	NA	12 UJ	NA	**6.4 J**	**5.3 J**	**14.4 J**	**63.6 J**	**20.4 J**
Arsenic	0.27	mg/kg	NA	**7.9**	NA	**7.9**	NA	**15.8**	**25.5**	**25.1**	**12**	**14.6**
Barium	1,500	mg/kg	NA	41 U	NA	**44**	NA	**881 J**	**346 J**	**350 J**	**156 J**	**86.6 J**
Beryllium	0.4	mg/kg	NA	**0.17 J**	NA	**0.16 J**	NA	0.073 U	0.075 U	0.075 U	0.073 U	**2.4**
Cadmium	0.36	mg/kg	NA	**0.49 J**	NA	**0.58 J**	NA	**21.8**	**9.3**	**5.9**	**4**	**5.5**
Calcium	- -	mg/kg	NA	**1,180**	NA	**956 J**	NA	**11,600 J**	**4,400 J**	**4,930 J**	1,210 U	1,440 U
Chromium	0.4	mg/kg	NA	**17.2**	NA	**76.4**	NA	**68.4 J**	**229 J**	**201 J**	**76.7 J**	**471 J**
Cobalt	2.3	mg/kg	NA	**4.7 J**	NA	**3 J**	NA	**7.9 J**	13 U	**12.8**	**4.3 J**	**5.5 J**
Copper	50	mg/kg	NA	**27.5 J**	NA	**49.6 J**	NA	**579 J**	**474 J**	**1,420 J**	**155 J**	**492 J**
Cyanide	160	mg/kg	NA	0.21 U	NA	0.21 U	NA	**0.71**	**1**	**1.2**	**0.34**	**0.98**
Iron	200	mg/kg	NA	**10,600 J**	NA	**9,170 J**	NA	**37,800 J**	**42,300 J**	**69,200 J**	**32,400 J**	**21,900 J**
Lead	11	mg/kg	NA	**56.9 J**	NA	**92.8 J**	NA	**2,230 J**	**1,170 J**	**857 J**	**149 J**	**473 J**
Magnesium	- -	mg/kg	NA	**1,870**	NA	**1,850**	NA	**2,980 J**	**3,010 J**	**2,410 J**	**1,410 J**	**1,870 J**
Manganese	100	mg/kg	NA	**175**	NA	**134**	NA	**409 J**	**396 J**	**425 J**	**117 J**	**133 J**
Mercury	0.00051	mg/kg	NA	**0.11**	NA	**0.32**	NA	**0.3 J**	**0.62 J**	**0.62 J**	**0.39 J**	**1.8 J**
Nickel	30	mg/kg	NA	**8.6**	NA	**7.4 J**	NA	**57.2 J**	**44.7 J**	**51.7 J**	**21 J**	**158 J**
Potassium	- -	mg/kg	NA	1,020 U	NA	985 U	NA	1,220 U	1,250 U	1,250 U	1,210 U	1,440 U
Selenium	0.21	mg/kg	NA	0.61 UJ	NA	0.59 UJ	NA	0.73 UJ	**1.5 J**	0.75 UJ	**1.6 J**	**1.7 J**
Silver	2	mg/kg	NA	**0.13 J**	NA	**0.25 J**	NA	**8.1 J**	**6.1 J**	**8.5 J**	**5.4 J**	**4.2 J**
Sodium	- -	mg/kg	NA	1,020 U	NA	985 U	NA	1,220 U	1,250 U	1,250 U	1,210 U	1,440 U
Thallium	0.51	mg/kg	NA	0.81 U	NA	0.79 U	NA	0.98 U	1 U	1 U	0.97 U	1.1 U
Vanadium	2	mg/kg	NA	**19.3**	NA	**14**	NA	**20.8**	**22.6**	**19.4**	12 U	**15.9**
Zinc	8.5	mg/kg	NA	**56**	NA	**74.5**	NA	**1,570 J**	**1,170 J**	**1,130 J**	**935 J**	**586 J**

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	LLF-002 0 - 1 12/01/05 LLF-002(0-1)	LLF-003 0 - 1 12/01/05 LLF-003(0-1)	LLF-004 0 - 1 12/01/05 LLF-004(0-1)	LNP-007 0 - 1 12/01/05 LNP-007(0-1)	LNP-008 0 - 1 12/01/05 LNP-008(0-1)	LOU-001 0 - 1 12/01/05 LOU-001(0-1)	LQW-009 0 - 1 11/30/05 LQW-009 (0-1)	LQW-010 0 - 1 12/01/05 LQW-010 (0-1)	LQW-011 0 - 1 12/02/05 LQW-011	LQW-012 0 - 1 11/30/05 LQW-012 (0-1)	LQW-012 0 - 1 12/02/05 LQW-012B
Dioxins and Furans													
2,3,7,8-TCDD	4.5	ng/kg	**2.3**	0.88 UJ	**1.1 J**	1.6 UJ	**1.3 J [2.2 J]**	**1.3 J**	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	**8.4**	**1.8 J**	**4.1 J**	**4.4 J**	**2 J [3.2 J]**	**5.8**	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	**11**	**1.3 J**	**4 J**	**9.7 J**	**4.8 J [2.9 J]**	**6.8**	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	**34**	**5 J**	**13**	**46 J**	**13 [16]**	**20**	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	**24**	**3.4 J**	**5.2 J**	**20 J**	**7 [8.1]**	**15**	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	**510**	**79**	**160**	**1,600**	**350 [430]**	**330**	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	**4,300**	**670**	**1,500**	**20,000**	**3,300 [4,400]**	**3,000**	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	**55**	**4.1**	**9.8**	**4.3 J**	**7 [4.5]**	**42**	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	**57**	**4.1 J**	**20**	**28 J**	**17 J [8 J]**	**41**	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	**260**	**36**	**90**	**270**	**92 [110]**	**150**	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	**880**	**140**	**320**	**3,000**	**640 [790]**	**640**	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	**5,550**	**854 J**	**1,940**	**23,300 J**	**4,060 J [5,310 J]**	**3,870**	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	**18**	**12**	**12**	**9 J**	**4.4 [6.4]**	**15**	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	**4.3 J**	**2.5 J**	**6.8 J**	**5.1 J**	**3.5 J [3.7 J]**	**8**	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	**39**	**6.5**	**16**	**15 J**	**18 [22]**	**28**	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	**56**	**10 J**	**20**	**28 J**	**6 J [5 J]**	**34**	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	**24**	**4.7 J**	**13**	**13 J**	**10 [14]**	**16**	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	**8.5**	1 UJ	**4 J**	6 UJ	**3.3 J [3.6 J]**	**4.4 J**	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	**18**	**3 J**	**19**	17 UJ	**34 [39]**	**10**	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	**310**	**52**	**100**	**190**	**98 [110]**	**190**	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	**20**	**3 J**	**9**	13 UJ	**8.1 [9.8]**	**16**	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	**590**	**76**	**130**	**370**	**200 [250]**	**350**	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	**320**	**46**	**120**	**83**	**42 J [73 J]**	**300**	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	**200**	**39**	**150**	**67**	**230 [280]**	**270**	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	**430**	**49 J**	**170**	**270 J**	**430 [500]**	**320**	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	**340**	**91**	**190**	**540**	**270 [330]**	**410**	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	**1,880**	**301 J**	**760**	**1,330 J**	**1,170 J [1,430 J]**	**1,650**	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	**2.3**	0	**1.1**	0	**1.3 [2.2]**	**1.3**	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	**8.4**	**1.8**	**4.1**	**4.4**	**2 [3.2]**	**5.8**	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	**1.1**	**0.13**	**0.4**	**0.97**	**0.48 [0.29]**	**0.68**	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	**3.4**	**0.5**	**1.3**	**4.6**	**1.3 [1.6]**	**2**	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	**2.4**	**0.34**	**0.52**	**2**	**0.7 [0.81]**	**1.5**	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	**5.1**	**0.79**	**1.6**	**16**	**3.5 [4.3]**	**3.3**	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	**0.43**	**0.067**	**0.15**	**2**	**0.33 [0.44]**	**0.3**	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	**1.8**	**1.2**	**1.2**	**0.9**	**0.44 [0.64]**	**1.5**	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	**0.22**	**0.13**	**0.34**	**0.26**	**0.18 [0.19]**	**0.4**	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	**20**	**3.3**	**8**	**7.5**	**9 [11]**	**14**	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	**5.6**	**1**	**2**	**2.8**	**0.6 [0.5]**	**3.4**	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	**2.4**	**0.47**	**1.3**	**1.3**	**1 [1.4]**	**1.6**	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	**0.85**	0	**0.4**	0	**0.33 [0.36]**	**0.44**	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	**1.8**	**0.3**	**1.9**	0	**3.4 [3.9]**	**1**	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	**3.1**	**0.52**	**1**	**1.9**	**0.98 [1.1]**	**1.9**	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	**0.2**	**0.03**	**0.09**	0	**0.081 [0.098]**	**0.16**	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	**0.059**	**0.0076**	**0.013**	**0.037**	**0.02 [0.025]**	**0.035**	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	**51.7**	**9.82**	**22.4**	**47.6**	**22.7 [28.5]**	**34.2**	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-013	LQW-014	LQW-015	LQW-015	LQW-016	LQW-016	LQW-017	LQW-017	LQW-018	LQW-018	LUI-005	LUI-006
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1		
Date Collected:			12/01/05	12/01/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	12/08/05	12/08/05
Sample Name:	PAL	Units	LQW-013 (0-1)	LQW-014 (0-1)	LQW-015 (0-1)	LQW-015B	LQW-016 (0-1)	LQW-016B	LQW-017 (0-1)	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005	LUI-006
Dioxins and Furans														
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2 UJ	**1.2**
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.7 J**	**5.5**
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.3 J**	**6.8**
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**5.1**	**21**
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3.1 J**	**9.9**
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**65**	**270**
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**320**	**1,800**
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**7.9**	**19**
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9.5**	**56**
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**42**	**190**
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**110**	**470**
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**489**	**2,540**
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3.9**	**13**
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**6.1 J**	**36 J**
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4.9 J**	**16**
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4 J**	**35**
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.8 J**	**31 J**
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.4 J**	**6.6**
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.5 J**	**13**
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**21**	**210**
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.1 J**	**14**
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31 U	**260**
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**55**	**170**
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**43**	**310**
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**41**	**230**
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**41**	**380**
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**180**	**1,350**
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	**1.2**
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.7**	**5.5**
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.23**	**0.68**
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.51**	**2.1**
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.31**	**0.99**
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.65**	**2.7**
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.032**	**0.18**
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.39**	**1.3**
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.31**	**1.8**
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.5**	**8**
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.4**	**3.5**
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.28**	**3.1**
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.14**	**0.66**
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.15**	**1.3**
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.21**	**2.1**
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.021**	**0.14**
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	**0.026**
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**8.74**	**31.8**

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-601	SEA-601	SEA-601	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-603
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	10 - 12	14 - 16	18 - 20	24 - 26	30 - 32	4 - 6
Date Collected:			09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/21/03
Sample Name:	PAL	Units	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF	SSO-SPT5-15-LF	SSO-SPT5-20-LF	SSO-SPT5-25-LF	SSO-SPT5-30-LF	SSO-SPT2-5-LF
Dioxins and Furans											
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-603	SEA-603	SEA-604	SEA-604	SEA-604	SEA-605	SEA-605	SEA-605	SEA-606
Sample Depth (Feet):			8 - 10	14 - 16	4 - 6	8 - 10	14 - 16	5 - 7	9 - 11	15 - 17	4 - 6
Date Collected:			09/21/03	09/21/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03	09/21/03
Sample Name:	PAL	Units	SSO-SPT2-10-LF	SSO-SPT2-15-LF	SSO-SPT3-5-LF	SSO-SPT3-10-LF	SSO-SPT3-15-LF	SSO-SPT4-5-LF	SSO-SPT4-10-LF	SSO-SPT4-15-LF	SSO-SPT8-5-NP
Dioxins and Furans											
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-606	SEA-606	SEA-607	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608	SO-001-BG	SO-002-BG
Sample Depth (Feet):			8 - 10	14 - 16	4 - 6	10 - 12	14 - 16	4 - 6	8 - 10	14 - 16	0 - 1	0 - 1
Date Collected:			09/21/03	09/21/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	08/18/03	08/18/03
Sample Name:	PAL	Units	SSO-SPT8-10-NP	SSO-SPT8-15-NP	SSO-SPT6-5-UI	SSO-SPT6-10-UI	SSO-SPT6-15-UI	SSO-SPT7-5-UI	SSO-SPT7-10-UI	SSO-SPT7-15-UI	SO-001-BG	SO-002-BG
Dioxins and Furans												
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI	SO-013-UI	SO-014-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/18/03	08/18/03	08/18/03	08/19/03	08/19/03	08/19/03	08/19/03	08/20/03	08/20/03	08/20/03	08/20/03	08/20/03
Sample Name:	PAL	Units	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI	SO-012-UI	SO-013-UI	SO-014-UI
Dioxins and Furans														
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF	SO-022-LF	SO-023-LF	SO-024-LF	SO-025-LF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/20/03	08/20/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/22/03	08/22/03	08/22/03
Sample Name:	PAL	Units	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF	SO-FD-03	SO-023-LF	SO-024-LF	SO-025-LF
Dioxins and Furans														
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-033-NP	SO-034-NP	SO-034-NP	SO-035-NP	SO-035-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	1 - 5	0 - 1	6 - 10	0 - 1	5 - 9
Date Collected:			08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/28/03	09/05/03	09/05/03	09/05/03	09/05/03	09/06/03	09/06/03
Sample Name:	PAL	Units	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP	SO-W14-NP	SO-034-NP	SO-W13-NP	SO-035-NP	SO-W15-NP
Dioxins and Furans														
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-036-NP	SO-036-NP	SO-036-NP	SO-037-NP	SO-037-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF
Sample Depth (Feet):			0 - 1	1 - 5	1 - 5	0 - 1	5 - 9	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/09/04	09/09/04	09/09/04	09/10/04	09/10/04	09/09/04	09/09/04
Sample Name:	PAL	Units	SO-036-NP	SSO-FD01	SSO-01-NP	SO-037-NP	SO-W16-NP	SO-041-LF	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF
Dioxins and Furans														
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-048-DF	SO-049-DF	SO-050-NP	SO-051-NP	SO-052-NP	SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/09/04	09/09/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/09/04	09/08/04	09/09/04
Sample Name:	PAL	Units	SO-048-DF	SO-049-DF	SO-050-NP	SO-051-NP	SO-052-NP	SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT
Dioxins and Furans														
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-060-WT	SO-061-WT	SO-061-WT	SO-062-WT	SO-062-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/09/04	11/27/04	09/09/04	11/27/04	09/09/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04
Sample Name:	PAL	Units	SO-060-WT	SO-061-WT	SO-091-WT	SO-062-WT	SO-092-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR
Dioxins and Furans														
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-070-BR	SO-071-BR	SO-072-MF	SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/08/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04
Sample Name:	PAL	Units	SO-070-BR	SO-071-BR	SO-072-MF	SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI
Dioxins and Furans														
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-082-UI	SO-083-UI	SO-084-UI	SO-084-UI	SO-085-UI	SO-085-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	2 - 7
Date Collected:			09/10/04	09/10/04	09/09/04	11/27/04	09/09/04	11/27/04	09/09/04	09/09/04	09/10/04	11/01/06
Sample Name:	PAL	Units	SO-082-UI	SO-083-UI	SO-084-UI	SO-089-UI	SO-085-UI	SO-090-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP (2-7')
Dioxins and Furans												
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-101-NP	SO-101-NP	SO-102-NP	SO-102-NP	SO-103-NP	SO-104-NP	SO-105-NP	SO-106-NP	SO-107-NP
Sample Depth (Feet):			0 - 1	2 - 9	0 - 1	2 - 8.5	2 - 7	2 - 3.4	2 - 3.4	2 - 5	0 - 1
Date Collected:			11/01/06	11/01/06	10/31/06	10/31/06	11/01/06	11/02/06	11/02/06	11/02/06	11/02/06
Sample Name:	PAL	Units	SO-101-NP (0-1')	SO-101-NP (2-9')	SO-102-NP (0-1')	SO-102-NP (2-8.5')	SO-103-NP (2-7')	SO-104-NP (2-3.4')	SO-105-NP (2-3.4')	SO-106-NP (2-5')	SO-107-NP (0-1')
Dioxins and Furans											
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-107-NP	SO-108-NP	SO-200-U1	SO-200-U1	SO-200-UI	SO-200-UI	SO-201-UI	SO-201-UI	SO-203-U1
Sample Depth (Feet):			2 - 10	3 - 8	0 - 1	5 - 6	0 - 1	5 - 6	4 - 6	4 - 6	0 - 1
Date Collected:			11/02/06	11/02/06	11/18/09	11/18/09	11/18/09	11/18/09	11/18/09	11/24/09	11/18/09
Sample Name:	PAL	Units	SO-107-NP (2-10')	SO-108-NP (3-8')	SO-200-U1-0-1'	SO-200-U1-5-6'	SO-200-UI (0-1')	SO-200-UI (5-6')	SO-201-UI (4-6')	SO-201-UI-4-6'	SO-203-U1-0-1'
Dioxins and Furans											
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	**4.4 J**	0.57 UJ	NA	NA	NA	**21 D**	**8.3 J**
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	**6.8 J**	0.57 UJ	NA	NA	NA	1.7 UJ	**7.4 J**
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	**7.6 J**	0.5 UJ	NA	NA	NA	2.1 UJ	**6.7 J**
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	**23 J**	0.45 UJ	NA	NA	NA	2.4 UJ	**20 J**
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	**17 J**	0.52 UJ	NA	NA	NA	2.7 UJ	**13 J**
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	**450 D**	**3.9 J**	NA	NA	NA	**53 D**	**450 D**
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	**4,200 D**	36 UJ	NA	NA	NA	**900 D**	**4,400 D**
Total TCDD	- -	ng/kg	NA	NA	**71 D**	0.57 UJ	NA	NA	NA	**21 D**	**27 D**
Total PeCDD	- -	ng/kg	NA	NA	**43 J**	0.57 UJ	NA	NA	NA	1.7 UJ	**41 J**
Total HxCDD	- -	ng/kg	NA	NA	**100 D**	0.49 UJ	NA	NA	NA	**7.4 J**	**110 D**
Total HpCDD	- -	ng/kg	NA	NA	**830 D**	**7.9 J**	NA	NA	NA	**110 D**	**830 D**
Total Dioxins	- -	ng/kg	NA	NA	**5,240 J**	**43.9 J**	NA	NA	NA	**1,040 J**	**5,410 J**
2,3,7,8-TCDF	- -	ng/kg	NA	NA	**23 D**	**1.6 J**	NA	NA	NA	**6.5 J**	**170 D**
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	**5.4 J**	0.48 UJ	NA	NA	NA	**2.7 J**	**13 J**
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	**26 J**	**0.56 J**	NA	NA	NA	**26 J**	**31 J**
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	**48 J**	**1.5 J**	NA	NA	NA	**29 J**	**74 D**
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	**18 J**	0.29 UJ	NA	NA	NA	**12 J**	**19 J**
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	**5.6 J**	0.39 UJ	NA	NA	NA	**7.7 J**	**10 J**
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	**21 J**	**0.44 J**	NA	NA	NA	**9.7 J**	**9.7 J**
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	**280 D**	**3 J**	NA	NA	NA	**23 J**	**330 D**
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	**17 J**	0.48 UJ	NA	NA	NA	**7.5 J**	**17 J**
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	**560 D**	**4.6 J**	NA	NA	NA	28 UJ	**500 D**
Total TCDF	- -	ng/kg	NA	NA	**320 D**	**1.3 J**	NA	NA	NA	**130 D**	**440 D**
Total PeCDF	- -	ng/kg	NA	NA	**320 D**	**4.9 J**	NA	NA	NA	**61 D**	**320 D**
Total HxCDF	- -	ng/kg	NA	NA	**320 D**	**4.1 J**	NA	NA	NA	**110 D**	**460 D**
Total HpCDF	- -	ng/kg	NA	NA	**290 D**	**5.7 J**	NA	NA	NA	**23 J**	**600 D**
Total Furans	- -	ng/kg	NA	NA	**1,810**	**20.6 J**	NA	NA	NA	**352 J**	**2,320**
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	**44.4**	**0.399**	NA	NA	NA	**28.6**	**67.1**

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-203-UI	SO-204-UI	SO-205-U1	SO-205-UI	SO-206-UI	SO-207B-UI	SO-207B-UI	SO-208B-UI	SO-208B-UI
Sample Depth (Feet):			5 - 7	2 - 4	3 - 4.5	2 - 4	2 - 3	1 - 2	2 - 3	0 - 1	1 - 5
Date Collected:			11/18/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09
Sample Name:	PAL	Units	SO-203-UI (5-7')	SO-204-UI (2-4')	SO-205-U1-3-4.5	SO-205-UI (2-4')	SO-206-UI (2-3')	SO-207B-UI (1-2')	SO-207B-UI (2-3')	SO-208B-UI (0-1')	SO-208B-UI (1-5')
Dioxins and Furans											
2,3,7,8-TCDD	4.5	ng/kg	NA	5 UJ	4.4 UJ	NA	NA	NA	1.4 UJ	**1.7 J**	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	4.4 UJ	4.3 UJ	NA	NA	NA	**9.4 J**	**5.1 J**	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	2.2 UJ	**4.8 J**	NA	NA	NA	**6.3 J**	**7.3 J**	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	**3.5 J**	**10 J**	NA	NA	NA	**17 J**	**20 J**	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	2.3 UJ	**7.8 J**	NA	NA	NA	**9.7 J**	**17 J**	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	**7.8 J**	**130 D**	NA	NA	NA	**200 D**	**630 D**	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	73 UJ	**1,100 D**	NA	NA	NA	**1,600 D**	**4,800 D**	NA
Total TCDD	- -	ng/kg	NA	5 UJ	4.4 UJ	NA	NA	NA	**56 D**	**76 D**	NA
Total PeCDD	- -	ng/kg	NA	4.4 UJ	4.3 UJ	NA	NA	NA	**100 D**	**90 D**	NA
Total HxCDD	- -	ng/kg	NA	**10 J**	**68 D**	NA	NA	NA	**220 D**	**250 D**	NA
Total HpCDD	- -	ng/kg	NA	**9.4 J**	**250 D**	NA	NA	NA	**400 D**	**1,200 D**	NA
Total Dioxins	- -	ng/kg	NA	**92.4 J**	**1,420**	NA	NA	NA	**2,380**	**6,420**	NA
2,3,7,8-TCDF	- -	ng/kg	NA	**26 D**	**1,200 D**	NA	NA	NA	**32 D**	**18 D**	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	**12 J**	**130 J**	NA	NA	NA	**16 J**	**6.2 J**	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	**9.8 J**	**39 J**	NA	NA	NA	**30 J**	**16 J**	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	**8.9 J**	**47 J**	NA	NA	NA	**41 J**	**28 J**	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	**5.7 J**	**36 J**	NA	NA	NA	**44 J**	**13 J**	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	3.7 UJ	**9.5 J**	NA	NA	NA	**8.3 J**	**2.7 J**	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	**3.3 J**	**24 J**	NA	NA	NA	**28 J**	**14 J**	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	**19 J**	**270 D**	NA	NA	NA	**190 D**	**130 D**	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	4.1 UJ	**19 J**	NA	NA	NA	**15 J**	**8.1 J**	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	**29 J**	**620 D**	NA	NA	NA	**200 D**	**200 D**	NA
Total TCDF	- -	ng/kg	NA	**150 D**	**2,200 D**	NA	NA	NA	**370 D**	**240 D**	NA
Total PeCDF	- -	ng/kg	NA	**55 D**	**210 D**	NA	NA	NA	**330 D**	**220 D**	NA
Total HxCDF	- -	ng/kg	NA	**30 J**	**330 D**	NA	NA	NA	**350 D**	**150 D**	NA
Total HpCDF	- -	ng/kg	NA	**25 J**	**480 D**	NA	NA	NA	**320 D**	**220 D**	NA
Total Furans	- -	ng/kg	NA	**289 J**	**3,840**	NA	NA	NA	**1,570**	**1,030**	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	**7.93**	**150**	NA	NA	NA	**41.1**	**31.3**	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-209-UI	SO-210B-UI	SO-211-UI	SO-212-UI	SO-213-U1	SO-214-U1	SO-215-U1
Sample Depth (Feet):			0 - 1	1.25 - 4	0 - 1	1 - 4.5	0 - 1	0 - 1	0 - 1
Date Collected:			11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09
Sample Name:	PAL	Units	SO-209-UI (0-1')	SO-210B-UI (1.25-4')	SO-211-UI (0-1')	SO-212-UI (1-4.5')	SO-213-U1-0-1'	SO-214-U1-0-1'	SO-215-U1-0-1'
Dioxins and Furans									
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	1.4 UJ	2 UJ	1.7 UJ
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	**4.9 J**	**2.2 J**	**6.6 J**
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	**4.3 J**	**2.8 J**	**5.2 J**
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	**20 J**	**7.4 J**	**13 J**
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	**10 J**	**4.7 J**	**11 J**
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	**280 D**	**120 D**	**220 D**
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	**2,900 D**	**1,200 D**	**2,300 D**
Total TCDD	- -	ng/kg	NA	NA	NA	NA	**26 D**	**2.6 J**	**40 D**
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	**35 J**	**8.3 J**	**51 D**
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	**75 D**	**34 J**	**80 D**
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	**540 D**	**230 D**	**440 D**
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	**3,580 J**	**1,470 J**	**2,910**
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	**15 D**	**7 J**	**16 D**
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	**4.6 J**	**2.3 J**	**7.5 J**
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	**23 J**	**9.4 J**	**21 J**
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	**41 J**	**16 J**	**36 J**
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	**15 J**	**7.1 J**	**27 J**
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	**3.4 J**	2.5 UJ	**5.9 J**
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	**16 J**	**6.5 J**	**21 J**
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	**200 D**	**76 D**	**150 D**
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	**12 J**	**6 J**	**13 J**
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	**370 D**	**160 D**	**290 D**
Total TCDF	- -	ng/kg	NA	NA	NA	NA	**200 D**	**77 D**	**210 D**
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	**290 D**	**98 D**	**240 D**
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	**220 D**	**92 D**	**230 D**
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	**210 D**	**82 D**	**170 D**
Total Furans	- -	ng/kg	NA	NA	NA	NA	**1,290**	**509**	**1,140**
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	**30.3**	**12.7**	**31.2**

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-216-U1 0 - 1 11/20/09 SO-216-U1-0-1'	SO-217-UI 0 - 1 11/20/09 SO-217-UI (0-1')	SO-218-UI 1 - 5 11/23/09 SO-218-UI-1-5'	SO-219-UI 1 - 5 11/23/09 SO-219-UI-1-5'	SO-220-UI 1 - 4.5 11/23/09 SO-220-UI-1-4.5'	SO-222-UI 1 - 3 11/23/09 SO-222-UI-1-3'	SO-223F-UI 0 - 1 11/24/09 SO-223F-UI-0-1'	SO-223F-UI 11 - 12 11/23/09 SO-223F-UI-11-12'
Dioxins and Furans										
2,3,7,8-TCDD	4.5	ng/kg	1.4 UJ	NA	1.7 UJ	2 UJ [1.9 UJ]	2.1 UJ	NA	2.1 UJ	NA
1,2,3,7,8-PeCDD	- -	ng/kg	**3.9 J**	NA	2.5 UJ	**4.6 J [1.92 J]**	**6.8 J**	NA	**3.7 J**	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	**2.8 J**	NA	1.3 UJ	**3.4 J [2.4 J]**	**9.7 J**	NA	3.6 UJ	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	**10 J**	NA	**7.7 J**	**10 J [7 J]**	**26 J**	NA	**11 J**	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	**6.3 J**	NA	**3.4 J**	**7 J [3.6 J]**	**17 J**	NA	**7.7 J**	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	**180 D**	NA	**72 D**	**190 J [110 J]**	**340 D**	NA	**190 D**	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	**1,700 D**	NA	**680 D**	**1,400 J [770 J]**	**2,300 D**	NA	**1,500 D**	NA
Total TCDD	- -	ng/kg	**15 D**	NA	**5.3 J**	**2.8 J [2 J]**	**20 D**	NA	**18 D**	NA
Total PeCDD	- -	ng/kg	**27 J**	NA	**2.5 J**	**23 J [5.7 J]**	**87 D**	NA	**30 J**	NA
Total HxCDD	- -	ng/kg	**53 D**	NA	**48 J**	**58 D [55 D]**	**270 D**	NA	**100 D**	NA
Total HpCDD	- -	ng/kg	**380 D**	NA	**150 D**	**370 J [220 J]**	**680 D**	NA	**410 D**	NA
Total Dioxins	- -	ng/kg	**2,180 J**	NA	**886 J**	**1,850 J [1,050 J]**	**3,360**	NA	**2,060 J**	NA
2,3,7,8-TCDF	- -	ng/kg	**13 D**	NA	**57 D**	**38 D [43 D]**	**49 D**	NA	**9.2 J**	NA
1,2,3,7,8-PeCDF	- -	ng/kg	**5.2 J**	NA	**4.8 J**	**1 UJ [3.8 J]**	**11 J**	NA	**11 J**	NA
2,3,4,7,8-PeCDF	- -	ng/kg	**19 J**	NA	**14 J**	**13 J [9.1 J]**	**42 J**	NA	**20 J**	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	**32 J**	NA	**15 J**	**16 J [16 J]**	**49 J**	NA	**44 J**	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	**15 J**	NA	**7.2 J**	**5.7 J [4.7 J]**	**30 J**	NA	**14 J**	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	**3.9 J**	NA	1.9 UJ	3.1 UJ [2.8 UJ]	**6.9 J**	NA	**5.3 J**	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	**14 J**	NA	**7 J**	**7.5 J [4.3 J]**	**26 J**	NA	**16 J**	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	**130 D**	NA	**87 D**	**110 D [88 D]**	**290 D**	NA	**160 D**	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	**10 J**	NA	**4.8 J**	**5.4 J [4.4 J]**	**17 J**	NA	**19 J**	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	**240 D**	NA	**95 J**	**180 J [97 J]**	**280 D**	NA	**200 D**	NA
Total TCDF	- -	ng/kg	**110 D**	NA	**92 D**	**93 D [96 D]**	**280 D**	NA	**130 D**	NA
Total PeCDF	- -	ng/kg	**210 D**	NA	**140 D**	**130 D [88 D]**	**470 D**	NA	**190 D**	NA
Total HxCDF	- -	ng/kg	**180 D**	NA	**94 D**	**130 D [110 D]**	**500 D**	NA	**250 D**	NA
Total HpCDF	- -	ng/kg	**140 D**	NA	**170 D**	**220 D [170 D]**	**540 D**	NA	**300 D**	NA
Total Furans	- -	ng/kg	**880**	NA	**591 J**	**753 [561 J]**	**2,070**	NA	**1,070**	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	**22**	NA	**15.1**	**14.1 [13.5]**	**47.6**	NA	**23.5**	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID: Sample Depth (Feet): Date Collected: Sample Name:	PAL	Units	SO-224A-UI 1 - 5 11/23/09 SO-224A-UI-1-5'	SO-225A-UI 0 - 1 11/24/09 SO-225A-UI-0-1'	SO-225A-UI 1.5 - 5 11/24/09 SO-225A-UI-1.5-5'	SO-226A-UI 6 - 8 11/24/09 SO-226A-UI-6-8'	SO-227B-UI 1 - 5 11/24/09 SO-227B-UI-1-5'	SO-228-UI 12 - 14 11/24/09 SO-228-UI-12-14'	SO-W05-DF 0 - 1 08/26/03 SO-W05-DF
Dioxins and Furans									
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	2.5 UJ	3.8 UJ	1.5 UJ	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	**4.3 J**	2.5 UJ	1 UJ	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	1.9 UJ	2.4 UJ	0.63 UJ	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	**22 J**	3.7 UJ	0.99 UJ	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	**10 J**	3.7 UJ	0.83 UJ	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	**340 D**	5.3 UJ	18 UJ	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	**3,100 J**	49 UJ	170 U	NA	NA
Total TCDD	- -	ng/kg	NA	NA	2.5 UJ	3.8 UJ	1.5 UJ	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	**40 J**	2.5 UJ	1 UJ	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	**130 D**	3.3 UJ	0.82 UJ	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	**680 D**	4 UJ	37 UJ	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	**3,950 J**	**49 J**	**207 J**	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	**310 D**	**5.6 J**	**24 D**	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	**20 J**	3.4 UJ	0.69 UJ	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	**35 J**	2.1 UJ	**2.6 J**	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	**160 J**	1.8 UJ	**5.8 J**	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	**24 J**	2.1 UJ	**1.3 J**	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	**6.7 J**	1.4 UJ	0.52 UJ	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	**29 J**	1.6 UJ	**2.1 J**	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	**580 D**	**7 J**	**25 J**	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	**24 J**	3.1 UJ	1.6 UJ	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	**630 D**	7.8 UJ	31 UJ	NA	NA
Total TCDF	- -	ng/kg	NA	NA	**700 D**	**26 D**	**24 D**	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	**470 D**	**8.1 J**	**23 J**	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	**460 D**	1.7 UJ	**33 J**	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	**970 D**	**12 J**	**25 J**	NA	NA
Total Furans	- -	ng/kg	NA	NA	**3,230**	**53.9 J**	**136 J**	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	**65.5**	**0.087**	**4.46**	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W05-DF	SO-W06-DF	SO-W06-DF	SO-W06-DF	SO-W07-DF	SO-W07x-DF	SO-W08-DF	SO-W08-DF	SO-W09-DF	SO-W09-DF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/20/03	08/26/03	08/27/03	09/20/03	08/26/03	09/20/03	08/26/03	09/20/03	08/26/03	09/20/03
Sample Name:	PAL	Units	SO-W05-DFb	SO-W06-DF	SO-FD04	SO-W06-DFb	SO-W07-DF	SO-W07x-DF	SO-W08-DF	SO-W08-DFb	SO-W09-DF	SO-W09-DFb
Dioxins and Furans												
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-18
SOIL RESULTS FOR PCDDs AND PCDFs (ng/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W10-DF	SO-W10-DF	SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			08/27/03	09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W10-DF	SO-W10-DFb	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
Dioxins and Furans													
2,3,7,8-TCDD	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dioxins	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8,9-OCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Furans	- -	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDD	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,7,8-TCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,7,8-PeCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,7,8,9-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 2,3,4,6,7,8-HxCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,7,8,9-HpCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEQ - 1,2,3,4,6,7,8,9-OCDF	- -	TEQ - ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WHO Dioxin TEQ	4.5	ng/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LLF-002	LLF-003	LLF-004	LNP-007	LNP-008	LOU-001	LQW-009	LQW-010	LQW-011	LQW-012	LQW-012
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	12/01/05	11/30/05	12/01/05	12/02/05	11/30/05	12/02/05
Sample Name:	PAL	Units	LLF-002(0-1)	LLF-003(0-1)	LLF-004(0-1)	LNP-007(0-1)	LNP-008(0-1)	LOU-001(0-1)	LQW-009 (0-1)	LQW-010 (0-1)	LQW-011	LQW-012 (0-1)	LQW-012B
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LQW-013	LQW-014	LQW-015	LQW-015	LQW-016	LQW-016	LQW-017	LQW-017	LQW-018	LQW-018	LUI-005
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	
Date Collected:			12/01/05	12/01/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	11/30/05	12/02/05	12/08/05
Sample Name:	PAL	Units	LQW-013 (0-1)	LQW-014 (0-1)	LQW-015 (0-1)	LQW-015B	LQW-016 (0-1)	LQW-016B	LQW-017 (0-1)	LQW-017B	LQW-018 (0-1)	LQW-018B	LUI-005
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			LUI-006	SEA-601	SEA-601	SEA-601	SEA-602B	SEA-602B	SEA-602B	SEA-602B	SEA-602B
Sample Depth (Feet):				4 - 6	8 - 10	14 - 16	10 - 12	14 - 16	18 - 20	24 - 26	30 - 32
Date Collected:			12/08/05	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03	09/15/03
Sample Name:	PAL	Units	LUI-006	SSO-SPT1-5-LF	SSO-SPT1-10-LF	SSO-SPT1-15-LF	SSO-SPT5-10-LF	SSO-SPT5-15-LF	SSO-SPT5-20-LF	SSO-SPT5-25-LF	SSO-SPT5-30-LF
Conventional Params											
TCO	- -	%	NA	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1
Total Organic Carbon	- -	mg/kg	NA	**1,500**	**530**	**580**	**900**	**820**	**350**	**610**	**500**
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-603	SEA-603	SEA-603	SEA-604	SEA-604	SEA-604	SEA-605	SEA-605	SEA-605
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	8 - 10	14 - 16	5 - 7	9 - 11	15 - 17
Date Collected:			09/21/03	09/21/03	09/21/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03	09/18/03
Sample Name:	PAL	Units	SSO-SPT2-5-LF	SSO-SPT2-10-LF	SSO-SPT2-15-LF	SSO-SPT3-5-LF	SSO-SPT3-10-LF	SSO-SPT3-15-LF	SSO-SPT4-5-LF	SSO-SPT4-10-LF	SSO-SPT4-15-LF
Conventional Params											
TCO	- -	%	0.2	0.1	0.1	0.4	0.1	0.1	0.7	0.2	1
Total Organic Carbon	- -	mg/kg	**1,700**	**660**	**500**	**2,100**	**520**	**1,000**	**4,100**	**1,700**	NA
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SEA-606	SEA-606	SEA-606	SEA-607	SEA-607	SEA-607	SEA-608	SEA-608	SEA-608
Sample Depth (Feet):			4 - 6	8 - 10	14 - 16	4 - 6	10 - 12	14 - 16	4 - 6	8 - 10	14 - 16
Date Collected:			09/21/03	09/21/03	09/21/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03	09/19/03
Sample Name:	PAL	Units	SSO-SPT8-5-NP	SSO-SPT8-10-NP	SSO-SPT8-15-NP	SSO-SPT6-5-UI	SSO-SPT6-10-UI	SSO-SPT6-15-UI	SSO-SPT7-5-UI	SSO-SPT7-10-UI	SSO-SPT7-15-UI
Conventional Params											
TCO	- -	%	3.8	0.2	0.1	0.4	0.1	0.2	0.3	3.1	0.2
Total Organic Carbon	- -	mg/kg	NA	**2,200**	**750**	**4,500**	**710**	**810**	**2,400**	NA	**1,400**
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/18/03	08/18/03	08/18/03	08/18/03	08/18/03	08/19/03	08/19/03	08/19/03	08/19/03	08/20/03	08/20/03
Sample Name:	PAL	Units	SO-001-BG	SO-002-BG	SO-003-BG	SO-004-BG	SO-005-BG	SO-006-UI	SO-007-UI	SO-008-NP	SO-009-NP	SO-010-UI	SO-011-UI
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-012-UI	SO-013-UI	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/20/03	08/20/03	08/20/03	08/20/03	08/20/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03	08/21/03
Sample Name:	PAL	Units	SO-012-UI	SO-013-UI	SO-014-UI	SO-015-UI	SO-016-UI	SO-017-NP	SO-018-LF	SO-019-LF	SO-020-LF	SO-021-LF	SO-022-LF
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	SO-022-LF	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			08/21/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/22/03	08/28/03	09/05/03
Sample Name:			SO-FD-03	SO-023-LF	SO-024-LF	SO-025-LF	SO-026-LF	SO-027-LF	SO-028-LF	SO-029-LF	SO-030-LF	SO-032-LF	SO-033-NP
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-033-NP	SO-034-NP	SO-034-NP	SO-035-NP	SO-035-NP	SO-036-NP	SO-036-NP	SO-036-NP	SO-037-NP	SO-037-NP	SO-041-LF
Sample Depth (Feet):			1 - 5	0 - 1	6 - 10	0 - 1	5 - 9	0 - 1	1 - 5	1 - 5	0 - 1	5 - 9	0 - 1
Date Collected:			09/05/03	09/05/03	09/05/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/06/03	09/09/04
Sample Name:	PAL	Units	SO-W14-NP	SO-034-NP	SO-W13-NP	SO-035-NP	SO-W15-NP	SO-036-NP	SSO-FD01	SSO-01-NP	SO-037-NP	SO-W16-NP	SO-041-LF
Conventional Params													
TCO	- -	%	2.6	NA	15	NA	6.1	NA	2.2	2.4	NA	2.1	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.7

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP	SO-051-NP	SO-052-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/09/04	09/09/04	09/10/04	09/10/04	09/09/04	09/09/04	09/09/04	09/09/04	09/08/04	09/08/04	09/08/04
Sample Name:			SO-042-LF	SO-043-LF	SO-044-QW	SO-045-QW	SO-046-DF	SO-047-DF	SO-048-DF	SO-049-DF	SO-050-NP	SO-051-NP	SO-052-NP
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	5.2	5.6	5.1	5.1	4.6 [4.6]	4.8	5	6	5.8	5.7	5.7

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-061-WT	SO-062-WT
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/08/04	09/08/04	09/08/04	09/08/04	09/09/04	09/08/04	09/09/04	09/08/04	09/09/04	11/27/04	09/09/04
Sample Name:	PAL	Units	SO-053-NP	SO-054-NP	SO-055-NP	SO-056-NP	SO-057-NP	SO-058-WT	SO-059-WT	SO-060-WT	SO-061-WT	SO-091-WT	SO-062-WT
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	5.7	5.4	6.1	6.1 [5.8]	5	5.3	6.1	5.9	5.3	NA	5.6

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-062-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			11/27/04	09/09/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/08/04	09/10/04
Sample Name:	PAL	Units	SO-092-WT	SO-063-WT	SO-064-BR	SO-065-BR	SO-066-BR	SO-067-BR	SO-068-BR	SO-069-BR	SO-070-BR	SO-071-BR	SO-072-MF
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	NA	5.6	6.3	4.6	6.3	5.8	6.3	5.4	5.8	5.8	4.6

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04	09/10/04
Sample Name:	PAL	Units	SO-073-MF	SO-074-MF	SO-075-QW	SO-076-QW	SO-077-UI	SO-078-UI	SO-079-UI	SO-080-UI	SO-081-UI	SO-082-UI	SO-083-UI
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	4.6	4.5	6.3	5.3 [5]	4.7	4	4.5	4.6	4.9	5.9	4.6

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	SO-084-UI	SO-084-UI	SO-085-UI	SO-085-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP	SO-101-NP	SO-101-NP
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	2 - 7	0 - 1	2 - 9
Date Collected:			09/09/04	11/27/04	09/09/04	11/27/04	09/09/04	09/09/04	09/10/04	11/01/06	11/01/06	11/01/06
Sample Name:			SO-084-UI	SO-089-UI	SO-085-UI	SO-090-UI	SO-086-UI	SO-087-UI	SO-088-UI	SO-100-NP (2-7')	SO-101-NP (0-1')	SO-101-NP (2-9')
Conventional Params												
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters												
pH	- -	s.u.	4.8	NA	4.7	NA	6.7	5.5	5	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-102-NP	SO-102-NP	SO-103-NP	SO-104-NP	SO-105-NP	SO-106-NP	SO-107-NP	SO-107-NP	SO-108-NP
Sample Depth (Feet):			0 - 1	2 - 8.5	2 - 7	2 - 3.4	2 - 3.4	2 - 5	0 - 1	2 - 10	3 - 8
Date Collected:			10/31/06	10/31/06	11/01/06	11/02/06	11/02/06	11/02/06	11/02/06	11/02/06	11/02/06
Sample Name:	PAL	Units	SO-102-NP (0-1')	SO-102-NP (2-8.5')	SO-103-NP (2-7')	SO-104-NP (2-3.4')	SO-105-NP (2-3.4')	SO-106-NP (2-5')	SO-107-NP (0-1')	SO-107-NP (2-10')	SO-108-NP (3-8')
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-200-U1	SO-200-U1	SO-200-UI	SO-200-UI	SO-201-UI	SO-201-UI	SO-203-U1	SO-203-UI	SO-204-UI
Sample Depth (Feet):			0 - 1	5 - 6	0 - 1	5 - 6	4 - 6	4 - 6	0 - 1	5 - 7	2 - 4
Date Collected:			11/18/09	11/18/09	11/18/09	11/18/09	11/18/09	11/24/09	11/18/09	11/18/09	11/19/09
Sample Name:	PAL	Units	SO-200-U1-0-1'	SO-200-U1-5-6'	SO-200-UI (0-1')	SO-200-UI (5-6')	SO-201-UI (4-6')	SO-201-UI-4-6'	SO-203-U1-0-1'	SO-203-UI (5-7')	SO-204-UI (2-4')
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-205-U1	SO-205-UI	SO-206-UI	SO-207B-UI	SO-207B-UI	SO-208B-UI	SO-208B-UI	SO-209-UI	SO-210B-UI
Sample Depth (Feet):			3 - 4.5	2 - 4	2 - 3	1 - 2	2 - 3	0 - 1	1 - 5	0 - 1	1.25 - 4
Date Collected:			11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/20/09	11/20/09
Sample Name:	PAL	Units	SO-205-U1-3-4.5	SO-205-UI (2-4')	SO-206-UI (2-3')	SO-207B-UI (1-2')	SO-207B-UI (2-3')	SO-208B-UI (0-1')	SO-208B-UI (1-5')	SO-209-UI (0-1')	SO-210B-UI (1.25-4')
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-211-UI	SO-212-UI	SO-213-U1	SO-214-U1	SO-215-U1	SO-216-U1	SO-217-UI	SO-218-UI	SO-219-UI
Sample Depth (Feet):			0 - 1	1 - 4.5	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	1 - 5	1 - 5
Date Collected:			11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/20/09	11/23/09	11/23/09
Sample Name:	PAL	Units	SO-211-UI (0-1')	SO-212-UI (1-4.5')	SO-213-U1-0-1'	SO-214-U1-0-1'	SO-215-U1-0-1'	SO-216-U1-0-1'	SO-217-UI (0-1')	SO-218-UI-1-5'	SO-219-UI-1-5'
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-220-UI	SO-222-UI	SO-223F-UI	SO-223F-UI	SO-224A-UI	SO-225A-UI	SO-225A-UI	SO-226A-UI	SO-227B-UI
Sample Depth (Feet):			1 - 4.5	1 - 3	0 - 1	11 - 12	1 - 5	0 - 1	1.5 - 5	6 - 8	1 - 5
Date Collected:			11/23/09	11/23/09	11/24/09	11/23/09	11/23/09	11/24/09	11/24/09	11/24/09	11/24/09
Sample Name:	PAL	Units	SO-220-UI-1-4.5'	SO-222-UI-1-3'	SO-223F-UI-0-1'	SO-223F-UI-11-12'	SO-224A-UI-1-5'	SO-225A-UI-0-1'	SO-225A-UI-1.5-5'	SO-226A-UI-6-8'	SO-227B-UI-1-5'
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:	PAL	Units	SO-228-UI	SO-W05-DF	SO-W05-DF	SO-W06-DF	SO-W06-DF	SO-W06-DF	SO-W07-DF	SO-W07x-DF	SO-W08-DF	SO-W08-DF	SO-W09-DF
Sample Depth (Feet):			12 - 14	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Date Collected:			11/24/09	08/26/03	09/20/03	08/26/03	08/27/03	09/20/03	08/26/03	09/20/03	08/26/03	09/20/03	08/26/03
Sample Name:			SO-228-UI-12-14'	SO-W05-DF	SO-W05-DFb	SO-W06-DF	SO-FD04	SO-W06-DFb	SO-W07-DF	SO-W07x-DF	SO-W08-DF	SO-W08-DFb	SO-W09-DF
Conventional Params													
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters													
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-19
SOIL RESULTS FOR PHYSICAL PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Location ID:			SO-W09-DF	SO-W10-DF	SO-W10-DF	SO-W11-DF	SO-W11-DF	SO-W12-DF	SO-W12-DF	UI-TT-01,02	UI-TT-03	UI-TT-03	UI-TT-06	UI-TT-10
Sample Depth (Feet):			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1					
Date Collected:			09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/27/03	09/20/03	08/20/03	08/20/03	08/20/03	08/19/03	08/19/03
Sample Name:	PAL	Units	SO-W09-DFb	SO-W10-DF	SO-W10-DFb	SO-W11-DF	SO-W11-DFb	SO-W12-DF	SO-W12-DFb	SO-W03-UI	SO-FD02	SO-W04-UI	SO-W01-UI	SO-W02-UI
Conventional Params														
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters														
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI	SE-005-UI
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI	SE-005-UI
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003
RISP East (ft)			352478	352322	352279	352279	352172	351747
RISP North (ft)			303295	303548	303356	303356	303168	303610
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50	29
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,1,2-Trichloroethane	840	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,1-Dichloroethane	27	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,1-Dichloroethene	31	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,2-Dibromoethane	6.9	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,2-Dichlorobenzene	330	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,2-Dichloroethane	250	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,2-Dichloropropane	350	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
1,4-Dichlorobenzene	340	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
2-Butanone	270	µg/kg dry wt	27 U	72	5 J	8 J	45 J	14
2-Hexanone	22	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
4-Methyl-2-pentanone	33	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Acetone	8.7	µg/kg dry wt	27 UJ	160 J	15 UJ	24 UJ	160 J	32 UJ
Benzene	57	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Bromodichloromethane	1,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Bromoform	62,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Bromomethane	390	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Carbon disulfide	0.85	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Carbon tetrachloride	47	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Chlorobenzene	410	µg/kg dry wt	27 U	30 U	10 U	10 U	20 J	11 U
Chloroethane	3,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Chloroform	22	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Chloromethane	1,200	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Cyclohexane	140,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Dibromochloromethane	1,100	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Ethylbenzene	89	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Isopropylbenzene	- -	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Methyl acetate	2,200,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Methyl tert butyl ether	- -	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Methylene chloride	370	µg/kg dry wt	27 U	30 U	10 U	4 JEB	11 JEB	11 U
Styrene	1,700,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Tetrachloroethene	410	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Toluene	50	µg/kg dry wt	27 U	5 J	10 U	10 U	16 U	11 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Trichloroethene	1,600	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Trichlorofluoromethane	39,000	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	2 J
Vinyl Chloride	150	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U
Xylene (Total)	160	µg/kg dry wt	27 U	30 U	10 U	10 U	16 U	11 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT	SE-010-WT	SE-011-WT
Sample Name			SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT	SE-010-WT	SE-011-WT
Date Collected			8/29/2003	9/2/2003	9/2/2003	9/3/2003	9/3/2003	9/3/2003
RISP East (ft)			352761	352484	352735	352646	352842	352504
RISP North (ft)			303287	303117	302367	304086	304421	304330
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			33	33	24	19	64	39
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	11 U	22 U	11 U	11 UJ	33 UJ	14 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,1,2-Trichloroethane	840	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,1-Dichloroethane	27	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,1-Dichloroethene	31	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,2-Dibromoethane	6.9	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,2-Dichlorobenzene	330	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,2-Dichloroethane	250	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,2-Dichloropropane	350	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
1,4-Dichlorobenzene	340	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
2-Butanone	270	µg/kg dry wt	16	69	11 U	11 UJ	33 UJ	8 J
2-Hexanone	22	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 UJ
4-Methyl-2-pentanone	33	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Acetone	8.7	µg/kg dry wt	39 UJ	160 J	11 UJ	11 U	33 U	25 U
Benzene	57	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Bromodichloromethane	1,000	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Bromoform	62,000	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Bromomethane	390	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Carbon disulfide	0.85	µg/kg dry wt	11 U	14 U	11 U	11 U	33 U	14 U
Carbon tetrachloride	47	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Chlorobenzene	410	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Chloroethane	3,000	µg/kg dry wt	11 U	22 U	11 U	11 UJ	33 UJ	14 UJ
Chloroform	22	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Chloromethane	1,200	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Cyclohexane	140,000	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Dibromochloromethane	1,100	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Ethylbenzene	89	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Isopropylbenzene	- -	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Methyl acetate	2,200,000	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Methyl tert butyl ether	- -	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Methylene chloride	370	µg/kg dry wt	11 U	14 U	11 U	11 U	33 U	14 U
Styrene	1,700,000	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Tetrachloroethene	410	µg/kg dry wt	11 U	22 U	11 U	11 U	8 J	14 U
Toluene	50	µg/kg dry wt	1 J	22 U	11 U	11 U	33 U	14 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Trichloroethene	1,600	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Trichlorofluoromethane	39,000	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Vinyl Chloride	150	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U
Xylene (Total)	160	µg/kg dry wt	11 U	22 U	11 U	11 U	33 U	14 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Sample Name			SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Date Collected			9/3/2003	9/4/2003	9/4/2003	9/4/2003	9/4/2003	9/5/2003
RISP East (ft)			351470	352327	351040	351365	349270	350890
RISP North (ft)			305229	304194	305533	305705	306035	305078
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			48	37	60	19	44	46
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	14 UJ	11 UJ	15 UJ	8 U	8 UJ	14 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
1,1,2-Trichloroethane	840	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
1,1-Dichloroethane	27	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
1,1-Dichloroethene	31	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
1,2-Dibromoethane	6.9	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
1,2-Dichlorobenzene	330	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
1,2-Dichloroethane	250	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
1,2-Dichloropropane	350	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
1,4-Dichlorobenzene	340	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
2-Butanone	270	µg/kg dry wt	4 J	4 J	8 J	8 UJ	9 J	14 UJ
2-Hexanone	22	µg/kg dry wt	14 U	11 UJ	15 UJ	8 UJ	8 U	14 U
4-Methyl-2-pentanone	33	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
Acetone	8.7	µg/kg dry wt	14 U	14 UJ	18 U	10 U	27 U	14 U
Benzene	57	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Bromodichloromethane	1,000	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Bromoform	62,000	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Bromomethane	390	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Carbon disulfide	0.85	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Carbon tetrachloride	47	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Chlorobenzene	410	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
Chloroethane	3,000	µg/kg dry wt	14 UJ	11 UJ	15 UJ	8 UJ	8 UJ	14 UJ
Chloroform	22	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Chloromethane	1,200	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	14 U	11 UJ	4 J	8 U	8 U	14 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Cyclohexane	140,000	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Dibromochloromethane	1,100	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Ethylbenzene	89	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
Isopropylbenzene	- -	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
Methyl acetate	2,200,000	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Methyl tert butyl ether	- -	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Methylene chloride	370	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Styrene	1,700,000	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
Tetrachloroethene	410	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U
Toluene	50	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Trichloroethene	1,600	µg/kg dry wt	14 U	11 UJ	2 J	8 U	8 U	14 U
Trichlorofluoromethane	39,000	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Vinyl Chloride	150	µg/kg dry wt	14 U	11 UJ	15 U	8 U	8 U	14 U
Xylene (Total)	160	µg/kg dry wt	14 U	11 UJ	15 UJ	8 U	8 U	14 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR
Sample Name			SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR
Date Collected			9/5/2003	9/5/2003	9/5/2003	9/5/2003	9/8/2003	9/5/2003
RISP East (ft)			350496	351002	351481	353121	345490	345490
RISP North (ft)			305336	304113	303930	303354	312537	312537
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			40	48	53	58	NA	29
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	13 UJ	18 UJ	19 UJ	21 UJ	12 U	15 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,1,2-Trichloroethane	840	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,1-Dichloroethane	27	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,1-Dichloroethene	31	µg/kg dry wt	13 U	2 J	19 U	21 U	12 U	2 J
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,2-Dibromoethane	6.9	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,2-Dichlorobenzene	330	µg/kg dry wt	13 U	18 U	9 J	21 U	12 U	15 U
1,2-Dichloroethane	250	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,2-Dichloropropane	350	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
1,4-Dichlorobenzene	340	µg/kg dry wt	13 U	18 U	20	21 U	12 U	15 U
2-Butanone	270	µg/kg dry wt	13 UJ	16 J	36 J	61 J	9 J	15 UJ
2-Hexanone	22	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
4-Methyl-2-pentanone	33	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Acetone	8.7	µg/kg dry wt	13 U	40 EB	76 EB	120 EB	20 U	15 U
Benzene	57	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Bromodichloromethane	1,000	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Bromoform	62,000	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Bromomethane	390	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Carbon disulfide	0.85	µg/kg dry wt	13 U	18 U	5 J	21 U	12 U	9 J
Carbon tetrachloride	47	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Chlorobenzene	410	µg/kg dry wt	13 U	35	29	6 J	12 U	15 U
Chloroethane	3,000	µg/kg dry wt	13 UJ	18 UJ	19 UJ	21 UJ	12 U	15 UJ
Chloroform	22	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Chloromethane	1,200	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Cyclohexane	140,000	µg/kg dry wt	13 U	18 U	5 J	21 U	12 U	15 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	13 U	18 U	12 J	21 U	12 U	15 U
Dibromochloromethane	1,100	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Ethylbenzene	89	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Isopropylbenzene	- -	µg/kg dry wt	13 U	18 U	3 J	21 U	12 U	15 U
Methyl acetate	2,200,000	µg/kg dry wt	13 U	18 U	4 J	21 U	12 U	15 U
Methyl tert butyl ether	- -	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Methylene chloride	370	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Styrene	1,700,000	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Tetrachloroethene	410	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Toluene	50	µg/kg dry wt	13 U	3 J	3 J	14 J	16 U	15 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Trichloroethene	1,600	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Trichlorofluoromethane	39,000	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Vinyl Chloride	150	µg/kg dry wt	13 U	18 U	19 U	21 U	12 U	15 U
Xylene (Total)	160	µg/kg dry wt	13 U	18 U	3 J	21 U	12 U	15 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-023-BR	SE-024-BR	SE-025-BR	SE-026-BR	SE-026-BR	SE-026-BR
Sample Name			SE-023-BR	SE-024-BR	SE-025-BR	SE-026-BR	SE-042-BR	SE-FD-02
Date Collected			9/6/2003	9/6/2003	9/6/2003	9/8/2003	8/31/2004	9/8/2003
RISP East (ft)			352567	352135	351456	352690	352690	352690
RISP North (ft)			302605	302922	303575	302735	302735	302735
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			19	33	13	19	16	14
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	10 UJ	11 U	9 UJ	8 UJ	10 U	8 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,1,2-Trichloroethane	840	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,1-Dichloroethane	27	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,1-Dichloroethene	31	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,2-Dibromoethane	6.9	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,2-Dichlorobenzene	330	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,2-Dichloroethane	250	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,2-Dichloropropane	350	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
1,4-Dichlorobenzene	340	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
2-Butanone	270	µg/kg dry wt	3 J	3 J	4 J	14 J	10 U	17 J
2-Hexanone	22	µg/kg dry wt	10 U	11 UJ	9 U	8 U	10 U	8 UJ
4-Methyl-2-pentanone	33	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Acetone	8.7	µg/kg dry wt	10 U	11 U	11 U	34 U	10 UJ	40 U
Benzene	57	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Bromodichloromethane	1,000	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Bromoform	62,000	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Bromomethane	390	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Carbon disulfide	0.85	µg/kg dry wt	10 U	11 U	9 U	1 J	10 U	2 J
Carbon tetrachloride	47	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Chlorobenzene	410	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Chloroethane	3,000	µg/kg dry wt	10 UJ	11 UJ	9 UJ	8 UJ	10 U	8 UJ
Chloroform	22	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Chloromethane	1,200	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Cyclohexane	140,000	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Dibromochloromethane	1,100	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Ethylbenzene	89	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Isopropylbenzene	- -	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Methyl acetate	2,200,000	µg/kg dry wt	2 J	11 U	9 U	8 U	10 U	8 U
Methyl tert butyl ether	- -	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Methylene chloride	370	µg/kg dry wt	10 U	11 U	9 U	8 U	44 U	8 U
Styrene	1,700,000	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Tetrachloroethene	410	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Toluene	50	µg/kg dry wt	1 J	11 U	9 U	8 U	10 U	0.8 J
trans-1,2-Dichloroethene	400	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Trichloroethene	1,600	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Trichlorofluoromethane	39,000	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Vinyl Chloride	150	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U
Xylene (Total)	160	µg/kg dry wt	10 U	11 U	9 U	8 U	10 U	8 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR	SE-031-BR
Sample Name			SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR	SE-031-BR
Date Collected			9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352779	352320	351551	351551	350958	350323
RISP North (ft)			303669	303984	303889	303889	304015	304420
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			38	12	16	8	13	17
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,1,2-Trichloroethane	840	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,1-Dichloroethane	27	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,1-Dichloroethene	31	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,2-Dibromoethane	6.9	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,2-Dichlorobenzene	330	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,2-Dichloroethane	250	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,2-Dichloropropane	350	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
1,4-Dichlorobenzene	340	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
2-Butanone	270	µg/kg dry wt	25	3 J	11 U	10 U	11 U	10 U
2-Hexanone	22	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
4-Methyl-2-pentanone	33	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Acetone	8.7	µg/kg dry wt	57 EB	10 U	18 U	10 U	14 U	11 U
Benzene	57	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Bromodichloromethane	1,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Bromoform	62,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Bromomethane	390	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Carbon disulfide	0.85	µg/kg dry wt	14 U	2 J	11 U	10 U	11 U	10 U
Carbon tetrachloride	47	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Chlorobenzene	410	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Chloroethane	3,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Chloroform	22	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Chloromethane	1,200	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Cyclohexane	140,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Dibromochloromethane	1,100	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	14 UJ	9 UJ	11 UJ	10 UJ	11 UJ	10 UJ
Ethylbenzene	89	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Isopropylbenzene	- -	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Methyl acetate	2,200,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Methyl tert butyl ether	- -	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Methylene chloride	370	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Styrene	1,700,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Tetrachloroethene	410	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Toluene	50	µg/kg dry wt	20 U	9 U	11 U	12 U	16 U	13 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Trichloroethene	1,600	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Trichlorofluoromethane	39,000	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Vinyl Chloride	150	µg/kg dry wt	14 U	9 U	11 U	10 U	11 U	10 U
Xylene (Total)	160	µg/kg dry wt	14 U	9 U	11 U	1 J	11 U	10 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR
Sample Name			SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR
Date Collected			9/10/2003	9/10/2003	9/10/2003	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			349117	347976	347020	351597	350184	347061
RISP North (ft)			305833	306035	307232	303879	304781	307158
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			16	23	19	15	10	20
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,1,2-Trichloroethane	840	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,1-Dichloroethane	27	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,1-Dichloroethene	31	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,2-Dibromoethane	6.9	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,2-Dichlorobenzene	330	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,2-Dichloroethane	250	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,2-Dichloropropane	350	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
1,4-Dichlorobenzene	340	µg/kg dry wt	10 U	9 U	11 U	8 U	3 J	7 U
2-Butanone	270	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
2-Hexanone	22	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
4-Methyl-2-pentanone	33	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Acetone	8.7	µg/kg dry wt	10 U	9 U	11 U	8 UJ	10 UJ	7 UJ
Benzene	57	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Bromodichloromethane	1,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Bromoform	62,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Bromomethane	390	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Carbon disulfide	0.85	µg/kg dry wt	10 U	9 U	2 J	8 U	10 U	7 U
Carbon tetrachloride	47	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Chlorobenzene	410	µg/kg dry wt	10 U	9 U	11 U	8 U	2 J	7 U
Chloroethane	3,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Chloroform	22	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Chloromethane	1,200	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	6 J	9 U	11 U	8 U	10 U	7 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Cyclohexane	140,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Dibromochloromethane	1,100	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	10 UJ	9 UJ	11 UJ	8 U	10 U	7 U
Ethylbenzene	89	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Isopropylbenzene	- -	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Methyl acetate	2,200,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Methyl tert butyl ether	- -	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Methylene chloride	370	µg/kg dry wt	10 U	9 U	11 U	28 U	22 U	7 U
Styrene	1,700,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Tetrachloroethene	410	µg/kg dry wt	11	9 U	11 U	8 U	10 U	7 U
Toluene	50	µg/kg dry wt	15 U	12 U	11 U	8 U	10 U	7 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Trichloroethene	1,600	µg/kg dry wt	3 J	9 U	11 U	8 U	10 U	7 U
Trichlorofluoromethane	39,000	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Vinyl Chloride	150	µg/kg dry wt	10 U	9 U	11 U	8 U	10 U	7 U
Xylene (Total)	160	µg/kg dry wt	10 U	1 J	11 U	8 U	10 U	7 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-045-BR	SE-046-BR	SE-046-BR	SE-047-BR	SE-048-BR	SE-049-BR
Sample Name			SE-045-BR	SE-046-BR	SE-FD-11	SE-047-BR	SE-048-BR	SE-049-BR
Date Collected			8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/31/2004	8/30/2004
RISP East (ft)			346903	352890	352890	350628	349568	346826
RISP North (ft)			309018	303046	303046	304243	305540	310413
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			19	16	18	31	12	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,1,2-Trichloroethane	840	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,1-Dichloroethane	27	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,1-Dichloroethene	31	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,2-Dibromoethane	6.9	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,2-Dichlorobenzene	330	µg/kg dry wt	5 U	8 U	11 U	1 J	6 U	9 U
1,2-Dichloroethane	250	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,2-Dichloropropane	350	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
1,4-Dichlorobenzene	340	µg/kg dry wt	5 U	8 U	11 U	4 J	6 U	9 U
2-Butanone	270	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
2-Hexanone	22	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
4-Methyl-2-pentanone	33	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Acetone	8.7	µg/kg dry wt	5 UJ	8 UJ	11 UJ	9 UJ	6 UJ	9 UJ
Benzene	57	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Bromodichloromethane	1,000	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Bromoform	62,000	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Bromomethane	390	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Carbon disulfide	0.85	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Carbon tetrachloride	47	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Chlorobenzene	410	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Chloroethane	3,000	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Chloroform	22	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Chloromethane	1,200	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Cyclohexane	140,000	µg/kg dry wt	5 U	8 U	11 U	1 J	6 U	9 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Dibromochloromethane	1,100	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Ethylbenzene	89	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Isopropylbenzene	- -	µg/kg dry wt	5 U	8 U	11 U	2 J	6 U	9 U
Methyl acetate	2,200,000	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Methyl tert butyl ether	- -	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Methylene chloride	370	µg/kg dry wt	14 U	38 U	15 U	9 U	14 U	21 U
Styrene	1,700,000	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Tetrachloroethene	410	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Toluene	50	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Trichloroethene	1,600	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Trichlorofluoromethane	39,000	µg/kg dry wt	5 U	8 U	11 U	23 U	6 U	9 U
Vinyl Chloride	150	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U
Xylene (Total)	160	µg/kg dry wt	5 U	8 U	11 U	9 U	6 U	9 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Sample Name			SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Date Collected			8/31/2004	8/31/2004	9/1/2004	8/31/2004	9/1/2004	8/31/2004
RISP East (ft)			345403	349116	349324	352957	345628	349320
RISP North (ft)			312315	305924	306113	304470	312400	306016
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			17	50	11	31	26	40
Percent Moisture, Freeze Dried (%)			NA	0	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,1,2-Trichloroethane	840	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,1-Dichloroethane	27	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,1-Dichloroethene	31	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,2-Dibromoethane	6.9	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,2-Dichlorobenzene	330	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,2-Dichloroethane	250	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,2-Dichloropropane	350	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
1,4-Dichlorobenzene	340	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
2-Butanone	270	µg/kg dry wt	10 U	10 J	6 U	11 U	9 J	16 U
2-Hexanone	22	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
4-Methyl-2-pentanone	33	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Acetone	8.7	µg/kg dry wt	10 UJ	87 J	6 UJ	11 UJ	42 J	16 UJ
Benzene	57	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Bromodichloromethane	1,000	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Bromoform	62,000	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Bromomethane	390	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Carbon disulfide	0.85	µg/kg dry wt	1 J	12 U	6 U	11 U	2 J	16 U
Carbon tetrachloride	47	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Chlorobenzene	410	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Chloroethane	3,000	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Chloroform	22	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Chloromethane	1,200	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Cyclohexane	140,000	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	19 U
Dibromochloromethane	1,100	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Ethylbenzene	89	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Isopropylbenzene	- -	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Methyl acetate	2,200,000	µg/kg dry wt	1 J	12 U	6 U	11 U	10 U	16 U
Methyl tert butyl ether	- -	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Methylene chloride	370	µg/kg dry wt	33 U	12 U	26 U	11 U	41 U	49 U
Styrene	1,700,000	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Tetrachloroethene	410	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Toluene	50	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	2 J
trans-1,2-Dichloroethene	400	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Trichloroethene	1,600	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Trichlorofluoromethane	39,000	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Vinyl Chloride	150	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U
Xylene (Total)	160	µg/kg dry wt	10 U	12 U	6 U	11 U	10 U	16 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-057-WT	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Sample Name			SE-057-WT	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Date Collected			9/2/2004	9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004
RISP East (ft)			352084	352774	351440	351895	352372	351508
RISP North (ft)			304607	304071	305562	304852	304608	305289
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			54	21	38	64	35	59
Percent Moisture, Freeze Dried (%)			9	NA	NA	0	NA	0
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
1,1,2-Trichloroethane	840	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
1,1-Dichloroethane	27	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
1,1-Dichloroethene	31	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
1,2-Dibromoethane	6.9	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
1,2-Dichlorobenzene	330	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
1,2-Dichloroethane	250	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
1,2-Dichloropropane	350	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
1,4-Dichlorobenzene	340	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
2-Butanone	270	µg/kg dry wt	45	10 U	36	99	6 J	130
2-Hexanone	22	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
4-Methyl-2-pentanone	33	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
Acetone	8.7	µg/kg dry wt	170 J	15 J	100 J	330 J	35 J	360 J
Benzene	57	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Bromodichloromethane	1,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Bromoform	62,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Bromomethane	390	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Carbon disulfide	0.85	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Carbon tetrachloride	47	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Chlorobenzene	410	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
Chloroethane	3,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Chloroform	22	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Chloromethane	1,200	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Cyclohexane	140,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Dibromochloromethane	1,100	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Ethylbenzene	89	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
Isopropylbenzene	- -	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
Methyl acetate	2,200,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Methyl tert butyl ether	- -	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Methylene chloride	370	µg/kg dry wt	43 U	26 U	16 U	84 U	30 U	52 U
Styrene	1,700,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
Tetrachloroethene	410	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ
Toluene	50	µg/kg dry wt	28 U	10 U	10 U	4 J	11 U	24 UJ
trans-1,2-Dichloroethene	400	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Trichloroethene	1,600	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Trichlorofluoromethane	39,000	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Vinyl Chloride	150	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 U
Xylene (Total)	160	µg/kg dry wt	28 U	10 U	10 U	38 U	11 U	24 UJ

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR	SE-068-BR
Sample Name			SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR	SE-068-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/3/2004	9/3/2004	9/6/2004
RISP East (ft)			350942	351791	352478	352272	352007	351730
RISP North (ft)			305250	303170	302602	302718	302937	303184
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			50	18	55	46	19	28
Percent Moisture, Freeze Dried (%)			0	NA	0	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
1,1,2-Trichloroethane	840	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
1,1-Dichloroethane	27	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
1,1-Dichloroethene	31	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
1,2-Dibromoethane	6.9	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
1,2-Dichlorobenzene	330	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
1,2-Dichloroethane	250	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
1,2-Dichloropropane	350	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
1,4-Dichlorobenzene	340	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
2-Butanone	270	µg/kg dry wt	12 U	11 U	10 U	79	4 J	9
2-Hexanone	22	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
4-Methyl-2-pentanone	33	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
Acetone	8.7	µg/kg dry wt	34 J	11 UJ	10 UJ	260 J	27 UJ	32 J
Benzene	57	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Bromodichloromethane	1,000	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Bromoform	62,000	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Bromomethane	390	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Carbon disulfide	0.85	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	3 J
Carbon tetrachloride	47	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Chlorobenzene	410	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
Chloroethane	3,000	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Chloroform	22	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Chloromethane	1,200	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Cyclohexane	140,000	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Dibromochloromethane	1,100	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	12 UJ	11 U	10 U	13 U	6 U	7 UJ
Ethylbenzene	89	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
Isopropylbenzene	- -	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
Methyl acetate	2,200,000	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Methyl tert butyl ether	- -	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Methylene chloride	370	µg/kg dry wt	9 J	32 U	20 U	27 U	13 U	15
Styrene	1,700,000	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
Tetrachloroethene	410	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U
Toluene	50	µg/kg dry wt	12 U	11 U	10 U	13 UJ	0.8 J	7 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Trichloroethene	1,600	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Trichlorofluoromethane	39,000	µg/kg dry wt	12 U	11 U	10 U	13 U	2 J	7 U
Vinyl Chloride	150	µg/kg dry wt	12 U	11 U	10 U	13 U	6 U	7 U
Xylene (Total)	160	µg/kg dry wt	12 U	11 U	10 U	13 UJ	6 U	7 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Sample Name			SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Date Collected			9/2/2004	9/2/2004	9/2/2004	9/6/2004	9/6/2004	9/3/2004
RISP East (ft)			353122	353122	350926	351567	351393	350848
RISP North (ft)			303341	303341	304138	303403	303624	304184
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			63	67	32	22	13	42
Percent Moisture, Freeze Dried (%)			8	0	NA	NA	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
1,1,2-Trichloroethane	840	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
1,1-Dichloroethane	27	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
1,1-Dichloroethene	31	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
1,2-Dibromoethane	6.9	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
1,2-Dichlorobenzene	330	µg/kg dry wt	5 J	4 J	14 U	6 U	7 U	17 U
1,2-Dichloroethane	250	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
1,2-Dichloropropane	350	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
1,4-Dichlorobenzene	340	µg/kg dry wt	5 J	4 J	14 U	6 U	7 U	17 U
2-Butanone	270	µg/kg dry wt	200 J	380 J	14 U	6 U	7 U	17 U
2-Hexanone	22	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
4-Methyl-2-pentanone	33	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Acetone	8.7	µg/kg dry wt	640 J	1,100 J	32 UJ	3 J	7 UJ	17 UJ
Benzene	57	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Bromodichloromethane	1,000	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Bromoform	62,000	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Bromomethane	390	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
Carbon disulfide	0.85	µg/kg dry wt	12 J	6 J	14 U	6 U	7 U	17 U
Carbon tetrachloride	47	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Chlorobenzene	410	µg/kg dry wt	53 J	49 J	14 U	6 U	7 U	17 U
Chloroethane	3,000	µg/kg dry wt	18 U	14 J	14 U	6 U	7 U	17 U
Chloroform	22	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
Chloromethane	1,200	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Cyclohexane	140,000	µg/kg dry wt	21 J	36 J	14 U	6 U	7 U	17 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Dibromochloromethane	1,100	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
Ethylbenzene	89	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Isopropylbenzene	- -	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Methyl acetate	2,200,000	µg/kg dry wt	22	29 U	14 U	1 J	1 J	17 U
Methyl tert butyl ether	- -	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
Methylene chloride	370	µg/kg dry wt	19 U	42 U	18 U	18 U	18 U	17 U
Styrene	1,700,000	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Tetrachloroethene	410	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Toluene	50	µg/kg dry wt	3 J	4 J	1 J	6 U	7 U	17 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Trichloroethene	1,600	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U
Trichlorofluoromethane	39,000	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
Vinyl Chloride	150	µg/kg dry wt	18 U	29 U	14 U	6 U	7 U	17 U
Xylene (Total)	160	µg/kg dry wt	18 UJ	29 UJ	14 U	6 U	7 U	17 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI
Sample Name			SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI
Date Collected			9/3/2004	9/3/2004	9/3/2004	9/6/2004	9/6/2004	9/7/2004
RISP East (ft)			351471	352417	352313	351696	352438	352447
RISP North (ft)			303952	303137	303353	303493	303325	303531
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1
Percent Moisture (%)			45	38	64	17	64	81
Percent Moisture, Freeze Dried (%)			NA	NA	8	NA	9	0
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,1,2-Trichloroethane	840	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,1-Dichloroethane	27	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,1-Dichloroethene	31	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,2-Dibromoethane	6.9	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,2-Dichlorobenzene	330	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,2-Dichloroethane	250	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,2-Dichloropropane	350	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,3-Dichlorobenzene	1,300	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
1,4-Dichlorobenzene	340	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
2-Butanone	270	µg/kg dry wt	13 U	54	54	13 U	750 J	470 J
2-Hexanone	22	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
4-Methyl-2-pentanone	33	µg/kg dry wt	13 U	11 U	26 U	13 U	130 J	40 UJ
Acetone	8.7	µg/kg dry wt	16 UJ	110 J	200 J	6 J	2,300 J	1,300 J
Benzene	57	µg/kg dry wt	13 U	11 U	26 U	13 U	6 J	40 UJ
Bromodichloromethane	1,000	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Bromoform	62,000	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Bromomethane	390	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Carbon disulfide	0.85	µg/kg dry wt	13 U	4 J	3 J	13 U	44 J	11 J
Carbon tetrachloride	47	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Chlorobenzene	410	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Chloroethane	3,000	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Chloroform	22	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Chloromethane	1,200	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
cis-1,2-Dichloroethene	400	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Cyclohexane	140,000	µg/kg dry wt	13 U	11 U	26 U	13 U	6 J	40 UJ
Cyclohexane, methyl-	260,000	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Dibromochloromethane	1,100	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Dichlorodifluoromethane	9,400	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Ethylbenzene	89	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Isopropylbenzene	- -	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Methyl acetate	2,200,000	µg/kg dry wt	13 U	11 U	26 U	6 J	23 UJ	38 J
Methyl tert butyl ether	- -	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Methylene chloride	370	µg/kg dry wt	13 U	22 U	26 U	27 U	87 UJ	61 J
Styrene	1,700,000	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Tetrachloroethene	410	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Toluene	50	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	38 J
trans-1,2-Dichloroethene	400	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Trichloroethene	1,600	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Trichlorofluoromethane	39,000	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Vinyl Chloride	150	µg/kg dry wt	13 U	11 U	26 U	13 U	23 UJ	40 UJ
Xylene (Total)	160	µg/kg dry wt	13 U	11 U	26 U	13 U	4 J	40 UJ

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-079-UI	SE-080-UI	SE-081-BR	SE-082-BR	SE-083-BR
Sample Name			SE-FD-13	SE-080-UI	SE-081-BR	SE-082-BR	SE-083-BR
Date Collected			9/7/2004	9/7/2004	9/7/2004	9/6/2004	9/6/2004
RISP East (ft)			352447	351994	352703	352820	352717
RISP North (ft)			303531	303594	302372	302413	302444
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			82	74	71	25	36
Percent Moisture, Freeze Dried (%)			0	8	33	NA	NA
VOC							
1,1,1-Trichloroethane	170	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,1,2-Trichloroethane	840	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,1-Dichloroethane	27	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,1-Dichloroethene	31	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,2-Dibromoethane	6.9	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,2-Dichlorobenzene	330	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,2-Dichloroethane	250	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,2-Dichloropropane	350	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
1,4-Dichlorobenzene	340	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
2-Butanone	270	µg/kg dry wt	440 J	270 J	140 J	25	41
2-Hexanone	22	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
4-Methyl-2-pentanone	33	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Acetone	8.7	µg/kg dry wt	1,300 J	770 J	380 J	89 J	120 J
Benzene	57	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Bromodichloromethane	1,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Bromoform	62,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Bromomethane	390	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Carbon disulfide	0.85	µg/kg dry wt	10 J	5 J	3 J	7 J	2 J
Carbon tetrachloride	47	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Chlorobenzene	410	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Chloroethane	3,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Chloroform	22	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Chloromethane	1,200	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Cyclohexane	140,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Dibromochloromethane	1,100	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 UJ
Ethylbenzene	89	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Isopropylbenzene	- -	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Methyl acetate	2,200,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Methyl tert butyl ether	- -	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Methylene chloride	370	µg/kg dry wt	25 J	34 UJ	8 J	38 U	10
Styrene	1,700,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Tetrachloroethene	410	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Toluene	50	µg/kg dry wt	36 J	34 UJ	24 UJ	13 U	10 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Trichloroethene	1,600	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Trichlorofluoromethane	39,000	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Vinyl Chloride	150	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U
Xylene (Total)	160	µg/kg dry wt	46 UJ	34 UJ	24 UJ	13 U	10 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002
Sample Name			SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002
Date Collected			9/7/2004	9/7/2004	9/7/2004	9/7/2004	6/23/2005	6/23/2005
RISP East (ft)			352049	352447	352149	352478	346599	346885
RISP North (ft)			303465	303427	303734	303603	310832	309261
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	0.5	0.5
Percent Moisture (%)			21	21	12	56	31.4	25.1
Percent Moisture, Freeze Dried (%)			NA	NA	NA	8	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
1,1,2-Trichloroethane	840	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
1,1-Dichloroethane	27	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
1,1-Dichloroethene	31	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	9 U	11 U	10 U	14 UJ	3.8 U	3.6 U
1,2-Dibromoethane	6.9	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
1,2-Dichlorobenzene	330	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
1,2-Dichloroethane	250	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
1,2-Dichloropropane	350	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
1,4-Dichlorobenzene	340	µg/kg dry wt	9 U	11 U	10 U	14 UJ	0.46 J	1.4 U
2-Butanone	270	µg/kg dry wt	21	11 U	10 U	120	16	1.4 U
2-Hexanone	22	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
4-Methyl-2-pentanone	33	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
Acetone	8.7	µg/kg dry wt	77 J	7 J	10 UJ	380 J	110 J	93 J
Benzene	57	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Bromodichloromethane	1,000	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Bromoform	62,000	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Bromomethane	390	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Carbon disulfide	0.85	µg/kg dry wt	5 J	11 U	10 U	3 J	2.1	1.4 U
Carbon tetrachloride	47	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Chlorobenzene	410	µg/kg dry wt	5 J	11 U	10 U	14 UJ	1.5 U	1.4 U
Chloroethane	3,000	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Chloroform	22	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Chloromethane	1,200	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Cyclohexane	140,000	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Dibromochloromethane	1,100	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 UJ	1.4 UJ
Ethylbenzene	89	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
Isopropylbenzene	- -	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
Methyl acetate	2,200,000	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Methyl tert butyl ether	- -	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Methylene chloride	370	µg/kg dry wt	16 U	37 U	24 U	14 U	3.8 UJ	3.6 UJ
Styrene	1,700,000	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
Tetrachloroethene	410	µg/kg dry wt	9 U	11 U	10 U	14 UJ	1.5 U	1.4 U
Toluene	50	µg/kg dry wt	9 U	11 U	10 U	14 UJ	0.51 J	1.4 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Trichloroethene	1,600	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	2.4
Trichlorofluoromethane	39,000	µg/kg dry wt	1 J	11 U	10 U	14 U	1.5 U	1.4 U
Vinyl Chloride	150	µg/kg dry wt	9 U	11 U	10 U	14 U	1.5 U	1.4 U
Xylene (Total)	160	µg/kg dry wt	9 U	11 U	10 U	14 UJ	4.6 U	4.3 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BL-003	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Sample Name			T05BL-003	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005
RISP East (ft)			344937	345416	345374	344036	344083	352685
RISP North (ft)			313353	312732	312447	313799	314193	302766
Depth Start (ft bgs)			0	0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			76.5	73.6	39	59.9	33.1	31.6
Percent Moisture, Freeze Dried (%)			27.1	18.8	NA	7.8	NA	NA
VOC								
1,1,1-Trichloroethane	170	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,1,2-Trichloroethane	840	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,1-Dichloroethane	27	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,1-Dichloroethene	31	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	17 UJ	16 UJ	5.5 U	8.9 U	4.5 U	4.5 U
1,2-Dibromoethane	6.9	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,2-Dichlorobenzene	330	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,2-Dichloroethane	250	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,2-Dichloropropane	350	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
1,4-Dichlorobenzene	340	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
2-Butanone	270	µg/kg dry wt	38 J	29 J	48	56	20	12
2-Hexanone	22	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
4-Methyl-2-pentanone	33	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Acetone	8.7	µg/kg dry wt	130 JEB	150 JEB	120 J	130 J	71 J	46 JEB
Benzene	57	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Bromodichloromethane	1,000	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Bromoform	62,000	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Bromomethane	390	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Carbon disulfide	0.85	µg/kg dry wt	13 J	5.7 J	3.5	2.1 J	1.9	0.88 J
Carbon tetrachloride	47	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Chlorobenzene	410	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Chloroethane	3,000	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Chloroform	22	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Chloromethane	1,200	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Cyclohexane	140,000	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Dibromochloromethane	1,100	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 UJ	3.6 UJ	1.8 UJ	1.8 U
Ethylbenzene	89	µg/kg dry wt	5.3 J	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Isopropylbenzene	- -	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Methyl acetate	2,200,000	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Methyl tert butyl ether	- -	µg/kg dry wt	4.1 J	6.2 UJ	1.3 J	3.6 U	0.56 J	1.8 U
Methylene chloride	370	µg/kg dry wt	17 UJ	16 UJ	5.5 UJ	8.9 UJ	4.5 UJ	4.5 UJ
Styrene	1,700,000	µg/kg dry wt	2 J	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Tetrachloroethene	410	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Toluene	50	µg/kg dry wt	6.8 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	4.5
trans-1,2-Dichloroethene	400	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Trichloroethene	1,600	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Trichlorofluoromethane	39,000	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Vinyl Chloride	150	µg/kg dry wt	6.6 UJ	6.2 UJ	2.2 U	3.6 U	1.8 U	1.8 U
Xylene (Total)	160	µg/kg dry wt	20 UJ	19 UJ	6.6 U	11 U	5.4 U	5.4 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			351655	352810	351070	351070	353080
RISP North (ft)			303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			NA	14.1	NA	NA	22.3
VOC							
1,1,1-Trichloroethane	170	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,1,2-Trichloroethane	840	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,1-Dichloroethane	27	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,1-Dichloroethene	31	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	3.3 U	9 U	4.3 U	4.3 U	12 U
1,2-Dibromoethane	6.9	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,2-Dichlorobenzene	330	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,2-Dichloroethane	250	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,2-Dichloropropane	350	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
1,4-Dichlorobenzene	340	µg/kg dry wt	0.51 J	3.6 U	0.64 J	1.7 U	4.6 U
2-Butanone	270	µg/kg dry wt	1 J	75	9.3 J	20 J	77
2-Hexanone	22	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
4-Methyl-2-pentanone	33	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Acetone	8.7	µg/kg dry wt	27 JEB	180 J	52 JEB	75 J	200 J
Benzene	57	µg/kg dry wt	1.3 U	3.6 U	0.56 J	1.7 U	4.6 U
Bromodichloromethane	1,000	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Bromoform	62,000	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Bromomethane	390	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Carbon disulfide	0.85	µg/kg dry wt	1.1 J	3.2 J	1.7 U	1.2 J	2.6 J
Carbon tetrachloride	47	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Chlorobenzene	410	µg/kg dry wt	0.85 J	3.6 U	2.2	0.81 J	2.9 J
Chloroethane	3,000	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Chloroform	22	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Chloromethane	1,200	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Cyclohexane	140,000	µg/kg dry wt	1.3 U	3.6 U	1.3 J	1.7 U	3 J
Cyclohexane, methyl-	260,000	µg/kg dry wt	0.38 J	3.6 U	1.7 U	1.7 U	4.6 U
Dibromochloromethane	1,100	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	1.3 U	3.6 UJ	1.7 U	1.7 U	4.6 UJ
Ethylbenzene	89	µg/kg dry wt	1.3 U	1.6 J	0.75 J	1.7 U	4.6 U
Isopropylbenzene	- -	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Methyl acetate	2,200,000	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Methyl tert butyl ether	- -	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Methylene chloride	370	µg/kg dry wt	3.7 UJ	9 UJ	4.3 UJ	4.3 UJ	12 UJ
Styrene	1,700,000	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Tetrachloroethene	410	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Toluene	50	µg/kg dry wt	1.3 U	3.6 U	2.2	1.2 J	4.6 U
trans-1,2-Dichloroethene	400	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Trichloroethene	1,600	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Trichlorofluoromethane	39,000	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Vinyl Chloride	150	µg/kg dry wt	1.3 U	3.6 U	1.7 U	1.7 U	4.6 U
Xylene (Total)	160	µg/kg dry wt	4 U	11 U	3 J	5.1 U	14 U

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Sample Name			T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Date Collected			6/22/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			350100	351910	352619	351885	352427
RISP North (ft)			304801	303103	303440	303634	303165
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			32.4	38.8	48	59.2	35.4
Percent Moisture, Freeze Dried (%)			NA	NA	7.1	18.2	NA
VOC							
1,1,1-Trichloroethane	170	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
1,1,2-Trichloroethane	840	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
1,1-Dichloroethane	27	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
1,1-Dichloroethene	31	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	4.2 U	5.1 U	5.9 U	8.8 U	4.9 UJ
1,2-Dibromoethane	6.9	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
1,2-Dichlorobenzene	330	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
1,2-Dichloroethane	250	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
1,2-Dichloropropane	350	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
1,4-Dichlorobenzene	340	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
2-Butanone	270	µg/kg dry wt	1.7 U	20	50	67	23 J
2-Hexanone	22	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
4-Methyl-2-pentanone	33	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Acetone	8.7	µg/kg dry wt	24 JEB	120 J	120 J	180 J	58 JEB
Benzene	57	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Bromodichloromethane	1,000	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Bromoform	62,000	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Bromomethane	390	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Carbon disulfide	0.85	µg/kg dry wt	1.7 U	1.3 J	3.2	4.6	1.6 J
Carbon tetrachloride	47	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Chlorobenzene	410	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Chloroethane	3,000	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Chloroform	22	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Chloromethane	1,200	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Cyclohexane	140,000	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Dibromochloromethane	1,100	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Dichlorodifluoromethane	9,400	µg/kg dry wt	1.7 U	2 UJ	2.4 UJ	3.5 UJ	2 U
Ethylbenzene	89	µg/kg dry wt	1.7 U	2 U	1.8 J	1 J	0.69 J
Isopropylbenzene	- -	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Methyl acetate	2,200,000	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Methyl tert butyl ether	- -	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Methylene chloride	370	µg/kg dry wt	4.2 UJ	5.1 UJ	5.9 UJ	8.8 UJ	4.9 UJ
Styrene	1,700,000	µg/kg dry wt	1.7 U	2 U	0.61 J	3.5 U	2 UJ
Tetrachloroethene	410	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Toluene	50	µg/kg dry wt	1.7 U	2.2	2.4 U	3.5 U	1 J
trans-1,2-Dichloroethene	400	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 UJ
Trichloroethene	1,600	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Trichlorofluoromethane	39,000	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Vinyl Chloride	150	µg/kg dry wt	1.7 U	2 U	2.4 U	3.5 U	2 U
Xylene (Total)	160	µg/kg dry wt	5 U	6.1 U	7.1 U	10 U	2.1 J

TABLE 4-21
SEDIMENT RESULTS FOR VOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			352427	352768	353596	351240	349545
RISP North (ft)			303165	302412	304467	305262	305938
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			NA	10.5	NA	9.8	NA
VOC							
1,1,1-Trichloroethane	170	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,1,2,2-Tetrachloroethane	380	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,600,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,1,2-Trichloroethane	840	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,1-Dichloroethane	27	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,1-Dichloroethene	31	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,2,4-Trichlorobenzene	9,200	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,2-Dibromo-3-chloropropane	450	µg/kg dry wt	5.2 U	9.2 U	4.3 U	10 U	4.9 U
1,2-Dibromoethane	6.9	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,2-Dichlorobenzene	330	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,2-Dichloroethane	250	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,2-Dichloropropane	350	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,3-Dichlorobenzene	1,300	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
1,4-Dichlorobenzene	340	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
2-Butanone	270	µg/kg dry wt	20	52	6.8	7.7	2 U
2-Hexanone	22	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
4-Methyl-2-pentanone	33	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Acetone	8.7	µg/kg dry wt	74 J	690 J	33 JEB	37 U	4.9 U
Benzene	57	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Bromodichloromethane	1,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Bromoform	62,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Bromomethane	390	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Carbon disulfide	0.85	µg/kg dry wt	1.8 J	2.9 J	1.7 U	4.1 U	2 U
Carbon tetrachloride	47	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Chlorobenzene	410	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Chloroethane	3,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Chloroform	22	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Chloromethane	1,200	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
cis-1,2-Dichloroethene	400	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
cis-1,3-Dichloropropene	0.051	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Cyclohexane	140,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Cyclohexane, methyl-	260,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Dibromochloromethane	1,100	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Dichlorodifluoromethane	9,400	µg/kg dry wt	2.1 U	3.7 UJ	1.7 U	4.1 UJ	2 U
Ethylbenzene	89	µg/kg dry wt	0.54 J	3.7 U	1 J	3.4 J	2 U
Isopropylbenzene	- -	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Methyl acetate	2,200,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Methyl tert butyl ether	- -	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Methylene chloride	370	µg/kg dry wt	5.2 UJ	9.2 UJ	4.3 UJ	10 UJ	4.9 UJ
Styrene	1,700,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	1.3 J	2 U
Tetrachloroethene	410	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Toluene	50	µg/kg dry wt	0.88 J	3.7 U	5.7	4.1 U	0.5 J
trans-1,2-Dichloroethene	400	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
trans-1,3-Dichloropropene	0.051	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Trichloroethene	1,600	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Trichlorofluoromethane	39,000	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Vinyl Chloride	150	µg/kg dry wt	2.1 U	3.7 U	1.7 U	4.1 U	2 U
Xylene (Total)	160	µg/kg dry wt	1.2 J	11 U	1.3 J	12 U	5.9 U

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	9/2/2003
RISP East (ft)			352478	352322	352279	352279	352172	351747	352761	352484
RISP North (ft)			303295	303548	303356	303356	303168	303610	303287	303117
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50	29	33	33
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt	270 NJ	310 NJ		110 NJ				
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt			35 NJ		20 NJ	58 NJ		9 NJ
Hexane	- -	µg/kg dry wt								
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt								
Straight-chain Alkane	- -	µg/kg dry wt								19 J
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	2	1	1	3	2	2	1

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-008-BR	SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT
Sample Name			SE-008-BR	SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT
Date Collected			9/2/2003	9/3/2003	9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003	9/4/2003
RISP East (ft)			352735	352646	352842	352504	351470	352327	351040	351365
RISP North (ft)			302367	304086	304421	304330	305229	304194	305533	305705
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			24	19	64	39	48	37	60	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt						29 NJ		
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt								
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt								
Straight-chain Alkane	- -	µg/kg dry wt		12 J	56 J		12 J		26 J	
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	1	3	1	1		6	2

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR
Sample Name			SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR
Date Collected			9/4/2003	9/5/2003	9/5/2003	9/5/2003	9/5/2003	9/5/2003	9/8/2003	9/5/2003
RISP East (ft)			349270	350890	350496	351002	351481	353121	345490	345490
RISP North (ft)			306035	305078	305336	304113	303930	303354	312537	312537
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			44	46	40	48	53	58	NA	29
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt					18 J			
Camphene	- -	µg/kg dry wt	9 NJ							
Cyclic alkane	- -	µg/kg dry wt					36 J			
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt			70 NJ				100 NJ	
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt					26 NJ			
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt								
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt					110 NJ			
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt					33 NJ			
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt								
Straight-chain Alkane	- -	µg/kg dry wt	14 J			10 J	33 J			
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	1		2	23	1		2

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-023-BR	SE-024-BR	SE-025-BR	SE-026-BR	SE-026-BR	SE-026-BR	SE-027-BR	SE-028-BR
Sample Name			SE-023-BR	SE-024-BR	SE-025-BR	SE-026-BR	SE-042-BR	SE-FD-02	SE-027-BR	SE-028-BR
Date Collected			9/6/2003	9/6/2003	9/6/2003	9/8/2003	8/31/2004	9/8/2003	9/8/2003	9/8/2003
RISP East (ft)			352567	352135	351456	352690	352690	352690	352779	352320
RISP North (ft)			302605	302922	303575	302735	302735	302735	303669	303984
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			19	33	13	19	16	14	38	12
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt								
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt					12 UJ			
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt								
Straight-chain Alkane	- -	µg/kg dry wt								
Unknown TICs (VOCs) - number of occurences	- -	(Count)		2		1	1	1	1	1

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-029-BR	SE-029-BR	SE-030-BR	SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Sample Name			SE-029-BR	SE-FD03	SE-030-BR	SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Date Collected			9/9/2003	9/9/2003	9/9/2003	9/9/2003	9/10/2003	9/10/2003	9/10/2003	8/30/2004
RISP East (ft)			351551	351551	350958	350323	349117	347976	347020	351597
RISP North (ft)			303889	303889	304015	304420	305833	306035	307232	303879
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			16	8	13	17	16	23	19	15
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt				130 NJ		140 NJ		
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt								5 UJ
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt								
Straight-chain Alkane	- -	µg/kg dry wt	13 J							
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	1	1	1	4	1	1	1

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR	SE-047-BR	SE-048-BR	SE-049-BR
Sample Name			SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11	SE-047-BR	SE-048-BR	SE-049-BR
Date Collected			8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/31/2004	8/30/2004
RISP East (ft)			350184	347061	346903	352890	352890	350628	349568	346826
RISP North (ft)			304781	307158	309018	303046	303046	304243	305540	310413
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			10	20	19	16	18	31	12	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt						9 NJ		
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt							2 NJ	
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt		5 UJ			14 UJ	9 UJ		13 UJ
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt								
Straight-chain Alkane	- -	µg/kg dry wt								
Unknown TICs (VOCs) - number of occurences	- -	(Count)						4		1

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT	SE-058-WT
Sample Name			SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT	SE-058-WT
Date Collected			8/31/2004	8/31/2004	9/1/2004	8/31/2004	9/1/2004	8/31/2004	9/2/2004	9/1/2004
RISP East (ft)			345403	349116	349324	352957	345628	349320	352084	352774
RISP North (ft)			312315	305924	306113	304470	312400	306016	304607	304071
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			17	50	11	31	26	40	54	21
Percent Moisture, Freeze Dried (%)			NA	0	NA	NA	NA	NA	9	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt						11 J		
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt								8 UJ
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt	19 UJ				16 UJ		24 UJ	6 UJ
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt								
Straight-chain Alkane	- -	µg/kg dry wt						8 J		
Unknown TICs (VOCs) - number of occurences	- -	(Count)	3	15	2		1		2	

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR
Sample Name			SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR
Date Collected			9/1/2004	9/2/2004	9/1/2004	9/1/2004	9/6/2004	9/2/2004	9/2/2004	9/3/2004
RISP East (ft)			351440	351895	352372	351508	350942	351791	352478	352272
RISP North (ft)			305562	304852	304608	305289	305250	303170	302602	302718
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			38	64	35	59	50	18	55	46
Percent Moisture, Freeze Dried (%)			NA	0	NA	0	0	NA	0	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt	9 UJ	37 NJ						
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt	7 UJ	81 UJ	12 UJ	28 UJ				9 UJ
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt								8 NJ
Straight-chain Alkane	- -	µg/kg dry wt								
Unknown TICs (VOCs) - number of occurences	- -	(Count)			1	2	1	2	2	

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-067-BR	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Sample Name			SE-067-BR	SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Date Collected			9/3/2004	9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004	9/6/2004	9/3/2004
RISP East (ft)			352007	351730	353122	353122	350926	351567	351393	350848
RISP North (ft)			302937	303184	303341	303341	304138	303403	303624	304184
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			19	28	63	67	32	22	13	42
Percent Moisture, Freeze Dried (%)			NA	NA	8	0	NA	NA	NA	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt	3 NJ		12 NJ					
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt				17 UJ	21 UJ			12 UJ
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt	5 NJ							
Straight-chain Alkane	- -	µg/kg dry wt								
Unknown TICs (VOCs) - number of occurences	- -	(Count)			5	3	2	1	1	

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI
Sample Name			SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI
Date Collected			9/3/2004	9/3/2004	9/3/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351471	352417	352313	351696	352438	352447	352447	351994
RISP North (ft)			303952	303137	303353	303493	303325	303531	303531	303594
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1
Percent Moisture (%)			45	38	64	17	64	81	82	74
Percent Moisture, Freeze Dried (%)			NA	NA	8	NA	9	0	0	8
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt					13 NJ			
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt	7 NJ							
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt		12 UJ		13 NJ	37 NJ	88 UJ	39 UJ	
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt					12 NJ			
Propene	- -	µg/kg dry wt								
Silanol, trimethyl-	- -	µg/kg dry wt						30 NJ		
Straight-chain Alkane	- -	µg/kg dry wt								
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	1	1		23			1

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001
Sample Name			SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001
Date Collected			9/7/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004	9/7/2004	6/23/2005
RISP East (ft)			352703	352820	352717	352049	352447	352149	352478	346599
RISP North (ft)			302372	302413	302444	303465	303427	303734	303603	310832
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	0.5
Percent Moisture (%)			71	25	36	21	21	12	56	31.4
Percent Moisture, Freeze Dried (%)			33	NA	NA	NA	NA	NA	8	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt								2 NJ
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								2 NJ
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								2 NJ
3-Octanone	- -	µg/kg dry wt								
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt								2 NJ
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt								
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								19 NJ
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt	32 UJ	19 NJ	7 NJ		14 UJ			
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt								22 NJ
Methane, chlorodifluoro-	- -	µg/kg dry wt								
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt				5.8 NJ				
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt								3 NJ
Silanol, trimethyl-	- -	µg/kg dry wt	16 NJ	7 NJ			7.9 NJ			
Straight-chain Alkane	- -	µg/kg dry wt								
Unknown TICs (VOCs) - number of occurences	- -	(Count)			1	1		1		

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BL-002	T05BL-003	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002
Sample Name			T05BL-002	T05BL-003	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005	6/21/2005
RISP East (ft)			346885	344937	345416	345374	344036	344083	352685	351655
RISP North (ft)			309261	313353	312732	312447	313799	314193	302766	303928
Depth Start (ft bgs)			0	0	0	0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			25.1	76.5	73.6	39	59.9	33.1	31.6	15.8
Percent Moisture, Freeze Dried (%)			NA	27.1	18.8	NA	7.8	NA	NA	NA
VOC TICS										
1-Hexanol, 3-methyl-	- -	µg/kg dry wt								
1-Propene, 2-methyl-	- -	µg/kg dry wt		9 NJ		3 NJ	5 NJ			
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt								
2-Heptene	- -	µg/kg dry wt								
2-Hexanone, 5-methyl-	- -	µg/kg dry wt								
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt								
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt								
2-Propyl-1-pentanol	- -	µg/kg dry wt								
3-Octanone	- -	µg/kg dry wt	3 NJ							
4-t-Butyl-o-xylene	- -	µg/kg dry wt								
Acetaldehyde	- -	µg/kg dry wt								
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt								
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt							3 NJ	
Branched alkane	- -	µg/kg dry wt								
Camphene	- -	µg/kg dry wt								
Cyclic alkane	- -	µg/kg dry wt								
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt								
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt								
Furan, tetrahydro-	- -	µg/kg dry wt								
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt								
Hexane	- -	µg/kg dry wt								
Hydroxylamine, O-decyl-	- -	µg/kg dry wt								
Isopropyl Alcohol	- -	µg/kg dry wt	8 NJ		16 NJ				3 NJ	
Methane, chlorodifluoro-	- -	µg/kg dry wt				8 NJ				6 NJ
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt								
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt								
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt								
Propene	- -	µg/kg dry wt		12 NJ	12 NJ	7 NJ	20 NJ	3 NJ	4 NJ	
Silanol, trimethyl-	- -	µg/kg dry wt								
Straight-chain Alkane	- -	µg/kg dry wt								
Unknown TICs (VOCs) - number of occurences	- -	(Count)								

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-003	T05BR-004	T05BR-004	T05BR-005	T05BR-006	T05BR-007	T05PA-001
Sample Name			T05BR-003	T05BR-004	BD062205	T05BR-005	T05BR-006	T05BR-007	T05PA-001
Date Collected			6/21/2005	6/22/2005	6/22/2005	6/22/2005	6/22/2005	6/23/2005	6/21/2005
RISP East (ft)			352810	351070	351070	353080	350100	351910	352619
RISP North (ft)			303693	303948	303948	303208	304801	303103	303440
Depth Start (ft bgs)			0	0	0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			56.2	33.3	32.8	67.2	32.4	38.8	48
Percent Moisture, Freeze Dried (%)			14.1	NA	NA	22.3	NA	NA	7.1
VOC TICS									
1-Hexanol, 3-methyl-	- -	µg/kg dry wt							3 NJ
1-Propene, 2-methyl-	- -	µg/kg dry wt	6 NJ			8 NJ			4 NJ
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt							
2-Heptene	- -	µg/kg dry wt							
2-Hexanone, 5-methyl-	- -	µg/kg dry wt							
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt							
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt							
2-Propyl-1-pentanol	- -	µg/kg dry wt							
3-Octanone	- -	µg/kg dry wt							
4-t-Butyl-o-xylene	- -	µg/kg dry wt							
Acetaldehyde	- -	µg/kg dry wt							
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt							
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt	7 NJ		2 NJ		2 NJ	5 NJ	
Branched alkane	- -	µg/kg dry wt							
Camphene	- -	µg/kg dry wt							
Cyclic alkane	- -	µg/kg dry wt							
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt	5 NJ						
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt							
Furan, tetrahydro-	- -	µg/kg dry wt							
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt							
Hexane	- -	µg/kg dry wt							
Hydroxylamine, O-decyl-	- -	µg/kg dry wt							
Isopropyl Alcohol	- -	µg/kg dry wt						6 NJ	
Methane, chlorodifluoro-	- -	µg/kg dry wt			27 NJ				
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt							
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt							
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt							
Propene	- -	µg/kg dry wt	8 NJ		3 NJ	11 NJ			6 NJ
Silanol, trimethyl-	- -	µg/kg dry wt							
Straight-chain Alkane	- -	µg/kg dry wt							
Unknown TICs (VOCs) - number of occurences	- -	(Count)		2	1		1		

TABLE 4-22
SEDIMENT RESULTS FOR VOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05PA-003	T05PD-002	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			T05PA-003	T05PD-002	BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			351885	352427	352427	352768	353596	351240	349545
RISP North (ft)			303634	303165	303165	302412	304467	305262	305938
Depth Start (ft bgs)			0	0	0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			59.2	35.4	35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			18.2	NA	NA	10.5	NA	9.8	NA
VOC TICS									
1-Hexanol, 3-methyl-	- -	µg/kg dry wt							
1-Propene, 2-methyl-	- -	µg/kg dry wt	6 NJ			5 NJ			
2,4,6,8-Tetramethyl-1-undecene	- -	µg/kg dry wt	7 NJ						
2-Heptene	- -	µg/kg dry wt							
2-Hexanone, 5-methyl-	- -	µg/kg dry wt							
2-Octene, 2,6-dimethyl-	- -	µg/kg dry wt	5 NJ						
2-Phenyl-1,2-bis(trimethylsilyloxy)propane	- -	µg/kg dry wt					6 NJ		
2-Propyl-1-pentanol	- -	µg/kg dry wt							
3-Octanone	- -	µg/kg dry wt							5 NJ
4-t-Butyl-o-xylene	- -	µg/kg dry wt							
Acetaldehyde	- -	µg/kg dry wt	6 NJ						
Benzeneethanamine, N-[(pentafluorophenyl)methylene]	- -	µg/kg dry wt						7 NJ	
Benzoic acid, 2-[(trimethylsilyl)oxy]-,	- -	µg/kg dry wt					4 NJ		
Branched alkane	- -	µg/kg dry wt							
Camphene	- -	µg/kg dry wt							
Cyclic alkane	- -	µg/kg dry wt							
Cyclotetrasiloxane, octamethyl-	- -	µg/kg dry wt							
Ethanone 1(2,4, 6, -Trimethyl)	- -	µg/kg dry wt							
Furan, tetrahydro-	- -	µg/kg dry wt							
Hexamethylcyclotrisiloxane	- -	µg/kg dry wt							
Hexane	- -	µg/kg dry wt							
Hydroxylamine, O-decyl-	- -	µg/kg dry wt	7 NJ						
Isopropyl Alcohol	- -	µg/kg dry wt		3 NJ		16 NJ			
Methane, chlorodifluoro-	- -	µg/kg dry wt	19 NJ						
Naphthalene, decahydro-, cis-	- -	µg/kg dry wt							
Naphthalene, decahydro-, trans-	- -	µg/kg dry wt							
Naphthalene, decahydro-2-methyl-	- -	µg/kg dry wt							
Propene	- -	µg/kg dry wt	11 NJ	3 NJ	3 NJ	7 NJ			
Silanol, trimethyl-	- -	µg/kg dry wt							
Straight-chain Alkane	- -	µg/kg dry wt							
Unknown TICs (VOCs) - number of occurences	- -	(Count)							

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	9/2/2003	9/2/2003
RISP East (ft)			352478	352322	352279	352279	352172	351747	352761	352484	352735
RISP North (ft)			303295	303548	303356	303356	303168	303610	303287	303117	302367
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50	29	33	33	24
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	60 J	630 U	400 U	5	36 J	460 U	10	73 J	420 U
Acenaphthene	16	µg/kg dry wt	73 J	630 U	400 U	5.3	38 J	460 U	16	92 J	68 J
Acenaphthylene	160	µg/kg dry wt	160 J	150 J	400 U	23	72 J	47 J	65	190 J	64 J
Anthracene	27	µg/kg dry wt	310 J	240 J	91 J	37	140 J	180 J	99	540	220 J
Benzo(a)pyrene	62	µg/kg dry wt	1,500 J	1,100	450	180	420	610	420	1,800 J	440 J
Benzo(b)fluoranthene	620	µg/kg dry wt	2,200 J	1,400	510	190	490	690	460	2,600 J	790 J
Benzo(g,h,i)perylene	170	µg/kg dry wt	540 J	500 J	200 J	120	280 J	370 J	320	470 J	230 J
Benzo(k)fluoranthene	240	µg/kg dry wt	880 J	480 J	210 J	84	210 J	290 J	190	930 J	810 J
Benzo[a]anthracene	108	µg/kg dry wt	1,500	930	510	190	400	650	400	1,700	580
Chrysene	166	µg/kg dry wt	1,700	1,300	480	180	510	650	400	2,100	700
Dibenz[a,h]anthracene	33	µg/kg dry wt	470 UJ	630 U	78 J	41	360 U	120 J	91	480 UJ	420 U
Fluoranthene	423	µg/kg dry wt	2,900	3,000	520	500	1,000	960	520	3,600	2,000
Fluorene	77.4	µg/kg dry wt	70 J	630 U	400 U	9.6	63 J	460 U	27	120 J	91 J
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	640 J	730	200 J	120	260 J	350 J	290	640 J	300 J
Naphthalene	160	µg/kg dry wt	81 J	630 U	400 U	7.4	66 J	460 U	13	110 J	420 U
Phenanthrene	204	µg/kg dry wt	1,200	940	120 J	66	430	480	270	1,500	860
Pyrene	195	µg/kg dry wt	3,100 J	1,700	530	440	710	1,000	650	5,300 J	1,100
Total PAHs	- -	µg/kg dry wt	16,900 J	12,500 J	3,900 J	2,200	5,130 J	6,400 J	4,240	21,800 J	8,250 J

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Sample Name			SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003	9/4/2003	9/4/2003	9/5/2003
RISP East (ft)			352646	352842	352504	351470	352327	351040	351365	349270	350890
RISP North (ft)			304086	304421	304330	305229	304194	305533	305705	306035	305078
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			19	64	39	48	37	60	19	44	46
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	4 U	540 U	5.4 U	620 U	520 U	17	400 U	5.9 U	6.1 U
Acenaphthene	16	µg/kg dry wt	4 U	540 U	5.4 U	620 U	520 U	14	400 U	5.9 U	6.1 U
Acenaphthylene	160	µg/kg dry wt	8.5	140 J	31	190 J	520 U	90	94 J	25	36
Anthracene	27	µg/kg dry wt	4.8	130 J	18	250 J	520 U	62	180 J	18	24
Benzo(a)pyrene	62	µg/kg dry wt	25	1,200	96	1,200	90 J	290	570 J	100	100
Benzo(b)fluoranthene	620	µg/kg dry wt	44	2,200	170	1,600	150 J	470	740 J	130	160
Benzo(g,h,i)perylene	170	µg/kg dry wt	25	1,100	100	740	520 UJ	200	310 J	68	64
Benzo(k)fluoranthene	240	µg/kg dry wt	16	730	57	560 J	66 J	160	300 J	58	54
Benzo[a]anthracene	108	µg/kg dry wt	16	920	58	1,200	74 J	230	600	82	72
Chrysene	166	µg/kg dry wt	31	1,700	100	1,500	110 J	310	640	96	98
Dibenz[a,h]anthracene	33	µg/kg dry wt	4 U	540 U	30	620 U	520 UJ	62	400 U	22	22
Fluoranthene	423	µg/kg dry wt	31	3,100	110	3,300	150 J	420	1,800	130	110
Fluorene	77.4	µg/kg dry wt	4 U	540 U	5.4 U	80 J	520 U	26	50 J	7.1	6.1 U
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	25	1,000	95	700	520 UJ	200	320 J	67	74
Naphthalene	160	µg/kg dry wt	4 U	540 U	5.4 U	620 U	520 UJ	17	400 U	5.9 U	6.1 U
Phenanthrene	204	µg/kg dry wt	10	790	35	1,300	57 J	310 J	730	51	40
Pyrene	195	µg/kg dry wt	28	1,900	98	2,200	160 J	800 J	1,000	120	110
Total PAHs	- -	µg/kg dry wt	264	14,900 J	998	14,800 J	857 J	3,680 J	7,330 J	974	964

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR	SE-024-BR	SE-025-BR
Sample Name			SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR	SE-024-BR	SE-025-BR
Date Collected			9/5/2003	9/5/2003	9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003	9/6/2003	9/6/2003
RISP East (ft)			350496	351002	351481	353121	345490	345490	352567	352135	351456
RISP North (ft)			305336	304113	303930	303354	312537	312537	302605	302922	303575
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			40	48	53	58	NA	29	19	33	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	7	630 U	66 J	79 J	NA	4.6 U	25	480 U	99 J
Acenaphthene	16	µg/kg dry wt	5.5 U	630 U	220 J	140 J	NA	4.6 U	68	480 U	540
Acenaphthylene	160	µg/kg dry wt	33	130 J	220 J	240 J	NA	4.6 U	160	70 J	61 J
Anthracene	27	µg/kg dry wt	18	200 J	400 J	500 J	NA	4.6 U	1,500	250 J	1,200 J
Benzo(a)pyrene	62	µg/kg dry wt	110	880 J	1,400	2,000	NA	9.7	710	790	1,900 J
Benzo(b)fluoranthene	620	µg/kg dry wt	180	1,200 J	1,900	3,000	NA	14	810	860	2,500 J
Benzo(g,h,i)perylene	170	µg/kg dry wt	83	510 J	990 J	1,500	NA	12	380	530	690 J
Benzo(k)fluoranthene	240	µg/kg dry wt	58	1,200 J	630 J	1,100 J	NA	6.4	390	310 J	840
Benzo[a]anthracene	108	µg/kg dry wt	83	790	1,300	1,800	NA	8.6	840	750 J	2,400 J
Chrysene	166	µg/kg dry wt	110	1,000	1,500	2,200	NA	12	1,000	880 J	2,600 J
Dibenz[a,h]anthracene	33	µg/kg dry wt	19	630 U	1,100 U	1,100 U	NA	4.6 U	150	480 UJ	370 UJ
Fluoranthene	423	µg/kg dry wt	130	1,800	2,600	4,100	NA	16	1,600	1,200	5,700
Fluorene	77.4	µg/kg dry wt	6.2	630 U	210 J	180 J	NA	4.6 U	130	61 J	450
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	76	530 J	910 J	1,400	NA	9.4	420 J	490	1,100 J
Naphthalene	160	µg/kg dry wt	6	85 J	110 J	120 J	NA	4.6 U	28	61 J	160 J
Phenanthrene	204	µg/kg dry wt	46	660	1,500	1,900	NA	7	1,100	450 J	4,600
Pyrene	195	µg/kg dry wt	130	1,200	2,400	3,400	NA	15	1,300	1,600 J	4,900
Total PAHs	- -	µg/kg dry wt	1,100	10,200 J	16,400 J	23,700 J	NA	110	10,600 J	8,300 J	29,700 J

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-026-BR	SE-026-BR	SE-026-BR	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR	SE-031-BR
Sample Name			SE-026-BR	SE-042-BR	SE-FD-02	SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR	SE-031-BR
Date Collected			9/8/2003	8/31/2004	9/8/2003	9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352690	352690	352690	352779	352320	351551	351551	350958	350323
RISP North (ft)			302735	302735	302735	303669	303984	303889	303889	304015	304420
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			19	16	14	38	12	16	8	13	17
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	9.8	3.9 U	7.2	130 J	3.7 U	3.9 UJ	10 J	50 J	43 J
Acenaphthene	16	µg/kg dry wt	100 J	3.9 U	23 J	320 J	3.7 U	6.4 J	51 J	78 J	400 U
Acenaphthylene	160	µg/kg dry wt	180 J	7	56 J	300 J	3.7 U	15	13	380 U	160 J
Anthracene	27	µg/kg dry wt	1,100 J	12	82 J	1,300	5	20 J	78 J	180 J	890
Benzo(a)pyrene	62	µg/kg dry wt	1,600 J	59	310 J	4,500	22 J	100 J	250 J	380	1,700
Benzo(b)fluoranthene	620	µg/kg dry wt	1,900 J	76	370 J	4,300	27 J	110 J	290 J	350 J	1,400
Benzo(g,h,i)perylene	170	µg/kg dry wt	530 J	36	260 J	820 J	21 J	88 J	190 J	120 J	780
Benzo(k)fluoranthene	240	µg/kg dry wt	1,200 J	36	200 J	2,400 J	12	56 J	130 J	190 J	540
Benzo[a]anthracene	108	µg/kg dry wt	2,100 J	51	360 J	4,400	21 J	94 J	260 J	510	1,800
Chrysene	166	µg/kg dry wt	2,000 J	74	380 J	4,400	24 J	100 J	280 J	400	1,700
Dibenz[a,h]anthracene	33	µg/kg dry wt	340 J	9.1	78 J	390 J	5.8 J	25 J	53 J	45 J	210 J
Fluoranthene	423	µg/kg dry wt	5,000 J	110	620 J	7,500 J	140 J	130 J	520 J	730	1,800
Fluorene	77.4	µg/kg dry wt	270 J	3.9 U	32 J	320 J	3.7 U	8.5 J	38 J	120 J	60 J
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	610 J	31	240 J	1,300 J	18 J	80 J	160 J	120 J	630
Naphthalene	160	µg/kg dry wt	16	3.9 U	11	230 J	3.7 U	5.6 J	32 J	380 U	280 J
Phenanthrene	204	µg/kg dry wt	3,500 J	50	270 J	3,400	66 J	70 J	320 J	940	590
Pyrene	195	µg/kg dry wt	4,000 J	110	660 J	8,800	130 J	120 J	380 J	730	2,900
Total PAHs	- -	µg/kg dry wt	24,500 J	661	3,960 J	44,800 J	492 J	1,030 J	3,060 J	4,940 J	15,500 J

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			9/10/2003	9/10/2003	9/10/2003	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			349117	347976	347020	351597	350184	347061	346903	352890	352890
RISP North (ft)			305833	306035	307232	303879	304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			16	23	19	15	10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	390 U	4.2 U	410 U	41 J	4.1	6.7	39	3.9 U	4 U
Acenaphthene	16	µg/kg dry wt	51 J	5.1	180 J	79 J	21	12	100	3.9 U	4 U
Acenaphthylene	160	µg/kg dry wt	55 J	28	410 U	390 U	16	56	78	7.4 J	4 UJ
Anthracene	27	µg/kg dry wt	180 J	32	210 J	310 J	36	71	190	17 J	4 UJ
Benzo(a)pyrene	62	µg/kg dry wt	730	150	680	370 J	150	450 J	690	100 J	6.3 J
Benzo(b)fluoranthene	620	µg/kg dry wt	890	190	860	390	220	380	1,100 J	96 J	11 J
Benzo(g,h,i)perylene	170	µg/kg dry wt	450	140	420	200 J	59	68	190	42 J	6.4 J
Benzo(k)fluoranthene	240	µg/kg dry wt	290 J	71	340 J	160 J	53	140	320	53 J	4 UJ
Benzo[a]anthracene	108	µg/kg dry wt	800	140	630	500	130	260	590 J	100 J	4.5 J
Chrysene	166	µg/kg dry wt	760	160	730	530	150	290	670 J	100 J	7.6 J
Dibenz[a,h]anthracene	33	µg/kg dry wt	110 J	39	100 J	51 J	18	25	69	11 J	4 UJ
Fluoranthene	423	µg/kg dry wt	910	250	1,300	1,200	240	560 J	1,900 J	140 J	8 J
Fluorene	77.4	µg/kg dry wt	50 J	10	150 J	120 J	24	20	100	3.9 U	4 U
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	390 J	130	360 J	150 J	54	70	210	39 J	5.2 J
Naphthalene	160	µg/kg dry wt	390 U	4.2 U	410 U	75 J	3.7 U	12	98	3.9 U	4 U
Phenanthrene	204	µg/kg dry wt	590	120	1,400	1,400	150	230	1,200 J	12 J	4 UJ
Pyrene	195	µg/kg dry wt	1,300	220	1,500	1,100	280	480 J	1,400 J	130 J	8 J
Total PAHs	- -	µg/kg dry wt	7,560 J	1,690	8,860 J	6,680 J	1,610	3,130 J	8,940 J	847 J	57 J

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004	9/1/2004	8/31/2004	9/1/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116	349324	352957	345628	349320
RISP North (ft)			304243	305540	310413	312315	305924	306113	304470	312400	306016
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50	11	31	26	40
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0	NA	NA	NA	NA
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	220 J	5	3.8 U	11	69 J	3.7 U	480 U	4.5 U	5.5
Acenaphthene	16	µg/kg dry wt	850	9.1	3.8 U	21	92 J	3.7 U	53 J	4.5 U	5.5 U
Acenaphthylene	160	µg/kg dry wt	63 J	25	9.6	55	190 J	3.7 U	140 J	8.7	33
Anthracene	27	µg/kg dry wt	1,100	45	9.8	200	400	3.7 U	300 J	11	23
Benzo(a)pyrene	62	µg/kg dry wt	1,700	150	54	520 J	980	12	3,100	46	140
Benzo(b)fluoranthene	620	µg/kg dry wt	2,000	200	73	690 J	1,200	20	NA	69	250
Benzo(g,h,i)perylene	170	µg/kg dry wt	850	65	29	84	350	9.1	2,900	25	31
Benzo(k)fluoranthene	240	µg/kg dry wt	790	54	21	220	580	4	1,900	19	71
Benzo[a]anthracene	108	µg/kg dry wt	1,900	130	42	410 J	1,100	9.4	1,800	32	98
Chrysene	166	µg/kg dry wt	2,000	140	47	420 J	1,100	14	3,600	51	120
Dibenz[a,h]anthracene	33	µg/kg dry wt	250 J	17	7.9	30	94 J	3.7 U	630	6.9	10
Fluoranthene	423	µg/kg dry wt	4,900	260	66	810 J	1,900	19	5,600	57	150
Fluorene	77.4	µg/kg dry wt	700	14	3.8 U	40	130 J	3.7 U	78 J	4.5 U	6.5
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	790	54	24	88	410	6.7	2,500	22	29
Naphthalene	160	µg/kg dry wt	700	7.5	3.8 U	16	78 J	3.7 U	480 U	4.5 U	5.5 U
Phenanthrene	204	µg/kg dry wt	5,300	170	34	340	1,100	9.1	2,300	20	63
Pyrene	195	µg/kg dry wt	3,300	290	72	760 J	1,500	17	4,200	73	190
Total PAHs	- -	µg/kg dry wt	27,400 J	1,640	489	4,720 J	11,300 J	120	29,100 J	441	1,220

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-057-WT	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT	SE-063-WT	SE-064-BR	SE-065-BR
Sample Name			SE-057-WT	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT	SE-063-WT	SE-064-BR	SE-065-BR
Date Collected			9/2/2004	9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004	9/6/2004	9/2/2004	9/2/2004
RISP East (ft)			352084	352774	351440	351895	352372	351508	350942	351791	352478
RISP North (ft)			304607	304071	305562	304852	304608	305289	305250	303170	302602
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			54	21	38	64	35	59	50	18	55
Percent Moisture, Freeze Dried (%)			9	NA	NA	0	NA	0	0	NA	0
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	14 J	4.2 U	5.3 U	51 J	5.1 U	57	22 J	12	4.3 UJ
Acenaphthene	16	µg/kg dry wt	12 J	4.2 U	5.3 U	48 J	5.1 U	44	24 J	26	4.3 UJ
Acenaphthylene	160	µg/kg dry wt	82 J	9.6	28	230 J	22	220	130 J	31	12 J
Anthracene	27	µg/kg dry wt	87 J	11	27	260 J	18	390 J	140 J	88	15 J
Benzo(a)pyrene	62	µg/kg dry wt	410 J	97	160	1,300 J	100	1,600 J	680 J	310 J	72 J
Benzo(b)fluoranthene	620	µg/kg dry wt	760 J	180	220	2,800 J	210	NA	1,800 J	420 J	110 J
Benzo(g,h,i)perylene	170	µg/kg dry wt	68 J	18	44	120 J	30 J	160 J	83 J	26	14 J
Benzo(k)fluoranthene	240	µg/kg dry wt	370 J	54	120	1,200 J	76	1,100 J	760 J	190 J	39 J
Benzo[a]anthracene	108	µg/kg dry wt	220 J	63	130	870 J	62	1,000 J	460 J	240	45 J
Chrysene	166	µg/kg dry wt	340	93	160	1,200 J	93	1,200 J	610 J	250 J	55 J
Dibenz[a,h]anthracene	33	µg/kg dry wt	28 J	5.8	18	52 J	12 J	63 J	33 J	10	9 J
Fluoranthene	423	µg/kg dry wt	530 J	150	220	2,500 J	100	2,900 J	1,200 J	740 J	98 J
Fluorene	77.4	µg/kg dry wt	19 J	4.2 U	7.2	78 J	6.8	82	34 J	35	6 J
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	77 J	18	47	140 J	30 J	170 J	94 J	31 J	14 J
Naphthalene	160	µg/kg dry wt	11 J	4.2 U	5.3 U	49 J	5.1 U	51	21 J	14	4.3 UJ
Phenanthrene	204	µg/kg dry wt	160 J	47	86	720 J	43	1,000 J	420 J	230	35 J
Pyrene	195	µg/kg dry wt	780 J	150	240	2,200 J	140	2,700 J	1,400 J	560 J	180 J
Total PAHs	- -	µg/kg dry wt	3,970 J	896	1,510	13,800 J	943 J	12,700 J	7,910 J	3,210 J	704 J

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-066-BR	SE-067-BR	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Sample Name			SE-066-BR	SE-067-BR	SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Date Collected			9/3/2004	9/3/2004	9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004	9/6/2004	9/3/2004
RISP East (ft)			352272	352007	351730	353122	353122	350926	351567	351393	350848
RISP North (ft)			302718	302937	303184	303341	303341	304138	303403	303624	304184
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			46	19	28	63	67	32	22	13	42
Percent Moisture, Freeze Dried (%)			NA	NA	NA	8	0	NA	NA	NA	NA
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	6.1 UJ	4.1 U	460 U	110 J	99 J	480 U	60 J	3.8 U	73 J
Acenaphthene	16	µg/kg dry wt	9	4.1 U	460 U	150 J	140 J	58 J	320 J	7.9	99 J
Acenaphthylene	160	µg/kg dry wt	12	4.1 U	58 J	310 J	310 J	170 J	420 U	35	300 J
Anthracene	27	µg/kg dry wt	39	4.1 U	150 J	410	400	290 J	440	310	440 J
Benzo(a)pyrene	62	µg/kg dry wt	150 J	15	610	1,400	1,200	1,100	1,100	310	1,800
Benzo(b)fluoranthene	620	µg/kg dry wt	NA	21	810	1,800	1,500	1,700	1,500	350	2,400
Benzo(g,h,i)perylene	170	µg/kg dry wt	58 J	9.2	330 J	630	520	690	470	130	1,100
Benzo(k)fluoranthene	240	µg/kg dry wt	99 J	6.5	290 J	540 J	590 J	610	610	94	700 J
Benzo[a]anthracene	108	µg/kg dry wt	110 J	12	560	1,200 J	1,200	1,000	1,200	230	1,400
Chrysene	166	µg/kg dry wt	150 J	16	610	1,900 J	1,600	1,200	1,300	270	2,000
Dibenz[a,h]anthracene	33	µg/kg dry wt	25 J	4.1 U	110 J	190 J	120 J	190 J	200 J	32	290 J
Fluoranthene	423	µg/kg dry wt	250 J	20	1,200	2,600	2,500 J	2,200	3,300	560 J	3,500
Fluorene	77.4	µg/kg dry wt	13	4.1 U	460 U	190 J	160 J	72 J	280 J	16	120 J
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	64 J	7.3 J	340 J	570	530	620	570	110 J	930
Naphthalene	160	µg/kg dry wt	7.4 J	4.1 U	460 U	140 J	120 J	57 J	170 J	3.8 U	84 J
Phenanthrene	204	µg/kg dry wt	180	9.8	590	1,300	1,200	990	3,200	250	1,600
Pyrene	195	µg/kg dry wt	470 J	22	1,100	1,500 J	1,400	1,300	2,500	580 J	2,600
Total PAHs	- -	µg/kg dry wt	1,640 J	139 J	6,760 J	14,900 J	13,600 J	12,200 J	17,200 J	3,280 J	19,400 J

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI	SE-081-BR
Sample Name			SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI	SE-081-BR
Date Collected			9/3/2004	9/3/2004	9/3/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351471	352417	352313	351696	352438	352447	352447	351994	352703
RISP North (ft)			303952	303137	303353	303493	303325	303531	303531	303594	302372
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			45	38	64	17	64	81	82	74	71
Percent Moisture, Freeze Dried (%)			NA	NA	8	NA	9	0	0	8	33
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	600 U	530 U	75 J	11	61 J	90 J	100 J	100 J	66 J
Acenaphthene	16	µg/kg dry wt	230 J	530 U	66 J	49 J	91 J	85 J	110 J	130 J	96 J
Acenaphthylene	160	µg/kg dry wt	340 J	160 J	250 J	28	180 J	350	460 J	440 J	300 J
Anthracene	27	µg/kg dry wt	670	270 J	340 J	120 J	480	440	670	630 J	470 J
Benzo(a)pyrene	62	µg/kg dry wt	1,700	1,000	1,400	400 J	2,200	1,900	3,000	2,600	1,800
Benzo(b)fluoranthene	620	µg/kg dry wt	2,300	1,100	2,200	470 J	NA	2,200 J	3,900 J	4,000	2,600
Benzo(g,h,i)perylene	170	µg/kg dry wt	860	590	650	110 J	1,100	950	1,400	1,300	960
Benzo(k)fluoranthene	240	µg/kg dry wt	830	480 J	780	190 J	1,400	780 J	1,400 J	1,300	1,100
Benzo[a]anthracene	108	µg/kg dry wt	2,100	840	1,200	330 J	1,800	1,400	2,000	2,200	1,400
Chrysene	166	µg/kg dry wt	1,900	1,100	1,500	380 J	1,900	2,100	3,300	3,100	2,100
Dibenz[a,h]anthracene	33	µg/kg dry wt	220 J	120 J	220 J	42 J	360	340 J	490	460 J	350 J
Fluoranthene	423	µg/kg dry wt	4,600	1,600	1,800 J	910 J	2,200	3,700	4,500	5,500	4,000
Fluorene	77.4	µg/kg dry wt	220 J	64 J	90 J	51 J	130 J	150 J	190 J	200 J	150 J
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	720	460 J	710	130 J	1,400	1,100	1,600	1,500	1,100
Naphthalene	160	µg/kg dry wt	92 J	530 U	89 J	17 J	90 J	100 J	110 J	110 J	83 J
Phenanthrene	204	µg/kg dry wt	2,600	770	920	730 J	1,800	1,600	2,200	2,300	1,700
Pyrene	195	µg/kg dry wt	2,500	1,300	1,100	890 J	2,200	2,400	2,800	3,900	2,700 J
Total PAHs	- -	µg/kg dry wt	21,900 J	9,850 J	13,400 J	4,860 J	17,400 J	19,700 J	28,200 J	29,800 J	21,000 J

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Date Collected			9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004	9/7/2004	6/23/2005	6/23/2005	6/23/2005
RISP East (ft)			352820	352717	352049	352447	352149	352478	346599	346885	344937
RISP North (ft)			302413	302444	303465	303427	303734	303603	310832	309261	313353
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	0.5	0.5	0.5
Percent Moisture (%)			25	36	21	21	12	56	31.4	25.1	76.5
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	8	NA	NA	27.1
PAH											
2-Methylnaphthalene	160	µg/kg dry wt	440 U	510 U	420 U	19	3.7 U	160 J	54 J	11 J	360
Acenaphthene	16	µg/kg dry wt	47 J	91 J	88 J	49	3.7 U	150 J	150	18	97
Acenaphthylene	160	µg/kg dry wt	66 J	120 J	420 U	55	3.7 U	360	450	95	310
Anthracene	27	µg/kg dry wt	170 J	450 J	210 J	210	3.7 U	1,200	960	400	440
Benzo(a)pyrene	62	µg/kg dry wt	760	1,100	540	1,100 J	3.7 U	3,000	1,400	990 J	1,700
Benzo(b)fluoranthene	620	µg/kg dry wt	810	1,400	660	NA	3.7 U	3,200	1,800	670 J	2,300
Benzo(g,h,i)perylene	170	µg/kg dry wt	330 J	440 J	230 J	130 J	3.7 U	1,200	1,800	610 J	1,800
Benzo(k)fluoranthene	240	µg/kg dry wt	370 J	500 J	270 J	320	3.7 U	1,300	1,400	760 J	1,800
Benzo[a]anthracene	108	µg/kg dry wt	690	1,100	530	660 J	3.7 U	3,000	2,800	890 J	1,300
Chrysene	166	µg/kg dry wt	780	1,100	620	610 J	3.7 U	2,800	2,800	950 J	1,800
Dibenz[a,h]anthracene	33	µg/kg dry wt	120 J	160 J	79 J	44 J	3.7 U	490	700	180 J	500
Fluoranthene	423	µg/kg dry wt	1,300	2,500	1,300	1,300 J	3.7 U	3,900	3,700	1,300	2,600
Fluorene	77.4	µg/kg dry wt	57 J	150 J	93 J	69	3.7 U	270 J	190	36	220
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	360 J	480 J	270 J	140 J	3.7 UJ	1,400	1,800	550 J	1,500
Naphthalene	160	µg/kg dry wt	440 U	510 U	97 J	30	3.7 U	180 J	98 J	27 J	270
Phenanthrene	204	µg/kg dry wt	630	1,400	1,000	340	3.7 U	2,500	1,800	680	970
Pyrene	195	µg/kg dry wt	1,300	2,100	1,200	1,300 J	3.7 U	4,100	4,000	1,300	2,200
Total PAHs	- -	µg/kg dry wt	7,790 J	13,100 J	7,190 J	6,380 J	0	29,200 J	25,900 J	9,470 J	20,200

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			345416	345374	344036	344083	352685	351655	352810	351070	351070	353080
RISP North (ft)			312732	312447	313799	314193	302766	303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6	15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA	NA	14.1	NA	NA	22.3
PAH												
2-Methylnaphthalene	160	µg/kg dry wt	430	94 J	380	51 J	88 J	5.7 J	320	35 J	39 J	470
Acenaphthene	16	µg/kg dry wt	84	180	170	120	280	12	200	72 J	31 J	180
Acenaphthylene	160	µg/kg dry wt	470	240	430	160	180	21	270	110	77	560
Anthracene	27	µg/kg dry wt	460	720	750	470	790 J	47	720	340 J	180 J	880
Benzo(a)pyrene	62	µg/kg dry wt	1,500	1,800 J	2,700	1,700	1,900 J	150 J	2,100	1,000 J	660 J	3,600
Benzo(b)fluoranthene	620	µg/kg dry wt	1,800	2,000	2,600	1,600	1,400 J	110 J	2,000	880 J	610 J	3,800
Benzo(g,h,i)perylene	170	µg/kg dry wt	1,300	1,500	1,900	1,200	1,100 J	150 J	1,400	660 J	410 J	2,700
Benzo(k)fluoranthene	240	µg/kg dry wt	1,600	2,100	2,400	1,500	1,500 J	120 J	1,900	890 J	640 J	3,200
Benzo[a]anthracene	108	µg/kg dry wt	1,300	2,000	2,200	1,700 J	1,600 J	140 J	2,100	1,000 J	640 J	2,800
Chrysene	166	µg/kg dry wt	1,500	1,900	2,600	1,600	1,900 J	150 J	2,200	1,200 J	770 J	3,700
Dibenz[a,h]anthracene	33	µg/kg dry wt	400	510	600	410	320 J	40 J	470	190 J	130 J	870
Fluoranthene	423	µg/kg dry wt	2,400	2,800	4,900	2,500	2,100	130	4,700	1,600	1,500 J	6,600
Fluorene	77.4	µg/kg dry wt	180	250	320	150	260	16	300	94 J	48 J	360
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	1,200	1,500	1,700	1,100	1,000 J	120 J	1,300	620 J	400 J	2,500
Naphthalene	160	µg/kg dry wt	350	160 J	340	85 J	95 J	15 J	680	66 J	52 J	680
Phenanthrene	204	µg/kg dry wt	840	2,200	2,400	1,700	2,200	96	2,700	1,200 J	670 J	2,800
Pyrene	195	µg/kg dry wt	2,200	3,200	4,200	2,200	2,700	300 J	4,000	1,500	1,800 J	5,400
Total PAHs	- -	µg/kg dry wt	18,000	23,200 J	30,600	18,200 J	19,400 J	1,620 J	27,400	11,500 J	8,660 J	41,100

TABLE 4-23
SEDIMENT RESULTS FOR PAHs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			**T05BR-006**	**T05BR-007**	**T05PA-001**	**T05PA-003**	**T05PD-002**	**BD062105**	**T05PF-004**	**T05WB-001**	**T05WB-002**	**T05WD-003**
Date Collected			**6/22/2005**	**6/23/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**
RISP East (ft)			**350100**	**351910**	**352619**	**351885**	**352427**	**352427**	**352768**	**353596**	**351240**	**349545**
RISP North (ft)			**304801**	**303103**	**303440**	**303634**	**303165**	**303165**	**302412**	**304467**	**305262**	**305938**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**32.4**	**38.8**	**48**	**59.2**	**35.4**	**35.4**	**63**	**36.2**	**69.4**	**32.8**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**7.1**	**18.2**	**NA**	**NA**	**10.5**	**NA**	**9.8**	**NA**
PAH												
2-Methylnaphthalene	160	µg/kg dry wt	75 J	2.3 U	240	400	77 J	250 J	180	4.8 J	430	3.6 J
Acenaphthene	16	µg/kg dry wt	69 J	2.3 U	92	150	52 J	130 J	87	3	71	2.1 U
Acenaphthylene	160	µg/kg dry wt	240 J	2.3 U	220	430	160 J	87 J	110	15	360	15
Anthracene	27	µg/kg dry wt	610 J	2.3 U	420	680	480 J	2,900 J	320	14 J	360	13
Benzo(a)pyrene	62	µg/kg dry wt	1,900 J	2.3 UJ	1,200	2,300	1,200 J	6,700 J	890	57 J	990	65 J
Benzo(b)fluoranthene	620	µg/kg dry wt	1,500 J	2.3 UJ	1,100	2,100	840 J	3,200 J	920	76 J	1,100	52 J
Benzo(g,h,i)perylene	170	µg/kg dry wt	910 J	2.3 UJ	820	1,600	810 J	910 J	620	55 J	790	56 J
Benzo(k)fluoranthene	240	µg/kg dry wt	1,600 J	2.3 UJ	950	1,900	890 J	3,600 J	830	60 J	950	49 J
Benzo[a]anthracene	108	µg/kg dry wt	1,900 J	2.3 UJ	1,000	2,000	970 J	7,100 J	840	37 J	850	43 J
Chrysene	166	µg/kg dry wt	1,900 J	34 J	1,200	2,200	1,100 J	6,900 J	980	64 J	1,100	51 J
Dibenz[a,h]anthracene	33	µg/kg dry wt	340 J	2.3 UJ	250	490	240 J	920 J	210	16 J	270	16 J
Fluoranthene	423	µg/kg dry wt	2,300	2.3 U	1,900	3,600	1,400 J	10,000 J	2,000	71 J	1,600	34
Fluorene	77.4	µg/kg dry wt	110 J	2.3 U	150	270	89 J	360 J	150	3.3	140	2.4
Indeno(1,2,3-cd)pyrene	200	µg/kg dry wt	1,000 J	2.3 UJ	730	1,400	710 J	800 J	590	50 J	750	44 J
Naphthalene	160	µg/kg dry wt	110 J	2.3 U	270	360	130 J	250 J	180	7 J	490	4.1 J
Phenanthrene	204	µg/kg dry wt	1,400 J	2.3 U	960 J	1,800	750 J	4,800 J	1,100	33 J	850	31
Pyrene	195	µg/kg dry wt	2,400	3.8 J	1,800	3,500	1,700 J	13,000 J	1,600	96 J	1,800	100 J
Total PAHs	- -	µg/kg dry wt	18,400 J	37.8 J	13,300 J	25,200	11,600 J	61,900 J	11,600	662 J	12,900	579 J

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003
RISP East (ft)			352478	352322	352279	352279	352172
RISP North (ft)			303295	303548	303356	303356	303168
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,200 U	1,600 U	1,000 U	980 U	900 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	470 U	630 UJ	400 U	390 U	360 UJ
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,200 UJ	1,600 U	1,000 U	980 UJ	900 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2-Chloronaphthalene	390,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2-Chlorophenol	6,300	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2-Methylphenol	12	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
2-Nitroaniline	3,500	µg/kg dry wt	1,200 U	1,600 U	1,000 U	980 U	900 U
2-Nitrophenol	49,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	470 UJ	630 UJ	400 U	390 UJ	360 UJ
3-Nitroaniline	3,500	µg/kg dry wt	1,200 UJ	1,600 UJ	1,000 U	980 UJ	900 UJ
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,200 U	1,600 U	1,000 U	980 U	900 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
4-Chloroaniline	24,000	µg/kg dry wt	470 U	630 UJ	400 U	390 U	360 UJ
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
4-Methylphenol	31,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
4-Nitroaniline	3,500	µg/kg dry wt	1,200 UJ	1,600 U	1,000 U	980 UJ	900 U
4-Nitrophenol	49,000	µg/kg dry wt	1,200 U	1,600 U	1,000 U	980 U	900 U
Acetophenone	490	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Atrazine	2,200	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Benzaldehyde	610,000	µg/kg dry wt	470 U	79 J	400 U	390 U	70 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	20,000	1,300	77 J	43 J	390
Butyl benzyl phthalate	11,000	µg/kg dry wt	74 J	630 U	400 U	390 U	360 U
Caprolactam	3,100,000	µg/kg dry wt	470 U	630 UJ	400 U	390 U	360 UJ
Carbazole	24,000	µg/kg dry wt	160 J	130 J	400 U	390 UJ	45 J
Dibenzofuran	420	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Diethylphthalate	600	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	470 UJ	630 U	400 U	390 U	360 U
Hexachlorobenzene	20	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Hexachlorobutadiene	6,200	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	470 U	630 UJ	400 U	390 U	360 UJ
Hexachloroethane	1,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Isophorone	510,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
Nitrobenzene	2,000	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	470 U	630 U	400 U	390 U	50 J
Pentachlorophenol	3,000	µg/kg dry wt	1,200 U	1,600 U	1,000 U	980 U	900 U
Phenol	57	µg/kg dry wt	470 U	630 U	400 U	390 U	360 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Sample Name			SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Date Collected			8/29/2003	8/29/2003	9/2/2003	9/2/2003	9/3/2003
RISP East (ft)			351747	352761	352484	352735	352646
RISP North (ft)			303610	303287	303117	302367	304086
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			29	33	33	24	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,200 U	1,200 U	1,200 U	1,100 U	1,000 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 UJ
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,200 U	1,200 U	1,200 UJ	1,100 UJ	1,000 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2-Chloronaphthalene	390,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2-Chlorophenol	6,300	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2-Methylphenol	12	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
2-Nitroaniline	3,500	µg/kg dry wt	1,200 U	1,200 U	1,200 U	1,100 U	1,000 U
2-Nitrophenol	49,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	460 U	490 U	480 UJ	420 UJ	400 UJ
3-Nitroaniline	3,500	µg/kg dry wt	1,200 U	1,200 U	1,200 UJ	1,100 UJ	1,000 UJ
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,200 U	1,200 U	1,200 UJ	1,100 U	1,000 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
4-Chloroaniline	24,000	µg/kg dry wt	460 U	490 U	480 U	420 UJ	400 UJ
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
4-Methylphenol	31,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
4-Nitroaniline	3,500	µg/kg dry wt	1,200 U	1,200 U	1,200 U	1,100 UJ	1,000 U
4-Nitrophenol	49,000	µg/kg dry wt	1,200 U	1,200 U	1,200 U	1,100 U	1,000 U
Acetophenone	490	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Atrazine	2,200	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Benzaldehyde	610,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	8,700	160 J	2,200	2,000	400 U
Butyl benzyl phthalate	11,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Caprolactam	3,100,000	µg/kg dry wt	460 U	490 U	480 U	420 UJ	400 UJ
Carbazole	24,000	µg/kg dry wt	91 J	490 U	180 J	98 J	400 UJ
Dibenzofuran	420	µg/kg dry wt	460 U	490 U	61 J	44 J	400 U
Diethylphthalate	600	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	160 J	75 J	480 UJ	420 U	400 U
Hexachlorobenzene	20	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Hexachlorobutadiene	6,200	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	460 U	490 U	480 U	420 UJ	400 UJ
Hexachloroethane	1,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Isophorone	510,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Nitrobenzene	2,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U
Pentachlorophenol	3,000	µg/kg dry wt	1,200 U	1,200 U	1,200 U	1,100 U	1,000 U
Phenol	57	µg/kg dry wt	460 U	490 U	480 U	420 U	400 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Sample Name			SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003
RISP East (ft)			352842	352504	351470	352327	351040
RISP North (ft)			304421	304330	305229	304194	305533
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			64	39	48	37	60
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,300 U	1,300 U	1,600 U	1,300 U	1,500 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	540 UJ	530 UJ	620 UJ	520 U	580 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,300 U	1,300 U	1,600 U	1,300 U	1,500 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2-Chloronaphthalene	390,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2-Chlorophenol	6,300	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2-Methylphenol	12	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
2-Nitroaniline	3,500	µg/kg dry wt	1,300 U	1,300 U	1,600 U	1,300 U	1,500 U
2-Nitrophenol	49,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	540 UJ	530 UJ	620 UJ	520 U	580 U
3-Nitroaniline	3,500	µg/kg dry wt	1,300 UJ	1,300 UJ	1,600 UJ	1,300 U	1,500 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,300 U	1,300 U	1,600 U	1,300 U	1,500 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
4-Chloroaniline	24,000	µg/kg dry wt	540 UJ	530 UJ	620 UJ	520 U	580 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
4-Methylphenol	31,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
4-Nitroaniline	3,500	µg/kg dry wt	1,300 U	1,300 U	1,600 U	1,300 U	1,500 U
4-Nitrophenol	49,000	µg/kg dry wt	1,300 U	1,300 U	1,600 U	1,300 U	1,500 U
Acetophenone	490	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Atrazine	2,200	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Benzaldehyde	610,000	µg/kg dry wt	540 U	530 U	82 J	520 U	580 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	2,100	530 U	620 U	520 U	750 U
Butyl benzyl phthalate	11,000	µg/kg dry wt	70 J	530 U	620 U	520 U	580 U
Caprolactam	3,100,000	µg/kg dry wt	540 UJ	530 UJ	620 UJ	520 UJ	580 UJ
Carbazole	24,000	µg/kg dry wt	180 J	530 UJ	120 J	520 U	580 U
Dibenzofuran	420	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Diethylphthalate	600	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	540 U	530 U	620 U	62 J	580 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 UJ
Hexachlorobenzene	20	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Hexachlorobutadiene	6,200	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	540 UJ	530 UJ	620 UJ	520 UJ	580 UJ
Hexachloroethane	1,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Isophorone	510,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Nitrobenzene	2,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	540 U	530 U	620 U	520 UJ	580 UJ
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U
Pentachlorophenol	3,000	µg/kg dry wt	1,300 U	1,300 U	1,600 U	1,300 U	1,500 U
Phenol	57	µg/kg dry wt	540 U	530 U	620 U	520 U	580 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Sample Name			SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Date Collected			9/4/2003	9/4/2003	9/5/2003	9/5/2003	9/5/2003
RISP East (ft)			351365	349270	350890	350496	351002
RISP North (ft)			305705	306035	305078	305336	304113
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			19	44	46	40	48
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,000 U	1,400 U	1,500 U	1,400 U	1,600 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,000 UJ	1,400 U	1,500 U	1,400 UJ	1,600 UJ
2,4-Dinitrotoluene	12,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2-Chloronaphthalene	390,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2-Chlorophenol	6,300	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2-Methylphenol	12	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
2-Nitroaniline	3,500	µg/kg dry wt	1,000 U	1,400 U	1,500 U	1,400 U	1,600 U
2-Nitrophenol	49,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
3-Nitroaniline	3,500	µg/kg dry wt	1,000 U	1,400 U	1,500 U	1,400 U	1,600 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,000 UJ	1,400 U	1,500 U	1,400 UJ	1,600 UJ
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
4-Chloroaniline	24,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
4-Methylphenol	31,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
4-Nitroaniline	3,500	µg/kg dry wt	1,000 U	1,400 U	1,500 U	1,400 U	1,600 U
4-Nitrophenol	49,000	µg/kg dry wt	1,000 U	1,400 U	1,500 U	1,400 U	1,600 U
Acetophenone	490	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Atrazine	2,200	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Benzaldehyde	610,000	µg/kg dry wt	400 UJ	580 U	600 U	540 UJ	630 UJ
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	400 U	580 U	600 U	540 U	1,400
Butyl benzyl phthalate	11,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Caprolactam	3,100,000	µg/kg dry wt	400 U	580 UJ	600 UJ	540 U	630 U
Carbazole	24,000	µg/kg dry wt	93 J	580 U	600 U	540 UJ	78 J
Dibenzofuran	420	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Diethylphthalate	600	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Hexachlorobenzene	20	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Hexachlorobutadiene	6,200	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	400 UJ	580 UJ	600 UJ	540 UJ	630 UJ
Hexachloroethane	1,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Isophorone	510,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Nitrobenzene	2,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	400 U	580 UJ	600 UJ	540 U	630 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U
Pentachlorophenol	3,000	µg/kg dry wt	1,000 U	1,400 U	1,500 U	1,400 U	1,600 U
Phenol	57	µg/kg dry wt	400 U	580 U	600 U	540 U	630 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft) Depth Start (ft bgs) Depth End (ft bgs) Percent Moisture (%) Percent Moisture, Freeze Dried (%)	PAL	Units	SE-020-LF SE-020-LF 9/5/2003 351481 303930 0 1 53 NA	SE-021-NP SE-021-NP 9/5/2003 353121 303354 0 1 58 NA	SE-022-BR SE-022A-BR 9/8/2003 345490 312537 0 1 NA NA	SE-022-BR SE-022-BR 9/5/2003 345490 312537 0 1 29 NA	SE-023-BR SE-023-BR 9/6/2003 352567 302605 0 1 19 NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,400 U	1,400 U	NA	1,100 U	1,000 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	550 UJ	560 UJ	NA	460 U	400 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,400 U	1,400 UJ	NA	1,100 U	1,000 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2-Chloronaphthalene	390,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2-Chlorophenol	6,300	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2-Methylphenol	12	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
2-Nitroaniline	3,500	µg/kg dry wt	1,400 U	1,400 U	NA	1,100 U	1,000 U
2-Nitrophenol	49,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	550 UJ	560 UJ	NA	460 U	400 U
3-Nitroaniline	3,500	µg/kg dry wt	1,400 UJ	1,400 UJ	NA	1,100 U	1,000 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,400 UJ	1,400 UJ	NA	1,100 U	1,000 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	550 UJ	560 UJ	NA	460 U	400 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
4-Chloroaniline	24,000	µg/kg dry wt	550 UJ	560 UJ	NA	460 U	400 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
4-Methylphenol	31,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
4-Nitroaniline	3,500	µg/kg dry wt	1,400 U	1,400 U	NA	1,100 U	1,000 U
4-Nitrophenol	49,000	µg/kg dry wt	1,400 U	1,400 U	NA	1,100 U	1,000 U
Acetophenone	490	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
Atrazine	2,200	µg/kg dry wt	550 UJ	560 UJ	NA	460 U	400 U
Benzaldehyde	610,000	µg/kg dry wt	550 U	140 J	NA	460 U	400 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	4,400	4,700	NA	460 U	9,700
Butyl benzyl phthalate	11,000	µg/kg dry wt	550 UJ	150 J	NA	460 U	400 U
Caprolactam	3,100,000	µg/kg dry wt	550 UJ	560 UJ	NA	460 UJ	400 UJ
Carbazole	24,000	µg/kg dry wt	240 J	320 J	NA	460 U	400 U
Dibenzofuran	420	µg/kg dry wt	87 J	79 J	NA	460 U	400 U
Diethylphthalate	600	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	550 UJ	560 U	NA	460 U	400 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	550 UJ	560 UJ	NA	460 U	400 U
Hexachlorobenzene	20	µg/kg dry wt	550 UJ	560 UJ	NA	460 U	400 U
Hexachlorobutadiene	6,200	µg/kg dry wt	550 U	560 U	NA	460 U	400 UJ
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	550 UJ	560 UJ	NA	460 UJ	400 UJ
Hexachloroethane	1,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
Isophorone	510,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
Nitrobenzene	2,000	µg/kg dry wt	550 U	560 U	NA	460 U	400 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	550 U	560 U	NA	460 UJ	400 UJ
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	250 J	560 UJ	NA	460 U	400 U
Pentachlorophenol	3,000	µg/kg dry wt	1,400 UJ	1,400 UJ	NA	1,100 U	1,000 U
Phenol	57	µg/kg dry wt	550 U	560 U	NA	460 U	400 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-024-BR	SE-025-BR	SE-026-BR	SE-026-BR	SE-026-BR
Sample Name			SE-024-BR	SE-025-BR	SE-026-BR	SE-042-BR	SE-FD-02
Date Collected			9/6/2003	9/6/2003	9/8/2003	8/31/2004	9/8/2003
RISP East (ft)			352135	351456	352690	352690	352690
RISP North (ft)			302922	303575	302735	302735	302735
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			33	13	19	16	14
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,200 U	930 U	1,000 U	980 U	950 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	480 U	370 UJ	400 U	390 U	380 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,200 U	930 U	1,000 U	980 U	950 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2-Chloronaphthalene	390,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2-Chlorophenol	6,300	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2-Methylphenol	12	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
2-Nitroaniline	3,500	µg/kg dry wt	1,200 U	930 U	1,000 U	980 U	950 U
2-Nitrophenol	49,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	480 UJ	370 UJ	400 U	390 U	380 U
3-Nitroaniline	3,500	µg/kg dry wt	1,200 U	930 UJ	1,000 U	980 U	950 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,200 U	930 U	1,000 U	980 U	950 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	480 U	370 UJ	400 U	390 U	380 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
4-Chloroaniline	24,000	µg/kg dry wt	480 U	370 UJ	400 U	390 U	380 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
4-Methylphenol	31,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
4-Nitroaniline	3,500	µg/kg dry wt	1,200 U	930 U	1,000 U	980 U	950 U
4-Nitrophenol	49,000	µg/kg dry wt	1,200 U	930 U	1,000 U	980 U	950 U
Acetophenone	490	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
Atrazine	2,200	µg/kg dry wt	480 U	370 UJ	400 U	390 U	380 U
Benzaldehyde	610,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	480 U	4,100	400 U	390 U	380 U
Butyl benzyl phthalate	11,000	µg/kg dry wt	480 UJ	370 UJ	400 U	390 U	380 U
Caprolactam	3,100,000	µg/kg dry wt	480 UJ	370 UJ	400 UJ	390 U	380 UJ
Carbazole	24,000	µg/kg dry wt	480 U	880 J	78 J	390 U	38 J
Dibenzofuran	420	µg/kg dry wt	480 U	220 J	100 J	390 U	380 U
Diethylphthalate	600	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	480 U	370 UJ	400 U	390 U	380 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	480 U	370 UJ	400 U	390 U	380 U
Hexachlorobenzene	20	µg/kg dry wt	480 U	370 UJ	400 U	390 U	380 U
Hexachlorobutadiene	6,200	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	480 UJ	370 UJ	400 UJ	390 U	380 UJ
Hexachloroethane	1,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
Isophorone	510,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
Nitrobenzene	2,000	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	480 UJ	370 U	400 UJ	390 U	380 UJ
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	480 U	370 UJ	400 U	390 U	380 U
Pentachlorophenol	3,000	µg/kg dry wt	1,200 U	930 UJ	1,000 U	980 U	380 U
Phenol	57	µg/kg dry wt	480 U	370 U	400 U	390 U	380 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR
Sample Name			SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR
Date Collected			9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352779	352320	351551	351551	350958
RISP North (ft)			303669	303984	303889	303889	304015
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			38	12	16	8	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	59 J	360 U	390 U	360 U	380 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,300 U	920 U	980 U	890 U	950 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,300 U	920 U	980 UJ	890 UJ	950 UJ
2,4-Dinitrotoluene	12,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2-Chloronaphthalene	390,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2-Chlorophenol	6,300	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2-Methylphenol	12	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
2-Nitroaniline	3,500	µg/kg dry wt	1,300 U	920 U	980 U	890 U	950 U
2-Nitrophenol	49,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
3-Nitroaniline	3,500	µg/kg dry wt	1,300 U	920 U	980 U	890 U	950 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,300 U	920 U	980 U	890 U	950 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
4-Chloroaniline	24,000	µg/kg dry wt	530 U	360 U	390 UJ	360 UJ	380 UJ
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
4-Methylphenol	31,000	µg/kg dry wt	530 U	360 U	390 U	360 U	54 J
4-Nitroaniline	3,500	µg/kg dry wt	1,300 U	920 U	980 UJ	890 UJ	950 UJ
4-Nitrophenol	49,000	µg/kg dry wt	1,300 U	920 U	980 UJ	890 UJ	950 UJ
Acetophenone	490	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Atrazine	2,200	µg/kg dry wt	530 U	360 U	390 UJ	360 UJ	380 UJ
Benzaldehyde	610,000	µg/kg dry wt	530 U	360 U	390 UJ	360 UJ	380 UJ
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	670	360 U	650 U	5,700	6,700
Butyl benzyl phthalate	11,000	µg/kg dry wt	530 U	360 U	390 UJ	360 UJ	380 UJ
Caprolactam	3,100,000	µg/kg dry wt	530 UJ	360 UJ	390 U	360 U	380 U
Carbazole	24,000	µg/kg dry wt	160 J	360 U	390 U	360 U	150 J
Dibenzofuran	420	µg/kg dry wt	94 J	360 U	390 U	360 U	92 J
Diethylphthalate	600	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	530 UJ	360 U	11,000 J	410 J	1,100
Hexachlorobenzene	20	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Hexachlorobutadiene	6,200	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	530 UJ	360 UJ	390 UJ	360 UJ	380 UJ
Hexachloroethane	1,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Isophorone	510,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Nitrobenzene	2,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	530 UJ	360 UJ	390 U	360 U	380 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U
Pentachlorophenol	3,000	µg/kg dry wt	1,300 U	920 U	980 UJ	890 UJ	950 UJ
Phenol	57	µg/kg dry wt	530 U	360 U	390 U	360 U	380 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Sample Name			SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Date Collected			9/9/2003	9/10/2003	9/10/2003	9/10/2003	8/30/2004
RISP East (ft)			350323	349117	347976	347020	351597
RISP North (ft)			304420	305833	306035	307232	303879
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	16	23	19	15
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	400 U	390 U	420 U	410 U	390 UJ
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,000 U	980 U	1,100 U	1,000 U	980 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,000 UJ	980 UJ	1,100 UJ	1,000 UJ	980 UJ
2,4-Dinitrotoluene	12,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2-Chloronaphthalene	390,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2-Chlorophenol	6,300	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2-Methylphenol	12	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
2-Nitroaniline	3,500	µg/kg dry wt	1,000 U	980 U	1,100 U	1,000 U	980 UJ
2-Nitrophenol	49,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
3-Nitroaniline	3,500	µg/kg dry wt	1,000 U	980 U	1,100 U	1,000 U	980 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,000 U	980 U	1,100 U	1,000 U	980 UJ
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
4-Chloroaniline	24,000	µg/kg dry wt	400 UJ	390 UJ	420 UJ	410 UJ	390 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
4-Methylphenol	31,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
4-Nitroaniline	3,500	µg/kg dry wt	1,000 UJ	980 UJ	1,100 UJ	1,000 UJ	980 U
4-Nitrophenol	49,000	µg/kg dry wt	1,000 UJ	980 UJ	1,100 UJ	1,000 UJ	980 U
Acetophenone	490	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Atrazine	2,200	µg/kg dry wt	400 UJ	390 UJ	420 UJ	410 UJ	390 U
Benzaldehyde	610,000	µg/kg dry wt	400 UJ	390 UJ	420 UJ	410 UJ	390 UJ
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	400 U	4,000	420 U	500 U	1,300
Butyl benzyl phthalate	11,000	µg/kg dry wt	400 UJ	200 J	420 UJ	410 UJ	390 U
Caprolactam	3,100,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Carbazole	24,000	µg/kg dry wt	400 U	68 J	420 U	260 J	130 J
Dibenzofuran	420	µg/kg dry wt	400 U	390 U	420 U	86 J	120 J
Diethylphthalate	600	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	400 U	560	420 U	410 U	390 U
Hexachlorobenzene	20	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Hexachlorobutadiene	6,200	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	400 UJ	390 UJ	420 UJ	410 UJ	390 U
Hexachloroethane	1,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Isophorone	510,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Nitrobenzene	2,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U
Pentachlorophenol	3,000	µg/kg dry wt	1,000 UJ	980 UJ	1,100 UJ	1,000 UJ	980 U
Phenol	57	µg/kg dry wt	400 U	390 U	420 U	410 U	390 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			350184	347061	346903	352890	352890
RISP North (ft)			304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	370 UJ	410 UJ	410 UJ	390 UJ	400 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	920 U	1,000 U	1,000 U	980 U	1,000 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	920 UJ	1,000 UJ	1,000 UJ	980 UJ	1,000 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2-Chloronaphthalene	390,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2-Chlorophenol	6,300	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2-Methylphenol	12	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
2-Nitroaniline	3,500	µg/kg dry wt	920 UJ	1,000 UJ	1,000 UJ	980 UJ	1,000 U
2-Nitrophenol	49,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
3-Nitroaniline	3,500	µg/kg dry wt	920 U	1,000 U	1,000 U	980 U	1,000 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	920 UJ	1,000 UJ	1,000 UJ	980 UJ	1,000 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
4-Chloroaniline	24,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
4-Methylphenol	31,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
4-Nitroaniline	3,500	µg/kg dry wt	920 U	1,000 U	1,000 U	980 U	1,000 U
4-Nitrophenol	49,000	µg/kg dry wt	920 U	1,000 U	1,000 U	980 U	1,000 U
Acetophenone	490	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Atrazine	2,200	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Benzaldehyde	610,000	µg/kg dry wt	370 UJ	410 UJ	410 UJ	390 UJ	400 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	140 J	160 J	150 J	140 J	400 U
Butyl benzyl phthalate	11,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Caprolactam	3,100,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Carbazole	24,000	µg/kg dry wt	370 U	410 U	56 J	390 U	400 U
Dibenzofuran	420	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Diethylphthalate	600	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Hexachlorobenzene	20	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Hexachlorobutadiene	6,200	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Hexachloroethane	1,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Isophorone	510,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Nitrobenzene	2,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U
Pentachlorophenol	3,000	µg/kg dry wt	920 U	1,000 U	1,000 U	980 U	1,000 U
Phenol	57	µg/kg dry wt	370 U	410 U	410 U	390 U	400 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116
RISP North (ft)			304243	305540	310413	312315	305924
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	68 J	380 U	380 U	400 U	42 J
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	480 U	380 U	380 UJ	400 UJ	330 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,200 U	940 U	950 U	1,000 U	830 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,200 U	940 U	950 UJ	1,000 UJ	830 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
2-Chloronaphthalene	390,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
2-Chlorophenol	6,300	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
2-Methylphenol	12	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
2-Nitroaniline	3,500	µg/kg dry wt	1,200 U	940 U	950 UJ	1,000 UJ	830 U
2-Nitrophenol	49,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
3-Nitroaniline	3,500	µg/kg dry wt	1,200 U	940 U	950 U	1,000 U	830 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,200 U	940 U	950 UJ	1,000 UJ	830 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
4-Chloroaniline	24,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
4-Methylphenol	31,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
4-Nitroaniline	3,500	µg/kg dry wt	1,200 U	940 U	950 U	1,000 U	830 U
4-Nitrophenol	49,000	µg/kg dry wt	1,200 U	940 U	950 U	1,000 U	830 U
Acetophenone	490	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Atrazine	2,200	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Benzaldehyde	610,000	µg/kg dry wt	81 J	380 U	380 UJ	400 UJ	130 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	1,500	380 U	1,000	260 J	13,000
Butyl benzyl phthalate	11,000	µg/kg dry wt	480 U	380 U	380 U	400 U	65 J
Caprolactam	3,100,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Carbazole	24,000	µg/kg dry wt	630	380 U	380 U	400 U	130 J
Dibenzofuran	420	µg/kg dry wt	500	380 U	380 U	400 U	72 J
Diethylphthalate	600	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Hexachlorobenzene	20	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Hexachlorobutadiene	6,200	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Hexachloroethane	1,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Isophorone	510,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
Nitrobenzene	2,000	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	150 J	380 U	380 U	400 U	330 U
Pentachlorophenol	3,000	µg/kg dry wt	1,200 U	940 U	950 U	1,000 U	830 U
Phenol	57	µg/kg dry wt	480 U	380 U	380 U	400 U	330 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Sample Name			SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Date Collected			9/1/2004	8/31/2004	9/1/2004	8/31/2004	9/2/2004
RISP East (ft)			349324	352957	345628	349320	352084
RISP North (ft)			306113	304470	312400	306016	304607
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			11	31	26	40	54
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	9
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	930 U	1,200 U	1,100 U	1,400 U	910 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	930 U	1,200 U	1,100 U	1,400 U	910 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2-Chloronaphthalene	390,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2-Chlorophenol	6,300	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2-Methylphenol	12	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
2-Nitroaniline	3,500	µg/kg dry wt	930 U	1,200 U	1,100 U	1,400 U	910 U
2-Nitrophenol	49,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
3-Nitroaniline	3,500	µg/kg dry wt	930 U	1,200 U	1,100 U	1,400 U	910 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	930 U	1,200 U	1,100 U	1,400 U	910 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
4-Chloroaniline	24,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
4-Methylphenol	31,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
4-Nitroaniline	3,500	µg/kg dry wt	930 U	1,200 U	1,100 U	1,400 U	910 U
4-Nitrophenol	49,000	µg/kg dry wt	930 U	1,200 U	1,100 U	1,400 U	910 U
Acetophenone	490	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Atrazine	2,200	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Benzaldehyde	610,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	370 U	1,100	450 U	550 U	360 U
Butyl benzyl phthalate	11,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Caprolactam	3,100,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Carbazole	24,000	µg/kg dry wt	370 U	460 J	450 U	550 U	360 U
Dibenzofuran	420	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Diethylphthalate	600	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Hexachlorobenzene	20	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Hexachlorobutadiene	6,200	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Hexachloroethane	1,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Isophorone	510,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Nitrobenzene	2,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U
Pentachlorophenol	3,000	µg/kg dry wt	930 U	1,200 U	1,100 U	1,400 U	910 U
Phenol	57	µg/kg dry wt	370 U	480 U	450 U	550 U	360 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Sample Name			SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Date Collected			9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004
RISP East (ft)			352774	351440	351895	352372	351508
RISP North (ft)			304071	305562	304852	304608	305289
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			21	38	64	35	59
Percent Moisture, Freeze Dried (%)			NA	NA	0	NA	0
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,000 U	1,300 U	830 U	1,300 U	830 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,000 U	1,300 U	830 U	1,300 U	830 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
2-Chloronaphthalene	390,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
2-Chlorophenol	6,300	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U
2-Methylphenol	12	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U
2-Nitroaniline	3,500	µg/kg dry wt	1,000 U	1,300 UJ	830 U	1,300 U	830 U
2-Nitrophenol	49,000	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
3-Nitroaniline	3,500	µg/kg dry wt	1,000 U	1,300 UJ	830 U	1,300 U	830 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,000 U	1,300 U	830 U	1,300 U	830 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U
4-Chloroaniline	24,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
4-Methylphenol	31,000	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U
4-Nitroaniline	3,500	µg/kg dry wt	1,000 U	1,300 UJ	830 U	1,300 U	830 U
4-Nitrophenol	49,000	µg/kg dry wt	1,000 U	1,300 U	830 U	1,300 U	830 U
Acetophenone	490	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Atrazine	2,200	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Benzaldehyde	610,000	µg/kg dry wt	420 U	90 J	40 J	510 U	53 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	580	530 UJ	330 U	510 U	330 U
Butyl benzyl phthalate	11,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Caprolactam	3,100,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Carbazole	24,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	57 J
Dibenzofuran	420	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Diethylphthalate	600	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Hexachlorobenzene	20	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Hexachlorobutadiene	6,200	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Hexachloroethane	1,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Isophorone	510,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Nitrobenzene	2,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	420 U	530 UJ	330 U	510 U	330 U
Pentachlorophenol	3,000	µg/kg dry wt	1,000 U	1,300 U	830 U	1,300 U	830 U
Phenol	57	µg/kg dry wt	420 U	530 U	330 U	510 U	330 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Sample Name			SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/3/2004	9/3/2004
RISP East (ft)			350942	351791	352478	352272	352007
RISP North (ft)			305250	303170	302602	302718	302937
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			50	18	55	46	19
Percent Moisture, Freeze Dried (%)			0	NA	0	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	830 U	1,000 U	820 U	1,500 U	1,000 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	830 U	1,000 U	820 U	1,500 U	1,000 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2-Chloronaphthalene	390,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2-Chlorophenol	6,300	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2-Methylphenol	12	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
2-Nitroaniline	3,500	µg/kg dry wt	830 U	1,000 U	820 U	1,500 U	1,000 U
2-Nitrophenol	49,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
3-Nitroaniline	3,500	µg/kg dry wt	830 U	1,000 U	820 U	1,500 U	1,000 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	830 U	1,000 U	820 U	1,500 U	1,000 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
4-Chloroaniline	24,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
4-Methylphenol	31,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
4-Nitroaniline	3,500	µg/kg dry wt	830 U	1,000 U	820 U	1,500 U	1,000 U
4-Nitrophenol	49,000	µg/kg dry wt	830 U	1,000 U	820 U	1,500 U	1,000 U
Acetophenone	490	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Atrazine	2,200	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Benzaldehyde	610,000	µg/kg dry wt	330 U	400 U	110 J	98 J	410 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	260 J	460 U	330 U	610 U	410 U
Butyl benzyl phthalate	11,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Caprolactam	3,100,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Carbazole	24,000	µg/kg dry wt	34 J	400 U	330 U	610 U	410 U
Dibenzofuran	420	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Diethylphthalate	600	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Hexachlorobenzene	20	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Hexachlorobutadiene	6,200	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Hexachloroethane	1,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Isophorone	510,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Nitrobenzene	2,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U
Pentachlorophenol	3,000	µg/kg dry wt	830 U	1,000 U	820 U	1,500 U	1,000 U
Phenol	57	µg/kg dry wt	330 U	400 U	330 U	610 U	410 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR
Sample Name			SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004
RISP East (ft)			351730	353122	353122	350926	351567
RISP North (ft)			303184	303341	303341	304138	303403
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			28	63	67	32	22
Percent Moisture, Freeze Dried (%)			NA	8	0	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,200 U	900 U	820 U	1,200 U	1,100 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,200 U	900 U	820 U	1,200 U	1,100 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2-Chloronaphthalene	390,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2-Chlorophenol	6,300	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2-Methylphenol	12	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
2-Nitroaniline	3,500	µg/kg dry wt	1,200 U	900 U	820 U	1,200 U	1,100 U
2-Nitrophenol	49,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
3-Nitroaniline	3,500	µg/kg dry wt	1,200 U	900 U	820 U	1,200 U	1,100 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,200 U	900 U	820 U	1,200 U	1,100 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
4-Chloroaniline	24,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
4-Methylphenol	31,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
4-Nitroaniline	3,500	µg/kg dry wt	1,200 U	900 U	820 U	1,200 U	1,100 U
4-Nitrophenol	49,000	µg/kg dry wt	1,200 U	900 U	820 U	1,200 U	1,100 U
Acetophenone	490	µg/kg dry wt	460 U	360 U	67 J	480 U	420 U
Atrazine	2,200	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Benzaldehyde	610,000	µg/kg dry wt	460 U	710	720	480 U	420 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	560	2,800 J	3,400	480 U	200 J
Butyl benzyl phthalate	11,000	µg/kg dry wt	460 U	72 J	64 J	480 U	420 U
Caprolactam	3,100,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Carbazole	24,000	µg/kg dry wt	67 J	150 J	120 J	130 J	440
Dibenzofuran	420	µg/kg dry wt	460 U	64 J	56 J	480 U	180 J
Diethylphthalate	600	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	460 U	72 J	50 J	480 U	420 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Hexachlorobenzene	20	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Hexachlorobutadiene	6,200	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Hexachloroethane	1,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Isophorone	510,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Nitrobenzene	2,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	460 U	360 U	330 U	480 U	420 U
Pentachlorophenol	3,000	µg/kg dry wt	1,200 U	900 U	820 U	1,200 U	1,100 U
Phenol	57	µg/kg dry wt	460 U	48 J	42 J	480 U	420 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Sample Name			SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Date Collected			9/6/2004	9/3/2004	9/3/2004	9/3/2004	9/3/2004
RISP East (ft)			351393	350848	351471	352417	352313
RISP North (ft)			303624	304184	303952	303137	303353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			13	42	45	38	64
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	8
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	950 U	1,400 U	1,500 U	1,300 U	900 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	950 U	1,400 U	1,500 U	1,300 U	900 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2-Chloronaphthalene	390,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2-Chlorophenol	6,300	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2-Methylphenol	12	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
2-Nitroaniline	3,500	µg/kg dry wt	950 U	1,400 U	1,500 U	1,300 U	900 U
2-Nitrophenol	49,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
3-Nitroaniline	3,500	µg/kg dry wt	950 U	1,400 U	1,500 U	1,300 U	900 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	950 U	1,400 U	1,500 U	1,300 U	900 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
4-Chloroaniline	24,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
4-Methylphenol	31,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
4-Nitroaniline	3,500	µg/kg dry wt	950 U	1,400 U	1,500 U	1,300 U	900 U
4-Nitrophenol	49,000	µg/kg dry wt	950 U	1,400 U	1,500 U	1,300 U	900 U
Acetophenone	490	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Atrazine	2,200	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Benzaldehyde	610,000	µg/kg dry wt	380 U	100 J	88 J	120 J	72 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	120 J	570 U	58,000 J	530 U	690
Butyl benzyl phthalate	11,000	µg/kg dry wt	380 U	67 J	600 U	530 U	360 U
Caprolactam	3,100,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Carbazole	24,000	µg/kg dry wt	380 U	200 J	200 J	66 J	110 J
Dibenzofuran	420	µg/kg dry wt	380 U	62 J	83 J	530 U	45 J
Diethylphthalate	600	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	380 U	85 J	600 U	530 U	360 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	380 U	570 U	320 J	530 U	360 U
Hexachlorobenzene	20	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Hexachlorobutadiene	6,200	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Hexachloroethane	1,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Isophorone	510,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Nitrobenzene	2,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U
Pentachlorophenol	3,000	µg/kg dry wt	950 U	1,400 U	1,500 U	1,300 U	900 U
Phenol	57	µg/kg dry wt	380 U	570 U	600 U	530 U	360 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI
Sample Name			SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI
Date Collected			9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351696	352438	352447	352447	351994
RISP North (ft)			303493	303325	303531	303531	303594
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	64	81	82	74
Percent Moisture, Freeze Dried (%)			NA	9	0	0	8
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,000 U	910 U	830 U	1,200 U	1,700 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,000 U	910 U	830 U	1,200 U	1,700 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2-Chloronaphthalene	390,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2-Chlorophenol	6,300	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2-Methylphenol	12	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
2-Nitroaniline	3,500	µg/kg dry wt	1,000 U	910 U	830 U	1,200 U	1,700 U
2-Nitrophenol	49,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	400 U	360 U	660 U	470 U	660 U
3-Nitroaniline	3,500	µg/kg dry wt	1,000 U	910 U	830 U	1,200 U	1,700 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,000 U	910 U	830 U	1,200 U	1,700 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
4-Chloroaniline	24,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
4-Methylphenol	31,000	µg/kg dry wt	400 U	360 U	56 J	68 J	660 U
4-Nitroaniline	3,500	µg/kg dry wt	1,000 U	910 U	830 U	1,200 U	1,700 U
4-Nitrophenol	49,000	µg/kg dry wt	1,000 U	910 U	830 U	1,200 U	1,700 U
Acetophenone	490	µg/kg dry wt	400 U	44 J	61 J	88 J	660 U
Atrazine	2,200	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Benzaldehyde	610,000	µg/kg dry wt	400 U	350 J	1,200	1,700	740
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	370 J	11,000	1,600	2,000	2,000
Butyl benzyl phthalate	11,000	µg/kg dry wt	400 U	360 U	660 U	470 U	90 J
Caprolactam	3,100,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Carbazole	24,000	µg/kg dry wt	400 U	150 J	170 J	260 J	280 J
Dibenzofuran	420	µg/kg dry wt	400 U	88 J	55 J	71 J	73 J
Diethylphthalate	600	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	400 U	43 J	120 J	470 U	78 J
Di-N-Octyl phthalate	120,000	µg/kg dry wt	1,300	110 J	100 J	470 U	660 U
Hexachlorobenzene	20	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Hexachlorobutadiene	6,200	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Hexachloroethane	1,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Isophorone	510,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
Nitrobenzene	2,000	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	400 U	360 U	330 U	470 U	660 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	400 U	1,400	330 U	470 U	660 U
Pentachlorophenol	3,000	µg/kg dry wt	1,000 U	910 U	830 U	1,200 U	1,700 U
Phenol	57	µg/kg dry wt	400 U	41 J	52 J	74 J	660 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Sample Name			SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Date Collected			9/7/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004
RISP East (ft)			352703	352820	352717	352049	352447
RISP North (ft)			302372	302413	302444	303465	303427
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			71	25	36	21	21
Percent Moisture, Freeze Dried (%)			33	NA	NA	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	1,500 U	1,100 U	1,300 U	1,000 U	1,000 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	1,500 U	1,100 U	1,300 U	1,000 U	1,000 U
2,4-Dinitrotoluene	12,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2-Chloronaphthalene	390,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2-Chlorophenol	6,300	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2-Methylphenol	12	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
2-Nitroaniline	3,500	µg/kg dry wt	1,500 U	1,100 U	1,300 U	1,000 U	1,000 U
2-Nitrophenol	49,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
3-Nitroaniline	3,500	µg/kg dry wt	1,500 U	1,100 U	1,300 U	1,000 U	1,000 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	1,500 U	1,100 U	1,300 U	1,000 U	1,000 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
4-Chloroaniline	24,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
4-Methylphenol	31,000	µg/kg dry wt	61 J	440 U	510 U	420 U	420 U
4-Nitroaniline	3,500	µg/kg dry wt	1,500 U	1,100 U	1,300 U	1,000 U	1,000 U
4-Nitrophenol	49,000	µg/kg dry wt	1,500 U	1,100 U	1,300 U	1,000 U	1,000 U
Acetophenone	490	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Atrazine	2,200	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Benzaldehyde	610,000	µg/kg dry wt	120 J	65 J	100 J	420 U	420 U
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	28,000	350 J	1,700	160 J	100 J
Butyl benzyl phthalate	11,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Caprolactam	3,100,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Carbazole	24,000	µg/kg dry wt	590 U	55 J	120 J	99 J	420 U
Dibenzofuran	420	µg/kg dry wt	63 J	440 U	62 J	69 J	420 U
Diethylphthalate	600	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	78 J	440 U	2,800	420 U	420 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	240 J	440 U	390 J	420 U	420 U
Hexachlorobenzene	20	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Hexachlorobutadiene	6,200	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Hexachloroethane	1,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Isophorone	510,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Nitrobenzene	2,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U
Pentachlorophenol	3,000	µg/kg dry wt	1,500 U	1,100 U	1,300 U	1,000 U	1,000 U
Phenol	57	µg/kg dry wt	590 U	440 U	510 U	420 U	420 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft) Depth Start (ft bgs) Depth End (ft bgs) Percent Moisture (%) Percent Moisture, Freeze Dried (%)	PAL	Units	SE-086-UI SE-086-UI 9/7/2004 352149 303734 0 1 12 NA	SE-087-UI SE-087-UI 9/7/2004 352478 303603 0 1 56 8	T05BL-001 T05BL-001 6/23/2005 310832 346599 0 0.5 31.4 NA	T05BL-002 T05BL-002 6/23/2005 309261 346885 0 0.5 25.1 NA	T05BL-003 T05BL-003 6/23/2005 313353 344937 0 0.5 76.5 27.1
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	370 U	52 J	100 U	95 U	190 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	940 U	900 U	100 U	95 U	370 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	940 U	900 U	100 UJ	95 UJ	R
2,4-Dinitrotoluene	12,000	µg/kg dry wt	370 U	360 U	100 U	95 U	370 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
2-Chloronaphthalene	390,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
2-Chlorophenol	6,300	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
2-Methylphenol	12	µg/kg dry wt	370 U	360 U	10 EB	2.4 EB	46 U
2-Nitroaniline	3,500	µg/kg dry wt	940 U	900 U	100 U	95 U	190 U
2-Nitrophenol	49,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
3-Nitroaniline	3,500	µg/kg dry wt	940 U	900 U	100 U	95 U	190 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	940 U	900 U	100 U	95 U	930 UJ
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
4-Chloroaniline	24,000	µg/kg dry wt	370 U	360 U	100 UJ	95 UJ	190 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
4-Methylphenol	31,000	µg/kg dry wt	370 U	360 U	56 J	95 U	190 U
4-Nitroaniline	3,500	µg/kg dry wt	940 U	900 U	100 U	95 U	190 U
4-Nitrophenol	49,000	µg/kg dry wt	940 U	900 U	100 U	95 U	930 U
Acetophenone	490	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Atrazine	2,200	µg/kg dry wt	370 U	360 U	100 UJ	95 U	190 UJ
Benzaldehyde	610,000	µg/kg dry wt	370 U	88 J	60 J	95 UJ	410 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	87 J	170 J	700	110	5,900
Butyl benzyl phthalate	11,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Caprolactam	3,100,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 UJ
Carbazole	24,000	µg/kg dry wt	370 U	95 J	240	95 U	220
Dibenzofuran	420	µg/kg dry wt	370 U	100 J	81 J	95 U	190 U
Diethylphthalate	600	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Hexachlorobenzene	20	µg/kg dry wt	370 U	360 U	2.1 U	1.9 U	9.3 U
Hexachlorobutadiene	6,200	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	370 U	360 U	100 U	95 U	930 UJ
Hexachloroethane	1,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Isophorone	510,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Nitrobenzene	2,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	370 U	360 U	100 U	95 U	190 U
Pentachlorophenol	3,000	µg/kg dry wt	940 U	900 U	100 U	95 U	R
Phenol	57	µg/kg dry wt	370 U	360 U	100 U	95 U	180

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005
RISP East (ft)			312732	312447	313799	314193	302766
RISP North (ft)			345416	345374	344035	344083	352658
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	170 U	65 J	150 U	100 U	51 J
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	340 U	120 U	300 U	100 U	100 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	R	120 UJ	R	100 UJ	100 UJ
2,4-Dinitrotoluene	12,000	µg/kg dry wt	340 U	120 U	300 U	100 U	100 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
2-Chloronaphthalene	390,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
2-Chlorophenol	6,300	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
2-Methylphenol	12	µg/kg dry wt	43 U	16 EB	37 U	6.6 EB	2 U
2-Nitroaniline	3,500	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
2-Nitrophenol	49,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
3-Nitroaniline	3,500	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	850 UJ	120 U	740 UJ	100 U	100 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
4-Chloroaniline	24,000	µg/kg dry wt	170 U	120 UJ	150 U	100 UJ	100 UJ
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
4-Methylphenol	31,000	µg/kg dry wt	170 U	120 U	150 U	74 J	100 U
4-Nitroaniline	3,500	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
4-Nitrophenol	49,000	µg/kg dry wt	850 U	120 U	740 U	100 U	100 U
Acetophenone	490	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
Atrazine	2,200	µg/kg dry wt	170 UJ	120 UJ	150 UJ	100 UJ	100 UJ
Benzaldehyde	610,000	µg/kg dry wt	170 UJ	110 J	480 J	82 J	90 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	1,900	1,100	2,700	1,100	370
Butyl benzyl phthalate	11,000	µg/kg dry wt	170 U	120 U	180	58 J	100 U
Caprolactam	3,100,000	µg/kg dry wt	170 UJ	120 U	150 UJ	100 U	100 U
Carbazole	24,000	µg/kg dry wt	170 U	230	330	170	120
Dibenzofuran	420	µg/kg dry wt	170 U	120 U	150 U	64 J	59 J
Diethylphthalate	600	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	170 U	120 UJ	150 U	150	100 U
Hexachlorobenzene	20	µg/kg dry wt	8.5 U	2.3 U	7.4 U	2 U	2 U
Hexachlorobutadiene	6,200	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	850 UJ	120 U	740 UJ	100 U	100 U
Hexachloroethane	1,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
Isophorone	510,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
Nitrobenzene	2,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	170 U	120 U	150 U	100 U	100 U
Pentachlorophenol	3,000	µg/kg dry wt	R	120 U	R	100 U	100 U
Phenol	57	µg/kg dry wt	160	120 U	170	100 U	100 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			303928	303693	303948	303948	303208
RISP North (ft)			351655	352810	351070	351070	353080
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			NA	14.1	NA	NA	22.3
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	80 U	310 U	110 U	110 U	360 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	80 UJ	R	110 UJ	110 UJ	R
2,4-Dinitrotoluene	12,000	µg/kg dry wt	80 U	310 U	110 U	110 U	360 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2-Chloronaphthalene	390,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2-Chlorophenol	6,300	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2-Methylphenol	12	µg/kg dry wt	1.6 U	38 U	15 EB	13 EB	45 U
2-Nitroaniline	3,500	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
2-Nitrophenol	49,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
3-Nitroaniline	3,500	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	80 U	770 UJ	110 U	110 U	890 UJ
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
4-Chloroaniline	24,000	µg/kg dry wt	80 UJ	150 U	110 UJ	110 UJ	180 U
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
4-Methylphenol	31,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
4-Nitroaniline	3,500	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
4-Nitrophenol	49,000	µg/kg dry wt	80 U	260 J	110 U	110 U	890 U
Acetophenone	490	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Atrazine	2,200	µg/kg dry wt	80 U	150 UJ	110 UJ	110 UJ	180 UJ
Benzaldehyde	610,000	µg/kg dry wt	80 UJ	310 J	92 J	74 J	340 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	1,100	2,800	210	190	3,600
Butyl benzyl phthalate	11,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Caprolactam	3,100,000	µg/kg dry wt	80 U	150 UJ	110 U	110 U	180 UJ
Carbazole	24,000	µg/kg dry wt	80 U	400	120	80 J	460
Dibenzofuran	420	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Diethylphthalate	600	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	80 U	400	110 U	110 U	180 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	80 U	150 U	110 U	110 UJ	180 U
Hexachlorobenzene	20	µg/kg dry wt	1.6 U	7.7 U	2.1 U	2.1 U	8.9 U
Hexachlorobutadiene	6,200	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	80 U	770 UJ	110 U	110 U	890 UJ
Hexachloroethane	1,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Isophorone	510,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Nitrobenzene	2,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	80 U	150 U	110 U	110 U	180 U
Pentachlorophenol	3,000	µg/kg dry wt	80 U	180 J	110 U	110 U	R
Phenol	57	µg/kg dry wt	80 U	110	110 U	110 U	160

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft) Depth Start (ft bgs) Depth End (ft bgs) Percent Moisture (%) Percent Moisture, Freeze Dried (%)	PAL	Units	T05BR-006 T05BR-006 6/22/2005 304801 350100 0 0.5 32.4 NA	T05BR-007 T05BR-007 6/23/2005 303103 351910 0 0.5 38.8 NA	T05PA-001 T05PA-001 6/21/2005 303440 352619 0 0.5 48 7.1	T05PA-003 T05PA-003 6/21/2005 303634 351885 0 0.5 59.2 18.2	T05PD-002 T05PD-002 6/21/2005 303165 352427 0 0.5 35.4 NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	100 U	120 U	300 U	340 U	110 UJ
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
2,4-Dichlorophenol	18,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
2,4-Dimethylphenol	120,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
2,4-Dinitrophenol	12,000	µg/kg dry wt	100 UJ	120 UJ	R	R	110 UJ
2,4-Dinitrotoluene	12,000	µg/kg dry wt	100 U	120 U	300 U	340 U	110 UJ
2,6-Dinitrotoluene	6,100	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
2-Chloronaphthalene	390,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
2-Chlorophenol	6,300	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
2-Methylphenol	12	µg/kg dry wt	15 EB	2.3 U	37 U	42 U	16 JEB
2-Nitroaniline	3,500	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
2-Nitrophenol	49,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	100 U	120 U	R	170 U	110 UJ
3-Nitroaniline	3,500	µg/kg dry wt	100 U	120 U	150 UJ	170 U	110 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	100 U	120 U	R	840 UJ	110 UJ
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
4-Chloro-3-methylphenol	- -	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
4-Chloroaniline	24,000	µg/kg dry wt	100 UJ	120 UJ	150 UJ	170 U	110 UJ
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
4-Methylphenol	31,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
4-Nitroaniline	3,500	µg/kg dry wt	100 U	120 U	150 UJ	170 U	110 UJ
4-Nitrophenol	49,000	µg/kg dry wt	100 U	120 U	740 U	840 U	110 UJ
Acetophenone	490	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
Atrazine	2,200	µg/kg dry wt	100 UJ	120 U	150 UJ	170 UJ	110 UJ
Benzaldehyde	610,000	µg/kg dry wt	57 J	120 UJ	220 J	300 J	82 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	120	480	1,200	3,200	210 J
Butyl benzyl phthalate	11,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
Caprolactam	3,100,000	µg/kg dry wt	100 U	120 U	150 UJ	170 UJ	110 UJ
Carbazole	24,000	µg/kg dry wt	120	97 J	150 U	200	110 UJ
Dibenzofuran	420	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
Diethylphthalate	600	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
Dimethyl phthalate	100,000,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
Di-N-Butyl phthalate	11,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
Di-N-Octyl phthalate	120,000	µg/kg dry wt	100 UJ	120 U	150 U	170 U	110 UJ
Hexachlorobenzene	20	µg/kg dry wt	2 UJ	2.3 U	7.4 U	8.4 U	2.2 U
Hexachlorobutadiene	6,200	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	100 U	120 U	R	840 UJ	R
Hexachloroethane	1,000	µg/kg dry wt	100 U	120 U	150 UJ	170 U	R
Isophorone	510,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
Nitrobenzene	2,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	100 U	120 U	150 U	170 U	110 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	100 U	120 U	150 U	170 U	110 UJ
Pentachlorophenol	3,000	µg/kg dry wt	100 U	120 U	3,000 UJ	R	110 UJ
Phenol	57	µg/kg dry wt	100 U	120 U	82	140	110 U

TABLE 4-24
SEDIMENT RESULTS FOR NON-PAH SVOCs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			303165	302412	304467	305262	305938
RISP North (ft)			352427	352768	352596	351240	349545
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			NA	10.5	NA	9.8	NA
SVOC							
1,1'-Biphenyl	1,100	µg/kg dry wt	88 J	150 U	110 U	150 U	100 U
2,2'-oxybis(1-Chloropropane)	2,900	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
2,4,5-Trichlorophenol	610,000	µg/kg dry wt	100 U	310 U	110 U	310 U	100 U
2,4,6-Trichlorophenol	44,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
2,4-Dichlorophenol	18,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
2,4-Dimethylphenol	120,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
2,4-Dinitrophenol	12,000	µg/kg dry wt	100 UJ	R	110 UJ	R	100 UJ
2,4-Dinitrotoluene	12,000	µg/kg dry wt	100 U	310 U	110 U	310 U	100 U
2,6-Dinitrotoluene	6,100	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
2-Chloronaphthalene	390,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
2-Chlorophenol	6,300	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
2-Methylphenol	12	µg/kg dry wt	2.1 UJ	39 U	7.5 EB	38 U	2.1 U
2-Nitroaniline	3,500	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
2-Nitrophenol	49,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
3,3'-Dichlorobenzidine	1,100	µg/kg dry wt	100 UJ	150 U	110 U	150 U	100 U
3-Nitroaniline	3,500	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
4,6-Dinitro-2-methylphenol	- -	µg/kg dry wt	100 U	770 UJ	110 U	770 UJ	100 U
4-Bromophenyl-phenylether	1,200	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
4-Chloro-3-methylphenol	- -	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
4-Chloroaniline	24,000	µg/kg dry wt	100 UJ	150 U	110 UJ	150 U	100 UJ
4-Chlorophenyl-phenylether	- -	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
4-Methylphenol	31,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
4-Nitroaniline	3,500	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
4-Nitrophenol	49,000	µg/kg dry wt	100 U	770 U	110 U	770 U	100 U
Acetophenone	490	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
Atrazine	2,200	µg/kg dry wt	100 UJ	150 UJ	110 U	150 UJ	100 U
Benzaldehyde	610,000	µg/kg dry wt	78 J	150 UJ	110 UJ	260 J	140 J
bis(2-Chloroethoxy)methane	- -	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
bis(2-Chloroethyl)ether	2,100	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
bis(2-Ethylhexyl)phthalate	35,000	µg/kg dry wt	260 J	720	62 J	150 U	100 U
Butyl benzyl phthalate	11,000	µg/kg dry wt	100 UJ	150 U	110 U	150 U	100 U
Caprolactam	3,100,000	µg/kg dry wt	100 U	150 UJ	110 U	150 UJ	100 U
Carbazole	24,000	µg/kg dry wt	93 J	180	110 U	150 U	100 U
Dibenzofuran	420	µg/kg dry wt	90 J	150 U	110 U	150 U	100 U
Diethylphthalate	600	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
Dimethyl phthalate	100,000,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
Di-N-Butyl phthalate	11,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
Di-N-Octyl phthalate	120,000	µg/kg dry wt	100 UJ	150 U	110 U	150 U	100 U
Hexachlorobenzene	20	µg/kg dry wt	2.1 U	7.7 U	2.1 U	7.7 U	2.1 U
Hexachlorobutadiene	6,200	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
Hexachlorocyclopentadiene	42,000	µg/kg dry wt	100 U	770 UJ	110 U	770 UJ	100 U
Hexachloroethane	1,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
Isophorone	510,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
Nitrobenzene	2,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
N-Nitroso-di-N-propylamine	690	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
N-Nitrosodiphenylamine	99,000	µg/kg dry wt	100 U	150 U	110 U	150 U	100 U
Pentachlorophenol	3,000	µg/kg dry wt	100 U	R	110 U	R	100 U
Phenol	57	µg/kg dry wt	100 U	66	110 U	1,600 J	100 U

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003
RISP East (ft)			352478	352322	352279	352279	352172
RISP North (ft)			303295	303548	303356	303356	303168
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1''-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt			160 NJ	140 NJ	
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt		640 NJ			
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					460 NJ
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003
RISP East (ft)			352478	352322	352279	352279	352172
RISP North (ft)			303295	303548	303356	303356	303168
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					610 NJ
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt	180 NJ				
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olic	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt		250 NJ			
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt			110 NJ		
9,12 Octadecadienoic acid	- -	µg/kg dry wt			960 NJ	780 NJ	
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt	330 NJ			390 NJ	
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003
RISP East (ft)			352478	352322	352279	352279	352172
RISP North (ft)			303295	303548	303356	303356	303168
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt				91 NJ	
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt		160 NJ			
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt		1,500 NJ			
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt			99 NJ	89 NJ	
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt			390 NJ		
Benzoic acid	- -	µg/kg dry wt	97 NJ				
Benzothiazole	- -	µg/kg dry wt	110 NJ				
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt				330 NJ	
Cholesterol	- -	µg/kg dry wt			640 NJ	750 NJ	
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003
RISP East (ft)			352478	352322	352279	352279	352172
RISP North (ft)			303295	303548	303356	303356	303168
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt		330 NJ			
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt					
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	2,300 NJ	1,800 NJ	730 NJ	510 NJ	750 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt		190 NJ			
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					90 NJ
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt	660 NJ		120 NJ	140 NJ	
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt		1,300 NJ	550 NJB	440 NJB	

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003
RISP East (ft)			352478	352322	352279	352279	352172
RISP North (ft)			303295	303548	303356	303356	303168
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt			280 NJ		
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt	550 NJ				
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt	200 NJ				
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt	270 NJ	670 NJ	120 NJ	110 NJ	260 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					160 NJ
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt	140 NJ				
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	9	15	15	6	18

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Sample Name			SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Date Collected			8/29/2003	8/29/2003	9/2/2003	9/2/2003	9/3/2003
RISP East (ft)			351747	352761	352484	352735	352646
RISP North (ft)			303610	303287	303117	302367	304086
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			29	33	33	24	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt				1,900 NJ	
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt	200 NJ				
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt		470 NJ			
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt				640 NJ	
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt	910 NJ				
1-Dodecene	- -	µg/kg dry wt			210 NJ		
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt	230 NJ				
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt				200 NJ	
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Sample Name			SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Date Collected			8/29/2003	8/29/2003	9/2/2003	9/2/2003	9/3/2003
RISP East (ft)			351747	352761	352484	352735	352646
RISP North (ft)			303610	303287	303117	302367	304086
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			29	33	33	24	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt		240 NJ			
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt			650 NJD		
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt				580 NJ	
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt		290 NJ			
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt			300 NJ		
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt				120 NJ	
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt		150 NJ			220 NJ
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt	490 NJ			1,500 NJ	490 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Sample Name			SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Date Collected			8/29/2003	8/29/2003	9/2/2003	9/2/2003	9/3/2003
RISP East (ft)			351747	352761	352484	352735	352646
RISP North (ft)			303610	303287	303117	302367	304086
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			29	33	33	24	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt	96 NJ		510 NJ		
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt	110 NJ				
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt			170 NJ		
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt		1,200 NJ			
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt		500 NJ			
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Sample Name			SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Date Collected			8/29/2003	8/29/2003	9/2/2003	9/2/2003	9/3/2003
RISP East (ft)			351747	352761	352484	352735	352646
RISP North (ft)			303610	303287	303117	302367	304086
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			29	33	33	24	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt		7,400 NJ			
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	550 NJ	760 NJ	3,100 NJ	1,800 NJ	760 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt			610 NJD		
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt			110 NJ		
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt	110 NJ	120 NJ	410 NJD	310 NJ	
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt	230 NJB	610 NJB		650 NJB	580 J

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Sample Name			SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR	SE-009-WT
Date Collected			8/29/2003	8/29/2003	9/2/2003	9/2/2003	9/3/2003
RISP East (ft)			351747	352761	352484	352735	352646
RISP North (ft)			303610	303287	303117	302367	304086
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			29	33	33	24	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt			1,200 NJ	1,100 NJ	
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt				320 NJ	
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt	150 NJ	210 NJ		330 NJ	
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt			160 NJ		
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt	160 NJ	190 NJ	630 NJ	350 NJ	220 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	21	17	27	21	19

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Sample Name			SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003
RISP East (ft)			352842	352504	351470	352327	351040
RISP North (ft)			304421	304330	305229	304194	305533
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			64	39	48	37	60
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt			170 NJ		
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt			720 NJ		
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt					1,400 NJ
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt		1,200 NJ		160 NJ	
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					1,900 NJ
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					2,900 NJ
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt			160 NJ		
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Sample Name			SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003
RISP East (ft)			352842	352504	351470	352327	351040
RISP North (ft)			304421	304330	305229	304194	305533
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			64	39	48	37	60
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt				820 NJ	
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt			180 NJ		
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt	210 NJ		210 NJ		
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt				140 NJ	
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt	380 NJ	920 NJ	470 NJ	650 NJ	260 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Sample Name			SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003
RISP East (ft)			352842	352504	351470	352327	351040
RISP North (ft)			304421	304330	305229	304194	305533
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			64	39	48	37	60
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt			410 NJ		
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt	140 NJ				270 NJ
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt	150 NJ				
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Sample Name			SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003
RISP East (ft)			352842	352504	351470	352327	351040
RISP North (ft)			304421	304330	305229	304194	305533
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			64	39	48	37	60
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt					
Heptadecanoic acid	- -	µg/kg dry wt	310 NJ				
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	2,000 NJ	1,000 NJ	2,200 NJ	760 NJ	1,100 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt			290 NJ		290 NJ
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt		400 NJ			
Octadecanoic acid, butyl ester	- -	µg/kg dry wt	460 NJ		200 NJ	1,500 NJ	1,700 NJB

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Sample Name			SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003
RISP East (ft)			352842	352504	351470	352327	351040
RISP North (ft)			304421	304330	305229	304194	305533
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			64	39	48	37	60
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt	500 NJ		710 NJ	350 NJ	270 NJ
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt				860 NJ	
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt	440 NJ	270 NJ	430 NJ	170 NJ	
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	15	14	18	25	31

Station	PAL	Units	SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Sample Name			SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Date Collected			9/4/2003	9/4/2003	9/5/2003	9/5/2003	9/5/2003
RISP East (ft)			351365	349270	350890	350496	351002
RISP North (ft)			305705	306035	305078	305336	304113
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			19	44	46	40	48
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt	1,100 NJ				
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt		3,100 NJ			
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt	160 NJ				
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt	520 NJ				
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					1,500 NJ
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt	530 NJ				
1-Tridecene	- -	µg/kg dry wt	390 NJ				
1-Undecanol	- -	µg/kg dry wt			770 NJ		

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Sample Name			SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Date Collected			9/4/2003	9/4/2003	9/5/2003	9/5/2003	9/5/2003
RISP East (ft)			351365	349270	350890	350496	351002
RISP North (ft)			305705	306035	305078	305336	304113
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			19	44	46	40	48
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					560 NJ
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt	160 NJ				
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt	670 NJ				190 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Sample Name			SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Date Collected			9/4/2003	9/4/2003	9/5/2003	9/5/2003	9/5/2003
RISP East (ft)			351365	349270	350890	350496	351002
RISP North (ft)			305705	306035	305078	305336	304113
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			19	44	46	40	48
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt	170 NJ				
Anthracene, 9-methyl-	- -	µg/kg dry wt	180 NJ				
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					450 NJ
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					160 NJ
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt	130 NJ				
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt		160 NJ			
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Sample Name			SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Date Collected			9/4/2003	9/4/2003	9/5/2003	9/5/2003	9/5/2003
RISP East (ft)			351365	349270	350890	350496	351002
RISP North (ft)			305705	306035	305078	305336	304113
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			19	44	46	40	48
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenononanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt				5,500 NJ	
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	790 NJ	1,000 NJ	360 NJ	1,100 NJ	700 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt				150 NJ	
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt	270 NJB		320 NJB	500 NJ	730 NJB

Station	PAL	Units	SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Sample Name			SE-015-WT	SE-016-WT	SE-017-WT	SE-018-WT	SE-019-LF
Date Collected			9/4/2003	9/4/2003	9/5/2003	9/5/2003	9/5/2003
RISP East (ft)			351365	349270	350890	350496	351002
RISP North (ft)			305705	306035	305078	305336	304113
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			19	44	46	40	48
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt				220 NJ	320 NJ
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt	850 NJ				
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt		130 NJ			
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	39	17	10	25	17

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR
Sample Name			SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR
Date Collected			9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003
RISP East (ft)			351481	353121	345490	345490	352567
RISP North (ft)			303930	303354	312537	312537	302605
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	58	NA	29	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt			NA		
.alpha.-Amyrin	- -	µg/kg dry wt			NA		
.beta.-iso-Methyl ionone	- -	µg/kg dry wt			NA		
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt			NA		
1,10-Undecadiene	- -	µg/kg dry wt			NA		
1,19-Eicosadiene	- -	µg/kg dry wt			NA		
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt			NA		
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt			NA		
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt			NA		
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt			NA		
1,3-Dicyclohexylurea	- -	µg/kg dry wt			NA		
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt			NA		
1,8-Naphthalic anhydride	- -	µg/kg dry wt			NA		
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt			NA		
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt			NA		
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt			NA		
11H-Benzo[a]fluorene	- -	µg/kg dry wt			NA		
11H-Benzo[b]fluorene	- -	µg/kg dry wt			NA		
13-Docosenamide, (Z)-	- -	µg/kg dry wt			NA		
13-Octadecenal	- -	µg/kg dry wt			NA		
14-Octadecenal	- -	µg/kg dry wt			NA		
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt			NA		
15-Tetracosenoic acid, meth	- -	µg/kg dry wt			NA		
16- or 17-Octadecanal	- -	µg/kg dry wt			NA		
16-Heptadecenal	- -	µg/kg dry wt			NA		
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt			NA		
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt			NA		
17-Pentatriacontene	- -	µg/kg dry wt			NA		
18-Norabietane	- -	µg/kg dry wt			NA		
1-Biscanol	- -	µg/kg dry wt			NA		
1-Butanol, 4-methoxy-	- -	µg/kg dry wt			NA		
1-Decene	- -	µg/kg dry wt		1,600 NJ	NA		
1-Docosene	- -	µg/kg dry wt			NA		
1-Dodecanol	- -	µg/kg dry wt	780 NJ		NA		
1-Dodecene	- -	µg/kg dry wt			NA		
1-Dotriacontanol	- -	µg/kg dry wt			NA		
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt			NA		
1-Heneicosyl formate	- -	µg/kg dry wt			NA		
1-Heptadecene	- -	µg/kg dry wt			NA		
1-Hexacosanol	- -	µg/kg dry wt			NA		
1-Hexadecanol	- -	µg/kg dry wt			NA		
1-Hexadecyne	- -	µg/kg dry wt			NA		
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt			NA		
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt			NA		
1H-Indene, 1-phenyl-	- -	µg/kg dry wt			NA		
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt			NA		
1-Nonadecanol	- -	µg/kg dry wt			NA		
1-Octadecanol	- -	µg/kg dry wt			NA		
1-Octadecene	- -	µg/kg dry wt			NA		
1-Pentadecene	- -	µg/kg dry wt			NA		
1-Tetradecene	- -	µg/kg dry wt			NA		
1-Tricosene	- -	µg/kg dry wt			NA		
1-Tridecanol	- -	µg/kg dry wt			NA		
1-Tridecene	- -	µg/kg dry wt			NA		
1-Undecanol	- -	µg/kg dry wt			NA		

Station	PAL	Units	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR
Sample Name			SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR
Date Collected			9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003
RISP East (ft)			351481	353121	345490	345490	352567
RISP North (ft)			303930	303354	312537	312537	302605
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	58	NA	29	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt			NA		
2 (3H)-Benzothiazolone	- -	µg/kg dry wt	1,100 NJ		NA		
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt			NA		
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt			NA		
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt			NA		
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt			NA		
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt			NA		
2-Bromo dodecane	- -	µg/kg dry wt			NA		
2-Heptanone, 6-methyl-	- -	µg/kg dry wt			NA		
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt			NA		
2-Nonacosanone	- -	µg/kg dry wt			NA		
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt			NA		
2-Phenylnaphthalene	- -	µg/kg dry wt			NA		
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt			NA		
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt			NA		
2-Propenoic acid, tridecyl	- -	µg/kg dry wt			NA		
2-Tetradecene, (E)-	- -	µg/kg dry wt			NA		
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt			NA		
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt			NA		
3-Bicosene, (E)-	- -	µg/kg dry wt			NA		
3-Dodecene, (z)-	- -	µg/kg dry wt			NA		
3-Eicosene, (E)-	- -	µg/kg dry wt			NA		
3-Hydroxy-2-pentanone	- -	µg/kg dry wt			NA		
3-Oxo-.beta.-ionone	- -	µg/kg dry wt			NA		
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt			NA		
3-Tetradecene, (E)-	- -	µg/kg dry wt			NA		
3-Tetradecyne	- -	µg/kg dry wt			NA		
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt			NA		
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt			NA		
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt			NA		
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt			NA		
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt			NA		
4-Nonylphenol	- -	µg/kg dry wt	160 NJ		NA		
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt			NA		
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt			NA		
5-Eicosene, (E)-	- -	µg/kg dry wt			NA		
5-Tetradecene, (E)-	- -	µg/kg dry wt			NA		
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt			NA		
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt			NA		
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt			NA		
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt			NA		
7-Heptadecene, 17-chloro	- -	µg/kg dry wt		910 NJ	NA		
7-Hexadecene, (Z)-	- -	µg/kg dry wt			NA		
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt			NA		
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt			NA		
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt			NA		
7-Tetradecene	- -	µg/kg dry wt			NA		
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt			NA		
9,10-Anthracenedione	- -	µg/kg dry wt			NA		
9,10-Dimethylanthracene	- -	µg/kg dry wt			NA		
9,12 Octadecadienoic acid	- -	µg/kg dry wt			NA		
9-Anthracenecarbonitrile	- -	µg/kg dry wt			NA		
9-Eicosene, (E)-	- -	µg/kg dry wt			NA		
9-Hexadecenoic acid	- -	µg/kg dry wt		1,100 NJD	NA		570 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt			NA		
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt			NA		

Station	PAL	Units	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR
Sample Name			SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR
Date Collected			9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003
RISP East (ft)			351481	353121	345490	345490	352567
RISP North (ft)			303930	303354	312537	312537	302605
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	58	NA	29	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt			NA		
9-Octadecenamide, (Z)-	- -	µg/kg dry wt			NA		250 NJ
9-Tricosene, (Z)-	- -	µg/kg dry wt			NA		
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt			NA		
Acridine	- -	µg/kg dry wt			NA		
Androst-7-en-3-ol	- -	µg/kg dry wt			NA		
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt			NA		
Anthracene, 1-methyl-	- -	µg/kg dry wt			NA		
Anthracene, 2-methyl-	- -	µg/kg dry wt			NA		
Anthracene, 9-methyl-	- -	µg/kg dry wt			NA		
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt			NA		
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt			NA		
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt			NA		
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt			NA		
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt			NA		
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt			NA		
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt			NA		
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt			NA		
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt			NA		
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt			NA		
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt	240 NJD	350 NJD	NA		
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt	560 NJD	120 NJ	NA		
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt			NA		
Benzeneacetic acid	- -	µg/kg dry wt			NA		
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt			NA		
Benzo(b)fluoranthene	620	µg/kg dry wt			NA		
Benzo(e)pyrene	- -	µg/kg dry wt			NA		
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt			NA		
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt			NA		
Benzo[b]triphenylene	- -	µg/kg dry wt			NA		
Benzo[j]fluoranthene	- -	µg/kg dry wt			NA		
Benzoic acid	- -	µg/kg dry wt		200 NJ	NA		
Benzothiazole	- -	µg/kg dry wt			NA		
beta-Sitosterol	- -	µg/kg dry wt			NA		
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt			NA		
Butanoic acid	- -	µg/kg dry wt			NA		
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt		180 NJ	NA		
Camphene	- -	µg/kg dry wt		180 NJ	NA		
Camphor	- -	µg/kg dry wt			NA		
Chloroacetic acid, dodecyl	- -	µg/kg dry wt			NA		
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt			NA		
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt			NA		
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt			NA		
Cholestan-2-one	- -	µg/kg dry wt			NA		
Cholestan-3.beta.-ol	- -	µg/kg dry wt			NA		
Cholestan-3-ol	- -	µg/kg dry wt			NA		
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt			NA		
Cholestane isomer	- -	µg/kg dry wt			NA		
Cholestanol	- -	µg/kg dry wt			NA		
Cholesterol	- -	µg/kg dry wt			NA		
Chrysene, 1-methyl-	- -	µg/kg dry wt			NA		
Chrysene, 4-methyl-	- -	µg/kg dry wt			NA		
Chrysene, 6-methyl-	- -	µg/kg dry wt			NA		
Chrysin	- -	µg/kg dry wt			NA		
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt			NA		
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt			NA		

Station	PAL	Units	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR
Sample Name			SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR
Date Collected			9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003
RISP East (ft)			351481	353121	345490	345490	352567
RISP North (ft)			303930	303354	312537	312537	302605
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	58	NA	29	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt			NA		
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt			NA		
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt			NA		
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt			NA		
Cyclopropanenononanoic Acid, 2	- -	µg/kg dry wt			NA		
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt			NA		
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt			NA		
Dibenzothiophene	- -	µg/kg dry wt			NA		
Diphenyl ether	- -	µg/kg dry wt			NA		
di-p-Tolyacetylene	- -	µg/kg dry wt			NA		
Docosanoic acid	- -	µg/kg dry wt			NA		
Dodecanoic acid	- -	µg/kg dry wt			NA		
Dodecyl acrylate	- -	µg/kg dry wt			NA		
E-15-Heptadecenal	- -	µg/kg dry wt			NA		
E-7-Octadecene	- -	µg/kg dry wt			NA		
Epicholestanol	- -	µg/kg dry wt			NA		
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt			NA		
Gamma-Sitosterol	- -	µg/kg dry wt			NA		
Heptadecanoic acid	- -	µg/kg dry wt		1,600 NJD	NA		
Hexadecane, 1-chloro-	- -	µg/kg dry wt			NA		
Hexadecane, 1-iodo-	- -	µg/kg dry wt			NA		
Hexadecanoic acid	- -	µg/kg dry wt	940 NJ	1,800 NJ	NA	220 NJ	660 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt			NA		
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt			NA		
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt			NA		
Hexathiepane	- -	µg/kg dry wt			NA		
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt			NA		
hopane isomer	- -	µg/kg dry wt			NA		
Indene	- -	µg/kg dry wt			NA		
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt			NA		
Lanost-8-en-3-one	- -	µg/kg dry wt			NA		
Lup-20-(29)-en-3-one	- -	µg/kg dry wt			NA		
Lupeol	- -	µg/kg dry wt			NA		
Methyldibenzothiophene	- -	µg/kg dry wt			NA		
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt			NA		
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt			NA		
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 1-methyl-	- -	µg/kg dry wt			NA		
Naphthalene, 1-phenyl-	- -	µg/kg dry wt			NA		
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt			NA		
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt			NA		
Naphthalene, 2-phenyl-	- -	µg/kg dry wt			NA		
Nonadecene, 1-chloro-	- -	µg/kg dry wt			NA		
Nonanal	- -	µg/kg dry wt			NA		
Octadecanal	- -	µg/kg dry wt			NA		
Octadecanoic acid	- -	µg/kg dry wt			NA		92 NJ
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt			NA		
Octadecanoic acid, butyl ester	- -	µg/kg dry wt			NA	300 NJB	480 NJB

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR
Sample Name			SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR
Date Collected			9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003
RISP East (ft)			351481	353121	345490	345490	352567
RISP North (ft)			303930	303354	312537	312537	302605
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			53	58	NA	29	19
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt			NA		
Oleic Acid	- -	µg/kg dry wt			NA		
o-Terphenyl	- -	µg/kg dry wt			NA		
Oxacycloheptadecan-2-one	- -	µg/kg dry wt			NA		570 NJ
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt			NA		
Oxacyclohexadecan-2-one	- -	µg/kg dry wt			NA		
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt			NA		
Oxacyclotridecan-2-one	- -	µg/kg dry wt			NA		
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt			NA		
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt			NA		
Oxirane, heptadecyl-	- -	µg/kg dry wt			NA		
Oxirane, hexadecyl-	- -	µg/kg dry wt			NA		
Oxirane, tridecyl-	- -	µg/kg dry wt			NA		
p-Dicyclohexylbenzene	- -	µg/kg dry wt			NA		
Pentadecanoic acid	- -	µg/kg dry wt		380 NJ	NA		
Perylene	- -	µg/kg dry wt			NA		
Phenanthrene, 1-methyl-	- -	µg/kg dry wt			NA		
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt			NA		
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt			NA		
Phenanthrene, 2-methyl-	- -	µg/kg dry wt			NA		
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt			NA		
Phenanthrene, 3-methyl-	- -	µg/kg dry wt			NA		
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt			NA		
Phenanthrene, 4-methyl-	- -	µg/kg dry wt			NA		
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt			NA		
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt			NA		90 NJ
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt	260 NJ		NA		
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt			NA		
Phenol, Nonyl-	- -	µg/kg dry wt			NA		
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt			NA		
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt			NA		
Phthalic anhydride	- -	µg/kg dry wt			NA		
Phytol	- -	µg/kg dry wt			NA		
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt			NA		
Pyrene, 1-methyl-	- -	µg/kg dry wt			NA		
Pyrene, 2-methyl-	- -	µg/kg dry wt			NA		
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt			NA		
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt			NA		
Stigmast-4-en-3-one	- -	µg/kg dry wt			NA		
Stigmastanol	- -	µg/kg dry wt			NA		
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt			NA		
Sulfur hexamer	- -	µg/kg dry wt			NA		
Tetracosanoic acid	- -	µg/kg dry wt			NA		
Tetradecanal	- -	µg/kg dry wt			NA		
Tetradecanoic acid	- -	µg/kg dry wt		560 NJ	NA		130 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt			NA		
Tridecanoic acid	- -	µg/kg dry wt			NA		
Triphenylene	- -	µg/kg dry wt			NA		
Triphenylene, 2-methyl-	- -	µg/kg dry wt			NA		
triterpane isomer	- -	µg/kg dry wt			NA		
Undecanoic Acid	- -	µg/kg dry wt			NA		
Urs-12-ene	- -	µg/kg dry wt			NA		
Vanillin	- -	µg/kg dry wt			NA		
Vitamin E	- -	µg/kg dry wt			NA		
Z-7-Hexadecenoic acid	- -	µg/kg dry wt			NA		
Z-7-Pentadecenol	- -	µg/kg dry wt			NA		
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	24	34	NA	8	19

Station	PAL	Units	SE-024-BR	SE-025-BR	SE-026-BR	SE-026-BR	SE-026-BR
Sample Name			SE-024-BR	SE-025-BR	SE-026-BR	SE-042-BR	SE-FD-02
Date Collected			9/6/2003	9/6/2003	9/8/2003	8/31/2004	9/8/2003
RISP East (ft)			352135	351456	352690	352690	352690
RISP North (ft)			302922	303575	302735	302735	302735
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			33	13	19	16	14
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1''-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt				81 UJ	
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt		220 NJ			110 NJ
11H-Benzo[b]fluorene	- -	µg/kg dry wt		420 NJD	110 NJ		
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt	580 NJ	560 NJ			
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt		220 NJ			
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					430 NJ

Station	PAL	Units	SE-024-BR	SE-025-BR	SE-026-BR	SE-026-BR	SE-026-BR
Sample Name			SE-024-BR	SE-025-BR	SE-026-BR	SE-042-BR	SE-FD-02
Date Collected			9/6/2003	9/6/2003	9/8/2003	8/31/2004	9/8/2003
RISP East (ft)			352135	351456	352690	352690	352690
RISP North (ft)			302922	303575	302735	302735	302735
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			33	13	19	16	14
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt		350 NJD			
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt	420 NJ				
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt	190 NJ				
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt		370 NJD			
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt		76 NJ			
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt		150 NJ			
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-024-BR	SE-025-BR	SE-026-BR	SE-026-BR	SE-026-BR
Sample Name			SE-024-BR	SE-025-BR	SE-026-BR	SE-042-BR	SE-FD-02
Date Collected			9/6/2003	9/6/2003	9/8/2003	8/31/2004	9/8/2003
RISP East (ft)			352135	351456	352690	352690	352690
RISP North (ft)			302922	303575	302735	302735	302735
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			33	13	19	16	14
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt		220 NJ			
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt		120 NJ			
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt		730 NJ			
Anthracene, 9-methyl-	- -	µg/kg dry wt		630 NJD			
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt		1,800 NJ	320 NJ		
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt		420 NJD			
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

Station	PAL	Units	SE-024-BR	SE-025-BR	SE-026-BR	SE-026-BR	SE-026-BR
Sample Name			SE-024-BR	SE-025-BR	SE-026-BR	SE-042-BR	SE-FD-02
Date Collected			9/6/2003	9/6/2003	9/8/2003	8/31/2004	9/8/2003
RISP East (ft)			352135	351456	352690	352690	352690
RISP North (ft)			302922	303575	302735	302735	302735
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			33	13	19	16	14
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt				180 UJ	
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt			370 NJ		
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt		270 NJ			
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt					
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	460 NJ		330 NJ	130 NJ	260 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt				140 NJ	
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt			1,000 NJ	90 NJ	
Octadecanoic acid, butyl ester	- -	µg/kg dry wt	720 NJB	1,300 NJD		100 NJ	210 NJB

Station	PAL	Units	SE-024-BR	SE-025-BR	SE-026-BR	SE-026-BR	SE-026-BR
Sample Name			SE-024-BR	SE-025-BR	SE-026-BR	SE-042-BR	SE-FD-02
Date Collected			9/6/2003	9/6/2003	9/8/2003	8/31/2004	9/8/2003
RISP East (ft)			352135	351456	352690	352690	352690
RISP North (ft)			302922	303575	302735	302735	302735
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			33	13	19	16	14
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt		2,300 NJ			
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt		300 NJ			
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt		430 NJD			
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt		120 NJ			
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt			110 NJ		
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt		710 NJD			
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt				640 UJ	
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt		910 NJ			
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	27	15	18	3	10

Station	PAL	Units	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR
Sample Name			SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR
Date Collected			9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352779	352320	351551	351551	350958
RISP North (ft)			303669	303984	303889	303889	304015
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			38	12	16	8	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1''-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt			20,000 NJD	200,000 NJ	260,000 NJ
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt	670 NJD				
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt	910 NJ	770 NJ	1,100 NJD	890 NJD	
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					960 NJD
1-Undecanol	- -	µg/kg dry wt					

Station	PAL	Units	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR
Sample Name			SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR
Date Collected			9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352779	352320	351551	351551	350958
RISP North (ft)			303669	303984	303889	303889	304015
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			38	12	16	8	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt	560 NJ				
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt	1,800 NJD				
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt	520 NJ				
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt	170 NJ				

Station	PAL	Units	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR
Sample Name			SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR
Date Collected			9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352779	352320	351551	351551	350958
RISP North (ft)			303669	303984	303889	303889	304015
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			38	12	16	8	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt	360 NJ				
Anthracene, 2-methyl-	- -	µg/kg dry wt	850 NJ				320 NJ
Anthracene, 9-methyl-	- -	µg/kg dry wt	540 NJD				
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt				520 NJD	
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR
Sample Name			SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR
Date Collected			9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352779	352320	351551	351551	350958
RISP North (ft)			303669	303984	303889	303889	304015
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			38	12	16	8	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt			460 NJ		1,500 NJ
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					270 NJ
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt					
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt					
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt	150 NJ				
Naphthalene, 1-phenyl-	- -	µg/kg dry wt	250 NJ				
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt	190 NJB	450 NJB			

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR
Sample Name			SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR
Date Collected			9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352779	352320	351551	351551	350958
RISP North (ft)			303669	303984	303889	303889	304015
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			38	12	16	8	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt	650 NJD				
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt	730 NJ				
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt		1,100 NJ			
Pyrene, 1-methyl-	- -	µg/kg dry wt					100 NJ
Pyrene, 2-methyl-	- -	µg/kg dry wt	630 NJD				
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	22	2	38	52	28

Station	PAL	Units	SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Sample Name			SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Date Collected			9/9/2003	9/10/2003	9/10/2003	9/10/2003	8/30/2004
RISP East (ft)			350323	349117	347976	347020	351597
RISP North (ft)			304420	305833	306035	307232	303879
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	16	23	19	15
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt	4,900 NJ				
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt	400 NJD				
11H-Benzo[b]fluorene	- -	µg/kg dry wt	250 NJD	210 NJD		140 NJ	
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt	1,000 NJD		790 NJ		
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt	92 NJ				
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt	200 NJD				
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt	440 NJD				
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Sample Name			SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Date Collected			9/9/2003	9/10/2003	9/10/2003	9/10/2003	8/30/2004
RISP East (ft)			350323	349117	347976	347020	351597
RISP North (ft)			304420	305833	306035	307232	303879
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	16	23	19	15
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt	430 NJ	110 NJ			90 NJ
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					520 NJ
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt	610 NJD				270 NJ
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt	85 NJ	120 NJ			
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt	350 NJD			130 NJ	
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Sample Name			SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Date Collected			9/9/2003	9/10/2003	9/10/2003	9/10/2003	8/30/2004
RISP East (ft)			350323	349117	347976	347020	351597
RISP North (ft)			304420	305833	306035	307232	303879
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	16	23	19	15
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt			290 NJ		
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt	380 NJD				200 NJ
Anthracene, 2-methyl-	- -	µg/kg dry wt	510 NJ				
Anthracene, 9-methyl-	- -	µg/kg dry wt	480 NJD			300 NJ	
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt		700 NJD			190 NJ
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt		210 NJD			
Benzo[b]triphenylene	- -	µg/kg dry wt	260 NJ				
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt	200 NJD				
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

Station	PAL	Units	SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Sample Name			SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Date Collected			9/9/2003	9/10/2003	9/10/2003	9/10/2003	8/30/2004
RISP East (ft)			350323	349117	347976	347020	351597
RISP North (ft)			304420	305833	306035	307232	303879
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	16	23	19	15
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					98 NJ
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					100 NJ
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt					
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt			180 NJ		
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt	87 NJ				
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt	92 NJ				
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Sample Name			SE-031-BR	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR
Date Collected			9/9/2003	9/10/2003	9/10/2003	9/10/2003	8/30/2004
RISP East (ft)			350323	349117	347976	347020	351597
RISP North (ft)			304420	305833	306035	307232	303879
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	16	23	19	15
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt	380 NJ				
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt	120 NJ				
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					170 NJ
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt	370 NJD				
Phenanthrene, 3-methyl-	- -	µg/kg dry wt		85 NJ			
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt	300 NJD	180 NJ			
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt	210 NJD	98 NJ			
Pyrene, 2-methyl-	- -	µg/kg dry wt	220 NJD				
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt	150 NJ				
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	11	6	3	6	3

Station	PAL	Units	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			350184	347061	346903	352890	352890
RISP North (ft)			304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1''-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt					
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt	350 NJ		450 NJ		
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			350184	347061	346903	352890	352890
RISP North (ft)			304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt			790 NJ		
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt			140 NJ		
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt			91 NJ		
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

Station	PAL	Units	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			350184	347061	346903	352890	352890
RISP North (ft)			304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt		110 NJ			
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt			120 NJ		
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt	100 NJ	130 NJ	330 NJ		
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

Station	PAL	Units	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			350184	347061	346903	352890	352890
RISP North (ft)			304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					210 UJ
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt		120 NJ		99 NJ	
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt					
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	360 NJ	160 NJ	160 NJ		94 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					120 NJ
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					83 NJ

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			350184	347061	346903	352890	352890
RISP North (ft)			304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt		270 NJ			
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt	96 NJ				
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	8	2	5	1	4

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116
RISP North (ft)			304243	305540	310413	312315	305924
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt		130 NJ			
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt		510 NJ			
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt	560 NJ				
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt	160 NJ				
11H-Benzo[b]fluorene	- -	µg/kg dry wt	160 NJ				
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt				140 NJ	
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt			390 NJ		
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt	550 NJ				
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116
RISP North (ft)			304243	305540	310413	312315	305924
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt	970 NJ	86 UJ			
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt	3,100 NJ				
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt	310 NJ				
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt	1,000 NJ				
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt	330 NJ				
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116
RISP North (ft)			304243	305540	310413	312315	305924
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt	260 NJ				
Anthracene, 1-methyl-	- -	µg/kg dry wt	640 NJ				
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					240 NJ
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt	1,200 NJ			140 NJ	
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt	520 NJ				
Cholestan-3.beta.-ol	- -	µg/kg dry wt	550 NJ				
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt	700 NJ				
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt	160 NJ				

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116
RISP North (ft)			304243	305540	310413	312315	305924
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt		200 UJ			
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					120 NJ
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt	330 NJ				
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt			110 NJ	110 NJ	
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt	11,000 NJ				
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	820 NJ				
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt		200 NJ			
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					8,200 NJ
Lanost-8-en-3-one	- -	µg/kg dry wt				1,600 NJ	
Lup-20-(29)-en-3-one	- -	µg/kg dry wt	4,600 NJ				
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt		81 NJ			
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt		130 NJ			

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116
RISP North (ft)			304243	305540	310413	312315	305924
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0
SVOC TICS							
Octasulfur	- -	µg/kg dry wt				93 NJ	
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt		390 NJ			
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt	710 NJ				
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt		230 NJ			
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt	1,100 NJ				
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	8	14	2	6	28

Station	PAL	Units	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Sample Name			SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Date Collected			9/1/2004	8/31/2004	9/1/2004	8/31/2004	9/2/2004
RISP East (ft)			349324	352957	345628	349320	352084
RISP North (ft)			306113	304470	312400	306016	304607
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			11	31	26	40	54
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	9
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1''-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt				120 UJ	
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt		410 NJ			
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt		190 NJ			
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt		120 NJ			
13-Docosenamide, (Z)-	- -	µg/kg dry wt			120 NJ		
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					250 NJ
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt		480 NJ			430 NJ
1-Docosene	- -	µg/kg dry wt				180 NJ	
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					110 NJ
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt			580 NJ		
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

Station	PAL	Units	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Sample Name			SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Date Collected			9/1/2004	8/31/2004	9/1/2004	8/31/2004	9/2/2004
RISP East (ft)			349324	352957	345628	349320	352084
RISP North (ft)			306113	304470	312400	306016	304607
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			11	31	26	40	54
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	9
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt	110 UJ		120 UJ	150 UJ	
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt				190 NJ	
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					86 NJ
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt		490 NJ			
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt		250 NJ			
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt		850 NJ			
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					220 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

Station	PAL	Units	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Sample Name			SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Date Collected			9/1/2004	8/31/2004	9/1/2004	8/31/2004	9/2/2004
RISP East (ft)			349324	352957	345628	349320	352084
RISP North (ft)			306113	304470	312400	306016	304607
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			11	31	26	40	54
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	9
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt		190 NJ			
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt		120 NJ			
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt		5,700			
Benzo(e)pyrene	- -	µg/kg dry wt		3,500 NJ			
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt		150 NJ			
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					160 NJ
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

Station	PAL	Units	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Sample Name			SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Date Collected			9/1/2004	8/31/2004	9/1/2004	8/31/2004	9/2/2004
RISP East (ft)			349324	352957	345628	349320	352084
RISP North (ft)			306113	304470	312400	306016	304607
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			11	31	26	40	54
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	9
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt	200 UJ		220 UJ	330 UJ	
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt		270 NJ			
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					180 NJ
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt		2,100 NJ		1,400 NJ	
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt		950 NJ	270 NJ	400 NJ	460 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt	190 NJ		720 NJ	170 NJ	
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					110 NJ
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt			400 NJ		
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt				150 NJ	86 NJ
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt	130 NJ		310 NJ		

Station	PAL	Units	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Sample Name			SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT	SE-057-WT
Date Collected			9/1/2004	8/31/2004	9/1/2004	8/31/2004	9/2/2004
RISP East (ft)			349324	352957	345628	349320	352084
RISP North (ft)			306113	304470	312400	306016	304607
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			11	31	26	40	54
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	9
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					280 NJ
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					1,500 NJ
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt					130 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	4	13	5	4	9

Station	PAL	Units	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Sample Name			SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Date Collected			9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004
RISP East (ft)			352774	351440	351895	352372	351508
RISP North (ft)			304071	305562	304852	304608	305289
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			21	38	64	35	59
Percent Moisture, Freeze Dried (%)			NA	NA	0	NA	0
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt		300 NJ			
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt	200 NJ				
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt					
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt	670 NJ	650 NJ			420 NJ
1-Docosene	- -	µg/kg dry wt			830 NJ	560 NJ	820 NJ
1-Dodecanol	- -	µg/kg dry wt				590 NJ	
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt			250 NJ		
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt			210 NJ		
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Sample Name			SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Date Collected			9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004
RISP East (ft)			352774	351440	351895	352372	351508
RISP North (ft)			304071	305562	304852	304608	305289
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			21	38	64	35	59
Percent Moisture, Freeze Dried (%)			NA	NA	0	NA	0
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt				130 UJ	
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt			820 NJ		
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt				110 NJ	250 NJ
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt		630 NJ			
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olic	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt			120 NJ		210 NJ
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					170 NJ
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt			130 NJ		
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt			230 NJ		
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					300 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Sample Name			SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Date Collected			9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004
RISP East (ft)			352774	351440	351895	352372	351508
RISP North (ft)			304071	305562	304852	304608	305289
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			21	38	64	35	59
Percent Moisture, Freeze Dried (%)			NA	NA	0	NA	0
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt		2,200 NJ			
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt		890 NJ	320 NJ	470 NJ	880 NJ
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					3,300 J
Benzo(e)pyrene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt			210 NJ		240 NJ
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					440 NJ
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Sample Name			SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Date Collected			9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004
RISP East (ft)			352774	351440	351895	352372	351508
RISP North (ft)			304071	305562	304852	304608	305289
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			21	38	64	35	59
Percent Moisture, Freeze Dried (%)			NA	NA	0	NA	0
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt		360 UJ		270 UJ	
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt		4,000 NJ			
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt			180 NJ		150 NJ
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt				290 NJ	
E-7-Octadecene	- -	µg/kg dry wt					1,300 NJ
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt				1,600 NJ	
Heptadecanoic acid	- -	µg/kg dry wt			120 NJ		
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	210 NJ	670 NJ	1,100 NJ	640 NJ	1,100 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt	350 NJ	270 NJ		220 NJ	
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt			470 NJ	390 NJ	
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt		1,100 NJ			
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt		3,200 NJ			
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					100 NJ
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt			220 NJ	130 NJ	320 NJ
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt	170 NJ	420 NJ		160 NJ	

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Sample Name			SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT
Date Collected			9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004
RISP East (ft)			352774	351440	351895	352372	351508
RISP North (ft)			304071	305562	304852	304608	305289
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			21	38	64	35	59
Percent Moisture, Freeze Dried (%)			NA	NA	0	NA	0
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt		280 NJ	720 NJ	180 NJ	490 NJ
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt		400 NJ			
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt		930 NJ			
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt			270 NJ	140 NJ	320 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt				200 NJ	
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt	290 NJ				
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	2	14	11	10	13

Station	PAL	Units	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Sample Name			SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/3/2004	9/3/2004
RISP East (ft)			350942	351791	352478	352272	352007
RISP North (ft)			305250	303170	302602	302718	302937
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			50	18	55	46	19
Percent Moisture, Freeze Dried (%)			0	NA	0	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt		700 NJ			
1,1':2',1''-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt	110 NJ				
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt	110 NJ				
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt				160 NJ	
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt					1,200 NJ
1-Docosene	- -	µg/kg dry wt			210 NJ		
1-Dodecanol	- -	µg/kg dry wt		450 NJ			
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt	730 NJ				
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					110 NJ
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

Station	PAL	Units	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Sample Name			SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/3/2004	9/3/2004
RISP East (ft)			350942	351791	352478	352272	352007
RISP North (ft)			305250	303170	302602	302718	302937
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			50	18	55	46	19
Percent Moisture, Freeze Dried (%)			0	NA	0	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt				560 NJ	
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt				250 NJ	
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt	140 NJ				
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt			340 NJ		96 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

Station	PAL	Units	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Sample Name			SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/3/2004	9/3/2004
RISP East (ft)			350942	351791	352478	352272	352007
RISP North (ft)			305250	303170	302602	302718	302937
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			50	18	55	46	19
Percent Moisture, Freeze Dried (%)			0	NA	0	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					260 NJ
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt			340 NJ		
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt				450 NJ	
Benzo(e)pyrene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

Station	PAL	Units	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Sample Name			SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/3/2004	9/3/2004
RISP East (ft)			350942	351791	352478	352272	352007
RISP North (ft)			305250	303170	302602	302718	302937
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			50	18	55	46	19
Percent Moisture, Freeze Dried (%)			0	NA	0	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt			210 NJ		
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt	1,900 NJ		1,900 NJ	4,300 NJ	
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt				370 NJ	
Hexadecanoic acid	- -	µg/kg dry wt	260 NJEB	250 NJ	560 NJ	620 NJ	120 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					270 NJ
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt		6,700 NJ	1,700 NJ		
Lanost-8-en-3-one	- -	µg/kg dry wt		3,100 NJ			
Lup-20-(29)-en-3-one	- -	µg/kg dry wt				13,000 NJ	
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt				250 NJ	
Octadecanoic acid	- -	µg/kg dry wt			69 NJ		
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					120 NJ

Station	PAL	Units	SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Sample Name			SE-063-WT	SE-064-BR	SE-065-BR	SE-066-BR	SE-067-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/3/2004	9/3/2004
RISP East (ft)			350942	351791	352478	352272	352007
RISP North (ft)			305250	303170	302602	302718	302937
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			50	18	55	46	19
Percent Moisture, Freeze Dried (%)			0	NA	0	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt			150 NJ		
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt	94 NJ				
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt			110 NJ		
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt			840 NJ		
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt			94 NJ		
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt			120 NJ	160 NJ	
Tridecane, 1-iodo-	- -	µg/kg dry wt				780 NJ	
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt			90 NJ		
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	11	14	15	16	4

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR
Sample Name			SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004
RISP East (ft)			351730	353122	353122	350926	351567
RISP North (ft)			303184	303341	303341	304138	303403
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			28	63	67	32	22
Percent Moisture, Freeze Dried (%)			NA	8	0	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					110 NJ
11H-Benzo[a]fluorene	- -	µg/kg dry wt	96 NJ				140 NJ
11H-Benzo[b]fluorene	- -	µg/kg dry wt	110 NJ				160 NJ
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					620 NJ
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt					
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt			910 NJ		
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt	640 NJ		370 NJ		

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR
Sample Name			SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004
RISP East (ft)			351730	353122	353122	350926	351567
RISP North (ft)			303184	303341	303341	304138	303403
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			28	63	67	32	22
Percent Moisture, Freeze Dried (%)			NA	8	0	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt	1,000 NJ				
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olic	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt	220 NJ			240 NJ	550 NJ
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					200 NJ
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					220 NJ
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt		19,000 NJ			
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt				180 NJ	430 NJ
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					120 NJ
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

Station	PAL	Units	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR
Sample Name			SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004
RISP East (ft)			351730	353122	353122	350926	351567
RISP North (ft)			303184	303341	303341	304138	303403
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			28	63	67	32	22
Percent Moisture, Freeze Dried (%)			NA	8	0	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt		240 NJ	270 NJ		
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt				170 NJ	
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt		270 NJ			
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt			260 NJ		
Benzeneacetic acid	- -	µg/kg dry wt			360 NJ		
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt				1,400 NJ	370 NJ
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					98 NJ
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR
Sample Name			SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004
RISP East (ft)			351730	353122	353122	350926	351567
RISP North (ft)			303184	303341	303341	304138	303403
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			28	63	67	32	22
Percent Moisture, Freeze Dried (%)			NA	8	0	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt			170 NJ		
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					270 NJ
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt		320 NJ	290 NJ		
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt		370 NJ			
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					140 NJ
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt	340 NJ				
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt					880 NJ
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	570 NJEB	3,200 NJ		380 NJ	1,900 NJEB
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					2,600 NJ
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt		250 NJ			
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt			170 NJ		
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt		240 NJ			
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt					100 NJEB
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

Station	PAL	Units	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR
Sample Name			SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR
Date Collected			9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004
RISP East (ft)			351730	353122	353122	350926	351567
RISP North (ft)			303184	303341	303341	304138	303403
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			28	63	67	32	22
Percent Moisture, Freeze Dried (%)			NA	8	0	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt	350 NJ				
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt				140 NJ	
Perylene	- -	µg/kg dry wt	1,900 NJ				
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt				230 NJ	
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt	440 NJ				
Stigmastanol	- -	µg/kg dry wt	810 NJ				
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt	5,000 NJ				
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt	110 NJ				270 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt			180 NJ		
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	13	21	21	3	8

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Sample Name			SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Date Collected			9/6/2004	9/3/2004	9/3/2004	9/3/2004	9/3/2004
RISP East (ft)			351393	350848	351471	352417	352313
RISP North (ft)			303624	304184	303952	303137	303353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			13	42	45	38	64
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	8
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt		170 NJ	560 NJ	220 NJ	
13-Docosenamide, (Z)-	- -	µg/kg dry wt	88 NJ				
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt	650 NJ				
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Sample Name			SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Date Collected			9/6/2004	9/3/2004	9/3/2004	9/3/2004	9/3/2004
RISP East (ft)			351393	350848	351471	352417	352313
RISP North (ft)			303624	304184	303952	303137	303353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			13	42	45	38	64
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	8
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt		270 NJ			
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt				250 NJ	
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt				590 NJ	
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt			920 NJ		
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt		460 NJ	600 NJ	300 NJ	310 NJ
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt				360 NJ	490 NJ
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt		340 NJ			
9,10-Dimethylanthracene	- -	µg/kg dry wt				180 NJ	
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt				180 NJ	
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Sample Name			SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Date Collected			9/6/2004	9/3/2004	9/3/2004	9/3/2004	9/3/2004
RISP East (ft)			351393	350848	351471	352417	352313
RISP North (ft)			303624	304184	303952	303137	303353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			13	42	45	38	64
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	8
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					230 NJ
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt			9,900 NJ		
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt			220 NJ		
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt		160 NJ			
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					280 NJ
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt		1,700 NJ	4,400 NJ		
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt		250 NJ			210 NJ
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

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PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
Sample Name			SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
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Percent Moisture (%)			13	42	45	38	64
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	8
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt			240 NJ		
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt		300 NJ			
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt		2,100 NJ			
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	280 NJEB	1,500 NJ	1,800 NJ	650 NJ	1,200 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt	95 NJ				
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt				5,100 NJ	
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt				110 NJ	
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt			190 NJ		
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

Station	PAL	Units	SE-072-BR	SE-073-LF	SE-074-LF	SE-075-UI	SE-076-UI
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Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	8
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt			300 NJ		
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					110 NJ
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt			2,900 NJ		
Pentadecanoic acid	- -	µg/kg dry wt		260 NJ		150 NJ	
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt	670 NJ				
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt			3,400 NJ		
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt					180 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt				240 NJ	
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt	360 NJ				
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	1	16	17	16	22

Station	PAL	Units	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI
Sample Name			SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI
Date Collected			9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351696	352438	352447	352447	351994
RISP North (ft)			303493	303325	303531	303531	303594
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	64	81	82	74
Percent Moisture, Freeze Dried (%)			NA	9	0	0	8
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					330 NJ
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt					
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt				190 NJ	
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt		700 NJ			
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt					
1-Docosene	- -	µg/kg dry wt		290 NJ			
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt			140 NJ		
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					760 NJ
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt	620 NJ				1,000 NJ

Station	PAL	Units	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI
Sample Name			SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI
Date Collected			9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351696	352438	352447	352447	351994
RISP North (ft)			303493	303325	303531	303531	303594
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	64	81	82	74
Percent Moisture, Freeze Dried (%)			NA	9	0	0	8
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt	530 NJ				
2 (3H)-Benzothiazolone	- -	µg/kg dry wt		810 NJ			
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt	400 NJ				
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt			140 NJ	330 NJ	
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					1,200 NJ
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt		300 NJ			540 NJ
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt				350 NJ	
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt		250 NJ			
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt		130 NJ			
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt			20,000 NJ		4,800 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

Station	PAL	Units	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI
Sample Name			SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI
Date Collected			9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351696	352438	352447	352447	351994
RISP North (ft)			303493	303325	303531	303531	303594
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	64	81	82	74
Percent Moisture, Freeze Dried (%)			NA	9	0	0	8
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt				850 NJ	
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt		260 NJ			
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt				140 NJ	
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt			160 NJ		
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					660 NJ
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt		2,700			
Benzo(e)pyrene	- -	µg/kg dry wt	170 NJ	360 NJ			
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt		250 NJ			
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt			310 NJ		
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt	240 NJ				
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					1,800 NJ
Cholesterol	- -	µg/kg dry wt	210 NJ				
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

Station	PAL	Units	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI
Sample Name			SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI
Date Collected			9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351696	352438	352447	352447	351994
RISP North (ft)			303493	303325	303531	303531	303594
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	64	81	82	74
Percent Moisture, Freeze Dried (%)			NA	9	0	0	8
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt				170 NJ	
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt			1,300 NJ	550 NJ	1,400 NJ
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt	6,200 NJ	2,300 NJ			
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	1,000 NJEB	1,400 NJEB		430 NJEB	2,700 NJEB
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt			230 NJ		
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt		800 NJ			
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt				770 NJ	
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt				230 NJ	
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					360 NJ
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt		140 NJ			
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt	210 NJ				
Nonanal	- -	µg/kg dry wt			150 NJ		
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt	190 NJEB				720 NJEB
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI
Sample Name			SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI
Date Collected			9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351696	352438	352447	352447	351994
RISP North (ft)			303493	303325	303531	303531	303594
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			17	64	81	82	74
Percent Moisture, Freeze Dried (%)			NA	9	0	0	8
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt		130 NJ			890 NJ
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt	110 NJ				
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt			2,300 NJ		740 NJ
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt				650 NJ	
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt	270 NJ				
Tetradecanoic acid	- -	µg/kg dry wt	280 NJ	300 NJ	1,700 NJ	180 NJ	750 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt	160 NJ				
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	16	13	20	17	13

Station	PAL	Units	SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Sample Name			SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Date Collected			9/7/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004
RISP East (ft)			352703	352820	352717	352049	352447
RISP North (ft)			302372	302413	302444	303465	303427
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			71	25	36	21	21
Percent Moisture, Freeze Dried (%)			33	NA	NA	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt		2,700 NJ			
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1''-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt		150 NJ		110 NJ	
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt	1,000 NJ				
1-Docosene	- -	µg/kg dry wt			460 NJ		
1-Dodecanol	- -	µg/kg dry wt					700 NJ
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt					
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt		840 NJ			
1-Pentadecene	- -	µg/kg dry wt	260 NJ				
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt	910 NJ				
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt		660 NJ			

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Sample Name			SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Date Collected			9/7/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004
RISP East (ft)			352703	352820	352717	352049	352447
RISP North (ft)			302372	302413	302444	303465	303427
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			71	25	36	21	21
Percent Moisture, Freeze Dried (%)			33	NA	NA	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					2,300 NJ
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt		730 NJ			
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt					
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olic	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt			550 NJ	220 NJ	
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt				150 NJ	
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					91 NJ
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt		150 NJ			
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt	460 NJ				
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt				91 NJ	
9,10-Dimethylanthracene	- -	µg/kg dry wt			420 NJ		
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					500 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Sample Name			SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Date Collected			9/7/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004
RISP East (ft)			352703	352820	352717	352049	352447
RISP North (ft)			302372	302413	302444	303465	303427
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			71	25	36	21	21
Percent Moisture, Freeze Dried (%)			33	NA	NA	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt			530 NJ		
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt		100 NJ			
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt	1,100 NJ				
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					1,200 J
Benzo(e)pyrene	- -	µg/kg dry wt	440 NJ	850 NJ		480 NJ	
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					620 NJ
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					230 NJ
Cholestan-3-ol	- -	µg/kg dry wt			990 NJ	210 NJ	450 NJ
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt	1,100 NJ	580 NJ			
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Sample Name			SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Date Collected			9/7/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004
RISP East (ft)			352703	352820	352717	352049	352447
RISP North (ft)			302372	302413	302444	303465	303427
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			71	25	36	21	21
Percent Moisture, Freeze Dried (%)			33	NA	NA	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt	540 NJ				
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt	340 NJ				
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt	1,800 NJ	11,000 NJ	9,300 NJ	3,300 NJ	
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt		790 NJEB	1,900 NJEB	320 NJEB	980 NJEB
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt		550 NJ	1,300 NJ		4,400 NJ
Lanost-8-en-3-one	- -	µg/kg dry wt			1,500 NJ		
Lup-20-(29)-en-3-one	- -	µg/kg dry wt				480 NJ	
Lupeol	- -	µg/kg dry wt		2,600 NJ			
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt		170 NJ			
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt	410 NJEB				180 NJEB
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

Station	PAL	Units	SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Sample Name			SE-081-BR	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI
Date Collected			9/7/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004
RISP East (ft)			352703	352820	352717	352049	352447
RISP North (ft)			302372	302413	302444	303465	303427
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1
Percent Moisture (%)			71	25	36	21	21
Percent Moisture, Freeze Dried (%)			33	NA	NA	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt		210 NJ			
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt	680 NJ				
Perylene	- -	µg/kg dry wt				240 NJ	
Phenanthrene, 1-methyl-	- -	µg/kg dry wt				250 NJ	
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt			350 NJ		
Phytol	- -	µg/kg dry wt		190 NJ			
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt				93 NJ	
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt		1,500 NJ	2,100 NJ	500 NJ	
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt	800 NJ		340 NJ		330 NJ
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt		420 NJ			
Z-7-Pentadecenol	- -	µg/kg dry wt	4,700 NJ				
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	13	12	18	15	18

Station	PAL	Units	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Date Collected			9/7/2004	9/7/2004	6/23/2005	6/23/2005	6/23/2005
RISP East (ft)			352149	352478	346599	346885	344937
RISP North (ft)			303734	303603	310832	309261	313353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	0.5	0.5	0.5
Percent Moisture (%)			12	56	31.4	25.1	76.5
Percent Moisture, Freeze Dried (%)			NA	8	NA	NA	27.1
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt		540 NJ			
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt		150 NJ		670 NJ	
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt			2,100 NJ		
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt					
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt				280 NJ	
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt			2,300 J		
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

Station	PAL	Units	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Date Collected			9/7/2004	9/7/2004	6/23/2005	6/23/2005	6/23/2005
RISP East (ft)			352149	352478	346599	346885	344937
RISP North (ft)			303734	303603	310832	309261	313353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	0.5	0.5	0.5
Percent Moisture (%)			12	56	31.4	25.1	76.5
Percent Moisture, Freeze Dried (%)			NA	8	NA	NA	27.1
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt			860 NJ		
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt			33,000 NJ		
2-Phenylnaphthalene	- -	µg/kg dry wt		340 NJ			
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt		290 NJ			
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					5,300 NJ
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt		900 NJ			
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt			1,000 NJ		
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

Station	PAL	Units	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Date Collected			9/7/2004	9/7/2004	6/23/2005	6/23/2005	6/23/2005
RISP East (ft)			352149	352478	346599	346885	344937
RISP North (ft)			303734	303603	310832	309261	313353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	0.5	0.5	0.5
Percent Moisture (%)			12	56	31.4	25.1	76.5
Percent Moisture, Freeze Dried (%)			NA	8	NA	NA	27.1
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt				220 NJ	
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt			890 NJ	320 NJ	
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt				270 NJ	
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt			2,300 NJ	370 NJ	
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt		980 NJ			
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt		290 NJ	1,600 NJ	910 NJ	
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt		380 NJ			
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt			2,500 NJ		
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Date Collected			9/7/2004	9/7/2004	6/23/2005	6/23/2005	6/23/2005
RISP East (ft)			352149	352478	346599	346885	344937
RISP North (ft)			303734	303603	310832	309261	313353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	0.5	0.5	0.5
Percent Moisture (%)			12	56	31.4	25.1	76.5
Percent Moisture, Freeze Dried (%)			NA	8	NA	NA	27.1
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt				630 NJ	
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt		300 NJ	1,400 NJ		
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt		1,700 NJEB			
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt	200 NJ				
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt		400 NJ			
Lanost-8-en-3-one	- -	µg/kg dry wt		290 NJ			
Lup-20-(29)-en-3-one	- -	µg/kg dry wt		530 NJ			
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt	110 NJ				

Station	PAL	Units	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Date Collected			9/7/2004	9/7/2004	6/23/2005	6/23/2005	6/23/2005
RISP East (ft)			352149	352478	346599	346885	344937
RISP North (ft)			303734	303603	310832	309261	313353
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			1	1	0.5	0.5	0.5
Percent Moisture (%)			12	56	31.4	25.1	76.5
Percent Moisture, Freeze Dried (%)			NA	8	NA	NA	27.1
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt				350 NJ	
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt				740 NJ	
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt		490 NJ			
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt		370 NJ	1,100 NJ		
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt			1,300 NJ		
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt			1,000 NJ		
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt				330 NJ	
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt		270 NJ			
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt				310 J	
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt			770 NJ		
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt			970 NJ		1,800 NJ
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)		12	4	7	2

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005
RISP East (ft)			345416	345374	344036	344083	352685
RISP North (ft)			312732	312447	313799	314193	302766
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt			3,700 NJ		
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt				450 NJ	560 NJ
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt			7,400 NJ		
14-Octadecenal	- -	µg/kg dry wt			1,600 NJ		1,300 NJ
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt				1,100 NJ	
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt		610 NJ			
1-Decene	- -	µg/kg dry wt					
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt		850 J			1,200 J
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt	1,500 NJ				
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt				1,200 NJ	
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005
RISP East (ft)			345416	345374	344036	344083	352685
RISP North (ft)			312732	312447	313799	314193	302766
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt		710 NJ		780 NJ	580 NJ
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt	160,000 NJ	40,000 NJ	250,000 NJ	34,000 NJ	38,000 NJ
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt	4,200 NJ		35,000 NJ		
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt		170 NJ			
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt		160 NJ			
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005
RISP East (ft)			345416	345374	344036	344083	352685
RISP North (ft)			312732	312447	313799	314193	302766
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt		590 NJ		530 NJ	1,100 NJ
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt				1,100 NJ	2,700 NJ
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt		700 NJ		230 NJ	
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt				420 J	
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt		240 NJ			
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005
RISP East (ft)			345416	345374	344036	344083	352685
RISP North (ft)			312732	312447	313799	314193	302766
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt			1,200 NJ	1,900 NJ	1,100 NJ
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt					
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt		530 NJ			
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt				580 J	
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt		1,700 NJ			
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt	2,700 NJ				
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005
RISP East (ft)			345416	345374	344036	344083	352685
RISP North (ft)			312732	312447	313799	314193	302766
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt				1,700 NJ	1,600 NJ
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					730 NJ
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt	1,900 NJ				
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt				1,300 NJ	970 NJ
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt		560 J			
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt			1,800 NJ	900 NJ	
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	1	7		6	9

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			351655	352810	351070	351070	353080
RISP North (ft)			303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			NA	14.1	NA	NA	22.3
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt			1,000 NJ		3,700 NJ
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1''-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt	400 NJ				
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt	180 NJ				
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt			580 NJ	340 NJ	
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt		6,100 NJ			1,900 NJ
14-Octadecenal	- -	µg/kg dry wt					8,900 NJ
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt		5,800 NJ	1,700 NJ		
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt					
1-Docosene	- -	µg/kg dry wt			680 NJ	1,200 NJ	
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt			570 NJ		
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt			4,000 J		
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			351655	352810	351070	351070	353080
RISP North (ft)			303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			NA	14.1	NA	NA	22.3
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt	1,600 NJ	2,700 NJ		40,000 NJ	3,100 NJ
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt				310 NJ	
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt			36,000 NJ		
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1'',2'']-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt				850 NJ	
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

Station	PAL	Units	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			351655	352810	351070	351070	353080
RISP North (ft)			303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			NA	14.1	NA	NA	22.3
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt			1,000 NJ		
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt	210 NJ				
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt			2,600 NJ		
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt	260 NJ				
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			351655	352810	351070	351070	353080
RISP North (ft)			303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			NA	14.1	NA	NA	22.3
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt			780 NJ		
Gamma-Sitosterol	- -	µg/kg dry wt		1,400 NJ			
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt	260 NJ				
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt				310 NJ	
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt			4,300 NJ	3,400 NJ	
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			351655	352810	351070	351070	353080
RISP North (ft)			303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			NA	14.1	NA	NA	22.3
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt				6,600 NJ	
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt			1,000 NJ		
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt	180 NJ				
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt	510 NJ				
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt				5,400 NJ	
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt				1,200 NJ	
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt			1,200 NJ	2,000 NJ	1,400 NJ
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	11		7	8	

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Sample Name			T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Date Collected			6/22/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			350100	351910	352619	351885	352427
RISP North (ft)			304801	303103	303440	303634	303165
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			32.4	38.8	48	59.2	35.4
Percent Moisture, Freeze Dried (%)			NA	NA	7.1	18.2	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt					
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt		1,200 NJ			
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					720 NJ
11H-Benzo[b]fluorene	- -	µg/kg dry wt	390 NJ				410 NJ
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt					
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt					
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt					
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt	570 J	7,300 J			
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt					
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt					
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Sample Name			T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Date Collected			6/22/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			350100	351910	352619	351885	352427
RISP North (ft)			304801	303103	303440	303634	303165
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			32.4	38.8	48	59.2	35.4
Percent Moisture, Freeze Dried (%)			NA	NA	7.1	18.2	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					1,100 NJ
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt	340 NJ				1,400 NJ
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt	2,800 NJ	28,000 NJ	2,400 NJ	2,900 NJ	38,000 NJ
2-Phenylnaphthalene	- -	µg/kg dry wt					
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt					
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 …	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olid	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt	930 NJ				
9,10-Anthracenedione	- -	µg/kg dry wt					
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt					
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Sample Name			T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Date Collected			6/22/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			350100	351910	352619	351885	352427
RISP North (ft)			304801	303103	303440	303634	303165
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			32.4	38.8	48	59.2	35.4
Percent Moisture, Freeze Dried (%)			NA	NA	7.1	18.2	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt					440 NJ
Anthracene, 9-methyl-	- -	µg/kg dry wt					1,000 NJ
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					340 NJ
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt	1,100 NJ				
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt	360 NJ				
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt		1,600 NJ			3,500 NJ
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt	320 NJ				
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt	1,200 NJ				
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					1,300 J
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Sample Name			T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Date Collected			6/22/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			350100	351910	352619	351885	352427
RISP North (ft)			304801	303103	303440	303634	303165
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			32.4	38.8	48	59.2	35.4
Percent Moisture, Freeze Dried (%)			NA	NA	7.1	18.2	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt					
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt					
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt					
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt					
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt		970 NJ			
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt	450 J	1,300 J			
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt	1,700 NJ				
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt		430 NJ			
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Sample Name			T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002
Date Collected			6/22/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			350100	351910	352619	351885	352427
RISP North (ft)			304801	303103	303440	303634	303165
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			32.4	38.8	48	59.2	35.4
Percent Moisture, Freeze Dried (%)			NA	NA	7.1	18.2	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt		920 NJ			
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt		3,800 NJ			740 NJ
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt					
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt					
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 4-methyl-	- -	µg/kg dry wt	610 NJ				
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt					
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt					
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt					
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt		850 NJ			
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt		660 J			
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt		1,600 NJ			
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	6	7			9

Station	PAL	Units	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			352427	352768	353596	351240	349545
RISP North (ft)			303165	302412	304467	305262	305938
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			NA	10.5	NA	9.8	NA
SVOC TICS							
(Z)14-Tricosenyl formate	- -	µg/kg dry wt			800 NJ		630 NJ
.alpha.-Amyrin	- -	µg/kg dry wt					
.beta.-iso-Methyl ionone	- -	µg/kg dry wt					
1,1':2',1"-Terphenyl, 4'-phenyl-	- -	µg/kg dry wt					
1,10-Undecadiene	- -	µg/kg dry wt					
1,19-Eicosadiene	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, decyl	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, diisodecyl ester	- -	µg/kg dry wt					
1,2-Benzenedicarboxylic acid, isod	- -	µg/kg dry wt					
1,3-Benzodioxole, 5-(2-propenyl)-	- -	µg/kg dry wt					
1,3-Dicyclohexylurea	- -	µg/kg dry wt					
1,4-Naphthoquinone, 6-ethyl-2,5-di	- -	µg/kg dry wt					
1,8-Naphthalic anhydride	- -	µg/kg dry wt					
10,18-Bisnorabieta-5,7,9(10),11,13-pentaene	- -	µg/kg dry wt					
11,13-Dimethyl-12-tetradecen-1-ol acetate	- -	µg/kg dry wt					
11H-Benzo[a]fluoren-11-one	- -	µg/kg dry wt					
11H-Benzo[a]fluorene	- -	µg/kg dry wt					
11H-Benzo[b]fluorene	- -	µg/kg dry wt	540 NJ				
13-Docosenamide, (Z)-	- -	µg/kg dry wt					
13-Octadecenal	- -	µg/kg dry wt					
14-Octadecenal	- -	µg/kg dry wt					
15-Octadecenoic acid, methyl ester	- -	µg/kg dry wt			460 NJ		
15-Tetracosenoic acid, meth	- -	µg/kg dry wt					
16- or 17-Octadecanal	- -	µg/kg dry wt				2,500 NJ	
16-Heptadecenal	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-te .	- -	µg/kg dry wt					
17-(1,5-dimethylhexyl)-10,13-dimethyl-4-vinylhexadecahydrocyclopenta[a]phen	- -	µg/kg dry wt					
17-Pentatriacontene	- -	µg/kg dry wt					
18-Norabietane	- -	µg/kg dry wt					
1-Biscanol	- -	µg/kg dry wt					
1-Butanol, 4-methoxy-	- -	µg/kg dry wt					
1-Decene	- -	µg/kg dry wt					
1-Docosene	- -	µg/kg dry wt					
1-Dodecanol	- -	µg/kg dry wt					
1-Dodecene	- -	µg/kg dry wt					
1-Dotriacontanol	- -	µg/kg dry wt					
1H-Cycloprop[e]azulene, decahydro-	- -	µg/kg dry wt					
1-Heneicosyl formate	- -	µg/kg dry wt					
1-Heptadecene	- -	µg/kg dry wt					
1-Hexacosanol	- -	µg/kg dry wt			870 J		
1-Hexadecanol	- -	µg/kg dry wt					
1-Hexadecyne	- -	µg/kg dry wt					
1H-Indene, 1-(phenylmethylene)-	- -	µg/kg dry wt	1,500 NJ				
1H-Indene, 1-ethylidene-	- -	µg/kg dry wt					
1H-Indene, 1-phenyl-	- -	µg/kg dry wt					
1H-Indene, 2-butyl-5-hexyloctahydro-	- -	µg/kg dry wt					
1-Nonadecanol	- -	µg/kg dry wt					
1-Octadecanol	- -	µg/kg dry wt					
1-Octadecene	- -	µg/kg dry wt					
1-Pentadecene	- -	µg/kg dry wt					
1-Tetradecene	- -	µg/kg dry wt					
1-Tricosene	- -	µg/kg dry wt					
1-Tridecanol	- -	µg/kg dry wt					
1-Tridecene	- -	µg/kg dry wt			420 NJ		
1-Undecanol	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			352427	352768	353596	351240	349545
RISP North (ft)			303165	302412	304467	305262	305938
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			NA	10.5	NA	9.8	NA
SVOC TICS							
2 (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethen	- -	µg/kg dry wt					
2 (3H)-Benzothiazolone	- -	µg/kg dry wt					
2,4-Cycloheptadien-1-one, 2-(diethylamino)-7-methyl-7-phenyl-	- -	µg/kg dry wt					
2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	- -	µg/kg dry wt					
26-Nor-5-cholesten-3.beta.-ol-2	- -	µg/kg dry wt					
28-Nor-17.alpha.(H)-hopane	- -	µg/kg dry wt					
28-Nor-17.beta.(H)-hopane	- -	µg/kg dry wt					
2-Bromo dodecane	- -	µg/kg dry wt					
2-Heptanone, 6-methyl-	- -	µg/kg dry wt					
2-Isopropenyl-4a,8-dimethyl-1,2	- -	µg/kg dry wt					
2-Nonacosanone	- -	µg/kg dry wt					
2-Pentanone, 4-hydroxy-4-methyl-	- -	µg/kg dry wt	40,000 NJ	1,300 NJ	36,000 NJ	290,000 NJ	39,000 NJ
2-Phenylnaphthalene	- -	µg/kg dry wt	3,200 NJ				
2-Propenoic acid, 3-phenyl	- -	µg/kg dry wt					
2-Propenoic acid, pentadecyl ester	- -	µg/kg dry wt					
2-Propenoic acid, tridecyl	- -	µg/kg dry wt					
2-Tetradecene, (E)-	- -	µg/kg dry wt					
3,4:8,9-Dibenzopyrene	- -	µg/kg dry wt					
3,4-Dihydrocyclopenta[cd]pyrene	- -	µg/kg dry wt					
3-Bicosene, (E)-	- -	µg/kg dry wt					
3-Dodecene, (z)-	- -	µg/kg dry wt					
3-Eicosene, (E)-	- -	µg/kg dry wt					
3-Hydroxy-2-pentanone	- -	µg/kg dry wt					
3-Oxo-.beta.-ionone	- -	µg/kg dry wt					
3-Penten-2-one, 4-methyl-	- -	µg/kg dry wt				12,000 NJ	
3-Tetradecene, (E)-	- -	µg/kg dry wt					
3-Tetradecyne	- -	µg/kg dry wt					
4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a,5,6,6a,6b,7,8,8a,9 ...	- -	µg/kg dry wt					
4,4-Difluororetinol (all-trans)	- -	µg/kg dry wt					
4.alpha., 5.beta.-Epoxy-9.alpha.-hydroxygermacra-1(10),11(13)-diene-6,12-olic	- -	µg/kg dry wt					
4H-1-benzopyran-4-one, 3,5	- -	µg/kg dry wt					
4H-Cyclopenta[def]phenanthrene	- -	µg/kg dry wt					
4-Nonylphenol	- -	µg/kg dry wt					
5,16[1',2']:8,13[1",2"]-Dibenzenodibenzeno[a,g]cyclodecene, 6,7,14,15-tetra	- -	µg/kg dry wt					
5,8,11,14,17-Eicosapentaenoic acid, methyl ester	- -	µg/kg dry wt					
5-Eicosene, (E)-	- -	µg/kg dry wt					
5-Tetradecene, (E)-	- -	µg/kg dry wt					
6-Octadecenoic acid, (Z)-	- -	µg/kg dry wt					
6-Phenylbenzocyclohepten-7-one	- -	µg/kg dry wt					
7,12a-Dimethyl-1,2,3,4,4a,11,12,12a-octahydrochrysene	- -	µg/kg dry wt					
7H-Benz[de]anthracen-7-one	- -	µg/kg dry wt					
7-Heptadecene, 17-chloro	- -	µg/kg dry wt					
7-Hexadecene, (Z)-	- -	µg/kg dry wt					
7H-Furo[3,2-g][1]benzopyran-7-one,	- -	µg/kg dry wt					
7-Isopropenyl-1, 4a-dimethyl-4,4a,5,6,7,8-hexahydro-3H-naphthalen-2-one	- -	µg/kg dry wt					
7-Oxabicyclo[4.1.0] heptane,	- -	µg/kg dry wt					
7-Tetradecene	- -	µg/kg dry wt					
9 beta,19-Cyclot-24-lanosten-3 beta-ol	- -	µg/kg dry wt					
9,10-Anthracenedione	- -	µg/kg dry wt	970 NJ				
9,10-Dimethylanthracene	- -	µg/kg dry wt					
9,12 Octadecadienoic acid	- -	µg/kg dry wt					
9-Anthracenecarbonitrile	- -	µg/kg dry wt					
9-Eicosene, (E)-	- -	µg/kg dry wt					
9-Hexadecenoic acid	- -	µg/kg dry wt			1,200 NJ		480 NJ
9H-Fluoren-9-one	- -	µg/kg dry wt					
9H-Fluorene, 2-methyl-	- -	µg/kg dry wt	460 NJ				

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			352427	352768	353596	351240	349545
RISP North (ft)			303165	302412	304467	305262	305938
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			NA	10.5	NA	9.8	NA
SVOC TICS							
9H-Fluorene, 4-methyl-	- -	µg/kg dry wt					
9-Octadecenamide, (Z)-	- -	µg/kg dry wt					320 NJ
9-Tricosene, (Z)-	- -	µg/kg dry wt					
Acetic acid, 3,7,11,15-tetramethyl-hexadecyl ester	- -	µg/kg dry wt					
Acridine	- -	µg/kg dry wt					
Androst-7-en-3-ol	- -	µg/kg dry wt					
Anthracene, 1,4-dimethyl-	- -	µg/kg dry wt					
Anthracene, 1-methyl-	- -	µg/kg dry wt					
Anthracene, 2-methyl-	- -	µg/kg dry wt	3,100 NJ				
Anthracene, 9-methyl-	- -	µg/kg dry wt					
Aspidospermidin-17-ol, 1-acetyl-19,21-epoxy-15,16-dimethoxy-	- -	µg/kg dry wt					
Benz(A)anthracene-7,12-dione	- -	µg/kg dry wt					
Benz[a]anthracene, 12-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 1-methyl-	- -	µg/kg dry wt					
Benz[a]anthracene, 2-methyl-	- -	µg/kg dry wt					
Benzaldehyde, 2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 3,5-dichloro-2-hydroxy-	- -	µg/kg dry wt					
Benzaldehyde, 4-hydroxy-	- -	µg/kg dry wt					
Benzenamine, 4-octyl-N-(4-octylphenyl)-	- -	µg/kg dry wt					
Benzene, 1,1'-(1,3-butadiyne-1,4-diyl)bis-	- -	µg/kg dry wt					
Benzene, 1,2-dichloro-4-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-2-isocyanato-	- -	µg/kg dry wt					
Benzene, 1-chloro-3-isocyanato-	- -	µg/kg dry wt					
Benzeneacetic acid	- -	µg/kg dry wt					
Benzenesulfonamide, 4-methyl-	- -	µg/kg dry wt					
Benzo(b)fluoranthene	620	µg/kg dry wt					
Benzo(e)pyrene	- -	µg/kg dry wt	470 NJ		270 NJ		
Benzo[b]naphtho[2,1-d]thiophene	- -	µg/kg dry wt					
Benzo[b]naphtho[2,3-d]furan	- -	µg/kg dry wt					
Benzo[b]triphenylene	- -	µg/kg dry wt					
Benzo[j]fluoranthene	- -	µg/kg dry wt					
Benzoic acid	- -	µg/kg dry wt					
Benzothiazole	- -	µg/kg dry wt					
beta-Sitosterol	- -	µg/kg dry wt					
Bicyclohexyl, 4-phenyl-	- -	µg/kg dry wt					
Butanoic acid	- -	µg/kg dry wt					
Bycyclo [2.2.1] heptan-2-ol,	- -	µg/kg dry wt					
Camphene	- -	µg/kg dry wt					
Camphor	- -	µg/kg dry wt					
Chloroacetic acid, dodecyl	- -	µg/kg dry wt					
Cholest-5-en-3-ol, 4,4-dimethyl-, (3.beta.)-	- -	µg/kg dry wt					
Cholesta-3,5-dien-7-one	- -	µg/kg dry wt					
Cholesta-4,6-dien-3-ol, benzoate,	- -	µg/kg dry wt					
Cholestan-2-one	- -	µg/kg dry wt					
Cholestan-3.beta.-ol	- -	µg/kg dry wt					
Cholestan-3-ol	- -	µg/kg dry wt					
Cholestan-3-ol, (3.beta., 5.beta.)-	- -	µg/kg dry wt					
Cholestane isomer	- -	µg/kg dry wt					
Cholestanol	- -	µg/kg dry wt					
Cholesterol	- -	µg/kg dry wt					
Chrysene, 1-methyl-	- -	µg/kg dry wt					
Chrysene, 4-methyl-	- -	µg/kg dry wt					
Chrysene, 6-methyl-	- -	µg/kg dry wt					
Chrysin	- -	µg/kg dry wt					
Curan-19,20-diol, 16,17-did	- -	µg/kg dry wt					
Cyclohexane, hexaethylidene-	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			352427	352768	353596	351240	349545
RISP North (ft)			303165	302412	304467	305262	305938
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			NA	10.5	NA	9.8	NA
SVOC TICS							
Cyclohexane, isothiocyanato-	- -	µg/kg dry wt					
Cyclohexasiloxane, dodecamethyl-	- -	µg/kg dry wt					
Cyclopenta(def)phenanthrenone	- -	µg/kg dry wt	720 NJ				
Cyclopentasiloxane, decamethyl-	- -	µg/kg dry wt					
Cyclopropanenonanoic Acid, 2	- -	µg/kg dry wt					
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/kg dry wt					
D-Friedoolean-14-en-3-one	- -	µg/kg dry wt					
Dibenzothiophene	- -	µg/kg dry wt	580 NJ				
Diphenyl ether	- -	µg/kg dry wt					
di-p-Tolyacetylene	- -	µg/kg dry wt					
Docosanoic acid	- -	µg/kg dry wt					
Dodecanoic acid	- -	µg/kg dry wt					
Dodecyl acrylate	- -	µg/kg dry wt					
E-15-Heptadecenal	- -	µg/kg dry wt					
E-7-Octadecene	- -	µg/kg dry wt					
Epicholestanol	- -	µg/kg dry wt					
Ethanol, 2-(tetradecyloxy)-	- -	µg/kg dry wt					
Gamma-Sitosterol	- -	µg/kg dry wt				780 NJ	
Heptadecanoic acid	- -	µg/kg dry wt					
Hexadecane, 1-chloro-	- -	µg/kg dry wt			290 NJ		
Hexadecane, 1-iodo-	- -	µg/kg dry wt					
Hexadecanoic acid	- -	µg/kg dry wt			1,100 NJ		550 NJ
Hexadecanoic acid, 1,1-dimethylethyl ester	- -	µg/kg dry wt					
Hexadecanoic acid, butyl ester	- -	µg/kg dry wt					
Hexadecenoic acid, Z-11-	- -	µg/kg dry wt					
Hexathiepane	- -	µg/kg dry wt					
Hop-22(29)-en-3.beta.-ol	- -	µg/kg dry wt					
hopane isomer	- -	µg/kg dry wt					
Indene	- -	µg/kg dry wt					
Lanost-8-en-3-ol, (3.beta.)-	- -	µg/kg dry wt					
Lanost-8-en-3-one	- -	µg/kg dry wt					
Lup-20-(29)-en-3-one	- -	µg/kg dry wt					
Lupeol	- -	µg/kg dry wt					
Methyldibenzothiophene	- -	µg/kg dry wt					
Naphthalene, 1,2,3,4,-tetrahydro-1,1,6-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	- -	µg/kg dry wt					
Naphthalene, 1,2-dihydro-1,	- -	µg/kg dry wt					
Naphthalene, 1,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,4-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,5-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6,7-trimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1,7-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 1-methyl-	- -	µg/kg dry wt					
Naphthalene, 1-phenyl-	- -	µg/kg dry wt					
Naphthalene, 2,3-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2,6-dimethyl-	- -	µg/kg dry wt					
Naphthalene, 2-Ethenyl-	- -	µg/kg dry wt					
Naphthalene, 2-phenyl-	- -	µg/kg dry wt					
Nonadecene, 1-chloro-	- -	µg/kg dry wt					
Nonanal	- -	µg/kg dry wt					
Octadecanal	- -	µg/kg dry wt					560 NJ
Octadecanoic acid	- -	µg/kg dry wt					
Octadecanoic acid, 2-methylpropyl ester	- -	µg/kg dry wt					
Octadecanoic acid, butyl ester	- -	µg/kg dry wt					

TABLE 4-25
SEDIMENT RESULTS FOR SVOC TICs (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			352427	352768	353596	351240	349545
RISP North (ft)			303165	302412	304467	305262	305938
Depth Start (ft bgs)			0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			NA	10.5	NA	9.8	NA
SVOC TICS							
Octasulfur	- -	µg/kg dry wt					
Oleic Acid	- -	µg/kg dry wt					
o-Terphenyl	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one	- -	µg/kg dry wt					
Oxacycloheptadecan-2-one, 16	- -	µg/kg dry wt					
Oxacyclohexadecan-2-one	- -	µg/kg dry wt					
Oxacyclotetradecane-2,11-dione, 13	- -	µg/kg dry wt					480 NJ
Oxacyclotridecan-2-one	- -	µg/kg dry wt					
Oxirane, [(hexadecyloxy)methyl]-	- -	µg/kg dry wt					
Oxirane, 2-decyl-3-(5-methylhexyl)-,cis-(.+/-.)-	- -	µg/kg dry wt					
Oxirane, heptadecyl-	- -	µg/kg dry wt					
Oxirane, hexadecyl-	- -	µg/kg dry wt					680 NJ
Oxirane, tridecyl-	- -	µg/kg dry wt					
p-Dicyclohexylbenzene	- -	µg/kg dry wt					
Pentadecanoic acid	- -	µg/kg dry wt			290 NJ		250 NJ
Perylene	- -	µg/kg dry wt					
Phenanthrene, 1-methyl-	- -	µg/kg dry wt					
Phenanthrene, 2,5-dimethyl-	- -	µg/kg dry wt	1,200 NJ				
Phenanthrene, 2,7-dimethyl-	- -	µg/kg dry wt					
Phenanthrene, 2-methyl-	- -	µg/kg dry wt	1,700 NJ				
Phenanthrene, 3,6-dimethyl-	- -	µg/kg dry wt	650 NJ				
Phenanthrene, 3-methyl-	- -	µg/kg dry wt					
Phenanthrene, 4,5-dimethyl-	- -	µg/kg dry wt	540 NJ				
Phenanthrene, 4-methyl-	- -	µg/kg dry wt					
Phenanthrene, 9-ethyl-	- -	µg/kg dry wt					
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	- -	µg/kg dry wt					
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/kg dry wt					
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/kg dry wt			400 NJ		
Phenol, Nonyl-	- -	µg/kg dry wt					
Phosphoric Acid, Dioctadecy	- -	µg/kg dry wt					
Phthalic acid, bis(1-methylheptyl) ester	- -	µg/kg dry wt					
Phthalic anhydride	- -	µg/kg dry wt					
Phytol	- -	µg/kg dry wt					
Propionic acid, 3,3'-thiodi-, didodecyl ester	- -	µg/kg dry wt					
Pyrene, 1-methyl-	- -	µg/kg dry wt					
Pyrene, 2-methyl-	- -	µg/kg dry wt					
Quinoline, 1,2-dihydro-2,2	- -	µg/kg dry wt					
Quinoline, 4,8-dimethyl-	- -	µg/kg dry wt					
Stigmast-4-en-3-one	- -	µg/kg dry wt			360 NJ		380 NJ
Stigmastanol	- -	µg/kg dry wt					
Stigmasterol, 22,23-dihydro-	- -	µg/kg dry wt					
Sulfur hexamer	- -	µg/kg dry wt					
Tetracosanoic acid	- -	µg/kg dry wt					
Tetradecanal	- -	µg/kg dry wt			680 NJ		
Tetradecanoic acid	- -	µg/kg dry wt					
Tridecane, 1-iodo-	- -	µg/kg dry wt					
Tridecanoic acid	- -	µg/kg dry wt					
Triphenylene	- -	µg/kg dry wt					
Triphenylene, 2-methyl-	- -	µg/kg dry wt					
triterpane isomer	- -	µg/kg dry wt					
Undecanoic Acid	- -	µg/kg dry wt					
Urs-12-ene	- -	µg/kg dry wt					
Vanillin	- -	µg/kg dry wt					
Vitamin E	- -	µg/kg dry wt					
Z-7-Hexadecenoic acid	- -	µg/kg dry wt					
Z-7-Pentadecenol	- -	µg/kg dry wt					
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	5		5		4

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	9/2/2003	9/2/2003
RISP East (ft)			352478	352322	352279	352279	352172	351747	352761	352484	352735
RISP North (ft)			303295	303548	303356	303356	303168	303610	303287	303117	302367
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50	29	33	33	24
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor-1016	23	µg/kg dry wt	9.3 U	13 U	8.1 U	7.9 U	7.1 U	9.1 U	9.7 U	9.8 U	8.7 U
Aroclor-1221	23	µg/kg dry wt	19 U	26 U	16 U	16 U	14 U	19 U	20 U	20 U	18 U
Aroclor-1232	23	µg/kg dry wt	9.3 U	13 U	8.1 U	7.9 U	7.1 U	9.1 U	9.7 U	9.8 U	8.7 U
Aroclor-1242	23	µg/kg dry wt	9.3 U	13 U	8.1 U	7.9 U	7.1 U	9.1 U	9.7 U	9.8 U	8.7 U
Aroclor-1248	23	µg/kg dry wt	9.3 U	13 U	8.1 U	7.9 U	7.1 U	9.1 U	9.7 U	9.8 U	8.7 U
Aroclor-1254	23	µg/kg dry wt	230 J	13 U	650 J	7.9 UJ	7.1 U	9.1 U	50 J	9.8 U	8.7 U
Aroclor-1260	23	µg/kg dry wt	9.3 U	160 J	8.1 U	7.9 U	100 J	58 J	9.7 U	250 J	120 J
Total PCBs	- -	µg/kg dry wt	230 J	160 J	650 J	0	100 J	58 J	50 J	250 J	120 J
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	9.2 J	1.3 U	8.1 U	0.79 U	6.6 J	3.8 J	3.5 J	R	6 J
4,4'-DDE	3.16	µg/kg dry wt	9.6 J	R	8.7 J	0.79 UJ	0.71 U	R	3.1 J	R	R
4,4'-DDT	1.6	µg/kg dry wt	9.3 U	R	8.1 U	0.79 U	R	R	0.97 U	R	R
Aldrin	2	µg/kg dry wt	0.48 U	0.66 U	0.42 U	0.41 U	0.36 U	0.47 U	0.5 U	0.5 U	1.4 J
alpha-BHC	6	µg/kg dry wt	0.48 U	0.66 U	0.42 U	0.41 U	R	0.47 U	0.5 U	0.5 U	0.45 U
alpha-Chlordane	3.24	µg/kg dry wt	4.3 J	R	0.42 U	0.41 U	0.36 U	R	0.5 U	R	R
beta-BHC	5	µg/kg dry wt	0.48 U	0.66 U	0.42 U	R	0.36 U	0.47 U	R	0.5 U	0.45 U
Delta-BHC	120	µg/kg dry wt	0.48 U	0.66 U	0.42 U	0.41 U	0.36 U	0.47 U	0.5 U	0.5 U	0.45 U
Dieldrin	1.9	µg/kg dry wt	19	1.3 U	8.1 U	0.79 U	R	R	0.97 U	R	R
Endosulfan I	2.9	µg/kg dry wt	0.48 U	0.66 U	0.42 U	0.41 U	0.36 U	0.47 U	0.5 U	0.5 U	R
Endosulfan II	5.5	µg/kg dry wt	0.93 U	1.3 U	0.81 U	0.79 U	0.71 U	0.91 U	0.97 U	0.98 U	0.87 U
Endosulfan Sulfate	5.4	µg/kg dry wt	9.3 U	4.1 J	8.1 U	0.79 U	2.5 J	2.4 J	R	8 J	5.1 J
Endrin	2.22	µg/kg dry wt	0.93 U	1.3 U	0.81 U	0.79 U	0.71 U	0.91 U	0.97 U	0.98 U	0.87 U
Endrin Aldehyde	2.22	µg/kg dry wt	7.6 J	R	5.7 J	0.79 UJ	R	0.91 U	0.97 U	R	R
Endrin Ketone	2.22	µg/kg dry wt	9.3 U	R	0.81 U	0.79 U	R	0.91 U	2.1 J	R	R
Gamma-BHC	2.37	µg/kg dry wt	0.48 U	0.66 U	0.42 U	0.41 U	R	0.47 U	0.5 U	0.5 U	0.45 U
Gamma-Chlordane	3.24	µg/kg dry wt	5.6	R	4.2 U	0.41 U	R	5.9 J	R	5.6 J	R
Heptachlor	68	µg/kg dry wt	0.48 U	0.66 U	0.42 U	0.41 U	0.36 U	0.47 U	0.5 U	0.5 U	0.45 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.48 U	0.66 U	0.42 U	0.41 U	0.36 U	0.47 U	0.5 U	0.5 U	0.45 U
Methoxychlor	19	µg/kg dry wt	4.8 U	6.6 U	4.2 U	4.1 U	3.6 U	4.5 J	5 U	5 U	4.5 U
Toxaphene	28	µg/kg dry wt	48 U	66 U	42 U	41 U	36 U	47 U	50 U	50 U	45 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Sample Name			SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003	9/4/2003	9/4/2003	9/5/2003
RISP East (ft)			352646	352842	352504	351470	352327	351040	351365	349270	350890
RISP North (ft)			304086	304421	304330	305229	304194	305533	305705	306035	305078
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			19	64	39	48	37	60	19	44	46
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor-1016	23	µg/kg dry wt	8.1 U	11 U	11 U	13 U	10 U	12 U	8 U	12 U	12 U
Aroclor-1221	23	µg/kg dry wt	16 U	22 U	22 U	26 U	21 U	24 U	16 U	24 U	24 U
Aroclor-1232	23	µg/kg dry wt	8.1 U	11 U	11 U	13 U	10 U	12 U	8 U	12 U	12 U
Aroclor-1242	23	µg/kg dry wt	8.1 U	11 U	11 U	13 U	10 U	12 U	8 U	12 U	12 U
Aroclor-1248	23	µg/kg dry wt	8.1 U	11 U	11 U	13 U	10 U	12 U	8 U	12 U	12 U
Aroclor-1254	23	µg/kg dry wt	8.1 U	11 U	11 U	13 U	10 U	12 U	8 U	12 U	12 U
Aroclor-1260	23	µg/kg dry wt	8.1 U	80 J	38 J	49 J	10 U	12 U	8 U	12 U	17
Total PCBs	- -	µg/kg dry wt	0	80 J	38 J	49 J	0	0	0	0	17
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	0.59 J	10 J	2 J	9.8 J	1 U	6.1 J	0.89 J	1.2 U	R
4,4'-DDE	3.16	µg/kg dry wt	0.69 J	12 J	3.7 J	6.5 J	0.94 J	3.5 J	0.83 J	1.2 U	1.2 U
4,4'-DDT	1.6	µg/kg dry wt	0.81 U	5 J	R	R	1 U	1.9 J	1 J	1.2 U	R
Aldrin	2	µg/kg dry wt	0.42 U	0.56 U	0.56 U	0.65 U	0.54 U	0.62 U	0.41 U	0.6 U	0.62 U
alpha-BHC	6	µg/kg dry wt	0.42 U	0.56 U	0.56 U	0.65 U	0.54 U	0.62 U	0.41 U	0.6 U	0.62 U
alpha-Chlordane	3.24	µg/kg dry wt	0.42 U	12 J	2.8 J	1.2 J	0.78 J	2.4 J	0.41 U	0.6 U	0.62 U
beta-BHC	5	µg/kg dry wt	0.42 U	0.56 U	0.56 U	0.65 U	0.54 U	0.62 U	0.41 U	2.9	0.62 U
Delta-BHC	120	µg/kg dry wt	0.42 U	0.56 U	0.56 U	0.65 U	0.54 U	0.62 U	0.41 U	0.6 U	0.62 U
Dieldrin	1.9	µg/kg dry wt	0.81 U	1.1 U	1.1 U	1.3 U	1 U	1.2 U	0.8 U	1.2 U	1.2 U
Endosulfan I	2.9	µg/kg dry wt	0.42 U	0.56 U	0.56 U	0.65 U	0.54 U	0.62 U	0.41 U	0.6 U	0.62 U
Endosulfan II	5.5	µg/kg dry wt	0.81 U	1.1 U	1.1 U	1.3 U	1 U	1.2 U	0.8 U	1.2 U	1.2 U
Endosulfan Sulfate	5.4	µg/kg dry wt	0.81 U	5.4 U	2 J	R	1 U	1.2 J	0.8 U	1.2 U	1.2 U
Endrin	2.22	µg/kg dry wt	0.81 U	1.1 U	1.1 U	1.3 U	1 U	1.2 U	0.8 U	1.2 U	1.2 U
Endrin Aldehyde	2.22	µg/kg dry wt	0.81 U	1.1 U	1.1 U	1.3 U	1 U	1.2 U	0.8 U	1.2 U	1.2 U
Endrin Ketone	2.22	µg/kg dry wt	0.81 U	5.4 U	1.1 U	R	1 U	1.2 U	0.8 U	1.2 U	1.2 U
Gamma-BHC	2.37	µg/kg dry wt	0.42 U	0.56 U	0.56 U	0.65 U	0.54 U	0.62 U	0.41 U	0.6 U	0.62 U
Gamma-Chlordane	3.24	µg/kg dry wt	0.42 U	11	R	0.65 U	0.54 U	R	0.41 U	0.6 U	0.62 U
Heptachlor	68	µg/kg dry wt	0.42 U	0.56 U	0.56 U	0.65 U	0.54 U	0.62 U	0.41 U	0.6 U	0.62 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.42 U	0.56 U	0.56 U	0.65 U	0.54 U	0.62 U	0.41 U	0.6 U	0.62 U
Methoxychlor	19	µg/kg dry wt	4.2 U	5.6 U	5.6 U	R	5.4 U	6.2 U	4.1 U	6 U	6.2 U
Toxaphene	28	µg/kg dry wt	42 U	56 U	56 U	65 U	54 U	62 U	41 U	60 U	62 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR	SE-024-BR	SE-025-BR
Sample Name			SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR	SE-024-BR	SE-025-BR
Date Collected			9/5/2003	9/5/2003	9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003	9/6/2003	9/6/2003
RISP East (ft)			350496	351002	351481	353121	345490	345490	352567	352135	351456
RISP North (ft)			305336	304113	303930	303354	312537	312537	302605	302922	303575
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			40	48	53	58	NA	29	19	33	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor-1016	23	µg/kg dry wt	11 U	13 U	11 U	11 U	NA	9.2 U	8 U	9.8 U	7.5 U
Aroclor-1221	23	µg/kg dry wt	22 U	25 U	22 U	22 U	NA	19 U	16 U	20 U	15 U
Aroclor-1232	23	µg/kg dry wt	11 U	13 U	11 U	11 U	NA	9.2 U	8 U	9.8 U	7.5 U
Aroclor-1242	23	µg/kg dry wt	11 U	13 U	11 U	11 U	NA	9.2 U	8 U	9.8 U	7.5 U
Aroclor-1248	23	µg/kg dry wt	11 U	13 U	11 U	11 U	NA	9.2 U	8 U	9.8 U	7.5 U
Aroclor-1254	23	µg/kg dry wt	11 U	13 U	230 J	11 U	NA	9.2 U	48 J	28 J	7.5 U
Aroclor-1260	23	µg/kg dry wt	13 J	100 J	11 U	200 J	NA	12 J	8 U	9.8 U	26 J
Total PCBs	- -	µg/kg dry wt	13 J	100 J	230 J	200 J	NA	12 J	48 J	28 J	26 J
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	1.1 U	5.9 J	10 J	R	NA	1 J	R	2.2 J	1.6 J
4,4'-DDE	3.16	µg/kg dry wt	1.1 U	3.8 J	9.4 J	R	NA	0.92 U	0.8 U	1.3 J	R
4,4'-DDT	1.6	µg/kg dry wt	R	R	R	R	NA	0.92 U	R	0.98 U	1.2 J
Aldrin	2	µg/kg dry wt	0.56 U	0.65 U	0.57 U	0.57 U	NA	0.48 U	0.41 U	0.5 U	0.39 U
alpha-BHC	6	µg/kg dry wt	0.56 U	0.65 U	0.57 U	0.57 U	NA	0.48 U	0.41 U	0.5 U	0.39 U
alpha-Chlordane	3.24	µg/kg dry wt	0.64 J	3 J	R	2.8 J	NA	0.48 U	0.41 U	0.5 U	R
beta-BHC	5	µg/kg dry wt	0.56 U	0.65 U	0.57 U	0.57 U	NA	0.48 U	R	0.5 U	0.51 J
Delta-BHC	120	µg/kg dry wt	0.56 U	0.65 U	0.57 U	0.57 U	NA	0.48 U	0.41 U	0.5 U	0.39 U
Dieldrin	1.9	µg/kg dry wt	1.1 U	15 J	4.3 J	R	NA	2.3	R	0.98 U	R
Endosulfan I	2.9	µg/kg dry wt	0.56 U	0.65 U	0.57 U	0.57 U	NA	0.48 U	0.41 U	0.5 U	0.39 U
Endosulfan II	5.5	µg/kg dry wt	1.1 U	1.3 U	1.1 U	1.1 U	NA	0.92 U	0.8 U	0.98 U	0.75 U
Endosulfan Sulfate	5.4	µg/kg dry wt	1.1 U	R	R	6.6 J	NA	0.92 U	0.8 U	0.98 U	0.75 U
Endrin	2.22	µg/kg dry wt	1.1 U	1.3 U	1.1 U	1.1 U	NA	0.92 U	0.8 U	0.98 U	0.75 U
Endrin Aldehyde	2.22	µg/kg dry wt	1.1 U	R	R	R	NA	0.92 U	0.8 U	0.98 U	0.75 U
Endrin Ketone	2.22	µg/kg dry wt	1.1 U	1.3 U	1.1 U	R	NA	0.92 U	R	0.98 U	1.8 J
Gamma-BHC	2.37	µg/kg dry wt	0.56 U	0.65 U	0.57 U	0.57 U	NA	0.48 U	0.41 U	0.5 U	0.39 U
Gamma-Chlordane	3.24	µg/kg dry wt	0.56 U	2.6 J	R	R	NA	0.47 J	R	R	R
Heptachlor	68	µg/kg dry wt	0.56 U	0.65 U	0.57 U	0.57 U	NA	0.48 U	0.41 U	0.5 U	0.39 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.56 U	0.65 U	0.57 U	0.57 U	NA	0.48 U	0.41 U	0.5 U	0.39 U
Methoxychlor	19	µg/kg dry wt	5.6 U	6.5 U	5.7 U	5.7 U	NA	4.8 U	4.1 U	5 U	3.9 U
Toxaphene	28	µg/kg dry wt	56 U	65 U	57 U	57 U	NA	48 U	41 U	50 U	39 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-026-BR	SE-026-BR	SE-026-BR	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR	SE-031-BR
Sample Name			SE-026-BR	SE-042-BR	SE-FD-02	SE-027-BR	SE-028-BR	SE-029-BR	SE-FD03	SE-030-BR	SE-031-BR
Date Collected			9/8/2003	8/31/2004	9/8/2003	9/8/2003	9/8/2003	9/9/2003	9/9/2003	9/9/2003	9/9/2003
RISP East (ft)			352690	352690	352690	352779	352320	351551	351551	350958	350323
RISP North (ft)			302735	302735	302735	303669	303984	303889	303889	304015	304420
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			19	16	14	38	12	16	8	13	17
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor-1016	23	µg/kg dry wt	8.1 U	7.9 U	7.5 U	10 U	7.4 U	7.7 U	7.1 U	7.5 U	7.8 U
Aroclor-1221	23	µg/kg dry wt	16 U	16 U	15 U	21 U	15 U	16 U	14 U	15 U	16 U
Aroclor-1232	23	µg/kg dry wt	8.1 U	7.9 U	7.5 U	10 U	7.4 U	7.7 U	7.1 U	7.5 U	7.8 U
Aroclor-1242	23	µg/kg dry wt	8.1 U	7.9 U	7.5 U	10 U	7.4 U	7.7 U	7.1 U	250 J	7.8 U
Aroclor-1248	23	µg/kg dry wt	8.1 U	7.9 U	7.5 U	10 U	7.4 U	7.7 U	7.1 U	7.5 U	7.8 U
Aroclor-1254	23	µg/kg dry wt	2,800	7.9 U	19 J	10 U	9.9 J	9.4 J	19 J	7.5 U	20
Aroclor-1260	23	µg/kg dry wt	8.1 U	6.5 J	7.5 U	10 U	7.4 U	7.7 U	7.1 U	7.5 U	7.8 U
Total PCBs	- -	µg/kg dry wt	2,800	6.5 J	19 J	0	9.9 J	9.4 J	19 J	250 J	20
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	8.1 U	0.79 U	0.75 U	1.2 J	0.71 J	0.77 UJ	1.9 J	0.871 J	0.78 U
4,4'-DDE	3.16	µg/kg dry wt	R	0.79 U	0.61 J	1 U	0.53 J	0.77 U	0.72 J	1.212 J	0.45 J
4,4'-DDT	1.6	µg/kg dry wt	R	0.79 U	0.75 U	R	0.74 U	0.77 U	0.71 U	0.75 U	0.78 U
Aldrin	2	µg/kg dry wt	0.42 U	0.4 U	0.39 U	0.54 U	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
alpha-BHC	6	µg/kg dry wt	0.42 U	0.4 U	0.39 U	0.54 U	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
alpha-Chlordane	3.24	µg/kg dry wt	0.42 U	0.4 U	0.39 U	0.54 U	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
beta-BHC	5	µg/kg dry wt	0.42 U	0.4 U	0.39 U	0.54 U	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
Delta-BHC	120	µg/kg dry wt	0.42 U	0.4 U	0.39 U	0.54 U	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
Dieldrin	1.9	µg/kg dry wt	R	0.79 U	1.3 J	1 U	0.74 U	0.77 UJ	0.94 J	0.93 J	1.7
Endosulfan I	2.9	µg/kg dry wt	4.2 U	0.4 U	0.39 U	0.54 U	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
Endosulfan II	5.5	µg/kg dry wt	0.81 U	0.79 U	0.75 U	1 U	0.74 U	0.77 U	0.71 U	0.75 U	0.78 U
Endosulfan Sulfate	5.4	µg/kg dry wt	R	0.79 U	0.75 U	4.3 J	0.74 U	0.77 U	0.71 U	0.75 U	2.4 J
Endrin	2.22	µg/kg dry wt	0.81 U	0.79 U	0.75 U	1 U	0.74 U	0.77 U	0.71 U	0.75 U	0.78 U
Endrin Aldehyde	2.22	µg/kg dry wt	R	0.79 U	0.75 U	1 U	0.74 U	0.77 U	0.71 U	0.75 U	0.78 U
Endrin Ketone	2.22	µg/kg dry wt	0.81 U	0.79 U	0.75 U	1 U	0.74 U	0.77 U	0.71 U	0.75 U	0.78 U
Gamma-BHC	2.37	µg/kg dry wt	0.42 U	0.4 U	0.39 U	0.54 U	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
Gamma-Chlordane	3.24	µg/kg dry wt	R	0.4 U	R	0.54 U	0.4 J	0.4 U	R	0.38 U	R
Heptachlor	68	µg/kg dry wt	0.42 U	0.4 U	0.39 U	R	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.42 U	0.4 U	0.39 U	0.54 U	0.38 U	0.4 U	0.36 U	0.38 U	0.4 U
Methoxychlor	19	µg/kg dry wt	4.2 U	4 U	3.9 U	5.4 U	3.8 U	4 U	3.6 U	3.8 U	4 U
Toxaphene	28	µg/kg dry wt	42 U	40 U	39 U	54 U	38 U	40 U	36 U	38 U	40 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			9/10/2003	9/10/2003	9/10/2003	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			349117	347976	347020	351597	350184	347061	346903	352890	352890
RISP North (ft)			305833	306035	307232	303879	304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			16	23	19	15	10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor-1016	23	µg/kg dry wt	7.7 U	8.4 U	8 U	7.8 U	7.3 U	8.3 U	8.1 U	7.9 U	8 U
Aroclor-1221	23	µg/kg dry wt	16 U	17 U	16 U	16 U	15 U	17 U	17 U	16 U	16 U
Aroclor-1232	23	µg/kg dry wt	7.7 U	8.4 U	8 U	7.8 U	7.3 U	8.3 U	8.1 U	7.9 U	8 U
Aroclor-1242	23	µg/kg dry wt	7.7 U	8.4 U	8 U	7.8 U	7.3 U	8.3 U	8.1 U	7.9 U	8 U
Aroclor-1248	23	µg/kg dry wt	7.7 U	8.4 U	8 U	7.8 U	7.3 U	8.3 U	8.1 U	7.9 U	8 U
Aroclor-1254	23	µg/kg dry wt	59 J	35	88	7.8 U	7.3 U	8.3 U	8.1 U	7.9 U	8 U
Aroclor-1260	23	µg/kg dry wt	7.7 U	8.4 U	8 U	32 J	13 J	R	130 J	7.9 U	8 U
Total PCBs	- -	µg/kg dry wt	59 J	35	88	32 J	13 J	0	130 J	0	0
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	2.5 J	0.84 U	2.3 J	1.4 J	0.73 U	0.68 J	0.51 J	0.79 U	0.8 U
4,4'-DDE	3.16	µg/kg dry wt	0.77 U	0.84 U	1.7 J	1.1 J	0.73 U	0.93	0.81 J	0.79 U	0.8 U
4,4'-DDT	1.6	µg/kg dry wt	2.6 J	R	R	0.78 U	0.73 U	R	0.81 U	0.79 U	0.8 U
Aldrin	2	µg/kg dry wt	0.4 U	0.43 U	0.41 U	0.4 U	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
alpha-BHC	6	µg/kg dry wt	0.4 U	0.43 U	0.41 U	0.4 U	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
alpha-Chlordane	3.24	µg/kg dry wt	0.4 U	0.43 U	1.116 J	0.5 J	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
beta-BHC	5	µg/kg dry wt	0.4 U	0.43 U	0.41 U	0.4 U	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
Delta-BHC	120	µg/kg dry wt	0.4 U	0.43 U	0.41 U	0.4 U	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
Dieldrin	1.9	µg/kg dry wt	3.576 J	0.84 U	7.01	8	0.73 U	1.1	0.81 U	0.79 U	0.8 U
Endosulfan I	2.9	µg/kg dry wt	0.4 U	0.43 U	0.41 U	0.4 U	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
Endosulfan II	5.5	µg/kg dry wt	0.77 U	0.84 U	0.8 U	0.78 U	0.73 U	0.83 U	0.81 U	0.79 U	0.8 U
Endosulfan Sulfate	5.4	µg/kg dry wt	0.77 U	0.84 U	R	R	0.73 U	0.83 U	R	0.79 U	0.8 U
Endrin	2.22	µg/kg dry wt	0.77 U	0.84 U	0.8 U	0.78 U	0.73 U	0.83 U	0.81 U	0.79 U	0.8 U
Endrin Aldehyde	2.22	µg/kg dry wt	0.77 U	0.84 U	0.801 U	0.78 U	0.73 U	0.83 U	2.7 J	0.79 U	0.8 U
Endrin Ketone	2.22	µg/kg dry wt	R	0.84 U	0.801 U	0.78 U	0.73 U	0.83 U	0.81 U	0.79 U	0.8 U
Gamma-BHC	2.37	µg/kg dry wt	0.4 U	0.43 U	0.41 U	0.4 U	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
Gamma-Chlordane	3.24	µg/kg dry wt	R	R	R	R	R	R	R	0.4 U	0.41 U
Heptachlor	68	µg/kg dry wt	0.4 U	R	0.41 U	0.4 U	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.4 U	0.43 U	0.41 U	0.4 U	0.38 U	0.43 U	0.42 U	0.4 U	0.41 U
Methoxychlor	19	µg/kg dry wt	4 U	4.3 U	4.1 U	R	3.8 U	R	4.2 U	4 U	4.1 U
Toxaphene	28	µg/kg dry wt	40 U	43 U	41 U	40 U	38 U	43 U	42 U	40 U	41 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004	9/1/2004	8/31/2004	9/1/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116	349324	352957	345628	349320
RISP North (ft)			304243	305540	310413	312315	305924	306113	304470	312400	306016
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50	11	31	26	40
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0	NA	NA	NA	NA
PCBs											
Aroclor-1016	23	µg/kg dry wt	9.6 UJ	7.5 U	7.6 U	8 U	6.6 UJ	7.4 U	9.5 UJ	8.9 U	11 U
Aroclor-1221	23	µg/kg dry wt	19 UJ	15 U	15 U	16 U	13 UJ	15 U	19 UJ	18 U	22 U
Aroclor-1232	23	µg/kg dry wt	9.6 UJ	7.5 U	7.6 U	8 U	6.6 UJ	7.4 U	9.5 UJ	8.9 U	11 U
Aroclor-1242	23	µg/kg dry wt	9.6 UJ	7.5 U	7.6 U	8 U	6.6 UJ	7.4 U	9.5 UJ	8.9 U	11 U
Aroclor-1248	23	µg/kg dry wt	9.6 UJ	7.5 U	7.6 U	8 U	6.6 UJ	7.4 U	9.5 UJ	8.9 U	11 U
Aroclor-1254	23	µg/kg dry wt	9.6 UJ	7.5 U	7.6 U	8 U	6.6 UJ	7.4 U	9.5 UJ	8.9 U	11 U
Aroclor-1260	23	µg/kg dry wt	9.6 UJ	7.5 U	16 J	21 J	550 J	7.4 U	12 J	43 J	19 J
Total PCBs	- -	µg/kg dry wt	0	0	16 J	21 J	550 J	0	12 J	43 J	19 J
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	0.96 UJ	0.72 J	0.76 U	1.9	35 J	0.74 U	0.95 UJ	2.7	1.1 U
4,4'-DDE	3.16	µg/kg dry wt	0.96 UJ	1.1 J	0.66 J	1.5 J	21 J	1	0.95 UJ	2.4 J	1.4
4,4'-DDT	1.6	µg/kg dry wt	0.96 UJ	R	0.76 U	0.8 U	R	0.72 J	0.95 UJ	0.89 U	R
Aldrin	2	µg/kg dry wt	0.49 UJ	0.39 U	0.39 U	0.41 U	0.34 UJ	0.38 U	0.49 UJ	0.46 U	0.56 U
alpha-BHC	6	µg/kg dry wt	0.49 UJ	0.39 U	0.39 U	0.41 U	0.34 UJ	0.38 U	0.49 UJ	0.46 U	0.56 U
alpha-Chlordane	3.24	µg/kg dry wt	0.49 UJ	0.39 U	0.29 J	0.41 U	6.6 J	0.38 U	0.49 UJ	0.73 J	0.86 J
beta-BHC	5	µg/kg dry wt	0.49 UJ	0.39 U	0.39 U	0.41 U	0.34 UJ	0.38 U	0.49 UJ	0.46 U	0.56 U
Delta-BHC	120	µg/kg dry wt	0.49 UJ	0.39 U	0.39 U	0.41 U	0.34 UJ	0.38 U	0.49 UJ	0.46 U	0.56 U
Dieldrin	1.9	µg/kg dry wt	0.96 UJ	1.2	0.76 U	4	74 J	0.74 U	0.95 UJ	4.5	1.1 U
Endosulfan I	2.9	µg/kg dry wt	0.49 UJ	0.39 U	0.39 U	0.41 U	R	0.38 U	0.49 UJ	0.46 U	0.56 U
Endosulfan II	5.5	µg/kg dry wt	0.96 UJ	0.75 U	0.76 U	0.8 U	0.66 UJ	0.74 U	0.95 UJ	0.89 U	1.1 U
Endosulfan Sulfate	5.4	µg/kg dry wt	0.96 UJ	0.75 U	R	0.8 U	R	0.74 U	0.95 UJ	R	1.1 U
Endrin	2.22	µg/kg dry wt	0.96 UJ	0.75 U	0.76 U	0.8 U	0.66 UJ	0.74 U	0.95 UJ	0.89 U	1.1 U
Endrin Aldehyde	2.22	µg/kg dry wt	0.96 UJ	0.75 U	0.76 U	0.8 U	2.2 J	0.74 U	0.95 UJ	R	1.1 U
Endrin Ketone	2.22	µg/kg dry wt	0.96 UJ	0.75 U	0.76 U	0.8 U	0.66 UJ	0.74 U	0.95 UJ	0.89 U	1.1 U
Gamma-BHC	2.37	µg/kg dry wt	0.49 UJ	0.39 U	0.39 U	0.41 U	0.34 UJ	0.38 U	0.49 UJ	0.46 U	0.56 U
Gamma-Chlordane	3.24	µg/kg dry wt	0.49 UJ	R	0.68 J	0.41 U	11 J	0.38 U	0.49 UJ	R	0.56 U
Heptachlor	68	µg/kg dry wt	0.49 UJ	0.39 U	0.39 U	0.41 U	0.34 UJ	0.38 U	0.49 UJ	0.46 U	0.56 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.49 UJ	0.39 U	0.39 U	0.41 U	0.34 UJ	0.38 U	0.49 UJ	0.46 U	0.56 U
Methoxychlor	19	µg/kg dry wt	4.9 UJ	3.9 U	3.9 U	4.1 U	16 J	3.8 U	4.9 UJ	4.6 U	5.6 U
Toxaphene	28	µg/kg dry wt	49 UJ	39 U	39 U	41 U	34 UJ	38 U	49 UJ	46 U	56 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-057-WT	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT	SE-063-WT	SE-064-BR	SE-065-BR
Sample Name			SE-057-WT	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT	SE-063-WT	SE-064-BR	SE-065-BR
Date Collected			9/2/2004	9/1/2004	9/1/2004	9/2/2004	9/1/2004	9/1/2004	9/6/2004	9/2/2004	9/2/2004
RISP East (ft)			352084	352774	351440	351895	352372	351508	350942	351791	352478
RISP North (ft)			304607	304071	305562	304852	304608	305289	305250	303170	302602
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			54	21	38	64	35	59	50	18	55
Percent Moisture, Freeze Dried (%)			9	NA	NA	0	NA	0	0	NA	0
PCBs											
Aroclor-1016	23	µg/kg dry wt	7.3 U	8.3 U	11 U	6.6 U	10 U	6.6 UJ	6.6 U	8 U	6.6 U
Aroclor-1221	23	µg/kg dry wt	15 U	17 U	22 U	13 U	21 U	13 UJ	13 U	16 U	13 U
Aroclor-1232	23	µg/kg dry wt	7.3 U	8.3 U	11 U	6.6 U	10 U	6.6 UJ	6.6 U	8 U	6.6 U
Aroclor-1242	23	µg/kg dry wt	7.3 U	8.3 U	11 U	6.6 U	10 U	6.6 UJ	6.6 U	8 U	6.6 U
Aroclor-1248	23	µg/kg dry wt	7.3 U	8.3 U	11 U	6.6 U	10 U	6.6 UJ	6.6 U	8 U	6.6 U
Aroclor-1254	23	µg/kg dry wt	7.3 U	8.3 U	11 U	6.6 U	10 U	6.6 UJ	6.6 U	8 U	6.6 U
Aroclor-1260	23	µg/kg dry wt	21 J	8.3 U	31 J	26 J	21 J	99 J	39 J	76	16 J
Total PCBs	- -	µg/kg dry wt	21 J	0	31 J	26 J	21 J	99 J	39 J	76	16 J
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	1.8 J	0.88 J	0.91 J	4.6	1.8	16 J	3.5 J	2.6 J	0.69 J
4,4'-DDE	3.16	µg/kg dry wt	4.6	1.5	3.7	5.3	3.8	8.7 J	R	R	0.9 J
4,4'-DDT	1.6	µg/kg dry wt	R	0.83 U	1.3 J	R	1 U	R	2.7 J	0.8 U	0.66 U
Aldrin	2	µg/kg dry wt	0.37 U	0.43 U	0.55 U	0.34 U	0.52 U	0.34 UJ	0.34 U	R	0.34 U
alpha-BHC	6	µg/kg dry wt	0.37 U	0.43 U	0.55 U	0.34 U	0.52 U	0.34 UJ	0.34 U	0.41 U	0.34 U
alpha-Chlordane	3.24	µg/kg dry wt	1.9 J	0.84 J	0.55 U	1.5	1.3 J	1.4 J	R	0.41 U	0.34 U
beta-BHC	5	µg/kg dry wt	0.37 U	0.43 U	0.55 U	0.34 U	0.52 U	0.34 UJ	0.34 U	0.41 U	0.34 U
Delta-BHC	120	µg/kg dry wt	0.37 U	0.43 U	0.55 U	0.34 U	0.52 U	0.34 UJ	0.34 U	0.41 U	0.34 U
Dieldrin	1.9	µg/kg dry wt	0.73 U	0.83 U	1.1 U	0.66 U	1 U	0.66 UJ	0.66 U	8.5	1.5
Endosulfan I	2.9	µg/kg dry wt	0.37 U	0.43 U	0.55 U	0.34 U	0.52 U	0.34 UJ	0.34 U	0.41 U	0.34 U
Endosulfan II	5.5	µg/kg dry wt	0.73 U	0.83 U	1.1 U	0.66 U	1 U	0.66 UJ	0.66 U	1.4	0.66 U
Endosulfan Sulfate	5.4	µg/kg dry wt	0.73 U	0.83 U	1.1 U	0.66 U	1 U	R	0.66 U	0.8 U	0.66 U
Endrin	2.22	µg/kg dry wt	0.73 U	0.83 U	1.1 U	0.66 U	1 U	0.66 UJ	0.66 U	0.8 U	0.66 U
Endrin Aldehyde	2.22	µg/kg dry wt	1.3 J	0.83 U	1.1 U	0.66 U	1 U	R	1.2 J	R	0.66 U
Endrin Ketone	2.22	µg/kg dry wt	R	0.83 U	1.1 U	0.66 U	1 U	R	R	0.8 U	0.66 U
Gamma-BHC	2.37	µg/kg dry wt	0.37 U	0.43 U	0.55 U	0.34 U	0.52 U	0.34 UJ	0.34 U	0.41 U	0.34 U
Gamma-Chlordane	3.24	µg/kg dry wt	1.3	0.59 J	0.55 U	1	0.7 J	R	0.34 U	R	0.34 U
Heptachlor	68	µg/kg dry wt	0.37 U	0.43 U	0.55 U	0.34 U	0.52 U	0.34 UJ	0.34 U	0.41 U	0.34 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.37 U	0.43 U	0.55 U	0.34 U	0.52 U	0.34 UJ	0.34 U	0.41 U	0.34 U
Methoxychlor	19	µg/kg dry wt	3.7 U	4.3 U	5.5 U	3.4 U	5.2 U	R	3.4 U	4.1 U	3.4 U
Toxaphene	28	µg/kg dry wt	37 U	43 U	55 U	34 U	52 U	34 UJ	34 U	41 U	34 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-066-BR	SE-067-BR	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Sample Name			SE-066-BR	SE-067-BR	SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Date Collected			9/3/2004	9/3/2004	9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004	9/6/2004	9/3/2004
RISP East (ft)			352272	352007	351730	353122	353122	350926	351567	351393	350848
RISP North (ft)			302718	302937	303184	303341	303341	304138	303403	303624	304184
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			46	19	28	63	67	32	22	13	42
Percent Moisture, Freeze Dried (%)			NA	NA	NA	8	0	NA	NA	NA	NA
PCBs											
Aroclor-1016	23	µg/kg dry wt	12 U	8.1 U	9.1 U	R	R	9.7 U	8.4 U	7.6 U	11 U
Aroclor-1221	23	µg/kg dry wt	25 U	16 U	19 U	R	R	20 U	17 U	15 U	23 U
Aroclor-1232	23	µg/kg dry wt	12 U	8.1 U	9.1 U	R	R	9.7 U	8.4 U	7.6 U	11 U
Aroclor-1242	23	µg/kg dry wt	12 U	8.1 U	9.1 U	R	R	9.7 U	8.4 U	7.6 U	11 U
Aroclor-1248	23	µg/kg dry wt	12 U	8.1 U	9.1 U	R	R	9.7 U	8.4 U	7.6 U	11 U
Aroclor-1254	23	µg/kg dry wt	12 U	8.1 U	9.1 U	R	R	9.7 U	8.4 U	7.6 U	11 U
Aroclor-1260	23	µg/kg dry wt	25	5.7 J	45 J	22 J	20 J	150	21 J	7.6 U	180
Total PCBs	- -	µg/kg dry wt	25	5.7 J	45 J	22 J	20 J	150	21 J	0	180
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	1.2 U	0.41 J	1.8 J	1.1 J	1	4.5 J	0.84 U	0.76 U	5.1 J
4,4'-DDE	3.16	µg/kg dry wt	1.2 U	0.81 U	R	1.4	1.3	3.8	0.84 U	0.76 U	4.3
4,4'-DDT	1.6	µg/kg dry wt	1.2 UJ	0.81 U	R	R	R	R	0.84 U	0.76 U	1.1 U
Aldrin	2	µg/kg dry wt	0.63 UJ	0.42 U	0.47 U	R	R	0.5 U	0.43 U	0.39 U	0.59 U
alpha-BHC	6	µg/kg dry wt	0.63 U	0.42 U	0.47 U	R	R	0.5 U	0.43 U	0.39 U	0.59 U
alpha-Chlordane	3.24	µg/kg dry wt	0.63 U	0.42 U	0.47 U	0.82	0.76 J	3.8 J	R	0.39 U	3.4 J
beta-BHC	5	µg/kg dry wt	0.63 U	0.42 U	0.47 U	R	R	0.5 U	0.43 U	0.39 U	0.59 U
Delta-BHC	120	µg/kg dry wt	0.63 U	0.42 U	0.47 U	R	R	0.5 U	0.43 U	0.39 U	0.59 U
Dieldrin	1.9	µg/kg dry wt	1.4 J	0.81 U	R	0.45 J	0.4 J	11	0.84 U	0.76 U	12
Endosulfan I	2.9	µg/kg dry wt	0.63 U	0.42 U	0.47 U	R	R	0.5 U	0.43 U	0.39 U	0.59 U
Endosulfan II	5.5	µg/kg dry wt	1.2 U	0.81 U	0.91 U	R	R	0.97 U	0.84 U	0.76 U	1.1 U
Endosulfan Sulfate	5.4	µg/kg dry wt	1.2 U	0.81 U	2	R	R	0.97 U	1 J	0.76 U	1.1 U
Endrin	2.22	µg/kg dry wt	1.2 U	0.81 U	0.91 U	R	R	0.97 U	0.84 U	0.76 U	1.1 U
Endrin Aldehyde	2.22	µg/kg dry wt	1.2 U	0.81 U	0.91 U	R	R	R	0.84 U	0.76 U	R
Endrin Ketone	2.22	µg/kg dry wt	1.2 U	0.81 U	R	R	R	R	0.84 U	0.76 U	R
Gamma-BHC	2.37	µg/kg dry wt	0.63 UJ	0.42 U	0.47 U	R	R	0.5 U	0.43 U	0.39 U	0.59 U
Gamma-Chlordane	3.24	µg/kg dry wt	0.74	0.34 J	R	0.73 J	0.61 J	3.8 J	0.43 U	0.39 U	4 J
Heptachlor	68	µg/kg dry wt	0.63 UJ	0.42 U	0.47 U	R	R	0.5 U	0.43 U	0.39 U	0.59 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.63 U	0.42 U	0.47 U	R	R	0.5 U	0.43 U	0.39 U	0.59 U
Methoxychlor	19	µg/kg dry wt	6.3 U	4.2 U	4.7 U	R	R	5 U	4.3 U	3.9 U	5.9 U
Toxaphene	28	µg/kg dry wt	63 U	42 U	47 U	R	R	50 U	43 U	39 U	59 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI	SE-081-BR
Sample Name			SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI	SE-081-BR
Date Collected			9/3/2004	9/3/2004	9/3/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351471	352417	352313	351696	352438	352447	352447	351994	352703
RISP North (ft)			303952	303137	303353	303493	303325	303531	303531	303594	302372
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			45	38	64	17	64	81	82	74	71
Percent Moisture, Freeze Dried (%)			NA	NA	8	NA	9	0	0	8	33
PCBs											
Aroclor-1016	23	µg/kg dry wt	12 U	11 U	7.2 U	8 U	7.3 U	6.6 U	6.6 U	7.2 U	12 U
Aroclor-1221	23	µg/kg dry wt	24 U	22 U	15 U	16 U	15 U	13 U	13 U	15 U	24 U
Aroclor-1232	23	µg/kg dry wt	12 U	11 U	7.2 U	8 U	7.3 U	6.6 U	6.6 U	7.2 U	12 U
Aroclor-1242	23	µg/kg dry wt	12 U	11 U	7.2 U	8 U	7.3 U	6.6 U	6.6 U	7.2 U	12 U
Aroclor-1248	23	µg/kg dry wt	12 U	11 U	7.2 U	8 U	7.3 U	6.6 U	6.6 U	7.2 U	12 U
Aroclor-1254	23	µg/kg dry wt	550	11 U	7.2 U	8 U	7.3 U	6.6 U	6.6 U	7.2 U	12 U
Aroclor-1260	23	µg/kg dry wt	310	98	100	10 J	120 J	190 J	200 J	290 J	260 J
Total PCBs	- -	µg/kg dry wt	860	98	100	10 J	120 J	190 J	200 J	290 J	260 J
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	13	3.3 J	4.1 J	0.8 U	10 J	7.2 J	13 J	11 J	R
4,4'-DDE	3.16	µg/kg dry wt	8 J	4.2	5 J	0.8 U	R	R	R	R	37 J
4,4'-DDT	1.6	µg/kg dry wt	1.2 U	1.1 U	0.72 U	0.8 U	R	R	R	R	R
Aldrin	2	µg/kg dry wt	0.62 U	0.55 U	0.37 U	0.41 U	0.37 U	0.34 U	0.34 U	0.37 U	0.61 U
alpha-BHC	6	µg/kg dry wt	0.62 U	0.55 U	0.37 U	0.41 U	0.37 U	0.34 U	0.34 U	R	0.61 U
alpha-Chlordane	3.24	µg/kg dry wt	5 J	0.65 J	1.1 J	0.41 U	0.37 U	39 J	0.34 U	32 J	0.61 U
beta-BHC	5	µg/kg dry wt	0.62 U	0.55 U	0.37 U	0.41 U	0.37 U	0.34 U	0.34 U	0.37 U	0.61 U
Delta-BHC	120	µg/kg dry wt	0.62 U	0.55 U	0.37 U	0.41 U	0.37 U	0.34 U	0.34 U	0.37 U	0.61 U
Dieldrin	1.9	µg/kg dry wt	33 J	1.1 U	0.72 U	0.8 U	0.73 U	0.66 U	0.66 U	0.72 U	21 J
Endosulfan I	2.9	µg/kg dry wt	0.62 U	0.55 U	0.37 U	0.41 U	0.37 U	0.34 U	0.34 U	0.37 U	0.61 U
Endosulfan II	5.5	µg/kg dry wt	1.2 U	1.1 U	0.72 U	0.8 U	0.73 U	0.66 U	0.66 U	0.72 U	1.2 U
Endosulfan Sulfate	5.4	µg/kg dry wt	1.2 U	1.1 U	0.72 U	0.8 U	4.8 J	R	R	10 J	R
Endrin	2.22	µg/kg dry wt	1.2 U	1.1 U	0.72 U	0.8 U	0.73 U	0.66 U	0.66 U	0.72 U	1.2 U
Endrin Aldehyde	2.22	µg/kg dry wt	9.2	1.7 J	R	0.8 U	4.5	4.7 J	5.8 J	R	9.5
Endrin Ketone	2.22	µg/kg dry wt	R	R	R	0.8 U	R	R	R	R	R
Gamma-BHC	2.37	µg/kg dry wt	0.62 U	0.55 U	0.37 U	0.41 U	0.37 U	0.34 U	0.34 U	0.37 U	0.61 U
Gamma-Chlordane	3.24	µg/kg dry wt	R	R	R	0.41 U	R	0.34 U	35 J	0.37 U	0.61 U
Heptachlor	68	µg/kg dry wt	0.62 U	0.55 U	0.37 U	0.41 U	0.37 U	0.34 U	0.34 U	0.37 U	0.61 U
Heptachlor Epoxide	2.47	µg/kg dry wt	0.62 U	0.55 U	0.37 U	0.41 U	0.37 U	0.34 U	0.34 U	27 J	0.61 U
Methoxychlor	19	µg/kg dry wt	6.2 U	5.5 U	3.7 U	4.1 U	8.1	6.4 J	8.1	10 J	11 J
Toxaphene	28	µg/kg dry wt	62 U	55 U	37 U	41 U	37 U	34 U	34 U	37 U	61 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Date Collected			9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004	9/7/2004	6/23/2005	6/23/2005	6/23/2005
RISP East (ft)			352820	352717	352049	352447	352149	352478	346599	346885	344937
RISP North (ft)			302413	302444	303465	303427	303734	303603	310832	309261	313353
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	0.5	0.5	0.5
Percent Moisture (%)			25	36	21	21	12	56	31.4	25.1	76.5
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	8	NA	NA	27.1
PCBs											
Aroclor-1016	23	µg/kg dry wt	8.8 U	10 U	8.3 U	8.3 U	7.5 U	7.2 U	7.9 U	7 U	38 U
Aroclor-1221	23	µg/kg dry wt	18 U	21 U	17 U	17 U	15 U	15 U	7.9 U	7 U	38 U
Aroclor-1232	23	µg/kg dry wt	8.8 U	10 U	8.3 U	8.3 U	7.5 U	7.2 U	7.9 U	7 U	38 U
Aroclor-1242	23	µg/kg dry wt	8.8 U	10 U	8.3 U	8.3 U	7.5 U	7.2 U	7.9 U	7 U	38 U
Aroclor-1248	23	µg/kg dry wt	8.8 U	10 U	8.3 U	8.3 U	7.5 U	7.2 U	7.9 U	7 U	38 U
Aroclor-1254	23	µg/kg dry wt	8.8 U	10 U	8.3 U	8.3 U	7.5 U	7.2 U	7.9 U	7 U	1,400 JEB
Aroclor-1260	23	µg/kg dry wt	35 J	97 J	8.3 U	8.3 U	7.5 U	R	300 J	43 J	570 J
Total PCBs	- -	µg/kg dry wt	35 J	97 J	0	0	0	0	300 J	43 J	1,970 J
PESTICIDES											
4,4'-DDD	4.88	µg/kg dry wt	1.9 J	R	R	0.83 U	0.75 U	R	5.9	2.1	18
4,4'-DDE	3.16	µg/kg dry wt	R	35 J	24 J	0.83 U	0.75 U	16 J	4.5 J	0.7 U	R
4,4'-DDT	1.6	µg/kg dry wt	0.88 U	4.8 J	2.4	0.83 U	0.75 U	2.2	4 UJ	2.7 J	0.76 UJ
Aldrin	2	µg/kg dry wt	0.45 U	0.53 U	0.43 U	0.43 U	0.38 U	0.37 U	0.79 U	0.7 U	0.76 U
alpha-BHC	6	µg/kg dry wt	0.45 U	0.53 U	0.43 U	0.43 U	0.38 U	0.37 U	0.79 U	0.7 U	0.76 U
alpha-Chlordane	3.24	µg/kg dry wt	0.45 U	0.53 U	0.43 U	18 J	0.38 U	14 J	2.3	0.7 U	5.5
beta-BHC	5	µg/kg dry wt	0.45 U	0.53 U	0.43 U	0.43 U	0.38 U	0.37 U	0.79 U	0.7 U	0.76 U
Delta-BHC	120	µg/kg dry wt	0.45 U	0.53 U	0.43 U	0.43 U	0.38 U	0.37 U	1.7 J	0.7 U	0.76 U
Dieldrin	1.9	µg/kg dry wt	R	36 J	21 J	0.83 U	0.75 U	13 J	17	3.1	0.76 U
Endosulfan I	2.9	µg/kg dry wt	0.45 U	0.53 U	0.43 U	R	0.38 U	0.37 U	0.79 U	0.7 U	0.76 U
Endosulfan II	5.5	µg/kg dry wt	0.88 U	1 U	0.83 U	0.83 U	0.75 U	R	0.79 U	0.7 U	0.76 U
Endosulfan Sulfate	5.4	µg/kg dry wt	1.5 J	4	R	0.83 U	0.75 U	0.72 U	0.79 U	0.7 U	0.76 U
Endrin	2.22	µg/kg dry wt	0.88 U	1 U	0.83 U	0.83 U	0.75 U	8.6 J	0.79 UJ	0.7 UJ	0.76 UJ
Endrin Aldehyde	2.22	µg/kg dry wt	0.88 U	5.3 J	1.3 J	0.83 U	0.75 U	R	4 U	3.5 U	0.76 U
Endrin Ketone	2.22	µg/kg dry wt	0.88 U	R	0.83 U	0.83 U	0.75 U	0.75 J	20 J	4.4 J	0.76 U
Gamma-BHC	2.37	µg/kg dry wt	0.45 U	0.53 U	0.43 U	0.43 U	0.38 U	0.37 U	0.79 U	0.7 U	0.76 U
Gamma-Chlordane	3.24	µg/kg dry wt	R	0.53 U	0.43 U	0.43 U	0.38 U	0.37 U	3.3	0.7 U	6.5
Heptachlor	68	µg/kg dry wt	0.45 U	0.53 U	0.43 U	0.43 U	0.38 U	0.37 U	0.79 U	0.7 U	0.76 UJ
Heptachlor Epoxide	2.47	µg/kg dry wt	0.45 U	0.53 U	0.43 U	0.43 U	0.38 U	0.37 U	0.79 U	0.7 U	0.76 U
Methoxychlor	19	µg/kg dry wt	4.5 U	8.4	4.3 U	4.3 U	3.8 U	R	0.79 U	0.7 U	0.76 UJ
Toxaphene	28	µg/kg dry wt	45 U	53 U	43 U	43 U	38 U	37 U	99 U	88 U	94 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			345416	345374	344036	344083	352685	351655	352810	351070	351070	353080
RISP North (ft)			312732	312447	313799	314193	302766	303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6	15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA	NA	14.1	NA	NA	22.3
PCBs												
Aroclor-1016	23	µg/kg dry wt	34 U	8.4 U	30 U	8 U	8 U	6.5 U	32 U	8 U	7.9 U	36 U
Aroclor-1221	23	µg/kg dry wt	34 U	8.4 U	30 U	8 U	8 U	6.5 U	32 U	8 U	7.9 U	36 U
Aroclor-1232	23	µg/kg dry wt	34 U	8.4 U	30 U	8 U	8 U	6.5 U	32 U	8 U	7.9 U	36 U
Aroclor-1242	23	µg/kg dry wt	34 U	8.4 U	30 U	8 U	8 U	6.5 U	32 U	8 U	7.9 U	36 U
Aroclor-1248	23	µg/kg dry wt	34 U	8.4 U	30 U	8 U	8 U	130	32 U	8 UJ	66 J	36 U
Aroclor-1254	23	µg/kg dry wt	1,100 JEB	8.4 U	480 JEB	8 U	8 U	6.5 U	300 JEB	8 U	7.9 U	360 JEB
Aroclor-1260	23	µg/kg dry wt	460	190 J	650 J	200 J	580 J	110 J	240	120 J	100 J	760
Total PCBs	- -	µg/kg dry wt	1,560 J	190 J	1,130 J	200 J	580 J	240 J	540 J	120 J	166 J	1,120 J
PESTICIDES												
4,4'-DDD	4.88	µg/kg dry wt	17	5.6	16	3.7	6.3	0.91	8.8	2.7	1.7	19
4,4'-DDE	3.16	µg/kg dry wt	16 J	9.5 J	15 J	5.5 J	3.7	0.65 U	6.2 J	1.9 J	1.3 J	15 J
4,4'-DDT	1.6	µg/kg dry wt	0.68 UJ	4.2 UJ	0.59 UJ	4 UJ	8 UJ	0.65 UJ	0.63 UJ	0.8 UJ	4 UJ	0.71 UJ
Aldrin	2	µg/kg dry wt	0.68 U	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	0.71 U
alpha-BHC	6	µg/kg dry wt	0.68 U	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	0.71 U
alpha-Chlordane	3.24	µg/kg dry wt	3.4	3.3	6.3	2.5	0.8 U	0.65 U	3.9	1.3	0.91	11 J
beta-BHC	5	µg/kg dry wt	0.68 U	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	0.71 U
Delta-BHC	120	µg/kg dry wt	0.68 U	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	1.6
Dieldrin	1.9	µg/kg dry wt	5.2 J	5.3	6.7	3	6.6	1.4 J	8	2.3	3.7	9.4
Endosulfan I	2.9	µg/kg dry wt	0.68 U	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	0.71 U
Endosulfan II	5.5	µg/kg dry wt	0.68 U	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	0.71 U
Endosulfan Sulfate	5.4	µg/kg dry wt	13 J	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	0.71 U
Endrin	2.22	µg/kg dry wt	0.68 UJ	0.84 UJ	0.59 UJ	0.8 UJ	0.8 UJ	0.65 UJ	0.63 UJ	0.8 UJ	0.79 UJ	0.71 UJ
Endrin Aldehyde	2.22	µg/kg dry wt	0.68 U	4.2 U	0.59 U	4 U	4 U	3.3 U	0.63 U	4 U	4 U	0.71 U
Endrin Ketone	2.22	µg/kg dry wt	0.68 U	10 J	0.59 U	9.6 J	0.8 U	0.65 U	0.63 U	0.8 UJ	3.6 J	0.71 U
Gamma-BHC	2.37	µg/kg dry wt	0.68 U	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	0.71 U
Gamma-Chlordane	3.24	µg/kg dry wt	3.6	3.4	6 J	2.7	2.5	0.65 U	3.1	2.4 J	1.9 J	7.4
Heptachlor	68	µg/kg dry wt	0.68 UJ	0.84 U	0.59 UJ	0.8 U	0.8 UJ	0.65 UJ	0.63 UJ	0.8 UJ	0.79 UJ	0.71 UJ
Heptachlor Epoxide	2.47	µg/kg dry wt	0.68 U	0.84 U	0.59 U	0.8 U	0.8 U	0.65 U	0.63 U	0.8 U	0.79 U	0.71 U
Methoxychlor	19	µg/kg dry wt	0.68 UJ	0.84 U	0.59 UJ	0.8 U	0.8 UJ	0.65 UJ	0.63 UJ	0.8 UJ	0.79 UJ	0.71 UJ
Toxaphene	28	µg/kg dry wt	85 U	100 U	74 U	100 U	100 U	82 U	79 U	100 U	99 U	89 U

TABLE 4-26
SEDIMENT RESULTS FOR PCBs AND PESTICIDES (ug/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002	BD062105	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Date Collected			6/22/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
RISP East (ft)			350100	351910	352619	351885	352427	352427	352768	353596	351240	349545
RISP North (ft)			304801	303103	303440	303634	303165	303165	302412	304467	305262	305938
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			32.4	38.8	48	59.2	35.4	35.4	63	36.2	69.4	32.8
Percent Moisture, Freeze Dried (%)			NA	NA	7.1	18.2	NA	NA	10.5	NA	9.8	NA
PCBs												
Aroclor-1016	23	µg/kg dry wt	8.1 U	9 U	29 U	34 U	R	8.4 U	31 U	8.2 U	30 U	8.2 U
Aroclor-1221	23	µg/kg dry wt	8.1 U	9 U	29 U	34 U	8.2 U	8.4 U	31 U	8.2 U	30 U	8.2 U
Aroclor-1232	23	µg/kg dry wt	8.1 U	9 U	29 U	34 U	8.2 U	8.4 U	31 U	8.2 U	30 U	8.2 U
Aroclor-1242	23	µg/kg dry wt	8.1 U	9 U	29 U	34 U	8.2 U	8.4 U	31 U	8.2 U	30 U	8.2 U
Aroclor-1248	23	µg/kg dry wt	8.1 U	9 U	29 U	34 U	8.2 U	8.4 U	31 U	8.2 U	30 U	8.2 U
Aroclor-1254	23	µg/kg dry wt	8.1 U	9 U	210 EB	420 EB	8.2 U	8.4 U	260 EB	8.2 U	30 U	8.2 U
Aroclor-1260	23	µg/kg dry wt	120 J	110 J	420 J	550	130 J	120 J	340	8.2 U	360 J	8.2 U
Total PCBs	- -	µg/kg dry wt	120 J	110 J	630 J	970	130 J	120 J	600	0	360 J	0
PESTICIDES												
4,4'-DDD	4.88	µg/kg dry wt	7.4	4.5 U	13	15	7.3	6.1	8.2	0.82 U	14	0.82 U
4,4'-DDE	3.16	µg/kg dry wt	3.6	3.2 J	9.7 J	19 J	4.8	5.1 J	14 J	0.82	14 J	0.82 U
4,4'-DDT	1.6	µg/kg dry wt	0.81 UJ	4.5 UJ	0.59 UJ	0.67 UJ	0.82 UJ	0.84 UJ	0.62 UJ	2.3	0.61 UJ	1.4 J
Aldrin	2	µg/kg dry wt	0.81 U	0.9 U	0.59 U	0.67 U	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
alpha-BHC	6	µg/kg dry wt	0.81 U	0.9 U	0.59 U	0.67 U	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
alpha-Chlordane	3.24	µg/kg dry wt	1.4	1.7	4.1 J	4.1	1.5	1.5	4.3	0.82 U	3.7	0.82 U
beta-BHC	5	µg/kg dry wt	0.81 U	0.9 U	0.59 U	0.67 U	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
Delta-BHC	120	µg/kg dry wt	0.81 U	0.9 U	0.59 U	0.97 J	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
Dieldrin	1.9	µg/kg dry wt	9	3	4 J	4.2	1.8	2.2	6.2	0.82 U	1.1	0.82 U
Endosulfan I	2.9	µg/kg dry wt	0.81 U	0.9 U	0.59 U	0.67 U	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
Endosulfan II	5.5	µg/kg dry wt	0.81 U	0.9 U	0.59 U	0.67 U	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
Endosulfan Sulfate	5.4	µg/kg dry wt	0.81 U	0.9 U	0.59 UJ	0.67 U	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
Endrin	2.22	µg/kg dry wt	0.81 UJ	0.9 UJ	0.59 UJ	0.67 UJ	0.82 UJ	0.84 UJ	R	0.82 UJ	0.61 UJ	0.82 UJ
Endrin Aldehyde	2.22	µg/kg dry wt	4 U	4.5 U	0.59 U	0.67 U	4.1 U	4.2 U	0.62 U	4.1 U	0.61 U	4.1 U
Endrin Ketone	2.22	µg/kg dry wt	12	6.6 J	0.59 U	0.67 U	8.2 J	9.1 J	0.62 U	0.82 U	8.8 J	0.82 U
Gamma-BHC	2.37	µg/kg dry wt	0.81 U	0.9 U	0.59 U	0.67 U	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
Gamma-Chlordane	3.24	µg/kg dry wt	1.4	2.7 J	3.1	4.2	1.3	2 J	3.7	0.82 U	3.4	0.82 U
Heptachlor	68	µg/kg dry wt	0.81 UJ	0.9 U	0.59 UJ	0.67 UJ	0.82 UJ	0.84 UJ	0.62 UJ	0.82 U	0.61 UJ	0.82 UJ
Heptachlor Epoxide	2.47	µg/kg dry wt	0.81 U	0.9 U	0.59 U	0.67 U	0.82 U	0.84 U	0.62 U	0.82 U	0.61 U	0.82 U
Methoxychlor	19	µg/kg dry wt	0.81 UJ	0.9 U	0.59 UJ	0.67 UJ	0.82 UJ	0.84 UJ	0.62 UJ	0.82 U	0.61 UJ	0.82 UJ
Toxaphene	28	µg/kg dry wt	100 U	110 U	73 U	84 U	100 U	100 U	77 U	100 U	76 U	100 U

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	9/2/2003	9/2/2003
RISP East (ft)			352478	352322	352279	352279	352172	351747	352761	352484	352735
RISP North (ft)			303295	303548	303356	303356	303168	303610	303287	303117	302367
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50	29	33	33	24
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	10,900	11,100	2,750	2,360	6,150	2,790	3,860	7,530	5,130
Antimony	3.1	mg/kg dry wt	18.9 J	0.71 UJ	0.49 UJ	0.48 UJ	2.4 J	0.56 UJ	0.77 J	1.1 J	0.55 J
Arsenic	6	mg/kg dry wt	21.1	17.9	1.9 J	1.9 J	7.3	6	6.7	12.3	4.7
Barium	540	mg/kg dry wt	617 J	142 J	16.6 J	14.2 J	67.300003 J	18.5 J	30.4 J	104 J	47.599998 J
Beryllium	15	mg/kg dry wt	0.72 J	0.83 J	0.095 J	0.086 J	0.36 J	0.13 J	0.19 J	0.54 J	0.23 J
Cadmium	0.6	mg/kg dry wt	13.2	12.2	0.6 J	0.41 J	18.200001	0.72 J	2.8	15.6	3.6
Calcium	- -	mg/kg dry wt	2,400	1,980	499 J	427 J	853 J	376 J	781 J	1,750	1,230 J
Chromium	26	mg/kg dry wt	204 J	118 J	17.700001 J	15.9 J	70.099998 J	23.299999 J	38.400002 J	141 J	53.5 J
Cobalt	470	mg/kg dry wt	13 U	18 U	12 U	12 U	11 U	14 U	14 U	14 U	13 U
Copper	16	mg/kg dry wt	653	187	23.5	18.700001	230	25.799999	51.299999	179	58.900002
Cyanide	1.1	mg/kg dry wt	0.3 J	0.71 J	0.17 U	0.3 J	0.52 J	1.1	0.21 U	0.72	0.17
Iron	2,300	mg/kg dry wt	49,600 J	21,700 J	4,410 J	3,900 J	11,700 J	5,240 J	9,580 J	12,500 J	9,330 J
Lead	31	mg/kg dry wt	1,290	176	21.1	18.700001	108	25.6	49.900002	196	54.099998
Magnesium	- -	mg/kg dry wt	3,560	3,950	1,222 U	1,193 U	1,750	1,395 U	1,530	2,510	2,860
Manganese	180	mg/kg dry wt	326	470	78.800003	68	107	69.199997	150	297	150
Mercury	0.15	mg/kg dry wt	0.78	0.5	0.06 J	0.092 J	0.62	0.24	0.094 J	0.45	0.11 J
Nickel	16	mg/kg dry wt	61.700001	36.5	9.8 U	10 U	58.200001	11 U	18.1	46.700001	19.1
Potassium	- -	mg/kg dry wt	1,299 U	1,783 U	1,222 U	1,193 U	1,055 U	1,395 U	1,421 U	1,408 U	1,253 U
Selenium	39	mg/kg dry wt	2.5	2	0.73 U	0.94 J	1.1	1.1 J	1.3 J	1.7	0.82 J
Silver	39	mg/kg dry wt	11.4	5.6	0.69 J	0.58 J	3.4 J	0.91 J	1.7 J	3.4 J	2.3 J
Sodium	- -	mg/kg dry wt	1,299 U	1,783 U	1,222 U	1,193 U	1,055 U	1,395 U	1,421 U	1,408 U	1,253 U
Thallium	0.52	mg/kg dry wt	0.96 J	0.83 J	0.49 U	0.48 U	0.45 J	0.56 U	0.57 U	0.56 U	0.5 U
Vanadium	55	mg/kg dry wt	34.299999 J	27 J	6 J	5.5 J	14 J	6 J	9.6 J	21.200001 J	12.9 J
Zinc	120	mg/kg dry wt	1,420 J	550 J	47.200001 J	44.700001 J	1,470 J	80.400002 J	189 J	590 J	164 J

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Sample Name			SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Date Collected			9/3/2003	9/3/2003	9/3/2003	9/3/2003	9/4/2003	9/4/2003	9/4/2003	9/4/2003	9/5/2003
RISP East (ft)			352646	352842	352504	351470	352327	351040	351365	349270	350890
RISP North (ft)			304086	304421	304330	305229	304194	305533	305705	306035	305078
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			19	64	39	48	37	60	19	44	46
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	6,480	16,300	7,750	6,150	8,320	10,900	2,390	24,000	27,000
Antimony	3.1	mg/kg dry wt	48 U	0.63 U	57 U	0.76 U	58 U	0.71 U	0.47 U	0.66 U	0.71 U
Arsenic	6	mg/kg dry wt	2.6	8.3	3.2	5.6	2.1 J	8	1.5 J	19.200001	11.3
Barium	540	mg/kg dry wt	0.15 U	121	0.171 U	76 U	0.173 U	76.599998	47 U	170	220
Beryllium	15	mg/kg dry wt	0.25 J	0.49 J	0.28 J	0.73 J	0.3 J	0.81 J	0.18 J	0.066 U	0.071 U
Cadmium	0.6	mg/kg dry wt	0.048 U	1.2 J	0.057 U	0.21 J	0.058 U	0.09 J	0.047 U	0.066 U	0.071 U
Calcium	- -	mg/kg dry wt	1,320 J	3,190 J	1,280 J	1,200 J	1,530 J	3,940 J	771 J	3,830 J	6,000 J
Chromium	26	mg/kg dry wt	22.1	48.5	20.1	17.9	15.1	34.799999	3.7 J	53.700001	75.400002
Cobalt	470	mg/kg dry wt	5.2 J	9.4 J	4.2 J	4.4 J	3.3 J	5.6 J	2.1 J	21	22.5
Copper	16	mg/kg dry wt	11.8	71.300003	20.5	25.4	9.8	41.599998	5.8 U	51.400002	68.599998
Cyanide	1.1	mg/kg dry wt	0.17 U	0.23 U	0.24 U	0.24 U	0.4 J	0.25 U	0.17 U	0.25 U	0.25 U
Iron	2,300	mg/kg dry wt	12,000	19,300	12,200	10,100	7,230	13,800	6,940	38,000	41,500
Lead	31	mg/kg dry wt	17.299999 J	362 J	73.900002 J	82.900002 J	25.799999 J	98.300003 J	13.9 J	30.4 J	47.799999 J
Magnesium	- -	mg/kg dry wt	4,080	6,310	3,030	2,220	2,260	3,780	1,165 U	13,800	15,100
Manganese	180	mg/kg dry wt	160 J	290 J	150 J	129 J	113 J	180 J	190 J	1,090 J	1,060 J
Mercury	0.15	mg/kg dry wt	0.062 U	0.23	0.071 U	0.11 J	0.066 U	0.24	0.054 U	0.071 U	0.077 U
Nickel	16	mg/kg dry wt	19.9	29.299999	12.5	9.8 J	8.8 J	13.8 J	3 J	39.099998	55.200001
Potassium	- -	mg/kg dry wt	1,210 U	2,100	1,426 U	1,904 U	1,443 U	1,765 U	1,165 U	7,630	8,500
Selenium	39	mg/kg dry wt	1.3	2.2	1.1 J	1.4 J	0.88 J	1.9	0.83 J	3.3	2.1
Silver	39	mg/kg dry wt	2.5	4	2.5 J	2.1 J	1.4 J	2.6 J	1.3 J	6.1	6.7
Sodium	- -	mg/kg dry wt	1,210 U	1,572 U	1,426 U	1,904 U	1,443 U	1,765 U	1,165 U	1,638 U	1,718 U
Thallium	0.52	mg/kg dry wt	0.48 U	0.63 U	0.57 U	0.76 U	0.58 U	0.71 U	0.47 U	0.66 U	0.71 U
Vanadium	55	mg/kg dry wt	14.7 J	51.099998 J	20.9 J	19.799999 J	13.5 J	33.400002 J	6.2 J	52.799999 J	59.5 J
Zinc	120	mg/kg dry wt	47.700001 J	262 J	98.900002 J	72.699997 J	54 J	101 J	33.900002 J	120 J	194 J

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR	SE-024-BR	SE-025-BR
Sample Name			SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR	SE-024-BR	SE-025-BR
Date Collected			9/5/2003	9/5/2003	9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003	9/6/2003	9/6/2003
RISP East (ft)			350496	351002	351481	353121	345490	345490	352567	352135	351456
RISP North (ft)			305336	304113	303930	303354	312537	312537	302605	302922	303575
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			40	48	53	58	NA	29	19	33	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	25,800	23,300	8,310	7,620	NA	6,000	2,160	4,190	2,350
Antimony	3.1	mg/kg dry wt	0.63 U	0.95 J	1.5 J	0.86 J	NA	0.45 U	0.4 U	0.53 J	0.41 U
Arsenic	6	mg/kg dry wt	8.1	23.799999	25.1	8.6	NA	5.1	1.7	5.3	2.7 J
Barium	540	mg/kg dry wt	192	192	90.900002	144	NA	44 J	16.1 J	28.5 J	47.900002
Beryllium	15	mg/kg dry wt	0.063 U	1.2 J	0.62 J	0.44 J	NA	0.12 J	0.081 J	0.13 J	0.21 J
Cadmium	0.6	mg/kg dry wt	0.063 U	8	14.7	11.4	NA	0.78 J	0.33 J	1.7	0.84 J
Calcium	- -	mg/kg dry wt	6,010 J	3,400 J	1,390 J	1,570 J	NA	643 J	486 J	651 J	512 J
Chromium	26	mg/kg dry wt	68.800003	143	132	106	NA	19.1	7.8	57.299999	13.6
Cobalt	470	mg/kg dry wt	20.299999	16 J	4.1 J	5.3 J	NA	3 J	1.8 J	3 J	2 J
Copper	16	mg/kg dry wt	60.599998	166	218	179	NA	22.700001	12.9	42.200001	39.200001
Cyanide	1.1	mg/kg dry wt	0.23 U	0.44 J	0.24 U	1.4	NA	0.21 U	0.17 U	0.21 U	0.16 U
Iron	2,300	mg/kg dry wt	37,600	46,300	12,900	18,000	NA	8,660	4,360	6,570	5,360
Lead	31	mg/kg dry wt	51.5 J	172 J	201 J	155 J	NA	9.5 J	12.7 J	51.400002 J	56.799999 J
Magnesium	- -	mg/kg dry wt	14,400	7,390	3,100	2,770	NA	1,360	996 U	1,350	1,026 U
Manganese	180	mg/kg dry wt	746 J	484 J	169 J	241 J	NA	207 J	112 J	118 J	81.599998 J
Mercury	0.15	mg/kg dry wt	0.096 J	0.49	0.45	0.36	NA	0.064 U	0.049 U	0.2	0.058 J
Nickel	16	mg/kg dry wt	50.700001	43.400002	14.3	28.299999	NA	13.6	8 U	10 U	8.2 U
Potassium	- -	mg/kg dry wt	6,800	3,090	1,487 U	1,614 U	NA	1,136 U	996 U	1,223 U	1,026 U
Selenium	39	mg/kg dry wt	1.3 J	2.9	1.9	2.4	NA	0.69 J	0.6 U	0.91 J	0.8 J
Silver	39	mg/kg dry wt	6.1	9.5	5.3	5.5	NA	1.6 J	0.85 J	1.3 J	1.1 J
Sodium	- -	mg/kg dry wt	1,572 U	1,702 U	1,487 U	1,614 U	NA	1,136 U	996 U	1,223 U	1,026 U
Thallium	0.52	mg/kg dry wt	0.63 U	0.68 U	0.59 U	0.65 U	NA	0.45 U	0.4	0.49 U	0.41 U
Vanadium	55	mg/kg dry wt	53.700001 J	48.900002 J	27 J	19.299999 J	NA	8.5 J	4.2 J	9.1 J	5.3 J
Zinc	120	mg/kg dry wt	205 J	363 J	280 J	344 J	NA	106 J	43 J	179 J	78.300003 J

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-026-BR	SE-026-BR	SE-026-BR	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR	SE-031-BR
Sample Name			**SE-026-BR**	**SE-042-BR**	**SE-FD-02**	**SE-027-BR**	**SE-028-BR**	**SE-029-BR**	**SE-FD03**	**SE-030-BR**	**SE-031-BR**
Date Collected			**9/8/2003**	**8/31/2004**	**9/8/2003**	**9/8/2003**	**9/8/2003**	**9/9/2003**	**9/9/2003**	**9/9/2003**	**9/9/2003**
RISP East (ft)			**352690**	**352690**	**352690**	**352779**	**352320**	**351551**	**351551**	**350958**	**350323**
RISP North (ft)			**302735**	**302735**	**302735**	**303669**	**303984**	**303889**	**303889**	**304015**	**304420**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**19**	**16**	**14**	**38**	**12**	**16**	**8**	**13**	**17**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	2,390	2,270	2,070	5,490	2,390	2,820	2,720	4,410	3,470
Antimony	3.1	mg/kg dry wt	0.68 U	1.1 UJ	0.65 U	1.1 J	0.58 U	0.69 UJ	0.65 UJ	0.68 UJ	0.72 UJ
Arsenic	6	mg/kg dry wt	6.4	3.6 J	4.2	7.5	2.7	55.700001 J	57.099998 J	34.099998 J	38.099998 J
Barium	540	mg/kg dry wt	35.599998 J	45 U	19.200001 J	34.5 J	8.7 J	46 U	43 U	46 U	29.4 J
Beryllium	15	mg/kg dry wt	0.089 J	1.1 U	0.085 J	0.14 J	0.089 J	0.11 J	0.12 J	0.24 J	0.14 J
Cadmium	0.6	mg/kg dry wt	0.49 J	0.59 J	0.32 J	0.12 J	0.21 J	0.046 U	0.043 U	0.17 J	0.11 J
Calcium	- -	mg/kg dry wt	477 J	1,100 U	431 J	932 J	279 J	625 J	518 J	524 J	809 J
Chromium	26	mg/kg dry wt	17.799999 J	7.7 J	16.6 J	167 J	9.5 J	11.3	12.8	16.799999	10.8
Cobalt	470	mg/kg dry wt	1.9 J	11 U	1.6 J	5.6 J	1.1 J	2.1 J	1.6 J	2.8 J	2.7 J
Copper	16	mg/kg dry wt	21.299999	9.6	17.5	102	5.7	11.6	14.8	18.200001	11.2
Cyanide	1.1	mg/kg dry wt	0.23 UJ	0.52 U	0.23 UJ	0.3 UJ	0.2 UJ	0.2 U	0.2 U	0.19 U	0.23 U
Iron	2,300	mg/kg dry wt	5,880	6,270	4,910	8,830	4,720	16,000 J	17,300 J	14,900 J	13,200 J
Lead	31	mg/kg dry wt	31.4 J	11.5 J	20.799999 J	207 J	8.3 J	17.1 J	20 J	16.299999 J	13.3 J
Magnesium	- -	mg/kg dry wt	1,133 U	1,120	1,077 U	1,780	1,130	1,430	1,230	1,950	1,840
Manganese	180	mg/kg dry wt	88.599998 J	105	71.099998 J	126 J	45.299999 J	126 J	106 J	103 J	214 J
Mercury	0.15	mg/kg dry wt	0.09 J	0.06 UJ	0.1 J	0.86	0.049 U	0.057 U	0.054 U	0.055 U	0.05 U
Nickel	16	mg/kg dry wt	9.1 U	8.9 U	8.6 U	11 U	7.8 U	5.2 J	5.6 J	6.1 J	8.2 J
Potassium	- -	mg/kg dry wt	1,133 U	1,100 U	1,077 U	1,403 U	971 U	1,145 U	1,076 U	1,138 U	1,193 U
Selenium	39	mg/kg dry wt	31.200001 J	1.1 U	0.65 UJ	0.98 J	0.62 J	0.99 J	0.76 J	0.95 J	0.79 J
Silver	39	mg/kg dry wt	1.1 J	2.5 J	0.99 J	1.7 J	0.83 J	3.2	3.5	3	2.6
Sodium	- -	mg/kg dry wt	1,133 U	1,100 U	1,077 U	1,403 U	971 U	1,145 U	1,076 U	1,138 U	1,193 U
Thallium	0.52	mg/kg dry wt	0.91 U	0.45 UJ	0.86 U	1.1 U	0.78 U	0.92 U	0.86 U	0.91 U	0.95 U
Vanadium	55	mg/kg dry wt	5.3 J	11 U	4.9 J	10.9 J	5.8 J	11 U	11 U	17.799999 J	12 U
Zinc	120	mg/kg dry wt	58.900002 J	39.7 J	46.099998 J	134 J	29.4 J	29.9	33.099998	39.700001	45.099998

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			9/10/2003	9/10/2003	9/10/2003	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			349117	347976	347020	351597	350184	347061	346903	352890	352890
RISP North (ft)			305833	306035	307232	303879	304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			16	23	19	15	10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	4,140	2,340	2,960	3,510	5,270	2,340	2,480	4,010	4,560
Antimony	3.1	mg/kg dry wt	0.64 UJ	0.63 UJ	0.63 UJ	3.6	1.7 UJ	0.92 UJ	0.92 UJ	1.1 UJ	1.5 UJ
Arsenic	6	mg/kg dry wt	5.8 J	4.8 J	2.6 J	92.3 J	13.8 J	0.97 J	1.8 J	2 J	2.4 J
Barium	540	mg/kg dry wt	19.799999 J	15.8 J	24.1 J	40 U	43 U	46 U	47 U	46 U	48 U
Beryllium	15	mg/kg dry wt	0.13 J	0.082 J	0.12 J	1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U
Cadmium	0.6	mg/kg dry wt	1.9	0.23 J	0.33 J	1.2 J	0.53 J	0.46 J	0.25 J	0.55 J	0.53 J
Calcium	- -	mg/kg dry wt	603 J	466 J	637 J	1,000 U	1,100 U	1,100 U	1,200 U	1,100 U	1,200 U
Chromium	26	mg/kg dry wt	32.200001	7.8	10.4	11 J	9.4 J	6.3 J	9.3 J	13.1 J	12.7 J
Cobalt	470	mg/kg dry wt	2.3 J	1.6 J	2.2 J	10 U	11 U	11 U	12 U	11 U	12 U
Copper	16	mg/kg dry wt	22.5	11	132	10.1	8.1	11.8	10.5	7.3	8.5
Cyanide	1.1	mg/kg dry wt	0.21 U	0.25 U	0.21 U	0.55 U	0.53 U	0.58 U	0.5 U	0.59 U	0.51 U
Iron	2,300	mg/kg dry wt	7,920 J	7,270 J	6,880 J	26,800	13,600	4,700	4,850	7,730	8,390
Lead	31	mg/kg dry wt	32.900002 J	12.5 J	18.9 J	11.5 J	9.2 J	12.3 J	25.1 J	9.9 J	9.1 J
Magnesium	- -	mg/kg dry wt	2,190	1,090	1,560	1,560	3,880	1,100 U	1,200 U	1,890	2,030
Manganese	180	mg/kg dry wt	184 J	86.5 J	191 J	250	124	63.3	135	149	138
Mercury	0.15	mg/kg dry wt	0.19	0.18	0.059 U	0.059 UJ	0.046 UJ	0.062 UJ	0.049 UJ	0.048 UJ	0.055 UJ
Nickel	16	mg/kg dry wt	10.1	4.7 J	6.6 J	8 U	9.4 J	9.2 U	9.4 U	9.7 J	11.5 J
Potassium	- -	mg/kg dry wt	1,032 U	1,056 U	1,055 U	1,000 U	1,100 U	1,100 U	1,200 U	1,100 U	1,200 U
Selenium	39	mg/kg dry wt	0.88 J	0.63 U	0.63 U	2.3	1.4	1.1 U	2.5	1.1	1.2 U
Silver	39	mg/kg dry wt	1.5 J	1.4 J	1.4 J	10.2 J	4.9 J	2.3 UJ	2.4 UJ	3.3 J	4.8 J
Sodium	- -	mg/kg dry wt	1,032 U	1,056 U	1,055 U	1,000 U	1,100 U	1,100 U	1,200 U	1,100 U	1,200 U
Thallium	0.52	mg/kg dry wt	0.85 U	0.84 U	0.84 U	1.3 J	0.43 UJ	0.46 UJ	0.47 UJ	0.46 UJ	0.48 UJ
Vanadium	55	mg/kg dry wt	11 U	5.5 J	10.5 J	10 U	13.9	11 U	12 U	11 U	12 U
Zinc	120	mg/kg dry wt	62.900002	33.599998	49	68.3 J	32 J	38.2 J	35 J	37.8 J	47.8 J

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Sample Name			SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Date Collected			8/30/2004	8/31/2004	8/30/2004	8/31/2004	8/31/2004	9/1/2004	8/31/2004	9/1/2004	8/31/2004
RISP East (ft)			350628	349568	346826	345403	349116	349324	352957	345628	349320
RISP North (ft)			304243	305540	310413	312315	305924	306113	304470	312400	306016
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			31	12	13	17	50	11	31	26	40
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	0	NA	NA	NA	NA
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	2,180	4,610	3,120	4,150	9,090	8,440	4,890	7,270	36,500
Antimony	3.1	mg/kg dry wt	1.4 UJ	1.5 UJ	1.3 UJ	1.4 UJ	2.1 U	1.9 UJ	1.7 UJ	1.4 UJ	4.2
Arsenic	6	mg/kg dry wt	9.1 J	1.9 J	3.9 J	2.9 J	9 J	12.3 J	1.7 J	5.3	5.3 J
Barium	540	mg/kg dry wt	55 U	55.7 J	45 U	40 U	113 J	42 U	52 U	64	289 J
Beryllium	15	mg/kg dry wt	1.4 U	0.99 U	1.1 U	1 U	0.92 U	1.1 U	1.3 U	1.3 U	1.7 U
Cadmium	0.6	mg/kg dry wt	1.8 J	0.69 J	0.39 J	2.9	13.8	0.56 J	0.71 J	1.8 J	2.3 J
Calcium	- -	mg/kg dry wt	1,400 U	990 U	1,100 U	1,000 U	2,080 J	1,100 U	1,420 J	1,360 J	8,310 J
Chromium	26	mg/kg dry wt	10.9 J	11.3 J	17.3 J	29 J	163 J	16.9 J	19.6 J	37	125 J
Cobalt	470	mg/kg dry wt	14 U	11	11 U	10 U	9.2 U	11 U	13 U	13 U	32.5
Copper	16	mg/kg dry wt	19.5	23.2	11.9	37.6	210	14.8	30.3	22.4	86.2
Cyanide	1.1	mg/kg dry wt	0.67 U	0.49 U	0.51 U	0.52 U	4	0.53 U	0.65 U	0.66 U	0.71 U
Iron	2,300	mg/kg dry wt	4,750	11,000	7,480	8,270	12,200	16,400	10,300	9,440	54,500
Lead	31	mg/kg dry wt	20 J	11.4 J	26.1 J	46.2 J	185 J	6.7 J	58.9 J	19.8 J	28.6 J
Magnesium	- -	mg/kg dry wt	1,400 U	2,530	1,480	2,620	3,170	4,060	2,330	2,320	27,400
Manganese	180	mg/kg dry wt	59.9	826	175	160	160	518	161	296	1,900
Mercury	0.15	mg/kg dry wt	0.072 UJ	0.049 UJ	0.046 UJ	0.073 J	0.43	0.051 UJ	0.066 UJ	0.069 J	0.072 UJ
Nickel	16	mg/kg dry wt	11 U	15.1 J	8.9 U	19.5 J	49.2 J	20.8 J	11.3 J	20.3 J	82.7 J
Potassium	- -	mg/kg dry wt	1,400 U	1,340	1,100 U	1,000 U	1,300	1,180	1,300 U	1,300 U	13,500
Selenium	39	mg/kg dry wt	1.4 U	1.3	1.1 U	1 U	1.4	1.6	1.3 U	1.3 U	2.5
Silver	39	mg/kg dry wt	2.7 UJ	4.1 J	3.2 J	3.5 J	10.5 J	7.1 J	4.4 J	5.2	19.1 J
Sodium	- -	mg/kg dry wt	1,400 U	990 U	1,100 U	1,000 U	920 U	1,100 U	1,300 U	1,300 U	1,700 U
Thallium	0.52	mg/kg dry wt	0.55 UJ	0.4 UJ	0.45 UJ	0.4 UJ	0.6 J	0.42 UJ	0.52 UJ	0.51 UJ	0.66 UJ
Vanadium	55	mg/kg dry wt	14 U	11.6	11 U	10.7	23.9	18.1	16.3	13.9	86.6
Zinc	120	mg/kg dry wt	62.9 J	57.6 J	35.3 J	168 J	478 J	32.8 J	118 J	95.4 J	172 J

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-057-WT	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT	SE-063-WT	SE-064-BR	SE-065-BR
Sample Name			**SE-057-WT**	**SE-058-WT**	**SE-059-WT**	**SE-060-WT**	**SE-061-WT**	**SE-062-WT**	**SE-063-WT**	**SE-064-BR**	**SE-065-BR**
Date Collected			**9/2/2004**	**9/1/2004**	**9/1/2004**	**9/2/2004**	**9/1/2004**	**9/1/2004**	**9/6/2004**	**9/2/2004**	**9/2/2004**
RISP East (ft)			**352084**	**352774**	**351440**	**351895**	**352372**	**351508**	**350942**	**351791**	**352478**
RISP North (ft)			**304607**	**304071**	**305562**	**304852**	**304608**	**305289**	**305250**	**303170**	**302602**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**54**	**21**	**38**	**64**	**35**	**59**	**50**	**18**	**55**
Percent Moisture, Freeze Dried (%)			**9**	**NA**	**NA**	**0**	**NA**	**0**	**0**	**NA**	**0**
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	13,600	4,150	4,850	9,500	7,560	8,680	17,600	3,850	5,670
Antimony	3.1	mg/kg dry wt	1.7 J	0.54 UJ	1 UJ	1 J	1.3 UJ	1.4 UJ	1.6 J	0.85 J	0.59 J
Arsenic	6	mg/kg dry wt	4.5	1.2 J	2.3 J	2.7	1.2 J	5.8 J	7.3	4.2	4.3
Barium	540	mg/kg dry wt	106	51 U	61 U	78.1	60 U	82.2 J	127	47 U	37 U
Beryllium	15	mg/kg dry wt	1 U	1.3 U	1.5 U	1 U	1.5 U	1.4	1.2	1.2 U	0.92 U
Cadmium	0.6	mg/kg dry wt	1.7 J	0.34 J	0.57 J	1.9 J	0.8 J	1.6 J	2.5	3.9	0.49 J
Calcium	- -	mg/kg dry wt	2,450	1,300 U	2,240 J	1,950	1,500 U	1,950 J	3,010	1,200 U	1,280
Chromium	26	mg/kg dry wt	41.4	7.3	9.2 J	37.8	15.6	37.9 J	66.6	52.2	11.4
Cobalt	470	mg/kg dry wt	10 U	13 U	15 U	10 U	15 U	9.7 U	11.2	12 U	9.2 U
Copper	16	mg/kg dry wt	40.8	8.9	14.1	43.4	11.3	51.9	61.8 J	48.5	8.6
Cyanide	1.1	mg/kg dry wt	0.44 U	0.55 U	0.76 U	0.46 U	0.65 U	0.47 U	0.45 UJ	0.55 U	0.46 U
Iron	2,300	mg/kg dry wt	18,000	6,380	9,000	12,500	11,400	12,200	23,100	7,970	6,470
Lead	31	mg/kg dry wt	76.1	21.2 J	45.9 J	80.2	43.4 J	127 J	87.5	48.1	7.1
Magnesium	- -	mg/kg dry wt	5,460	1,510	1,790	3,510	2,750	2,700	6,860	1,530	1,810
Manganese	180	mg/kg dry wt	327	107	225	233	315	163	434	122	145
Mercury	0.15	mg/kg dry wt	0.17	0.063 UJ	0.07 UJ	0.18	0.07 UJ	0.18	0.25	0.14	0.048 UJ
Nickel	16	mg/kg dry wt	26	10 U	12 U	18.1	12 U	13.9 J	31.1	14	7.3 U
Potassium	- -	mg/kg dry wt	2,000	1,300 U	1,500 U	1,250	1,500 U	970 U	2,490	1,200 U	920 U
Selenium	39	mg/kg dry wt	2.3	1.3 U	1.5 U	1.9	1.5 U	1.9	3	1.2 U	0.93
Silver	39	mg/kg dry wt	9.4	3.2 J	4.1 J	6.9	5.7 J	6.9 J	12.5	4.5 J	3.8
Sodium	- -	mg/kg dry wt	1,000 U	1,300 U	1,500 U	1,000 U	1,500 U	970 U	890 U	1,200 U	920 U
Thallium	0.52	mg/kg dry wt	0.41 UJ	0.51 UJ	0.61 UJ	0.4 UJ	0.6 UJ	0.42 J	0.36 UJ	0.47 UJ	0.37 UJ
Vanadium	55	mg/kg dry wt	33.3	13 U	16.1	24.3	16.2	28.8	37.9	12 U	15.4
Zinc	120	mg/kg dry wt	138	40.6 J	53.3 J	124	81.3 J	134 J	163	155	34.3

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-066-BR	SE-067-BR	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Sample Name			SE-066-BR	SE-067-BR	SE-068-BR	SE-069-NP	SE-FD-12	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Date Collected			9/3/2004	9/3/2004	9/6/2004	9/2/2004	9/2/2004	9/2/2004	9/6/2004	9/6/2004	9/3/2004
RISP East (ft)			352272	352007	351730	353122	353122	350926	351567	351393	350848
RISP North (ft)			302718	302937	303184	303341	303341	304138	303403	303624	304184
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			46	19	28	63	67	32	22	13	42
Percent Moisture, Freeze Dried (%)			NA	NA	NA	8	0	NA	NA	NA	NA
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	4,770	4,000	2,670	12,400	8,220	9,260	3,330	3,670	11,300
Antimony	3.1	mg/kg dry wt	0.74 UJ	0.6 J	0.45 UJ	4.5	2.3	3.2	0.47 UJ	0.4 UJ	3.5
Arsenic	6	mg/kg dry wt	2.4 J	1.8 J	2.2 J	12.6	8.5	10.9	3.3	3.4	15.4
Barium	540	mg/kg dry wt	74 U	41 U	45 U	219 J	116 J	136	47 U	40 U	203
Beryllium	15	mg/kg dry wt	1.9 U	1 U	1.1 U	1.2	0.9 U	1.5 U	1.2 U	0.99 U	1.6 U
Cadmium	0.6	mg/kg dry wt	1.1 J	0.51 J	1.5	30.2 J	15.5 J	9.6	0.61	0.45	13.3
Calcium	- -	mg/kg dry wt	1,900 U	1,000 U	1,100 U	2,500	1,710	1,840	1,200 U	990 U	2,170
Chromium	26	mg/kg dry wt	14	9.8	16.2 EB	257 J	132 J	106	16.5 EB	8.7 EB	153
Cobalt	470	mg/kg dry wt	19 U	10 U	11 U	8.6	9 U	15 U	12 U	9.9 U	16 U
Copper	16	mg/kg dry wt	13.9	13.3	25.4 JEB	355 J	176 J	148	16.9 JEB	12.3 JEB	213
Cyanide	1.1	mg/kg dry wt	0.83 U	0.54 U	1.3 J	2 J	0.45 UJ	0.64 U	0.6 UJ	0.5 UJ	0.81 U
Iron	2,300	mg/kg dry wt	5,530	6,210	4,360	30,200 J	17,500 J	24,300	9,530	8,200	24,400
Lead	31	mg/kg dry wt	11.3	5.4	24.2	300 J	154 J	148	19.3	12.1	206
Magnesium	- -	mg/kg dry wt	1,900 U	1,750	1,100 U	4,040	2,690	3,460	1,430	1,680	3,990
Manganese	180	mg/kg dry wt	171	118	64.4	370	233	417	234	143	389
Mercury	0.15	mg/kg dry wt	0.088 UJ	0.049 UJ	0.13	0.66 J	0.35 J	0.35	0.056 UJ	0.052 UJ	0.58
Nickel	16	mg/kg dry wt	15 U	8.2 U	9 U	70.6 J	37.2 J	30.3	9.4 U	7.9 U	38.6
Potassium	- -	mg/kg dry wt	1,900 U	1,000 U	1,100 U	1,710	983	1,500 U	1,200 U	990 U	1,600 U
Selenium	39	mg/kg dry wt	1.9 U	1 U	1.1 U	3.7	2.6	3	1.4	1.1	3.4
Silver	39	mg/kg dry wt	3.7 UJ	3 J	2.4	18.8 J	11 J	12.2	4.3	3.4	14.3
Sodium	- -	mg/kg dry wt	1,900 U	1,000 U	1,100 U	860 U	900 U	1,500 U	1,200 U	990 U	1,600 U
Thallium	0.52	mg/kg dry wt	0.74 UJ	0.41 UJ	0.45 UJ	0.92 JEB	0.4 JEB	0.58 UJ	0.47 UJ	0.4 UJ	0.63 UJ
Vanadium	55	mg/kg dry wt	19 U	10 U	11 U	33.5	22.4	26	12 U	9.9 U	28.8
Zinc	120	mg/kg dry wt	124	46.3	62.4	666 J	343 J	271	35.6	31.3	345

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI	SE-081-BR
Sample Name			SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI	SE-081-BR
Date Collected			9/3/2004	9/3/2004	9/3/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351471	352417	352313	351696	352438	352447	352447	351994	352703
RISP North (ft)			303952	303137	303353	303493	303325	303531	303531	303594	302372
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			45	38	64	17	64	81	82	74	71
Percent Moisture, Freeze Dried (%)			NA	NA	8	NA	9	0	0	8	33
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	6,810	4,430	8,670	3,080	8,030	17,900	17,000	13,900	11,100
Antimony	3.1	mg/kg dry wt	2.7 J	1.2 J	2 J	0.43 UJ	5.6 J	5 J	4.6 J	3.4 J	2.4 J
Arsenic	6	mg/kg dry wt	25.4	4.7	8	1.9 J	15.2	29	28.7	18	17.3
Barium	540	mg/kg dry wt	95.6	54	119	43 U	451	237	221	199	202
Beryllium	15	mg/kg dry wt	1.6 U	1.3 U	1.1 U	1.1 U	0.96 U	1.7	1.6	1.3	1.7 U
Cadmium	0.6	mg/kg dry wt	7.2	5.9	11.1	2.2	15.9	23.2	21.5	19.8	14.8
Calcium	- -	mg/kg dry wt	1,830	1,300 U	1,570	1,100 U	3,090	2,940	2,820	2,650	2,390
Chromium	26	mg/kg dry wt	88.4	57.3	121	8.5 EB	354	220	203	170	149
Cobalt	470	mg/kg dry wt	16 U	13 U	11 U	11 U	9.6 U	16	15.6	12.6	17 U
Copper	16	mg/kg dry wt	166	67.6	160	12.7 JEB	439 J	337 J	312 J	273 J	234 J
Cyanide	1.1	mg/kg dry wt	0.84 U	0.65 U	0.48 U	0.52 UJ	0.5 J	0.96	1.1 J	0.92 J	0.72 UJ
Iron	2,300	mg/kg dry wt	14,800	7,650	13,500	6,070	21,200	40,200	38,600	29,100	24,500
Lead	31	mg/kg dry wt	145	77.9	152	10.5	1,760	318	298	239	207
Magnesium	- -	mg/kg dry wt	2,490	1,600	3,070	1,440	3,530	5,440	5,220	4,520	3,600
Manganese	180	mg/kg dry wt	166	179	239	75.8	254	872	830	630	672
Mercury	0.15	mg/kg dry wt	0.53	0.25	0.6	0.048 UJ	0.54	0.9	0.88	0.72	0.61
Nickel	16	mg/kg dry wt	13 U	20	30.6	8.5 U	60.8	60.6	57.6	49.7	37.7
Potassium	- -	mg/kg dry wt	1,600 U	1,300 U	1,100 U	1,100 U	1,040	2,310	2,240	1,790	1,700 U
Selenium	39	mg/kg dry wt	2.1	1.3 U	2	1.1 U	3.2	4.8	5.2	4.2	3.6
Silver	39	mg/kg dry wt	8.8	4.4 J	8.6	2.8	11.7	23.3	22.1	17.1	14.6
Sodium	- -	mg/kg dry wt	1,600 U	1,300 U	1,100 U	1,100 U	960 U	940 U	880 U	900 U	1,700 U
Thallium	0.52	mg/kg dry wt	0.65 UJ	0.53 UJ	0.43 UJ	0.43 UJ	0.38 UJ	0.38 UJ	0.35 UJ	0.36 UJ	0.69 UJ
Vanadium	55	mg/kg dry wt	20.2	13 U	19.4	11 U	31.1	42.6	40.6	30.3	27.1
Zinc	120	mg/kg dry wt	243	272	485	84.2	1,460	972	897	824	477

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			**SE-082-BR**	**SE-083-BR**	**SE-084-UI**	**SE-085-UI**	**SE-086-UI**	**SE-087-UI**	**T05BL-001**	**T05BL-002**	**T05BL-003**
Date Collected			**9/6/2004**	**9/6/2004**	**9/7/2004**	**9/7/2004**	**9/7/2004**	**9/7/2004**	**6/23/2005**	**6/23/2005**	**6/23/2005**
RISP East (ft)			**352820**	**352717**	**352049**	**352447**	**352149**	**352478**	**346599**	**346885**	**344937**
RISP North (ft)			**302413**	**302444**	**303465**	**303427**	**303734**	**303603**	**310832**	**309261**	**313353**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**25**	**36**	**21**	**21**	**12**	**56**	**31.4**	**25.1**	**76.5**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**8**	**NA**	**NA**	**27.1**
METALS AND CYANIDE											
Aluminum	7,600	mg/kg dry wt	2,570	4,200	2,310	2,880	2,820	8,720	2,900	2,400	12,000
Antimony	3.1	mg/kg dry wt	0.52 UJ	0.47 UJ	0.36 UJ	1.1 J	0.44 UJ	1.8 J	0.76 J	0.12 UJ	0.52 J
Arsenic	6	mg/kg dry wt	2.6 J	4.8	1.1 J	12.8	0.44 UJ	21.5	4.5	1.3	10
Barium	540	mg/kg dry wt	52 U	47 U	36 U	46 U	44 U	72.4	35	12	82
Beryllium	15	mg/kg dry wt	1.3 U	1.2 U	0.89 U	1.2 U	1.1 U	0.95 U	0.22	0.16	0.88
Cadmium	0.6	mg/kg dry wt	1.8	3.5	0.84	1.6	0.45	2.6	2	0.2	9.9
Calcium	- -	mg/kg dry wt	1,300 U	1,200 U	890 U	1,200 U	1,100 U	1,960	870	470	3,300 J
Chromium	26	mg/kg dry wt	18.4 EB	36.8	13.6 EB	58.4	4.8 EB	257	19	10	110
Cobalt	470	mg/kg dry wt	13 U	12 U	8.9 U	12 U	11 U	9.5 U	2.4	1.2	12
Copper	16	mg/kg dry wt	26.6 JEB	51.4 JEB	16.4 JEB	42 JEB	5.5 U	141 J	38	13	170
Cyanide	1.1	mg/kg dry wt	0.59 UJ	0.65 UJ	0.51 UJ	5.7 J	0.47 UJ	0.46 UJ	NA	NA	NA
Iron	2,300	mg/kg dry wt	4,980	8,050	4,320	16,400	5,690	14,700	5,500	4,200	25,000
Lead	31	mg/kg dry wt	41.3	47.2	27.1	60.7	3	192	34	18	450
Magnesium	- -	mg/kg dry wt	1,300 U	1,640	950	1,200 U	1,280	2,430	1,100	820	4,100
Manganese	180	mg/kg dry wt	87.9	140	63.3	138	73.6	280	62	49	200 J
Mercury	0.15	mg/kg dry wt	0.096 J	0.15	0.064 J	0.6	0.045 UJ	1.1	0.32 J	0.024 J	0.54
Nickel	16	mg/kg dry wt	10 U	15.7	7.1 U	9.2 U	8.8 U	15.8	8	4.3	52
Potassium	- -	mg/kg dry wt	1,300 U	1,200 U	890 U	1,200 U	1,100 U	950 U	440	290	1,500
Selenium	39	mg/kg dry wt	1.3 U	1.2 U	0.89 U	2.1	1.1 U	2.4	0.13 U	0.18	1.5
Silver	39	mg/kg dry wt	2.6 U	4.3	2.1	6.7	2.6	8.1	0.33	0.18	1.7
Sodium	- -	mg/kg dry wt	1,300 U	1,200 U	890 U	1,200 U	1,100 U	950 U	63	55	2,500
Thallium	0.52	mg/kg dry wt	0.52 UJ	0.47 UJ	0.36 UJ	0.46 UJ	0.44 UJ	0.38 UJ	0.059	0.026	0.4
Vanadium	55	mg/kg dry wt	13 U	12 U	8.9 U	12 U	11 U	19	6.6	4.6	31
Zinc	120	mg/kg dry wt	73.1	145	43.8	147	29.5	198	96	24	680 J

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			**T05BL-004**	**T05BL-005**	**T05BL-006**	**T05BL-007**	**T05BR-001**	**T05BR-002**	**T05BR-003**	**T05BR-004**	**BD062205**	**T05BR-005**
Date Collected			**6/23/2005**	**6/23/2005**	**6/23/2005**	**6/23/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/22/2005**	**6/22/2005**	**6/22/2005**
RISP East (ft)			**345416**	**345374**	**344036**	**344083**	**352685**	**351655**	**352810**	**351070**	**351070**	**353080**
RISP North (ft)			**312732**	**312447**	**313799**	**314193**	**302766**	**303928**	**303693**	**303948**	**303948**	**303208**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**73.6**	**39**	**59.9**	**33.1**	**31.6**	**15.8**	**56.2**	**33.3**	**32.8**	**67.2**
Percent Moisture, Freeze Dried (%)			**18.8**	**NA**	**7.8**	**NA**	**NA**	**NA**	**14.1**	**NA**	**NA**	**22.3**
METALS AND CYANIDE												
Aluminum	7,600	mg/kg dry wt	12,000	6,300	8,100	3,300	3,100	1,800	4,800	2,300	2,700	12,000
Antimony	3.1	mg/kg dry wt	0.47 J	0.59 J	0.6 J	0.26 J	0.76 J	0.1 UJ	0.26 J	0.14 UJ	0.29 J	0.6 J
Arsenic	6	mg/kg dry wt	8.1	12	8	3.4	8.8	3.9	5.7	8.3	11	13
Barium	540	mg/kg dry wt	79	100	140	52	46	8.9	73	24	30	200
Beryllium	15	mg/kg dry wt	0.73	0.53	0.66	0.27	0.27	0.11	0.38	0.17	0.19	0.9
Cadmium	0.6	mg/kg dry wt	9.8	11	12	3.1	1.6	0.39	4.1	1.1	1.4	12
Calcium	- -	mg/kg dry wt	3,100 J	1,800	2,200 J	960	670	240	1,300 J	660	1,100	2,100 J
Chromium	26	mg/kg dry wt	120	86	110	21	33	6	38	13	16	140
Cobalt	470	mg/kg dry wt	11	8.1	7.5	3.5	3.1	1.3	4	2.2	2.9	7.1
Copper	16	mg/kg dry wt	160	140	180	47	41	11	65	29	36	220
Cyanide	1.1	mg/kg dry wt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	2,300	mg/kg dry wt	17,000	15,000	16,000	7,200	9,500	3,600	11,000	6,100	7,400	31,000
Lead	31	mg/kg dry wt	300	160	160	48	46	11	73	23 J	42 J	190
Magnesium	- -	mg/kg dry wt	2,900	2,200	2,800	1,200	1,100	680	1,700	870	1,200	3,400
Manganese	180	mg/kg dry wt	160 J	290	300 J	160	290	30	210 J	94	120	380 J
Mercury	0.15	mg/kg dry wt	0.47	0.28 J	0.41	0.11 J	0.097 J	0.017 J	0.14	0.11 J	0.061 J	0.6
Nickel	16	mg/kg dry wt	46	36	34	11	7.8	4.5	15	5.8	7.9	31
Potassium	- -	mg/kg dry wt	1,100	1,100	1,000	500	440	310	510	340	460	1,300
Selenium	39	mg/kg dry wt	1.3	0.58	0.99	0.21	0.22	0.11 U	0.37	0.13 U	0.15 U	1.2
Silver	39	mg/kg dry wt	2.1	0.84	2.7	0.43	0.37	0.08	0.71	0.3	0.28	3.3
Sodium	- -	mg/kg dry wt	2,100	150	160	92	76	28	110	57	58	210
Thallium	0.52	mg/kg dry wt	0.26	0.16	0.2	0.075	0.051	0.023	0.1	0.039	0.056	0.25
Vanadium	55	mg/kg dry wt	24	15	18	7.1	7	3.4	11	5.5	6.5	23
Zinc	120	mg/kg dry wt	490 J	410	380 J	120	95	20	160 J	62	64	390 J

TABLE 4-27
SEDIMENT RESULTS FOR INORGANICS (mg/kg dry wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			**T05BR-006**	**T05BR-007**	**T05PA-001**	**T05PA-003**	**T05PD-002**	**BD062105**	**T05PF-004**	**T05WB-001**	**T05WB-002**	**T05WD-003**
Date Collected			**6/22/2005**	**6/23/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**
RISP East (ft)			**350100**	**351910**	**352619**	**351885**	**352427**	**352427**	**352768**	**353596**	**351240**	**349545**
RISP North (ft)			**304801**	**303103**	**303440**	**303634**	**303165**	**303165**	**302412**	**304467**	**305262**	**305938**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**32.4**	**38.8**	**48**	**59.2**	**35.4**	**35.4**	**63**	**36.2**	**69.4**	**32.8**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**7.1**	**18.2**	**NA**	**NA**	**10.5**	**NA**	**9.8**	**NA**
METALS AND CYANIDE												
Aluminum	7,600	mg/kg dry wt	3,300	3,500	8,900	12,000	5,200	4,700	7,400	5,700	17,000	31,000
Antimony	3.1	mg/kg dry wt	0.32 J	0.2 J	0.27 J	0.73 J	0.47 J	0.46 J	0.42 J	0.15 UJ	0.34 J	0.12 UJ
Arsenic	6	mg/kg dry wt	3.6	3.8	12	18	5.8	5.5	12	2.3	9.3	5.4
Barium	540	mg/kg dry wt	29	37	80	150	51	44	120	26	120	200
Beryllium	15	mg/kg dry wt	0.2	0.29	0.63	0.91	0.35	0.3	0.65	0.36	1.4	1
Cadmium	0.6	mg/kg dry wt	2.9	2.6	12	25	4.6	4	8.9	0.26	0.96	0.22
Calcium	- -	mg/kg dry wt	580	810	1,400 J	2,000 J	1,100	950	1,800 J	900	4,900 J	6,300
Chromium	26	mg/kg dry wt	47	24	98	210	86	70	96	12	98	78
Cobalt	470	mg/kg dry wt	2	2.8	9.1	14	4.8	4.4	7.7	3.1	12	26
Copper	16	mg/kg dry wt	43	39	130	260	72	69	150	11	79	59
Cyanide	1.1	mg/kg dry wt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	2,300	mg/kg dry wt	5,100	7,300	17,000	24,000	8,200	7,300	15,000	9,100	24,000	57,000
Lead	31	mg/kg dry wt	52	44	120	240	96	94	180	27	160	18
Magnesium	- -	mg/kg dry wt	990	1,200	2,900	3,600	1,600	1,500	2,600	2,000	5,500	21,000
Manganese	180	mg/kg dry wt	58	110	280 J	450 J	140	120	360 J	110	360 J	1,400
Mercury	0.15	mg/kg dry wt	0.2 J	0.095 J	0.31	0.67	0.26 J	0.29 J	0.35	0.032 J	0.39	0.016 J
Nickel	16	mg/kg dry wt	6.7	9.3	33	54	19	18	26	9.2	26	60
Potassium	- -	mg/kg dry wt	370	420	1,200	1,300	480	420	910	390	1,300	11,000
Selenium	39	mg/kg dry wt	0.24	0.36	0.54	1	0.29	0.26	0.76	0.15 U	1.5	0.16 U
Silver	39	mg/kg dry wt	0.59	0.47	1.4	3	0.44	0.49	2.1	0.088	0.65	0.082
Sodium	- -	mg/kg dry wt	57	84	130	130	99	86	190	100	290	130
Thallium	0.52	mg/kg dry wt	0.054	0.063	0.15	0.25	0.1	0.087	0.15	0.071	0.27	0.52
Vanadium	55	mg/kg dry wt	7.2	7.3	21	27	12	9.9	18	13	46	60
Zinc	120	mg/kg dry wt	150	100	400 J	950 J	220	200	290 J	50	130 J	140

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Sample Name			**SE-001-UI**	**SE-002-UI**	**SE-003-UI**	**SE-FD01**	**SE-004-UI**	**SE-005-UI**	**SE-006-UI**	**SE-007-UI**	**SE-008-BR**
Date Collected			**8/28/2003**	**8/28/2003**	**8/29/2003**	**8/29/2003**	**8/29/2003**	**8/29/2003**	**8/29/2003**	**9/2/2003**	**9/2/2003**
RISP East (ft)			**352478**	**352322**	**352279**	**352279**	**352172**	**351747**	**352761**	**352484**	**352735**
RISP North (ft)			**303295**	**303548**	**303356**	**303356**	**303168**	**303610**	**303287**	**303117**	**302367**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**53**	**69**	**19**	**17**	**50**	**29**	**33**	**33**	**24**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	**PAL**	**Units**	**SE-009-WT**	**SE-010-WT**	**SE-011-WT**	**SE-012-WT**	**SE-013-WT**	**SE-014-WT**	**SE-015-WT**	**SE-016-WT**	**SE-017-WT**
Sample Name			**SE-009-WT**	**SE-010-WT**	**SE-011-WT**	**SE-012-WT**	**SE-013-WT**	**SE-014-WT**	**SE-015-WT**	**SE-016-WT**	**SE-017-WT**
Date Collected			**9/3/2003**	**9/3/2003**	**9/3/2003**	**9/3/2003**	**9/4/2003**	**9/4/2003**	**9/4/2003**	**9/4/2003**	**9/5/2003**
RISP East (ft)			**352646**	**352842**	**352504**	**351470**	**352327**	**351040**	**351365**	**349270**	**350890**
RISP North (ft)			**304086**	**304421**	**304330**	**305229**	**304194**	**305533**	**305705**	**306035**	**305078**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**19**	**64**	**39**	**48**	**37**	**60**	**19**	**44**	**46**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	**PAL**	**Units**	**SE-018-WT**	**SE-019-LF**	**SE-020-LF**	**SE-021-NP**	**SE-022-BR**	**SE-022-BR**	**SE-023-BR**	**SE-024-BR**	**SE-025-BR**
Sample Name			**SE-018-WT**	**SE-019-LF**	**SE-020-LF**	**SE-021-NP**	**SE-022A-BR**	**SE-022-BR**	**SE-023-BR**	**SE-024-BR**	**SE-025-BR**
Date Collected			**9/5/2003**	**9/5/2003**	**9/5/2003**	**9/5/2003**	**9/8/2003**	**9/5/2003**	**9/6/2003**	**9/6/2003**	**9/6/2003**
RISP East (ft)			**350496**	**351002**	**351481**	**353121**	**345490**	**345490**	**352567**	**352135**	**351456**
RISP North (ft)			**305336**	**304113**	**303930**	**303354**	**312537**	**312537**	**302605**	**302922**	**303575**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**40**	**48**	**53**	**58**	**NA**	**29**	**19**	**33**	**13**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	**PAL**	**Units**	**SE-026-BR**	**SE-026-BR**	**SE-026-BR**	**SE-027-BR**	**SE-028-BR**	**SE-029-BR**	**SE-029-BR**	**SE-030-BR**	**SE-031-BR**
Sample Name			**SE-026-BR**	**SE-042-BR**	**SE-FD-02**	**SE-027-BR**	**SE-028-BR**	**SE-029-BR**	**SE-FD03**	**SE-030-BR**	**SE-031-BR**
Date Collected			**9/8/2003**	**8/31/2004**	**9/8/2003**	**9/8/2003**	**9/8/2003**	**9/9/2003**	**9/9/2003**	**9/9/2003**	**9/9/2003**
RISP East (ft)			**352690**	**352690**	**352690**	**352779**	**352320**	**351551**	**351551**	**350958**	**350323**
RISP North (ft)			**302735**	**302735**	**302735**	**303669**	**303984**	**303889**	**303889**	**304015**	**304420**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**19**	**16**	**14**	**38**	**12**	**16**	**8**	**13**	**17**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			9/10/2003	9/10/2003	9/10/2003	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			349117	347976	347020	351597	350184	347061	346903	352890	352890
RISP North (ft)			305833	306035	307232	303879	304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			16	23	19	15	10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Sample Name			**SE-047-BR**	**SE-048-BR**	**SE-049-BR**	**SE-050-BR**	**SE-051-DF**	**SE-052-WT**	**SE-053-WT**	**SE-054-BR**	**SE-055-WT**
Date Collected			**8/30/2004**	**8/31/2004**	**8/30/2004**	**8/31/2004**	**8/31/2004**	**9/1/2004**	**8/31/2004**	**9/1/2004**	**8/31/2004**
RISP East (ft)			**350628**	**349568**	**346826**	**345403**	**349116**	**349324**	**352957**	**345628**	**349320**
RISP North (ft)			**304243**	**305540**	**310413**	**312315**	**305924**	**306113**	**304470**	**312400**	**306016**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**31**	**12**	**13**	**17**	**50**	**11**	**31**	**26**	**40**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**0**	**NA**	**NA**	**NA**	**NA**
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	**PAL**	**Units**	**SE-057-WT**	**SE-058-WT**	**SE-059-WT**	**SE-060-WT**	**SE-061-WT**	**SE-062-WT**	**SE-063-WT**	**SE-064-BR**	**SE-065-BR**
Sample Name			**SE-057-WT**	**SE-058-WT**	**SE-059-WT**	**SE-060-WT**	**SE-061-WT**	**SE-062-WT**	**SE-063-WT**	**SE-064-BR**	**SE-065-BR**
Date Collected			**9/2/2004**	**9/1/2004**	**9/1/2004**	**9/2/2004**	**9/1/2004**	**9/1/2004**	**9/6/2004**	**9/2/2004**	**9/2/2004**
RISP East (ft)			**352084**	**352774**	**351440**	**351895**	**352372**	**351508**	**350942**	**351791**	**352478**
RISP North (ft)			**304607**	**304071**	**305562**	**304852**	**304608**	**305289**	**305250**	**303170**	**302602**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**54**	**21**	**38**	**64**	**35**	**59**	**50**	**18**	**55**
Percent Moisture, Freeze Dried (%)			**9**	**NA**	**NA**	**0**	**NA**	**0**	**0**	**NA**	**0**
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-066-BR	SE-067-BR	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Sample Name			**SE-066-BR**	**SE-067-BR**	**SE-068-BR**	**SE-069-NP**	**SE-FD-12**	**SE-070-LF**	**SE-071-BR**	**SE-072-BR**	**SE-073-LF**
Date Collected			**9/3/2004**	**9/3/2004**	**9/6/2004**	**9/2/2004**	**9/2/2004**	**9/2/2004**	**9/6/2004**	**9/6/2004**	**9/3/2004**
RISP East (ft)			**352272**	**352007**	**351730**	**353122**	**353122**	**350926**	**351567**	**351393**	**350848**
RISP North (ft)			**302718**	**302937**	**303184**	**303341**	**303341**	**304138**	**303403**	**303624**	**304184**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**46**	**19**	**28**	**63**	**67**	**32**	**22**	**13**	**42**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**8**	**0**	**NA**	**NA**	**NA**	**NA**
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI	SE-081-BR
Sample Name			SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-FD-13	SE-080-UI	SE-081-BR
Date Collected			9/3/2004	9/3/2004	9/3/2004	9/6/2004	9/6/2004	9/7/2004	9/7/2004	9/7/2004	9/7/2004
RISP East (ft)			351471	352417	352313	351696	352438	352447	352447	351994	352703
RISP North (ft)			303952	303137	303353	303493	303325	303531	303531	303594	302372
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			45	38	64	17	64	81	82	74	71
Percent Moisture, Freeze Dried (%)			NA	NA	8	NA	9	0	0	8	33
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Sand	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
% Silt	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	**PAL**	**Units**	**SE-082-BR**	**SE-083-BR**	**SE-084-UI**	**SE-085-UI**	**SE-086-UI**	**SE-087-UI**	**T05BL-001**	**T05BL-002**	**T05BL-003**
Sample Name			**SE-082-BR**	**SE-083-BR**	**SE-084-UI**	**SE-085-UI**	**SE-086-UI**	**SE-087-UI**	**T05BL-001**	**T05BL-002**	**T05BL-003**
Date Collected			**9/6/2004**	**9/6/2004**	**9/7/2004**	**9/7/2004**	**9/7/2004**	**9/7/2004**	**6/23/2005**	**6/23/2005**	**6/23/2005**
RISP East (ft)			**352820**	**352717**	**352049**	**352447**	**352149**	**352478**	**346599**	**346885**	**344937**
RISP North (ft)			**302413**	**302444**	**303465**	**303427**	**303734**	**303603**	**310832**	**309261**	**313353**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**25**	**36**	**21**	**21**	**12**	**56**	**31.4**	**25.1**	**76.5**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**8**	**NA**	**NA**	**27.1**
AVS/SEM											
Acid volatile sulfide (AVS)	- -	µmol/g	NA	NA	NA	NA	NA	NA	1.5 J	0.6 UJ	16 J
SEM	- -	µmol/g	NA	NA	NA	NA	NA	NA	1.6	1.5	12 J
SEM-AVS	- -	µmol/g	NA	NA	NA	NA	NA	NA	0.031 J	1.5 J	-3.3 J
SEM-Cadmium	- -	µmol/g	NA	NA	NA	NA	NA	NA	0.019 U	0.017 U	0.077 UJ
SEM-Copper	- -	µmol/g	NA	NA	NA	NA	NA	NA	0.32	0.48	1.1 J
SEM-Lead	- -	µmol/g	NA	NA	NA	NA	NA	NA	0.18	0.32	1.6 J
SEM-Nickel	- -	µmol/g	NA	NA	NA	NA	NA	NA	0.18 U	0.16 U	0.73 UJ
SEM-Zinc	- -	µmol/g	NA	NA	NA	NA	NA	NA	1.1	0.74	9.7 J
TOC & Grain Size											
% Clay	- -	%	NA	NA	NA	NA	NA	NA	5.6	0	18.2
% Coarse	- -	%	NA	NA	NA	NA	NA	NA	0.2	8	0.1
% Sand	- -	%	NA	NA	NA	NA	NA	NA	80.1	89.5	20.8
% Silt	- -	%	NA	NA	NA	NA	NA	NA	14	2.4	60.9
Average total organic carbon (TOC)	- -	%	NA	NA	NA	NA	NA	NA	1	0.65	10

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002	T05BR-003	T05BR-004	BD062205	T05BR-005
Date Collected			6/23/2005	6/23/2005	6/23/2005	6/23/2005	6/21/2005	6/21/2005	6/21/2005	6/22/2005	6/22/2005	6/22/2005
RISP East (ft)			345416	345374	344036	344083	352685	351655	352810	351070	351070	353080
RISP North (ft)			312732	312447	313799	314193	302766	303928	303693	303948	303948	303208
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Percent Moisture (%)			73.6	39	59.9	33.1	31.6	15.8	56.2	33.3	32.8	67.2
Percent Moisture, Freeze Dried (%)			18.8	NA	7.8	NA	NA	NA	14.1	NA	NA	22.3
AVS/SEM												
Acid volatile sulfide (AVS)	- -	µmol/g	8.4 J	8.1 J	12 J	2.4 J	0.55 UJ	0.42 UJ	1.9 J	0.7 J	2.8 J	3.9 J
SEM	- -	µmol/g	6.2 J	2.3	4.6	1.6	0.8	0.21	2.4	0.8	0.82	6.6
SEM-AVS	- -	µmol/g	-2.2 J	-5.8 J	-7.7 J	-0.9 J	0.8 J	0.21 J	0.41 J	0.1 J	-2 J	2.6 J
SEM-Cadmium	- -	µmol/g	0.092 UJ	0.036	0.061	0.017	0.016 U	0.012 U	0.026 U	0.015 U	0.016 U	0.079
SEM-Copper	- -	µmol/g	0.82 UJ	0.32	0.68	0.26	0.17	0.11 U	0.4	0.2	0.17	1.5
SEM-Lead	- -	µmol/g	0.97 J	0.23	0.46	0.17	0.1	0.062	0.32	0.12	0.12	0.72
SEM-Nickel	- -	µmol/g	0.88 UJ	0.21 U	0.46 U	0.14 U	0.15 U	0.11 U	0.25 U	0.14 U	0.15 U	0.63 U
SEM-Zinc	- -	µmol/g	5.2 J	1.7	3.4	1.1	0.53	0.15	1.6	0.48	0.53	4.2
TOC & Grain Size												
% Clay	- -	%	8.6	9.2	8	5.8	8.9	2	7.4	6.7	6	6.1
% Coarse	- -	%	0.1	0	0	0	0	16.2	1	0	0	0
% Sand	- -	%	20.3	80.1	48.7	84.1	84.3	76.9	78.4	87.3	87.4	18.5
% Silt	- -	%	70.9	10.8	43.3	10.1	6.8	4.8	13.2	6	6.5	75.3
Average total organic carbon (TOC)	- -	%	8.7	1.8	4.6	1.1	1.3	0.12	1.2	1	0.77	5.9

TABLE 4-28
SEDIMENT RESULTS FOR AVS/SEM AND TOC AND GRAIN SIZE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	**PAL**	**Units**	**T05BR-006**	**T05BR-007**	**T05PA-001**	**T05PA-003**	**T05PD-002**	**T05PD-002**	**T05PF-004**	**T05WB-001**	**T05WB-002**	**T05WD-003**
Sample Name			**T05BR-006**	**T05BR-007**	**T05PA-001**	**T05PA-003**	**T05PD-002**	**BD062105**	**T05PF-004**	**T05WB-001**	**T05WB-002**	**T05WD-003**
Date Collected			**6/22/2005**	**6/23/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**
RISP East (ft)			**350100**	**351910**	**352619**	**351885**	**352427**	**352427**	**352768**	**353596**	**351240**	**349545**
RISP North (ft)			**304801**	**303103**	**303440**	**303634**	**303165**	**303165**	**302412**	**304467**	**305262**	**305938**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**32.4**	**38.8**	**48**	**59.2**	**35.4**	**35.4**	**63**	**36.2**	**69.4**	**32.8**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**7.1**	**18.2**	**NA**	**NA**	**10.5**	**NA**	**9.8**	**NA**
AVS/SEM												
Acid volatile sulfide (AVS)	- -	µmol/g	0.54 UJ	1.9 J	26 J	7 J	1.7 J	1.9 J	11 J	0.6 UJ	0.81 UJ	0.58 UJ
SEM	- -	µmol/g	0.57	1.5	7.2	13	1.3	1.4	6	0.81	2.6	0.95
SEM-AVS	- -	µmol/g	0.57 J	-0.38 J	-19 J	6.2 J	-0.41 J	-0.5 J	-5.4 J	0.81 J	2.6 J	0.95 J
SEM-Cadmium	- -	µmol/g	0.015 U	0.023 U	0.12	0.17	0.016 U	0.018 U	0.075	0.017 U	0.023 U	0.017 U
SEM-Copper	- -	µmol/g	0.17	0.32	0.45 U	1.9	0.18	0.18	1.2	0.17	1.1	0.28
SEM-Lead	- -	µmol/g	0.1	0.18	0.58	0.84	0.17	0.21 J	0.69	0.31	0.93	0.069
SEM-Nickel	- -	µmol/g	0.15 U	0.22 U	0.49 U	0.47 U	0.16 U	0.17 U	0.47 U	0.16 U	0.22 U	0.17
SEM-Zinc	- -	µmol/g	0.3	1	6.5	10	0.94	1	4.1	0.33	0.56	0.43
TOC & Grain Size												
% Clay	- -	%	8.9	6.3	9.2	10.8	7.4	7.4	7.1	7.9	16.8	11.1
% Coarse	- -	%	0	0	1.1	0	0	0.1	1.8	0.9	0	0
% Sand	- -	%	80.5	83.9	61.3	20.8	78.8	79.9	67.6	79.6	18.7	3.6
% Silt	- -	%	10.6	9.8	28.4	68.5	13.8	12.6	23.6	11.6	64.5	85.4
Average total organic carbon (TOC)	- -	%	1.1	1.2	2.2	6.1	3.1	1.7	7.7	1.4	6	1.2

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-001-UI	SE-002-UI	SE-003-UI	SE-003-UI	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Sample Name			SE-001-UI	SE-002-UI	SE-003-UI	SE-FD01	SE-004-UI	SE-005-UI	SE-006-UI	SE-007-UI	SE-008-BR
Date Collected			8/28/2003	8/28/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	9/2/2003	9/2/2003
RISP East (ft)			352478	352322	352279	352279	352172	351747	352761	352484	352735
RISP North (ft)			303295	303548	303356	303356	303168	303610	303287	303117	302367
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			53	69	19	17	50	29	33	33	24
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
Conventional Params											
TCO	- -	%	12	9.7	0.9	0.6	7	2	2	8.6	1.9
Total Organic Carbon	- -	mg/kg dry wt	NA	NA	11,000	3,400	NA	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-009-WT	SE-010-WT	SE-011-WT	SE-012-WT	SE-013-WT	SE-014-WT	SE-015-WT	SE-016-WT	SE-017-WT
Sample Name			**SE-009-WT**	**SE-010-WT**	**SE-011-WT**	**SE-012-WT**	**SE-013-WT**	**SE-014-WT**	**SE-015-WT**	**SE-016-WT**	**SE-017-WT**
Date Collected			**9/3/2003**	**9/3/2003**	**9/3/2003**	**9/3/2003**	**9/4/2003**	**9/4/2003**	**9/4/2003**	**9/4/2003**	**9/5/2003**
RISP East (ft)			**352646**	**352842**	**352504**	**351470**	**352327**	**351040**	**351365**	**349270**	**350890**
RISP North (ft)			**304086**	**304421**	**304330**	**305229**	**304194**	**305533**	**305705**	**306035**	**305078**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**19**	**64**	**39**	**48**	**37**	**60**	**19**	**44**	**46**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Conventional Params											
TCO	- -	%	1	14	1.4	7	2.7	14	2.1	3.6	3.4
Total Organic Carbon	- -	mg/kg dry wt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022-BR	SE-022-BR	SE-023-BR	SE-024-BR	SE-025-BR
Sample Name			SE-018-WT	SE-019-LF	SE-020-LF	SE-021-NP	SE-022A-BR	SE-022-BR	SE-023-BR	SE-024-BR	SE-025-BR
Date Collected			9/5/2003	9/5/2003	9/5/2003	9/5/2003	9/8/2003	9/5/2003	9/6/2003	9/6/2003	9/6/2003
RISP East (ft)			350496	351002	351481	353121	345490	345490	352567	352135	351456
RISP North (ft)			305336	304113	303930	303354	312537	312537	302605	302922	303575
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			40	48	53	58	NA	29	19	33	13
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
Conventional Params											
TCO	- -	%	5.6	7.5	5.9	7.9	NA	2.3	0.7	8.2	0.7
Total Organic Carbon	- -	mg/kg dry wt	NA	NA	NA	NA	NA	NA	2,600	NA	5,000
Water Parameters											
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-026-BR	SE-026-BR	SE-026-BR	SE-027-BR	SE-028-BR	SE-029-BR	SE-029-BR	SE-030-BR	SE-031-BR
Sample Name			**SE-026-BR**	**SE-042-BR**	**SE-FD-02**	**SE-027-BR**	**SE-028-BR**	**SE-029-BR**	**SE-FD03**	**SE-030-BR**	**SE-031-BR**
Date Collected			**9/8/2003**	**8/31/2004**	**9/8/2003**	**9/8/2003**	**9/8/2003**	**9/9/2003**	**9/9/2003**	**9/9/2003**	**9/9/2003**
RISP East (ft)			**352690**	**352690**	**352690**	**352779**	**352320**	**351551**	**351551**	**350958**	**350323**
RISP North (ft)			**302735**	**302735**	**302735**	**303669**	**303984**	**303889**	**303889**	**304015**	**304420**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**19**	**16**	**14**	**38**	**12**	**16**	**8**	**13**	**17**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Conventional Params											
TCO	- -	%	1	NA	0.8	3.8	0.2	0.6	1	0.6	0.6
Total Organic Carbon	- -	mg/kg dry wt	NA	1,900	4,100	NA	2,100	2,900	NA	3,800	2,000
Water Parameters											
pH	- -	s.u.	NA	6.8	NA	NA	NA	NA	NA	NA	NA

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-046-BR
Sample Name			SE-032-BR	SE-033-BR	SE-034-BR	SE-041-BR	SE-043-BR	SE-044-BR	SE-045-BR	SE-046-BR	SE-FD-11
Date Collected			9/10/2003	9/10/2003	9/10/2003	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
RISP East (ft)			349117	347976	347020	351597	350184	347061	346903	352890	352890
RISP North (ft)			305833	306035	307232	303879	304781	307158	309018	303046	303046
Depth Start (ft bgs)			0	0	0	0	0	0	0	0	0
Depth End (ft bgs)			1	1	1	1	1	1	1	1	1
Percent Moisture (%)			16	23	19	15	10	20	19	16	18
Percent Moisture, Freeze Dried (%)			NA	NA	NA	NA	NA	NA	NA	NA	NA
Conventional Params											
TCO	- -	%	1	0.5	1.1	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg dry wt	NA	3,700	NA	3,700	2,000	760	2,000	2,300	1,700
Water Parameters											
pH	- -	s.u.	NA	NA	NA	6.7	6.7	6.6	7.3	6.6	6.6

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-047-BR	SE-048-BR	SE-049-BR	SE-050-BR	SE-051-DF	SE-052-WT	SE-053-WT	SE-054-BR	SE-055-WT
Sample Name			**SE-047-BR**	**SE-048-BR**	**SE-049-BR**	**SE-050-BR**	**SE-051-DF**	**SE-052-WT**	**SE-053-WT**	**SE-054-BR**	**SE-055-WT**
Date Collected			**8/30/2004**	**8/31/2004**	**8/30/2004**	**8/31/2004**	**8/31/2004**	**9/1/2004**	**8/31/2004**	**9/1/2004**	**8/31/2004**
RISP East (ft)			**350628**	**349568**	**346826**	**345403**	**349116**	**349324**	**352957**	**345628**	**349320**
RISP North (ft)			**304243**	**305540**	**310413**	**312315**	**305924**	**306113**	**304470**	**312400**	**306016**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**31**	**12**	**13**	**17**	**50**	**11**	**31**	**26**	**40**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**0**	**NA**	**NA**	**NA**	**NA**
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg dry wt	NA	1,800	NA	5,500	NA	1,400	NA	NA	NA
Water Parameters											
pH	- -	s.u.	7.2	6.7	6.4	6.9	7	7.3	6.3	6.9	7.5

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-057-WT	SE-058-WT	SE-059-WT	SE-060-WT	SE-061-WT	SE-062-WT	SE-063-WT	SE-064-BR	SE-065-BR
Sample Name			**SE-057-WT**	**SE-058-WT**	**SE-059-WT**	**SE-060-WT**	**SE-061-WT**	**SE-062-WT**	**SE-063-WT**	**SE-064-BR**	**SE-065-BR**
Date Collected			**9/2/2004**	**9/1/2004**	**9/1/2004**	**9/2/2004**	**9/1/2004**	**9/1/2004**	**9/6/2004**	**9/2/2004**	**9/2/2004**
RISP East (ft)			**352084**	**352774**	**351440**	**351895**	**352372**	**351508**	**350942**	**351791**	**352478**
RISP North (ft)			**304607**	**304071**	**305562**	**304852**	**304608**	**305289**	**305250**	**303170**	**302602**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**54**	**21**	**38**	**64**	**35**	**59**	**50**	**18**	**55**
Percent Moisture, Freeze Dried (%)			**9**	**NA**	**NA**	**0**	**NA**	**0**	**0**	**NA**	**0**
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg dry wt	NA	3,800	NA	NA	NA	NA	NA	NA	29,000
Water Parameters											
pH	- -	s.u.	6	6.7	6.5	6.3	6.5	6	5.7	6.8	6.4

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-066-BR	SE-067-BR	SE-068-BR	SE-069-NP	SE-069-NP	SE-070-LF	SE-071-BR	SE-072-BR	SE-073-LF
Sample Name			**SE-066-BR**	**SE-067-BR**	**SE-068-BR**	**SE-069-NP**	**SE-FD-12**	**SE-070-LF**	**SE-071-BR**	**SE-072-BR**	**SE-073-LF**
Date Collected			**9/3/2004**	**9/3/2004**	**9/6/2004**	**9/2/2004**	**9/2/2004**	**9/2/2004**	**9/6/2004**	**9/6/2004**	**9/3/2004**
RISP East (ft)			**352272**	**352007**	**351730**	**353122**	**353122**	**350926**	**351567**	**351393**	**350848**
RISP North (ft)			**302718**	**302937**	**303184**	**303341**	**303341**	**304138**	**303403**	**303624**	**304184**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**46**	**19**	**28**	**63**	**67**	**32**	**22**	**13**	**42**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**8**	**0**	**NA**	**NA**	**NA**	**NA**
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg dry wt	NA	3,600	NA	NA	NA	NA	2,900	1,800	NA
Water Parameters											
pH	- -	s.u.	6.5	6.6	6.4	6.4	6.5	5.7	6.7	6.5	5.3

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-074-LF	SE-075-UI	SE-076-UI	SE-077-UI	SE-078-UI	SE-079-UI	SE-079-UI	SE-080-UI	SE-081-BR
Sample Name			**SE-074-LF**	**SE-075-UI**	**SE-076-UI**	**SE-077-UI**	**SE-078-UI**	**SE-079-UI**	**SE-FD-13**	**SE-080-UI**	**SE-081-BR**
Date Collected			**9/3/2004**	**9/3/2004**	**9/3/2004**	**9/6/2004**	**9/6/2004**	**9/7/2004**	**9/7/2004**	**9/7/2004**	**9/7/2004**
RISP East (ft)			**351471**	**352417**	**352313**	**351696**	**352438**	**352447**	**352447**	**351994**	**352703**
RISP North (ft)			**303952**	**303137**	**303353**	**303493**	**303325**	**303531**	**303531**	**303594**	**302372**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Percent Moisture (%)			**45**	**38**	**64**	**17**	**64**	**81**	**82**	**74**	**71**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**8**	**NA**	**9**	**0**	**0**	**8**	**33**
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg dry wt	NA	NA	NA	1,300	NA	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	5.6	6.6	5.7	6.4	7	6.9	6.7	6.6	6.5

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	SE-082-BR	SE-083-BR	SE-084-UI	SE-085-UI	SE-086-UI	SE-087-UI	T05BL-001	T05BL-002	T05BL-003
Sample Name			**SE-082-BR**	**SE-083-BR**	**SE-084-UI**	**SE-085-UI**	**SE-086-UI**	**SE-087-UI**	**T05BL-001**	**T05BL-002**	**T05BL-003**
Date Collected			**9/6/2004**	**9/6/2004**	**9/7/2004**	**9/7/2004**	**9/7/2004**	**9/7/2004**	**6/23/2005**	**6/23/2005**	**6/23/2005**
RISP East (ft)			**352820**	**352717**	**352049**	**352447**	**352149**	**352478**	**346599**	**346885**	**344937**
RISP North (ft)			**302413**	**302444**	**303465**	**303427**	**303734**	**303603**	**310832**	**309261**	**313353**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**1**	**1**	**1**	**1**	**1**	**1**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**25**	**36**	**21**	**21**	**12**	**56**	**31.4**	**25.1**	**76.5**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**NA**	**NA**	**NA**	**8**	**NA**	**NA**	**27.1**
Conventional Params											
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg dry wt	NA	NA	2,900	15,000	2,200	NA	NA	NA	NA
Water Parameters											
pH	- -	s.u.	6.5	6.5	6.1	6.7	6.4	6.5	NA	NA	NA

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BL-004	T05BL-005	T05BL-006	T05BL-007	T05BR-001	T05BR-002	T05BR-003	T05BR-004	T05BR-004	T05BR-005
Sample Name			**T05BL-004**	**T05BL-005**	**T05BL-006**	**T05BL-007**	**T05BR-001**	**T05BR-002**	**T05BR-003**	**T05BR-004**	**BD062205**	**T05BR-005**
Date Collected			**6/23/2005**	**6/23/2005**	**6/23/2005**	**6/23/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/22/2005**	**6/22/2005**	**6/22/2005**
RISP East (ft)			**345416**	**345374**	**344036**	**344083**	**352685**	**351655**	**352810**	**351070**	**351070**	**353080**
RISP North (ft)			**312732**	**312447**	**313799**	**314193**	**302766**	**303928**	**303693**	**303948**	**303948**	**303208**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**73.6**	**39**	**59.9**	**33.1**	**31.6**	**15.8**	**56.2**	**33.3**	**32.8**	**67.2**
Percent Moisture, Freeze Dried (%)			**18.8**	**NA**	**7.8**	**NA**	**NA**	**NA**	**14.1**	**NA**	**NA**	**22.3**
Conventional Params												
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg dry wt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters												
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-29
SEDIMENT RESULTS FOR PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	T05BR-006	T05BR-007	T05PA-001	T05PA-003	T05PD-002	T05PD-002	T05PF-004	T05WB-001	T05WB-002	T05WD-003
Sample Name			**T05BR-006**	**T05BR-007**	**T05PA-001**	**T05PA-003**	**T05PD-002**	**BD062105**	**T05PF-004**	**T05WB-001**	**T05WB-002**	**T05WD-003**
Date Collected			**6/22/2005**	**6/23/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**	**6/21/2005**
RISP East (ft)			**350100**	**351910**	**352619**	**351885**	**352427**	**352427**	**352768**	**353596**	**351240**	**349545**
RISP North (ft)			**304801**	**303103**	**303440**	**303634**	**303165**	**303165**	**302412**	**304467**	**305262**	**305938**
Depth Start (ft bgs)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Depth End (ft bgs)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Percent Moisture (%)			**32.4**	**38.8**	**48**	**59.2**	**35.4**	**35.4**	**63**	**36.2**	**69.4**	**32.8**
Percent Moisture, Freeze Dried (%)			**NA**	**NA**	**7.1**	**18.2**	**NA**	**NA**	**10.5**	**NA**	**9.8**	**NA**
Conventional Params												
TCO	- -	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	- -	mg/kg dry wt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters												
pH	- -	s.u.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-001-UI SW-001-UI 8/28/2003 352478 303295	SE-002-UI SW-002-UI 8/28/2003 352322 303548	SE-003-UI SW-003-UI 8/29/2003 352279 303356	SE-003-UI SW-FD01 8/29/2003 352279 303356	SE-005-UI SW-005-UI 8/29/2003 351747 303610	SE-006-UI SW-006-UI 8/29/2003 352761 303287
VOC								
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 UJ	5 UJ	5 UJ	5 U	5 UJ	5 UJ
4-Methyl-2-pentanone	16	µg/L	5 U	5 UJ	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.35 J	0.5 U	0.5 U	0.44 J
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.66 UJ	0.73 UJ	0.95 UJ	0.7 UJ	1.4 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-007-UI SW-007-UI 9/2/2003 352484 303117	SE-008-BR SW-008-BR 9/2/2003 352735 302367	SE-009-WT SW-009-WT 9/3/2003 352646 304086	SE-010-WT SW-010-WT 9/3/2003 352842 304421
VOC						
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 UJ	5 UJ
2-Hexanone	99	µg/L	5 UJ	5 UJ	5 UJ	5 UJ
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 UJ	5 UJ
Acetone	61	µg/L	11 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 UJ
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.32 U	0.5 U	0.38 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.82 U	0.73 U
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.6	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-011-WT SW-011-WT 9/3/2003 352504 304330	SE-012-WT SW-012-WT 9/3/2003 351470 305229	SE-013-WT SW-013-WT 9/4/2003 352327 304194	SE-014-WT SW-014-WT 9/4/2003 351040 305533	SE-015-WT SW-015-WT 9/4/2003 351365 305705
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2-Hexanone	99	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
4-Methyl-2-pentanone	16	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.38 J	0.38 J	0.52	0.38 J
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.84 U	0.78 UJ	0.56 UJ	1 UJ	0.54 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-016-WT SW-016-WT 9/4/2003 349270 306035	SE-017-WT SW-017-WT 9/5/2003 350890 305078	SE-020-LF SW-020-LF 9/5/2003 351481 303930	SE-021-NP SW-021-NP 9/5/2003 353121 303354	SE-022-BR SW-022-BR 9/5/2003 345490 312537
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.54	0.5 U	0.5 U
2-Butanone	190	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2-Hexanone	99	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
4-Methyl-2-pentanone	16	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.8	2.4	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	1.5	3.5	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.67	0.37 J	0.5 U	0.36 J	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	1.2 UJ	0.59 UJ	0.5 UJ	0.69 UJ	0.73 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-023-BR SW-023-BR 9/6/2003 352567 302605	SE-024-BR SW-024-BR 9/6/2003 352135 302922	SE-025-BR SW-025-BR 9/6/2003 351456 303575	SE-026-BR SW-026-BR 9/8/2003 352690 302735	SE-026-BR SW-FD-02 9/8/2003 352690 302735
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 UJ
2-Hexanone	99	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 U	12 J	5 U	5 U	5 UJ
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Methyl acetate	610	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.73 J	0.5 UJ
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.72 UJ	0.85 UJ	0.87 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-026-BR SW-042-BR 8/31/2004 352690 302735	SE-027-BR SW-027-BR 9/8/2003 352779 303669	SE-028-BR SW-028-BR 9/8/2003 352320 303984	SE-029-BR SW-029-BR 9/9/2003 351551 303889	SE-029-BR SW-FD-03 9/9/2003 351551 303889
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 U	5 U	5 U	5 UJ	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 UJ	5 U
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.31 J
Bromoform	4.3	µg/L	0.5 U	0.5	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.33 J	0.34 J	0.57 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.61 UJ	1.4 UJ	0.69 UJ	0.68 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-030-BR SW-030-BR 9/9/2003 350958 304015	SE-031-BR SW-031-BR 9/9/2003 350323 304420	SE-032-BR SW-032-BR 9/10/2003 349117 305833	SE-033-BR SW-033-BR 9/10/2003 347976 306035	SE-034-BR SW-034-BR 9/10/2003 347020 307232
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 UJ	5 U	5 UJ	5 UJ	5 UJ
4-Methyl-2-pentanone	16	µg/L	5 UJ	5 U	5 UJ	5 UJ	5 UJ
Acetone	61	µg/L	5 U	5 U	5 U	9.9 U	5 U
Benzene	1.2	µg/L	0.34 J	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.37 J
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
Methyl acetate	610	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.86 UJ	0.5 UJ	0.83 UJ	0.5 UJ	0.84 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-041-BR SW-041-BR 8/30/2004 351597 303879	SE-043-BR SW-043-BR 8/30/2004 350184 304781	SE-044-BR SW-044-BR 8/30/2004 347061 307158	SE-046-BR SW-046-BR 8/30/2004 352890 303046	SE-046-BR SW-FD-11 8/30/2004 352890 303046
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-047-BR SW-047-BR 8/30/2004 350628 304243	SE-048B-BR SW-048-BR 8/31/2004 349566 305538	SE-051-DF SW-051-DF 8/31/2004 349116 305924	SE-052-WT SW-052-WT 9/1/2004 349324 306113	SE-053B-WT SW-053-WT 9/9/2004 352950 304500
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-057-WT SW-057-WT 9/2/2004 352084 304607	SE-058-WT SW-058-WT 9/1/2004 352774 304071	SE-059-WT SW-059-WT 9/1/2004 351440 305562	SE-060-WT SW-060-WT 9/2/2004 351895 304852	SE-061-WT SW-061-WT 9/1/2004 352372 304608
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-062-WT SW-062-WT 9/1/2004 351508 305289	SE-064-BR SW-064-BR 9/2/2004 351791 303170	SE-065-BR SW-065-BR 9/2/2004 352478 302602	SE-066-BR SW-066-BR 9/3/2004 352272 302718	SE-067-BR SW-067-BR 9/3/2004 352007 302937
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.64	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-068-BR SW-068-BR 9/6/2004 351730 303184	SE-069-NP SW-069-NP 9/2/2004 353122 303341	SE-069-NP SW-FD-12 9/2/2004 353122 303341	SE-071-BR SW-071-BR 9/6/2004 351567 303403	SE-072-BR SW-072-BR 9/6/2004 351393 303624
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-074-LF SW-074-LF 9/10/2004 351471 303952	SE-075-UI SW-075-UI 9/3/2004 352417 303137	SE-077-UI SW-077-UI 9/6/2004 351696 303493	SE-078-UI SW-078-UI 9/6/2004 352438 303325	SE-079-UI SW-079-UI 9/7/2004 352447 303531
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 UJ	5 U	5 U
2-Hexanone	99	µg/L	5 U	5 U	5 UJ	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 UJ	5 U	5 U
Acetone	61	µg/L	5 U	5 U	5 UJ	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
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Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 UJ	2.6	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-079-UI SW-FD-13 9/7/2004 352447 303531	SE-080-UI SW-080-UI 9/7/2004 351994 303594	SE-081-BR SW-081-BR 9/7/2004 352703 302372	SE-082-BR SW-082-BR 9/6/2004 352820 302413	SE-083-BR SW-083-BR 9/6/2004 352717 302444	SE-084-UI SW-084-UI 9/7/2004 352049 303465
VOC								
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	190	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	99	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-085-UI SW-085-UI 9/7/2004 352447 303427	SE-086-UI SW-086-UI 9/7/2004 352149 303734	SE-087-UI SW-087-UI 9/7/2004 352478 303603	SW-1 ash SW-1 ash 4/4/2005	SW-2 ash SW-2 ash 4/4/2005
VOC							
1,1,1-Trichloroethane	11	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,1,2,2-Tetrachloroethane	0.17	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,1,2-Trichloroethane	0.6	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,1-Dichloroethane	47	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,1-Dichloroethene	0.057	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,2,3-Trichlorobenzene	- -	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	NA	NA
1,2,4-Trichlorobenzene	1.7	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,2-Dichlorobenzene	1.8	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,2-Dichloroethane	0.38	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,2-Dichloropropane	0.52	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
1,4-Dichlorobenzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
2-Butanone	190	µg/L	5 U	5 U	5 U	NA	NA
2-Hexanone	99	µg/L	5 U	5 U	5 U	NA	NA
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	NA	NA
Acetone	61	µg/L	5 U	5 U	5 U	NA	NA
Benzene	1.2	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Bromodichloromethane	0.56	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Bromoform	4.3	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Carbon disulfide	0.92	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Carbon tetrachloride	0.25	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Chlorobenzene	11	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Chloromethane	15	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
cis-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Dibromochloromethane	0.41	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Ethylbenzene	7.3	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Isopropylbenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Methyl acetate	610	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Methylene chloride	4.7	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	NA	NA
Styrene	160	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Tetrachloroethene	0.8	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Toluene	9.8	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
trans-1,3-Dichloropropene	0.055	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Trichloroethene	2.7	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	NA	NA
Xylene (Total)	13	µg/L	0.5 U	0.5 U	0.5 U	NA	NA

TABLE 4-30
SURFACE-WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SW-3 Pratt SW-3 Pratt 4/4/2005	SW-3 Pratt Cumberland SW-3 Pratt Cumberland 4/4/2005	SW-4 Pratt SW-4 Pratt 4/4/2005	SW-4 Pratt Lincoln SW-4 Pratt Lincoln 4/4/2005
VOC						
1,1,1-Trichloroethane	11	µg/L	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	0.17	µg/L	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	NA	NA	NA	NA
1,1,2-Trichloroethane	0.6	µg/L	NA	NA	NA	NA
1,1-Dichloroethane	47	µg/L	NA	NA	NA	NA
1,1-Dichloroethene	0.057	µg/L	NA	NA	NA	NA
1,2,3-Trichlorobenzene	- -	µg/L	NA	NA	NA	NA
1,2,4-Trichlorobenzene	1.7	µg/L	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	0.047	µg/L	NA	NA	NA	NA
1,2-Dibromoethane	0.0076	µg/L	NA	NA	NA	NA
1,2-Dichlorobenzene	1.8	µg/L	NA	NA	NA	NA
1,2-Dichloroethane	0.38	µg/L	NA	NA	NA	NA
1,2-Dichloropropane	0.52	µg/L	NA	NA	NA	NA
1,3-Dichlorobenzene	0.55	µg/L	NA	NA	NA	NA
1,4-Dichlorobenzene	1.2	µg/L	NA	NA	NA	NA
2-Butanone	190	µg/L	NA	NA	NA	NA
2-Hexanone	99	µg/L	NA	NA	NA	NA
4-Methyl-2-pentanone	16	µg/L	NA	NA	NA	NA
Acetone	61	µg/L	NA	NA	NA	NA
Benzene	1.2	µg/L	NA	NA	NA	NA
Bromochloromethane	- -	µg/L	NA	NA	NA	NA
Bromodichloromethane	0.56	µg/L	NA	NA	NA	NA
Bromoform	4.3	µg/L	NA	NA	NA	NA
Bromomethane	8.7	µg/L	NA	NA	NA	NA
Carbon disulfide	0.92	µg/L	NA	NA	NA	NA
Carbon tetrachloride	0.25	µg/L	NA	NA	NA	NA
Chlorobenzene	11	µg/L	NA	NA	NA	NA
Chloroethane	4.6	µg/L	NA	NA	NA	NA
Chloroform	1.6	µg/L	NA	NA	NA	NA
Chloromethane	15	µg/L	NA	NA	NA	NA
cis-1,2-Dichloroethene	6.1	µg/L	NA	NA	NA	NA
cis-1,3-Dichloropropene	0.055	µg/L	NA	NA	NA	NA
Cyclohexane	3,500	µg/L	NA	NA	NA	NA
Cyclohexane, methyl-	520	µg/L	NA	NA	NA	NA
Dibromochloromethane	0.41	µg/L	NA	NA	NA	NA
Dichlorodifluoromethane	39	µg/L	NA	NA	NA	NA
Ethylbenzene	7.3	µg/L	NA	NA	NA	NA
Isopropylbenzene	- -	µg/L	NA	NA	NA	NA
Methyl acetate	610	µg/L	NA	NA	NA	NA
Methyl tert butyl ether	2	µg/L	NA	NA	NA	NA
Methylene chloride	4.7	µg/L	NA	NA	NA	NA
Styrene	160	µg/L	NA	NA	NA	NA
Tetrachloroethene	0.8	µg/L	NA	NA	NA	NA
Toluene	9.8	µg/L	NA	NA	NA	NA
trans-1,2-Dichloroethene	12	µg/L	NA	NA	NA	NA
trans-1,3-Dichloropropene	0.055	µg/L	NA	NA	NA	NA
Trichloroethene	2.7	µg/L	NA	NA	NA	NA
Trichlorofluoromethane	130	µg/L	NA	NA	NA	NA
Vinyl Chloride	0.41	µg/L	NA	NA	NA	NA
Xylene (Total)	13	µg/L	NA	NA	NA	NA

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-001-UI SW-001-UI 8/28/2003 352478 303295	SE-002-UI SW-002-UI 8/28/2003 352322 303548	SE-003-UI SW-003-UI 8/29/2003 352279 303356	SE-003-UI SW-FD01 8/29/2003 352279 303356	SE-005-UI SW-005-UI 8/29/2003 351747 303610	SE-006-UI SW-006-UI 8/29/2003 352761 303287	SE-007-UI SW-007-UI 9/2/2003 352484 303117	SE-008-BR SW-008-BR 9/2/2003 352735 302367
VOC TICs										
1-Pentene, 2-methyl-	- -	µg/L								
Branched alkane	- -	µg/L			1.9 J	6.9 J	5.3 J	0.77 J		
Cyclic alkane	- -	µg/L			3.9 J	8.9 J	8.3 J			
Cyclopentane, methyl-	- -	µg/L		3.3 NJ						
Dimethyl sulfide	- -	µg/L								
Hexane	- -	µg/L								
Straight-chain Alkane	- -	µg/L	4.6 J	26 J	54 J	190 J	140 J	28 J	38 J	72 J
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	2	1	1	1	1	2	2

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-009-WT SW-009-WT 9/3/2003 352646 304086	SE-010-WT SW-010-WT 9/3/2003 352842 304421	SE-011-WT SW-011-WT 9/3/2003 352504 304330	SE-012-WT SW-012-WT 9/3/2003 351470 305229	SE-013-WT SW-013-WT 9/4/2003 352327 304194	SE-014-WT SW-014-WT 9/4/2003 351040 305533	SE-015-WT SW-015-WT 9/4/2003 351365 305705	SE-016-WT SW-016-WT 9/4/2003 349270 306035
VOC TICs										
1-Pentene, 2-methyl-	- -	µg/L								
Branched alkane	- -	µg/L			1 J					
Cyclic alkane	- -	µg/L								
Cyclopentane, methyl-	- -	µg/L								
Dimethyl sulfide	- -	µg/L	0.55 NJ							
Hexane	- -	µg/L								
Straight-chain Alkane	- -	µg/L	20 J	24 J	34 J	12 J	7.9 J	12 J	24 J	8.6 J
Unknown TICs (VOCs) - number of occurences	- -	(Count)	3	2	2	1	1	1	2	1

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-017-WT SW-017-WT 9/5/2003 350890 305078	SE-020-LF SW-020-LF 9/5/2003 351481 303930	SE-021-NP SW-021-NP 9/5/2003 353121 303354	SE-022-BR SW-022-BR 9/5/2003 345490 312537	SE-023-BR SW-023-BR 9/6/2003 352567 302605	SE-024-BR SW-024-BR 9/6/2003 352135 302922	SE-025-BR SW-025-BR 9/6/2003 351456 303575	SE-026-BR SW-026-BR 9/8/2003 352690 302735
VOC TICs										
1-Pentene, 2-methyl-	- -	µg/L								
Branched alkane	- -	µg/L								
Cyclic alkane	- -	µg/L								
Cyclopentane, methyl-	- -	µg/L								
Dimethyl sulfide	- -	µg/L								
Hexane	- -	µg/L								
Straight-chain Alkane	- -	µg/L	4.1 J	17 J	16 J	11 J	15 J	7.7 J	24 J	8.8 J
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1	1	3	1	2	1	2	1

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-026-BR SW-FD-02 9/8/2003 352690 302735	SE-026-BR SW-042-BR 8/31/2004 352690 302735	SE-027-BR SW-027-BR 9/8/2003 352779 303669	SE-028-BR SW-028-BR 9/8/2003 352320 303984	SE-029-BR SW-029-BR 9/9/2003 351551 303889	SE-029-BR SW-FD-03 9/9/2003 351551 303889	SE-030-BR SW-030-BR 9/9/2003 350958 304015	SE-031-BR SW-031-BR 9/9/2003 350323 304420	SE-032-BR SW-032-BR 9/10/2003 349117 305833
VOC TICs											
1-Pentene, 2-methyl-	- -	µg/L									
Branched alkane	- -	µg/L								1 J	
Cyclic alkane	- -	µg/L									
Cyclopentane, methyl-	- -	µg/L									
Dimethyl sulfide	- -	µg/L									
Hexane	- -	µg/L									
Straight-chain Alkane	- -	µg/L	8.3 J		28 J	32 J	15 J	23 J	14 J	140 J	28 J
Unknown TICs (VOCs) - number of occurences	- -	(Count)	3	1	2	2	3	4	4	2	3

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-033-BR SW-033-BR 9/10/2003 347976 306035	SE-034-BR SW-034-BR 9/10/2003 347020 307232	SE-041-BR SW-041-BR 8/30/2004 351597 303879	SE-043-BR SW-043-BR 8/30/2004 350184 304781	SE-044-BR SW-044-BR 8/30/2004 347061 307158	SE-046-BR SW-046-BR 8/30/2004 352890 303046	SE-046-BR SW-FD-11 8/30/2004 352890 303046
VOC TICs									
1-Pentene, 2-methyl-	- -	µg/L							
Branched alkane	- -	µg/L		11 J					
Cyclic alkane	- -	µg/L		16 J					
Cyclopentane, methyl-	- -	µg/L							
Dimethyl sulfide	- -	µg/L							
Hexane	- -	µg/L							
Straight-chain Alkane	- -	µg/L	37 J	270 J					
Unknown TICs (VOCs) - number of occurences	- -	(Count)	2	2	3	2	1	1	1

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-047-BR SW-047-BR 8/30/2004 350628 304243	SE-048B-BR SW-048-BR 8/31/2004 349566 305538	SE-051-DF SW-051-DF 8/31/2004 349116 305924	SE-052-WT SW-052-WT 9/1/2004 349324 306113	SE-053B-WT SW-053-WT 9/9/2004 352950 304500	SE-057-WT SW-057-WT 9/2/2004 352084 304607	SE-058-WT SW-058-WT 9/1/2004 352774 304071	SE-059-WT SW-059-WT 9/1/2004 351440 305562
VOC TICs										
1-Pentene, 2-methyl-	- -	µg/L								
Branched alkane	- -	µg/L								
Cyclic alkane	- -	µg/L								
Cyclopentane, methyl-	- -	µg/L								
Dimethyl sulfide	- -	µg/L						1.1 NJ		
Hexane	- -	µg/L								
Straight-chain Alkane	- -	µg/L								
Unknown TICs (VOCs) - number of occurences	- -	(Count)	3	2					1	

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-060-WT SW-060-WT 9/2/2004 351895 304852	SE-061-WT SW-061-WT 9/1/2004 352372 304608	SE-062-WT SW-062-WT 9/1/2004 351508 305289	SE-064-BR SW-064-BR 9/2/2004 351791 303170	SE-065-BR SW-065-BR 9/2/2004 352478 302602	SE-066-BR SW-066-BR 9/3/2004 352272 302718	SE-067-BR SW-067-BR 9/3/2004 352007 302937	SE-068-BR SW-068-BR 9/6/2004 351730 303184
VOC TICs										
1-Pentene, 2-methyl-	- -	µg/L								
Branched alkane	- -	µg/L								
Cyclic alkane	- -	µg/L								
Cyclopentane, methyl-	- -	µg/L								
Dimethyl sulfide	- -	µg/L								
Hexane	- -	µg/L								
Straight-chain Alkane	- -	µg/L								
Unknown TICs (VOCs) - number of occurences	- -	(Count)				2	3	1	1	1

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-069-NP SW-069-NP 9/2/2004 353122 303341	SE-069-NP SW-FD-12 9/2/2004 353122 303341	SE-071-BR SW-071-BR 9/6/2004 351567 303403	SE-072-BR SW-072-BR 9/6/2004 351393 303624	SE-074-LF SW-074-LF 9/10/2004 351471 303952	SE-075-UI SW-075-UI 9/3/2004 352417 303137	SE-077-UI SW-077-UI 9/6/2004 351696 303493	SE-078-UI SW-078-UI 9/6/2004 352438 303325	SE-079-UI SW-079-UI 9/7/2004 352447 303531
VOC TICs											
1-Pentene, 2-methyl-	- -	µg/L									
Branched alkane	- -	µg/L									
Cyclic alkane	- -	µg/L									
Cyclopentane, methyl-	- -	µg/L									
Dimethyl sulfide	- -	µg/L									0.84 NJ
Hexane	- -	µg/L							8.7 NJ		3 NJ
Straight-chain Alkane	- -	µg/L									
Unknown TICs (VOCs) - number of occurences	- -	(Count)			2	2			1		1

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-079-UI SW-FD-13 9/7/2004 352447 303531	SE-080-UI SW-080-UI 9/7/2004 351994 303594	SE-081-BR SW-081-BR 9/7/2004 352703 302372	SE-082-BR SW-082-BR 9/6/2004 352820 302413	SE-083-BR SW-083-BR 9/6/2004 352717 302444	SE-084-UI SW-084-UI 9/7/2004 352049 303465	SE-085-UI SW-085-UI 9/7/2004 352447 303427
VOC TICs									
1-Pentene, 2-methyl-	- -	µg/L							4.1 NJ
Branched alkane	- -	µg/L							
Cyclic alkane	- -	µg/L							
Cyclopentane, methyl-	- -	µg/L							
Dimethyl sulfide	- -	µg/L	0.76 NJ	1.1 NJ				0.85 NJ	0.87 NJ
Hexane	- -	µg/L	3.3 NJ	2.5 NJ	14 NJ				
Straight-chain Alkane	- -	µg/L							
Unknown TICs (VOCs) - number of occurences	- -	(Count)		1		1	3	2	2

TABLE 4-31
SURFACE-WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-086-UI SW-086-UI 9/7/2004 352149 303734	SE-087-UI SW-087-UI 9/7/2004 352478 303603	SW-1 ash SW-1 ash 4/4/2005	SW-2 ash SW-2 ash 4/4/2005	SW-3 Pratt SW-3 Pratt 4/4/2005	SW-3 Pratt Cumberland SW-3 Pratt Cumberland 4/4/2005	SW-4 Pratt SW-4 Pratt 4/4/2005	SW-4 Pratt Lincoln SW-4 Pratt Lincoln 4/4/2005
VOC TICs										
1-Pentene, 2-methyl-	- -	µg/L			NA	NA	NA	NA	NA	NA
Branched alkane	- -	µg/L			NA	NA	NA	NA	NA	NA
Cyclic alkane	- -	µg/L			NA	NA	NA	NA	NA	NA
Cyclopentane, methyl-	- -	µg/L			NA	NA	NA	NA	NA	NA
Dimethyl sulfide	- -	µg/L	0.63 NJ	0.56 NJ	NA	NA	NA	NA	NA	NA
Hexane	- -	µg/L	7.8 NJ	3.8 NJ	NA	NA	NA	NA	NA	NA
Straight-chain Alkane	- -	µg/L			NA	NA	NA	NA	NA	NA
Unknown TICs (VOCs) - number of occurences	- -	(Count)	1		NA	NA	NA	NA	NA	NA

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-001-UI SW-001-UI 8/28/2003 352478 303295	SE-002-UI SW-002-UI 8/28/2003 352322 303548	SE-003-UI SW-003-UI 8/29/2003 352279 303356	SE-003-UI SW-FD01 8/29/2003 352279 303356	SE-005-UI SW-005-UI 8/29/2003 351747 303610	SE-006-UI SW-006-UI 8/29/2003 352761 303287	SE-007-UI SW-007-UI 9/2/2003 352484 303117	SE-008-BR SW-008-BR 9/2/2003 352735 302367	SE-009-WT SW-009-WT 9/3/2003 352646 304086
PAH											
2-Methylnaphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthene	1.9	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.14 J	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.13 J	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.059 J	0.1 U	0.1 UJ	0.1 U	0.22 J	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.19	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.14	0.1 U	0.1 UJ	0.1 U	0.2 J	0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	4.4	µg/L	0.12	0.1 U	0.1 UJ	0.1 U	0.21 J	0.1 U	0.1	0.1 U	0.1 U
Total PAHs	- -	µg/L	0.319 J	0	0	0	0.9 J	0	0.29	0	0

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-010-WT SW-010-WT 9/3/2003 352842 304421	SE-011-WT SW-011-WT 9/3/2003 352504 304330	SE-012-WT SW-012-WT 9/3/2003 351470 305229	SE-013-WT SW-013-WT 9/4/2003 352327 304194	SE-014-WT SW-014-WT 9/4/2003 351040 305533	SE-015-WT SW-015-WT 9/4/2003 351365 305705	SE-016-WT SW-016-WT 9/4/2003 349270 306035
PAH									
2-Methylnaphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
Acenaphthene	1.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.11	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.2	0.1 U	0.1 U
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.12	0.1 U	0.1 U
Pyrene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.21	0.1 U	0.1 U
Total PAHs	- -	µg/L	0	0	0	0	0.64	0	0

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-017-WT SW-017-WT 9/5/2003 350890 305078	SE-020-LF SW-020-LF 9/5/2003 351481 303930	SE-021-NP SW-021-NP 9/5/2003 353121 303354	SE-022-BR SW-022-BR 9/5/2003 345490 312537	SE-023-BR SW-023-BR 9/6/2003 352567 302605	SE-024-BR SW-024-BR 9/6/2003 352135 302922	SE-025-BR SW-025-BR 9/6/2003 351456 303575	SE-026-BR SW-026-BR 9/8/2003 352690 302735
PAH										
2-Methylnaphthalene	2.6	µg/L	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
Acenaphthene	1.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.18	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.34 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.36	0.18	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.23	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.26	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.2	0.12	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.3	0.15	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.1 U	0.39	0.24	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 U	0.19	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.14	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.1 U	0.2	0.14	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	4.4	µg/L	0.1 U	0.42	0.22	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total PAHs	- -	µg/L	0	3.07 J	1.39	0	0	0	0	0

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-026-BR SW-FD-02 9/8/2003 352690 302735	SE-026-BR SW-042-BR 8/31/2004 352690 302735	SE-027-BR SW-027-BR 9/8/2003 352779 303669	SE-028-BR SW-028-BR 9/8/2003 352320 303984	SE-029-BR SW-029-BR 9/9/2003 351551 303889	SE-029-BR SW-FD-03 9/9/2003 351551 303889	SE-030-BR SW-030-BR 9/9/2003 350958 304015	SE-031-BR SW-031-BR 9/9/2003 350323 304420	SE-032-BR SW-032-BR 9/10/2003 349117 305833
PAH											
2-Methylnaphthalene	2.6	µg/L	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthene	1.9	µg/L	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total PAHs	- -	µg/L	0	0	0	0	0	0	0	0	0

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-033-BR SW-033-BR 9/10/2003 347976 306035	SE-034-BR SW-034-BR 9/10/2003 347020 307232	SE-041-BR SW-041-BR 8/30/2004 351597 303879	SE-043-BR SW-043-BR 8/30/2004 350184 304781	SE-044-BR SW-044-BR 8/30/2004 347061 307158	SE-046-BR SW-046-BR 8/30/2004 352890 303046	SE-046-BR SW-FD-11 8/30/2004 352890 303046
PAH									
2-Methylnaphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthene	1.9	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12	0.1 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total PAHs	- -	µg/L	0	0	0	0	0	0.12	0

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-047-BR SW-047-BR 8/30/2004 350628 304243	SE-048B-BR SW-048-BR 8/31/2004 349566 305538	SE-051-DF SW-051-DF 8/31/2004 349116 305924	SE-052-WT SW-052-WT 9/1/2004 349324 306113	SE-053B-WT SW-053-WT 9/9/2004 352950 304500	SE-057-WT SW-057-WT 9/2/2004 352084 304607	SE-058-WT SW-058-WT 9/1/2004 352774 304071	SE-059-WT SW-059-WT 9/1/2004 351440 305562
PAH										
2-Methylnaphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthene	1.9	µg/L	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 UJ
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.1 U	0.19 J	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.1 U	0.14	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.2	0.1 UJ	0.1	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.1	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.1	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.15	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.1 U	0.1 U	0.21	0.1 UJ	0.1	0.1 U	0.1 U	0.1 U
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.1 U
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.1 U	0.1 U	0.17	0.1 UJ	0.11	0.1 U	0.1 U	0.1 U
Pyrene	4.4	µg/L	0.1 U	0.1 U	0.27	0.1 UJ	0.14	0.1 U	0.1 U	0.1 U
Total PAHs	- -	µg/L	0	0	1.44	0.19 J	0.45	0	0	0

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-060-WT SW-060-WT 9/2/2004 351895 304852	SE-061-WT SW-061-WT 9/1/2004 352372 304608	SE-062-WT SW-062-WT 9/1/2004 351508 305289	SE-064-BR SW-064-BR 9/2/2004 351791 303170	SE-065-BR SW-065-BR 9/2/2004 352478 302602	SE-066-BR SW-066-BR 9/3/2004 352272 302718	SE-067-BR SW-067-BR 9/3/2004 352007 302937	SE-068-BR SW-068-BR 9/6/2004 351730 303184
PAH										
2-Methylnaphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthene	1.9	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.14
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11
Pyrene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.17 J
Total PAHs	- -	µg/L	0	0	0	0	0	0	0	0.54 J

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-069-NP SW-069-NP 9/2/2004 353122 303341	SE-069-NP SW-FD-12 9/2/2004 353122 303341	SE-071-BR SW-071-BR 9/6/2004 351567 303403	SE-072-BR SW-072-BR 9/6/2004 351393 303624	SE-074-LF SW-074-LF 9/10/2004 351471 303952	SE-075-UI SW-075-UI 9/3/2004 352417 303137	SE-077-UI SW-077-UI 9/6/2004 351696 303493	SE-078-UI SW-078-UI 9/6/2004 352438 303325	SE-079-UI SW-079-UI 9/7/2004 352447 303531
PAH											
2-Methylnaphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthene	1.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.15	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.16	0.1 U	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.19	0.1 U	0.1 U	0.1 U
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	0.11	0.1 UJ	0.1 UJ	0.1 UJ
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.13	0.13	0.1 U	0.1 U	0.1 U	0.21	0.1 U	0.14	0.1 U
Pyrene	4.4	µg/L	0.13 J	0.12 J	0.1 U	0.1 U	0.1 U	0.38 J	0.1 U	0.1 U	0.1 U
Total PAHs	- -	µg/L	0.26 J	0.25 J	0	0	0	1.68 J	0	0.14	0

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-079-UI SW-FD-13 9/7/2004 352447 303531	SE-080-UI SW-080-UI 9/7/2004 351994 303594	SE-081-BR SW-081-BR 9/7/2004 352703 302372	SE-082-BR SW-082-BR 9/6/2004 352820 302413	SE-083-BR SW-083-BR 9/6/2004 352717 302444	SE-084-UI SW-084-UI 9/7/2004 352049 303465	SE-085-UI SW-085-UI 9/7/2004 352447 303427
PAH									
2-Methylnaphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthene	1.9	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.014	µg/L	0.1 U	0.1 U	0.17	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.16	0.1 U	0.1 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.14	0.1 U	0.1 U
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.18	0.1 U	0.1 U
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 UJ
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.1 UJ	0.13 U	0.1 U	0.1 U	0.1 U
Phenanthrene	6.3	µg/L	0.1 U	0.1 U	0.1 UJ	0.1	0.17	0.1 U	0.1 U
Pyrene	4.4	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.25 J	0.1 U	0.1 U
Total PAHs	- -	µg/L	0	0	0.17	0.1	0.9 J	0	0

TABLE 4-32
SURFACE-WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-086-UI SW-086-UI 9/7/2004 352149 303734	SE-087-UI SW-087-UI 9/7/2004 352478 303603	SW-1 ash SW-1 ash 4/4/2005	SW-2 ash SW-2 ash 4/4/2005	SW-3 Pratt SW-3 Pratt 4/4/2005	SW-3 Pratt Cumberland SW-3 Pratt Cumberland 4/4/2005	SW-4 Pratt SW-4 Pratt 4/4/2005	SW-4 Pratt Lincoln SW-4 Pratt Lincoln 4/4/2005
PAH										
2-Methylnaphthalene	2.6	µg/L	0.1 U	0.1 U	0.0045 J	0.012 U	NA	0.012 U	NA	0.012 U
Acenaphthene	1.9	µg/L	0.1 U	0.1 U	0.0058 J	0.0052 J	NA	0.0062 J	NA	0.0062 J
Acenaphthylene	2.6	µg/L	0.1 U	0.1 U	0.01 J	0.01 J	NA	0.01 J	NA	0.013
Anthracene	0.73	µg/L	0.1 U	0.1 U	0.014	0.012 J	NA	0.013	NA	0.017
Benzo(a)pyrene	0.014	µg/L	0.12	0.11	0.067 J	0.044 J	NA	0.04 U	NA	0.06 U
Benzo(b)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.086 J	0.062 UJ	NA	0.057 U	NA	0.088 U
Benzo(g,h,i)perylene	0.014	µg/L	0.1 U	0.1 U	0.13 J	0.051 UJ	NA	0.042 U	NA	0.062 U
Benzo(k)fluoranthene	0.014	µg/L	0.1 U	0.1 U	0.069 J	0.026 UJ	NA	0.027 U	NA	0.028 U
Benzo[a]anthracene	0.027	µg/L	0.1 U	0.1 U	0.044	0.035 U	NA	0.036 U	NA	0.047 U
Chrysene	0.027	µg/L	0.1 U	0.1 U	0.074 J	0.054 UJ	NA	0.051 U	NA	0.072
Dibenz[a,h]anthracene	0.014	µg/L	0.1 U	0.1 U	0.14 J	0.014 UJ	NA	0.012 U	NA	0.016 U
Fluoranthene	4.4	µg/L	0.1 U	0.1 U	0.082	0.083	NA	0.087	NA	0.1
Fluorene	3.9	µg/L	0.1 U	0.1 U	0.0064 J	0.0058 J	NA	0.0076 J	NA	0.0068 J
Indeno(1,2,3-cd)pyrene	0.014	µg/L	0.1 UJ	0.1 UJ	0.13 J	0.036 UJ	NA	0.033 U	NA	0.05 U
Naphthalene	2.6	µg/L	0.1 U	0.1 U	0.0084 J	0.0069 J	NA	0.0069 J	NA	0.0067 J
Phenanthrene	6.3	µg/L	0.11	0.1 U	0.035	0.045	NA	0.048	NA	0.041
Pyrene	4.4	µg/L	0.1 U	0.1 U	0.067	0.087	NA	0.071	NA	0.09
Total PAHs	- -	µg/L	0.23	0.11	0.973 J	0.299 J	NA	0.25 J	NA	0.353 J

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-001-UI SW-001-UI 8/28/2003 352478 303295	SE-002-UI SW-002-UI 8/28/2003 352322 303548	SE-003-UI SW-003-UI 8/29/2003 352279 303356	SE-003-UI SW-FD01 8/29/2003 352279 303356	SE-005-UI SW-005-UI 8/29/2003 351747 303610
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 U	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 UJ	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	R	R	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 UJ	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 UJ	R	R	5 UJ	5 UJ
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4-Nitrophenol	29	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Benzaldehyde	360	µg/L	5 UJ	5 UJ	5 U	5 UJ	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	1.9 J	5 U	1.3 J
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 UJ	5 UJ	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	R	R	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 UJ	5 U	5 UJ	5 UJ	5 UJ
N-Nitrosodiphenylamine	5	µg/L	1.6 J	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-006-UI SW-006-UI 8/29/2003 352761 303287	SE-007-UI SW-007-UI 9/2/2003 352484 303117	SE-008-BR SW-008-BR 9/2/2003 352735 302367	SE-009-WT SW-009-WT 9/3/2003 352646 304086	SE-010-WT SW-010-WT 9/3/2003 352842 304421
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 U	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 UJ	20 UJ	20 UJ	20 UJ
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 UJ	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4-Nitrophenol	29	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Benzaldehyde	360	µg/L	5 UJ	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	1.1 J	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
N-Nitrosodiphenylamine	5	µg/L	5 U	5 UJ	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-011-WT SW-011-WT 9/3/2003 352504 304330	SE-012-WT SW-012-WT 9/3/2003 351470 305229	SE-013-WT SW-013-WT 9/4/2003 352327 304194	SE-014-WT SW-014-WT 9/4/2003 351040 305533	SE-015-WT SW-015-WT 9/4/2003 351365 305705
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 U	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 U	20 UJ
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4-Nitrophenol	29	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 UJ	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 UJ	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 UJ	5 UJ	5 UJ	5 U	5 UJ
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-016-WT SW-016-WT 9/4/2003 349270 306035	SE-017-WT SW-017-WT 9/5/2003 350890 305078	SE-020-LF SW-020-LF 9/5/2003 351481 303930	SE-021-NP SW-021-NP 9/5/2003 353121 303354	SE-022-BR SW-022-BR 9/5/2003 345490 312537
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 UJ	20 U	20 U	20 U	20 UJ
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4-Nitrophenol	29	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Benzaldehyde	360	µg/L	5 U	5 UJ	5 UJ	5 UJ	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 UJ	5 U	5 U	5 U	5 UJ
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-023-BR SW-023-BR 9/6/2003 352567 302605	SE-024-BR SW-024-BR 9/6/2003 352135 302922	SE-025-BR SW-025-BR 9/6/2003 351456 303575	SE-026-BR SW-026-BR 9/8/2003 352690 302735	SE-026-BR SW-FD-02 9/8/2003 352690 302735
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 U
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 UJ	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4-Nitrophenol	29	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 U
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Benzaldehyde	360	µg/L	5 U	5 UJ	5 UJ	5 UJ	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 U
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 UJ	5 U	5 U	5 U	5 U
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-026-BR SW-042-BR 8/31/2004 352690 302735	SE-027-BR SW-027-BR 9/8/2003 352779 303669	SE-028-BR SW-028-BR 9/8/2003 352320 303984	SE-029-BR SW-029-BR 9/9/2003 351551 303889	SE-029-BR SW-FD-03 9/9/2003 351551 303889
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 UJ	5 UJ	5 UJ	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 U	20 U
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 U	20 UJ	20 UJ	20 UJ	20 UJ
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 UJ	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 U	20 UJ	20 UJ	20 UJ	20 UJ
4-Nitrophenol	29	µg/L	20 U	20 UJ	20 UJ	20 UJ	20 U
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 U	5 UJ	5 UJ	5 UJ	5 UJ
Benzaldehyde	360	µg/L	5 U	5 UJ	5 UJ	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 U
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 UJ	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 U	5 U	5 U	5 U
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-030-BR SW-030-BR 9/9/2003 350958 304015	SE-031-BR SW-031-BR 9/9/2003 350323 304420	SE-032-BR SW-032-BR 9/10/2003 349117 305833	SE-033-BR SW-033-BR 9/10/2003 347976 306035	SE-034-BR SW-034-BR 9/10/2003 347020 307232
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 UJ	5 UJ	5 UJ	5 UJ
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4-Nitrophenol	29	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Benzaldehyde	360	µg/L	5 UJ	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 U	5 UJ	5 UJ	5 UJ	5 UJ
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 UJ	5 UJ	5 UJ	5 UJ
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 UJ	5 UJ	5 UJ	5 UJ
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-041-BR SW-041-BR 8/30/2004 351597 303879	SE-043-BR SW-043-BR 8/30/2004 350184 304781	SE-044-BR SW-044-BR 8/30/2004 347061 307158	SE-046-BR SW-046-BR 8/30/2004 352890 303046	SE-046-BR SW-FD-11 8/30/2004 352890 303046
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	29	µg/L	20 U	20 U	20 U	20 U	20 U
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 U	5 UJ	5 U	5 UJ	5 UJ
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 U	5 U	5 U	5 U
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-047-BR SW-047-BR 8/30/2004 350628 304243	SE-048B-BR SW-048-BR 8/31/2004 349566 305538	SE-051-DF SW-051-DF 8/31/2004 349116 305924	SE-052-WT SW-052-WT 9/1/2004 349324 306113	SE-053B-WT SW-053-WT 9/9/2004 352950 304500
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 UJ	5 U	R	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 UJ	5 U	R	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 UJ	5 U	R	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 UJ	20 U	20 UJ	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 UJ	5 U	R	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 UJ	5 U	R	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 UJ	5 U	R	5 U
2-Chlorophenol	3	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
2-Methylphenol	13	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 UJ	20 U	R	20 U
2-Nitrophenol	29	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	R	5 UJ
3-Nitroaniline	2.1	µg/L	20 U	20 UJ	20 U	R	20 U
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 UJ	20 U	20 UJ	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 UJ	5 U	R	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
4-Chloroaniline	15	µg/L	5 U	5 UJ	5 U	R	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 UJ	5 U	R	5 U
4-Methylphenol	18	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
4-Nitroaniline	2.1	µg/L	20 U	20 UJ	20 U	R	20 U
4-Nitrophenol	29	µg/L	20 U	20 UJ	20 U	20 UJ	20 U
Acetophenone	0.042	µg/L	5 U	5 UJ	5 U	R	5 U
Atrazine	3	µg/L	5 U	5 UJ	5 U	R	5 U
Benzaldehyde	360	µg/L	5 U	5 UJ	5 U	R	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 UJ	5 U	R	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 UJ	5 U	R	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 UJ	10	R	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 UJ	5 U	R	5 U
Caprolactam	1,800	µg/L	5 UJ	5 UJ	5 UJ	R	5 U
Dibenzofuran	20	µg/L	5 U	5 UJ	5 U	R	5 U
Diethylphthalate	58	µg/L	5 U	5 UJ	5 U	R	5 U
Dimethyl phthalate	37	µg/L	5 U	5 UJ	5 U	R	5 U
Di-N-Butyl phthalate	33	µg/L	1.8 J	5 UJ	5 U	R	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 UJ	5 U	R	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 UJ	5 U	R	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 UJ	5 U	R	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 UJ	5 U	R	5 U
Hexachloroethane	1.9	µg/L	5 U	5 UJ	5 U	R	5 U
Isophorone	36	µg/L	5 U	5 UJ	5 U	R	5 U
Nitrobenzene	3.4	µg/L	5 U	5 UJ	5 U	R	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 UJ	5 U	R	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 UJ	5 U	R	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 UJ	5 U	5 UJ	5 U
Phenol	5.6	µg/L	5 U	5 UJ	5 U	5 UJ	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-057-WT SW-057-WT 9/2/2004 352084 304607	SE-058-WT SW-058-WT 9/1/2004 352774 304071	SE-059-WT SW-059-WT 9/1/2004 351440 305562	SE-060-WT SW-060-WT 9/2/2004 351895 304852	SE-061-WT SW-061-WT 9/1/2004 352372 304608
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	29	µg/L	20 U	20 U	20 U	20 U	20 U
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	1.9 J	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 U	5 U	5 UJ	5 U	5 U
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 U	5 U	5 U	5 U
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-062-WT SW-062-WT 9/1/2004 351508 305289	SE-064-BR SW-064-BR 9/2/2004 351791 303170	SE-065-BR SW-065-BR 9/2/2004 352478 302602	SE-066-BR SW-066-BR 9/3/2004 352272 302718	SE-067-BR SW-067-BR 9/3/2004 352007 302937
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	29	µg/L	20 U	20 U	20 U	20 U	20 U
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 UJ	5 U	5 U	5 U	5 U
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 U	5 U	5 U	5 U
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-068-BR SW-068-BR 9/6/2004 351730 303184	SE-069-NP SW-069-NP 9/2/2004 353122 303341	SE-069-NP SW-FD-12 9/2/2004 353122 303341	SE-071-BR SW-071-BR 9/6/2004 351567 303403	SE-072-BR SW-072-BR 9/6/2004 351393 303624
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	29	µg/L	20 U	20 U	20 U	20 U	20 U
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 U	5 U	5 U	5 U	5 U
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 U	5 U	5 U	5 U
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-074-LF SW-074-LF 9/10/2004 351471 303952	SE-075-UI SW-075-UI 9/3/2004 352417 303137	SE-077-UI SW-077-UI 9/6/2004 351696 303493	SE-078-UI SW-078-UI 9/6/2004 352438 303325	SE-079-UI SW-079-UI 9/7/2004 352447 303531
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	29	µg/L	20 U	20 U	20 U	20 U	20 U
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 U	5 U	5 U	5 U	5 U
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 U	5 U	5 U	5 U
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-079-UI SW-FD-13 9/7/2004 352447 303531	SE-080-UI SW-080-UI 9/7/2004 351994 303594	SE-081-BR SW-081-BR 9/7/2004 352703 302372	SE-082-BR SW-082-BR 9/6/2004 352820 302413	SE-083-BR SW-083-BR 9/6/2004 352717 302444
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	5 U
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	29	µg/L	20 U	20 U	20 U	20 U	20 U
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U
Atrazine	3	µg/L	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	5 U
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Caprolactam	1,800	µg/L	5 U	5 U	5 U	5 U	5 U
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	5 U
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	5 U
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	0.28	µg/L	5 U	5 U	5 U	5 U	5 U
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	5 U

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-084-UI SW-084-UI 9/7/2004 352049 303465	SE-085-UI SW-085-UI 9/7/2004 352447 303427	SE-086-UI SW-086-UI 9/7/2004 352149 303734	SE-087-UI SW-087-UI 9/7/2004 352478 303603	SW-1 ash SW-1 ash 4/4/2005
SVOC							
1,1'-Biphenyl	14	µg/L	5 U	5 U	5 U	5 U	NA
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	NA
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	5 U	5 U	5 U	5 U	NA
2,4,5-Trichlorophenol	0.51	µg/L	20 U	20 U	20 U	20 U	NA
2,4,6-Trichlorophenol	0.36	µg/L	5 U	5 U	5 U	5 U	NA
2,4-Dichlorophenol	2.2	µg/L	5 U	5 U	5 U	5 U	NA
2,4-Dimethylphenol	2.4	µg/L	5 U	5 U	5 U	5 U	NA
2,4-Dinitrophenol	0.69	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	NA
2,4-Dinitrotoluene	0.11	µg/L	5 U	5 U	5 U	5 U	NA
2,6-Dinitrotoluene	3.6	µg/L	5 U	5 U	5 U	5 U	NA
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	NA
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	NA
2-Methylphenol	13	µg/L	5 U	5 U	5 U	5 U	NA
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	NA
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	NA
3,3'-Dichlorobenzidine	0.077	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	NA
3-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	NA
4,6-Dinitro-2-methylphenol	13.4	µg/L	20 U	20 U	20 U	20 U	NA
4-Bromophenyl-phenylether	0.4	µg/L	5 U	5 U	5 U	5 U	NA
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	NA
4-Chloroaniline	15	µg/L	5 U	5 U	5 U	5 U	NA
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	NA
4-Methylphenol	18	µg/L	5 U	5 U	5 U	5 U	NA
4-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	NA
4-Nitrophenol	29	µg/L	20 U	20 U	20 U	20 U	NA
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	NA
Atrazine	3	µg/L	5 U	5 U	5 U	5 U	NA
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 U	NA
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	NA
bis(2-Chloroethyl)ether	0.031	µg/L	5 U	5 U	5 U	5 U	NA
bis(2-Ethylhexyl)phthalate	1.8	µg/L	5 U	5 U	5 U	5 U	NA
Butyl benzyl phthalate	1.9	µg/L	5 U	5 U	5 U	5 U	NA
Caprolactam	1,800	µg/L	5 U	5 U	5 U	5 U	NA
Dibenzofuran	20	µg/L	5 U	5 U	5 U	5 U	NA
Diethylphthalate	58	µg/L	5 U	5 U	5 U	5 U	NA
Dimethyl phthalate	37	µg/L	5 U	5 U	5 U	5 U	NA
Di-N-Butyl phthalate	33	µg/L	5 U	5 U	5 U	5 U	NA
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	NA
Hexachlorobenzene	0.00075	µg/L	5 U	5 U	5 U	5 U	NA
Hexachlorobutadiene	0.44	µg/L	5 U	5 U	5 U	5 U	NA
Hexachlorocyclopentadiene	0.008	µg/L	5 U	5 U	5 U	5 U	NA
Hexachloroethane	1.9	µg/L	5 U	5 U	5 U	5 U	NA
Isophorone	36	µg/L	5 U	5 U	5 U	5 U	NA
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	NA
N-Nitroso-di-N-propylamine	0.005	µg/L	5 U	5 U	5 U	5 U	NA
N-Nitrosodiphenylamine	5	µg/L	5 U	5 U	5 U	5 U	NA
Pentachlorophenol	0.28	µg/L	5 U	5 U	5 U	5 U	NA
Phenol	5.6	µg/L	5 U	5 U	5 U	5 U	NA

TABLE 4-33
SURFACE-WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SW-2 ash SW-2 ash 4/4/2005	SW-3 Pratt SW-3 Pratt 4/4/2005	SW-3 Pratt Cumberland SW-3 Pratt Cumberland 4/4/2005	SW-4 Pratt SW-4 Pratt 4/4/2005	SW-4 Pratt Lincoln SW-4 Pratt Lincoln 4/4/2005
SVOC							
1,1'-Biphenyl	14	µg/L	NA	NA	NA	NA	NA
1,2,4,5-Tetrachlorobenzene	- -	µg/L	NA	NA	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	1,400	µg/L	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	0.51	µg/L	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	0.36	µg/L	NA	NA	NA	NA	NA
2,4-Dichlorophenol	2.2	µg/L	NA	NA	NA	NA	NA
2,4-Dimethylphenol	2.4	µg/L	NA	NA	NA	NA	NA
2,4-Dinitrophenol	0.69	µg/L	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.11	µg/L	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	3.6	µg/L	NA	NA	NA	NA	NA
2-Chloronaphthalene	49	µg/L	NA	NA	NA	NA	NA
2-Chlorophenol	3	µg/L	NA	NA	NA	NA	NA
2-Methylphenol	13	µg/L	NA	NA	NA	NA	NA
2-Nitroaniline	2.1	µg/L	NA	NA	NA	NA	NA
2-Nitrophenol	29	µg/L	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	0.077	µg/L	NA	NA	NA	NA	NA
3-Nitroaniline	2.1	µg/L	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	13.4	µg/L	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	0.4	µg/L	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	- -	µg/L	NA	NA	NA	NA	NA
4-Chloroaniline	15	µg/L	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	- -	µg/L	NA	NA	NA	NA	NA
4-Methylphenol	18	µg/L	NA	NA	NA	NA	NA
4-Nitroaniline	2.1	µg/L	NA	NA	NA	NA	NA
4-Nitrophenol	29	µg/L	NA	NA	NA	NA	NA
Acetophenone	0.042	µg/L	NA	NA	NA	NA	NA
Atrazine	3	µg/L	NA	NA	NA	NA	NA
Benzaldehyde	360	µg/L	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	- -	µg/L	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	0.031	µg/L	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	1.8	µg/L	NA	NA	NA	NA	NA
Butyl benzyl phthalate	1.9	µg/L	NA	NA	NA	NA	NA
Caprolactam	1,800	µg/L	NA	NA	NA	NA	NA
Dibenzofuran	20	µg/L	NA	NA	NA	NA	NA
Diethylphthalate	58	µg/L	NA	NA	NA	NA	NA
Dimethyl phthalate	37	µg/L	NA	NA	NA	NA	NA
Di-N-Butyl phthalate	33	µg/L	NA	NA	NA	NA	NA
Di-N-Octyl phthalate	73	µg/L	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00075	µg/L	NA	NA	NA	NA	NA
Hexachlorobutadiene	0.44	µg/L	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	0.008	µg/L	NA	NA	NA	NA	NA
Hexachloroethane	1.9	µg/L	NA	NA	NA	NA	NA
Isophorone	36	µg/L	NA	NA	NA	NA	NA
Nitrobenzene	3.4	µg/L	NA	NA	NA	NA	NA
N-Nitroso-di-N-propylamine	0.005	µg/L	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	5	µg/L	NA	NA	NA	NA	NA
Pentachlorophenol	0.28	µg/L	NA	NA	NA	NA	NA
Phenol	5.6	µg/L	NA	NA	NA	NA	NA

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-001-UI SW-001-UI 8/28/2003 352478 303295	SE-002-UI SW-002-UI 8/28/2003 352322 303548	SE-003-UI SW-003-UI 8/29/2003 352279 303356	SE-003-UI SW-FD01 8/29/2003 352279 303356	SE-005-UI SW-005-UI 8/29/2003 351747 303610	SE-006-UI SW-006-UI 8/29/2003 352761 303287	SE-007-UI SW-007-UI 9/2/2003 352484 303117	SE-008-BR SW-008-BR 9/2/2003 352735 302367
SVOC TICS										
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L								
1,4-Cyclooctadiene	- -	µg/L								
13-Docosenamide, (Z)-	- -	µg/L								
2 (3H)-Benzothiazolone	- -	µg/L	29 NJ							
2-Propenoic acid, tridecyl	- -	µg/L								
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L								2 NJ
9-Octadecenamide, (Z)-	- -	µg/L								
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L								
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L								
Benzothiazole, 2-(methylthio)-	- -	µg/L								
Hexadecanoic acid	- -	µg/L								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L								
Phthalic anhydride	- -	µg/L								
Tridecanoic acid	- -	µg/L								
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	1		3	1	5	1		1

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-009-WT SW-009-WT 9/3/2003 352646 304086	SE-010-WT SW-010-WT 9/3/2003 352842 304421	SE-011-WT SW-011-WT 9/3/2003 352504 304330	SE-012-WT SW-012-WT 9/3/2003 351470 305229	SE-013-WT SW-013-WT 9/4/2003 352327 304194	SE-014-WT SW-014-WT 9/4/2003 351040 305533	SE-015-WT SW-015-WT 9/4/2003 351365 305705	SE-016-WT SW-016-WT 9/4/2003 349270 306035
SVOC TICS										
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L								
1,4-Cyclooctadiene	- -	µg/L								
13-Docosenamide, (Z)-	- -	µg/L								
2 (3H)-Benzothiazolone	- -	µg/L								
2-Propenoic acid, tridecyl	- -	µg/L								
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L								
9-Octadecenamide, (Z)-	- -	µg/L								
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L								
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L								
Benzothiazole, 2-(methylthio)-	- -	µg/L								
Hexadecanoic acid	- -	µg/L								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L								
Phthalic anhydride	- -	µg/L								
Tridecanoic acid	- -	µg/L								
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	1							

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-017-WT SW-017-WT 9/5/2003 350890 305078	SE-020-LF SW-020-LF 9/5/2003 351481 303930	SE-021-NP SW-021-NP 9/5/2003 353121 303354	SE-022-BR SW-022-BR 9/5/2003 345490 312537	SE-023-BR SW-023-BR 9/6/2003 352567 302605	SE-024-BR SW-024-BR 9/6/2003 352135 302922	SE-025-BR SW-025-BR 9/6/2003 351456 303575	SE-026-BR SW-026-BR 9/8/2003 352690 302735
SVOC TICS										
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L								
1,4-Cyclooctadiene	- -	µg/L								
13-Docosenamide, (Z)-	- -	µg/L								
2 (3H)-Benzothiazolone	- -	µg/L		27 NJ	14 NJ					
2-Propenoic acid, tridecyl	- -	µg/L								
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L								
9-Octadecenamide, (Z)-	- -	µg/L								
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L			3.8 NJ					
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L		43 J						
Benzothiazole, 2-(methylthio)-	- -	µg/L								
Hexadecanoic acid	- -	µg/L								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L			5.4 NJ					
Phthalic anhydride	- -	µg/L								
Tridecanoic acid	- -	µg/L								
Unknown TICs (SVOCs) - number of occurences	- -	(Count)		13	1		1			

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-026-BR SW-FD-02 9/8/2003 352690 302735	SE-026-BR SW-042-BR 8/31/2004 352690 302735	SE-027-BR SW-027-BR 9/8/2003 352779 303669	SE-028-BR SW-028-BR 9/8/2003 352320 303984	SE-029-BR SW-029-BR 9/9/2003 351551 303889	SE-029-BR SW-FD-03 9/9/2003 351551 303889	SE-030-BR SW-030-BR 9/9/2003 350958 304015	SE-031-BR SW-031-BR 9/9/2003 350323 304420	SE-032-BR SW-032-BR 9/10/2003 349117 305833
SVOC TICS											
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L									
1,4-Cyclooctadiene	- -	µg/L									
13-Docosenamide, (Z)-	- -	µg/L		24 UJ							
2 (3H)-Benzothiazolone	- -	µg/L									
2-Propenoic acid, tridecyl	- -	µg/L									
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L									
9-Octadecenamide, (Z)-	- -	µg/L									
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L									
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L									
Benzothiazole, 2-(methylthio)-	- -	µg/L									
Hexadecanoic acid	- -	µg/L									
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L									
Phthalic anhydride	- -	µg/L									
Tridecanoic acid	- -	µg/L									
Unknown TICs (SVOCs) - number of occurences	- -	(Count)		3				1		6	5

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-033-BR SW-033-BR 9/10/2003 347976 306035	SE-034-BR SW-034-BR 9/10/2003 347020 307232	SE-041-BR SW-041-BR 8/30/2004 351597 303879	SE-043-BR SW-043-BR 8/30/2004 350184 304781	SE-044-BR SW-044-BR 8/30/2004 347061 307158	SE-046-BR SW-046-BR 8/30/2004 352890 303046	SE-046-BR SW-FD-11 8/30/2004 352890 303046	SE-047-BR SW-047-BR 8/30/2004 350628 304243
SVOC TICS										
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L								
1,4-Cyclooctadiene	- -	µg/L								
13-Docosenamide, (Z)-	- -	µg/L			19 UJ		24 UJ	31 UJ		21 UJ
2 (3H)-Benzothiazolone	- -	µg/L				3 NJ				7.2 NJ
2-Propenoic acid, tridecyl	- -	µg/L								
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L								
9-Octadecenamide, (Z)-	- -	µg/L			2.2 UJ	19 UJ				
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L								
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L								
Benzothiazole, 2-(methylthio)-	- -	µg/L								
Hexadecanoic acid	- -	µg/L								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L								
Phthalic anhydride	- -	µg/L								
Tridecanoic acid	- -	µg/L								
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	4	3	1		2	1	2	1

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-048B-BR SW-048-BR 8/31/2004 349566 305538	SE-051-DF SW-051-DF 8/31/2004 349116 305924	SE-052-WT SW-052-WT 9/1/2004 349324 306113	SE-053B-WT SW-053-WT 9/9/2004 352950 304500	SE-057-WT SW-057-WT 9/2/2004 352084 304607	SE-058-WT SW-058-WT 9/1/2004 352774 304071	SE-059-WT SW-059-WT 9/1/2004 351440 305562	SE-060-WT SW-060-WT 9/2/2004 351895 304852
SVOC TICS										
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L								
1,4-Cyclooctadiene	- -	µg/L		3.6 NJ						
13-Docosenamide, (Z)-	- -	µg/L		24 UJ				26 UJ		33 UJ
2 (3H)-Benzothiazolone	- -	µg/L								
2-Propenoic acid, tridecyl	- -	µg/L	15 NJ							
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L								
9-Octadecenamide, (Z)-	- -	µg/L	20 UJ			2.5 NJ				
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L								
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L								
Benzothiazole, 2-(methylthio)-	- -	µg/L								
Hexadecanoic acid	- -	µg/L		2.4 NJ						
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L								
Phthalic anhydride	- -	µg/L			4.7 NJ					
Tridecanoic acid	- -	µg/L								
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	1	11	1	3	1	2	3	1

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-061-WT SW-061-WT 9/1/2004 352372 304608	SE-062-WT SW-062-WT 9/1/2004 351508 305289	SE-064-BR SW-064-BR 9/2/2004 351791 303170	SE-065-BR SW-065-BR 9/2/2004 352478 302602	SE-066-BR SW-066-BR 9/3/2004 352272 302718	SE-067-BR SW-067-BR 9/3/2004 352007 302937	SE-068-BR SW-068-BR 9/6/2004 351730 303184	SE-069-NP SW-069-NP 9/2/2004 353122 303341
SVOC TICS										
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L								
1,4-Cyclooctadiene	- -	µg/L								
13-Docosenamide, (Z)-	- -	µg/L		21 UJ		34 UJ			25 UJ	
2 (3H)-Benzothiazolone	- -	µg/L								
2-Propenoic acid, tridecyl	- -	µg/L								
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L								
9-Octadecenamide, (Z)-	- -	µg/L			18 NJ	6.2 NJ	16 NJ			
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L								
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L								
Benzothiazole, 2-(methylthio)-	- -	µg/L								
Hexadecanoic acid	- -	µg/L								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L								
Phthalic anhydride	- -	µg/L								
Tridecanoic acid	- -	µg/L								
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	2	1	1		1	1	1	3

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-069-NP SW-FD-12 9/2/2004 353122 303341	SE-071-BR SW-071-BR 9/6/2004 351567 303403	SE-072-BR SW-072-BR 9/6/2004 351393 303624	SE-074-LF SW-074-LF 9/10/2004 351471 303952	SE-075-UI SW-075-UI 9/3/2004 352417 303137	SE-077-UI SW-077-UI 9/6/2004 351696 303493	SE-078-UI SW-078-UI 9/6/2004 352438 303325	SE-079-UI SW-079-UI 9/7/2004 352447 303531
SVOC TICS										
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L						12 NJ		
1,4-Cyclooctadiene	- -	µg/L								
13-Docosenamide, (Z)-	- -	µg/L	20 UJ	17 UJ	21 UJ	23 UJ			16 UJ	31 UJ
2 (3H)-Benzothiazolone	- -	µg/L	4 NJ						32 NJ	
2-Propenoic acid, tridecyl	- -	µg/L								
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L								
9-Octadecenamide, (Z)-	- -	µg/L					19 NJ			
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L								
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L								
Benzothiazole, 2-(methylthio)-	- -	µg/L							2.1 NJ	
Hexadecanoic acid	- -	µg/L							2 UJ	
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L								
Phthalic anhydride	- -	µg/L								
Tridecanoic acid	- -	µg/L						2.3 NJ		
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	1			1		3	1	3

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-079-UI SW-FD-13 9/7/2004 352447 303531	SE-080-UI SW-080-UI 9/7/2004 351994 303594	SE-081-BR SW-081-BR 9/7/2004 352703 302372	SE-082-BR SW-082-BR 9/6/2004 352820 302413	SE-083-BR SW-083-BR 9/6/2004 352717 302444	SE-084-UI SW-084-UI 9/7/2004 352049 303465	SE-085-UI SW-085-UI 9/7/2004 352447 303427	SE-086-UI SW-086-UI 9/7/2004 352149 303734
SVOC TICS										
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L								
1,4-Cyclooctadiene	- -	µg/L								
13-Docosenamide, (Z)-	- -	µg/L		31 UJ					18 UJ	
2 (3H)-Benzothiazolone	- -	µg/L								
2-Propenoic acid, tridecyl	- -	µg/L								
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L								
9-Octadecenamide, (Z)-	- -	µg/L			17 NJ	19 NJ	34 NJ	18 NJ		
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L								
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L								
Benzothiazole, 2-(methylthio)-	- -	µg/L								
Hexadecanoic acid	- -	µg/L								
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L								
Phthalic anhydride	- -	µg/L								
Tridecanoic acid	- -	µg/L								
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	4	3		1	1	2	4	3

TABLE 4-34
SURFACE-WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-087-UI SW-087-UI 9/7/2004 352478 303603	SW-1 ash SW-1 ash 4/4/2005	SW-2 ash SW-2 ash 4/4/2005	SW-3 Pratt SW-3 Pratt 4/4/2005	SW-3 Pratt Cumberland SW-3 Pratt Cumberland 4/4/2005	SW-4 Pratt SW-4 Pratt 4/4/2005	SW-4 Pratt Lincoln SW-4 Pratt Lincoln 4/4/2005
SVOC TICS									
1,4,8-Dodecatriene, (E,E,E)-	- -	µg/L		NA	NA	NA	NA	NA	NA
1,4-Cyclooctadiene	- -	µg/L		NA	NA	NA	NA	NA	NA
13-Docosenamide, (Z)-	- -	µg/L	30 UJ	NA	NA	NA	NA	NA	NA
2 (3H)-Benzothiazolone	- -	µg/L		NA	NA	NA	NA	NA	NA
2-Propenoic acid, tridecyl	- -	µg/L		NA	NA	NA	NA	NA	NA
3-Hydroxy-2,4,4-trimethylpentyl-ester-2-methyl-propanoic acid	- -	µg/L		NA	NA	NA	NA	NA	NA
9-Octadecenamide, (Z)-	- -	µg/L		NA	NA	NA	NA	NA	NA
Benzenamine, 3,3'-sulfonylbis-	- -	µg/L		NA	NA	NA	NA	NA	NA
Benzenesulfonamide, N-ethyl-4-methyl-	- -	µg/L		NA	NA	NA	NA	NA	NA
Benzothiazole, 2-(methylthio)-	- -	µg/L		NA	NA	NA	NA	NA	NA
Hexadecanoic acid	- -	µg/L		NA	NA	NA	NA	NA	NA
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L		NA	NA	NA	NA	NA	NA
Phthalic anhydride	- -	µg/L		NA	NA	NA	NA	NA	NA
Tridecanoic acid	- -	µg/L		NA	NA	NA	NA	NA	NA
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	3	NA	NA	NA	NA	NA	NA

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-001-UI SW-001-UI 8/28/2003 352478 303295	SE-002-UI SW-002-UI 8/28/2003 352322 303548	SE-003-UI SW-003-UI 8/29/2003 352279 303356	SE-003-UI SW-FD01 8/29/2003 352279 303356	SE-005-UI SW-005-UI 8/29/2003 351747 303610	SE-006-UI SW-006-UI 8/29/2003 352761 303287	SE-007-UI SW-007-UI 9/2/2003 352484 303117	SE-008-BR SW-008-BR 9/2/2003 352735 302367
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	0	0	0	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	0.00059	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDT	0.001	µg/L	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 U
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
beta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	110	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Methoxychlor	0.03	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-009-WT SW-009-WT 9/3/2003 352646 304086	SE-010-WT SW-010-WT 9/3/2003 352842 304421	SE-011-WT SW-011-WT 9/3/2003 352504 304330	SE-012-WT SW-012-WT 9/3/2003 351470 305229	SE-013-WT SW-013-WT 9/4/2003 352327 304194	SE-014-WT SW-014-WT 9/4/2003 351040 305533	SE-015-WT SW-015-WT 9/4/2003 351365 305705	SE-016-WT SW-016-WT 9/4/2003 349270 306035
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Total PCBs	- -	µg/L	0	0	0	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
4,4'-DDE	0.00059	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDT	0.001	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
beta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0044 J	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	110	µg/L	0.005 U	0.005 U	0.013	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Methoxychlor	0.03	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-017-WT SW-017-WT 9/5/2003 350890 305078	SE-020-LF SW-020-LF 9/5/2003 351481 303930	SE-021-NP SW-021-NP 9/5/2003 353121 303354	SE-022-BR SW-022-BR 9/5/2003 345490 312537	SE-023-BR SW-023-BR 9/6/2003 352567 302605	SE-024-BR SW-024-BR 9/6/2003 352135 302922	SE-025-BR SW-025-BR 9/6/2003 351456 303575	SE-026-BR SW-026-BR 9/8/2003 352690 302735
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U
Aroclor-1260	0.014	µg/L	0.05 UJ	0.3 J	0.12 J	0.056 UJ	0.056 UJ	0.056 UJ	0.056 UJ	0.056 UJ
Total PCBs	- -	µg/L	0	0.3 J	0.12 J	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 UJ	0.025 J	0.0052 J	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
4,4'-DDE	0.00059	µg/L	0.005 U	0.015 J	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
4,4'-DDT	0.001	µg/L	0.005 UJ	0.005 U	0.005 UJ	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
alpha-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
beta-BHC	2.2	µg/L	0.01 J	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Dieldrin	0.056	µg/L	0.005 U	0.014 J	0.012 J	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
Endosulfan Sulfate	110	µg/L	0.005 U	0.011 J	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
Endrin	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.006 J	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	R	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	R
Methoxychlor	0.03	µg/L	0.025 UJ	0.025 U	0.025 UJ	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.25 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-026-BR SW-FD-02 9/8/2003 352690 302735	SE-026-BR SW-042-BR 8/31/2004 352690 302735	SE-027-BR SW-027-BR 9/8/2003 352779 303669	SE-028-BR SW-028-BR 9/8/2003 352320 303984	SE-029-BR SW-029-BR 9/9/2003 351551 303889	SE-029-BR SW-FD-03 9/9/2003 351551 303889	SE-030-BR SW-030-BR 9/9/2003 350958 304015	SE-031-BR SW-031-BR 9/9/2003 350323 304420
PCBs										
Aroclor-1016	0.014	µg/L	0.056 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.05 U
Aroclor-1221	0.014	µg/L	0.11 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.1 U
Aroclor-1232	0.014	µg/L	0.056 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.05 U
Aroclor-1242	0.014	µg/L	0.056 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.05 U
Aroclor-1248	0.014	µg/L	0.056 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.05 U
Aroclor-1254	0.014	µg/L	0.056 U	0.05 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.05 U
Aroclor-1260	0.014	µg/L	0.056 UJ	0.05 U	0.056 UJ	0.056 UJ	0.056 UJ	0.056 U	0.056 UJ	0.05 U
Total PCBs	- -	µg/L	0	0	0	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.0056 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
4,4'-DDE	0.00059	µg/L	0.0056 U	0.005 UJ	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
4,4'-DDT	0.001	µg/L	0.0056 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
Aldrin	3	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0025 U
alpha-BHC	2.2	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0025 U
alpha-Chlordane	0.0043	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0025 U
beta-BHC	2.2	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	R	0.0028 U	0.0028 U	0.0025 U
Delta-BHC	2.2	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0025 U
Dieldrin	0.056	µg/L	0.0056 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
Endosulfan I	0.056	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0025 U
Endosulfan II	0.056	µg/L	0.0056 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
Endosulfan Sulfate	110	µg/L	0.0056 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
Endrin	0.036	µg/L	0.0056 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
Endrin Aldehyde	0.76	µg/L	0.0056 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
Endrin Ketone	0.036	µg/L	0.0056 U	0.005 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.0056 U	0.005 U
Gamma-BHC	0.019	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0025 U
Gamma-Chlordane	0.0043	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0025 U
Heptachlor	0.0038	µg/L	0.0028 U	0.0025 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0025 U
Heptachlor Epoxide	0.0038	µg/L	0.0028 U	0.0025 U	R	0.0028 U	R	0.0028 U	0.0028 U	0.0025 U
Methoxychlor	0.03	µg/L	0.028 U	0.025 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.025 U
Toxaphene	0.0002	µg/L	0.28 U	0.25 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.25 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-032-BR SW-032-BR 9/10/2003 349117 305833	SE-033-BR SW-033-BR 9/10/2003 347976 306035	SE-034-BR SW-034-BR 9/10/2003 347020 307232	SE-041-BR SW-041-BR 8/30/2004 351597 303879	SE-043-BR SW-043-BR 8/30/2004 350184 304781	SE-044-BR SW-044-BR 8/30/2004 347061 307158	SE-046-BR SW-046-BR 8/30/2004 352890 303046	SE-046-BR SW-FD-11 8/30/2004 352890 303046
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	0	0	0	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.0047 J	0.005 U	0.005 U	0.005 U
4,4'-DDE	0.00059	µg/L	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ
4,4'-DDT	0.001	µg/L	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
beta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	110	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	R	0.005 U	0.005 U	0.005 U
Endrin	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0037 J	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Methoxychlor	0.03	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-047-BR SW-047-BR 8/30/2004 350628 304243	SE-048B-BR SW-048-BR 8/31/2004 349566 305538	SE-051-DF SW-051-DF 8/31/2004 349116 305924	SE-052-WT SW-052-WT 9/1/2004 349324 306113	SE-053B-WT SW-053-WT 9/9/2004 352950 304500	SE-057-WT SW-057-WT 9/2/2004 352084 304607	SE-058-WT SW-058-WT 9/1/2004 352774 304071	SE-059-WT SW-059-WT 9/1/2004 351440 305562
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	R	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	0	0	0	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 U	0.005 U	0.0058 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	0.00059	µg/L	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ
4,4'-DDT	0.001	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0044 J	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
beta-BHC	2.2	µg/L	0.0025 U	0.0025 U	R	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	110	µg/L	R	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 UJ	0.005 U	R
Endrin	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0029 J	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Methoxychlor	0.03	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-060-WT SW-060-WT 9/2/2004 351895 304852	SE-061-WT SW-061-WT 9/1/2004 352372 304608	SE-062-WT SW-062-WT 9/1/2004 351508 305289	SE-064-BR SW-064-BR 9/2/2004 351791 303170	SE-065-BR SW-065-BR 9/2/2004 352478 302602	SE-066-BR SW-066-BR 9/3/2004 352272 302718	SE-067-BR SW-067-BR 9/3/2004 352007 302937	SE-068-BR SW-068-BR 9/6/2004 351730 303184
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	0	0	0	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	0.00059	µg/L	0.005 U	0.005 UJ	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
4,4'-DDT	0.001	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 UJ
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
beta-BHC	2.2	µg/L	0.0025 U	0.0036 J	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.0024 J	0.005 U	0.005 U	0.005 U
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	110	µg/L	0.005 UJ	0.005 U	0.005 U	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ
Endrin	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Methoxychlor	0.03	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 UJ
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-069-NP SW-069-NP 9/2/2004 353122 303341	SE-069-NP SW-FD-12 9/2/2004 353122 303341	SE-071-BR SW-071-BR 9/6/2004 351567 303403	SE-072-BR SW-072-BR 9/6/2004 351393 303624	SE-074-LF SW-074-LF 9/10/2004 351471 303952	SE-075-UI SW-075-UI 9/3/2004 352417 303137	SE-077-UI SW-077-UI 9/6/2004 351696 303493	SE-078-UI SW-078-UI 9/6/2004 352438 303325
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	0	0	0	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.012 J
4,4'-DDE	0.00059	µg/L	0.005 U	0.005 U	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ
4,4'-DDT	0.001	µg/L	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.0092 J	0.005 UJ
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	2.2	µg/L	0.0021 J	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0033 J	0.0025 U
beta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	R	0.0025 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.056	µg/L	0.0021 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	R	0.0025 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	110	µg/L	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ
Endrin	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0043 J	0.0025 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0027 J	0.0094	0.0047
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0051 J	0.0025 U
Methoxychlor	0.03	µg/L	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U	0.025 U	0.025 UJ	0.025 UJ
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-079-UI SW-079-UI 9/7/2004 352447 303531	SE-079-UI SW-FD-13 9/7/2004 352447 303531	SE-080-UI SW-080-UI 9/7/2004 351994 303594	SE-081-BR SW-081-BR 9/7/2004 352703 302372	SE-082-BR SW-082-BR 9/6/2004 352820 302413	SE-083-BR SW-083-BR 9/6/2004 352717 302444	SE-084-UI SW-084-UI 9/7/2004 352049 303465	SE-085-UI SW-085-UI 9/7/2004 352447 303427
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	0.014	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCBs	- -	µg/L	0	0	0	0	0	0	0	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	0.00059	µg/L	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ
4,4'-DDT	0.001	µg/L	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 U
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
beta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Dieldrin	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan Sulfate	110	µg/L	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ
Endrin	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Methoxychlor	0.03	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 UJ	0.025 UJ	0.025 U	0.025 U
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

TABLE 4-35
SURFACE-WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-086-UI SW-086-UI 9/7/2004 352149 303734	SE-087-UI SW-087-UI 9/7/2004 352478 303603	SW-1 ash SW-1 ash 4/4/2005	SW-2 ash SW-2 ash 4/4/2005	SW-3 Pratt SW-3 Pratt 4/4/2005	SW-3 Pratt Cumberland SW-3 Pratt Cumberland 4/4/2005	SW-4 Pratt SW-4 Pratt 4/4/2005	SW-4 Pratt Lincoln SW-4 Pratt Lincoln 4/4/2005
PCBs										
Aroclor-1016	0.014	µg/L	0.05 U	0.05 U	0.023 U	0.024 U	NA	0.024 U	NA	0.023 U
Aroclor-1221	0.014	µg/L	0.1 U	0.1 U	0.023 U	0.024 U	NA	0.024 U	NA	0.023 U
Aroclor-1232	0.014	µg/L	0.05 U	0.05 U	0.023 U	0.024 U	NA	0.024 U	NA	0.023 U
Aroclor-1242	0.014	µg/L	0.05 U	0.05 U	0.023 U	0.024 U	NA	0.024 U	NA	0.023 U
Aroclor-1248	0.014	µg/L	0.05 U	0.05 U	0.023 U	0.024 U	NA	0.024 U	NA	0.023 U
Aroclor-1254	0.014	µg/L	0.05 U	0.05 U	0.023 U	0.024 U	NA	0.024 U	NA	0.023 U
Aroclor-1260	0.014	µg/L	0.05 U	0.05 U	0.023 U	0.024 U	NA	0.024 U	NA	0.023 U
Total PCBs	- -	µg/L	0	0	0	0	NA	0	NA	0
PESTICIDES										
4,4'-DDD	0.011	µg/L	0.005 U	0.005 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
4,4'-DDE	0.00059	µg/L	0.005 UJ	0.005 UJ	0.0014	0.0012 U	NA	0.0012 U	NA	0.0014
4,4'-DDT	0.001	µg/L	0.005 U	0.005 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0017
Aldrin	3	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
alpha-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0027 J	0.0029 J	NA	0.0012 UJ	NA	0.0026 J
alpha-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
beta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Delta-BHC	2.2	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Dieldrin	0.056	µg/L	0.005 U	0.005 U	0.0014	0.0012	NA	0.0013	NA	0.0013
Endosulfan I	0.056	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Endosulfan II	0.056	µg/L	0.005 U	0.005 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Endosulfan Sulfate	110	µg/L	0.005 UJ	0.005 UJ	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Endrin	0.036	µg/L	0.005 U	0.005 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Endrin Aldehyde	0.76	µg/L	0.005 U	0.005 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Endrin Ketone	0.036	µg/L	0.005 U	0.005 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Gamma-BHC	0.019	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Gamma-Chlordane	0.0043	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Heptachlor	0.0038	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Heptachlor Epoxide	0.0038	µg/L	0.0025 U	0.0025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Methoxychlor	0.03	µg/L	0.025 U	0.025 U	0.0011 U	0.0012 U	NA	0.0012 U	NA	0.0011 U
Toxaphene	0.0002	µg/L	0.25 U	0.25 U	0.11 U	0.12 U	NA	0.12 U	NA	0.11 U

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-001-UI SW-001-UI 8/28/2003 352478 303295	SE-002-UI SW-002-UI 8/28/2003 352322 303548	SE-003-UI SW-003-UI 8/29/2003 352279 303356	SE-003-UI SW-FD01 8/29/2003 352279 303356	SE-005-UI SW-005-UI 8/29/2003 351747 303610
Metals and Cyanide							
Aluminum	87	µg/L	200 U	200 U	200 U	200 U	529
Antimony	30	µg/L	3 U	3 U	3 U	3 U	3 U
Arsenic	3.1	µg/L	0.572	1.29	2.14	1.6	1.74
Barium	3.9	µg/L	248	200 U	200 U	200 U	200 U
Beryllium	0.17	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Cadmium	0.25	µg/L	0.64 J	0.2 U	0.2 U	0.2 U	2.2 J
Calcium	- -	µg/L	30,900	8,990	9,190	9,200	9,760
Chromium	11	µg/L	1.6 J	0.4 U	0.4 U	0.4 U	4.8 J
Cobalt	3	µg/L	50 U	50 U	50 U	50 U	50 U
Copper	2.87	µg/L	25 U	25 U	25 U	25 U	25 U
Cyanide	5.2	µg/L	4 U	4 U	4 U	4 U	4 U
Iron	1,000	µg/L	6,830	866	1,310	1,240	6,630
Lead	0.32	µg/L	14.3	1.5 J	2.8 J	2.1 J	15.5
Magnesium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Manganese	50	µg/L	553	267	331	329	441
Mercury	0.0122	µg/L	0.15 U	0.14 U	0.14 U	0.14 U	0.14 U
Nickel	40.28	µg/L	40 U	40 U	40 U	40 U	40 U
Potassium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Selenium	5	µg/L	3 U	3 U	3 U	3 U	3 U
Silver	0.36	µg/L	10 U	0.6 U	0.6 U	0.6 U	10 U
Sodium	- -	µg/L	35,300	30,400	31,200	32,000	31,200
Thallium	1	µg/L	4 U	4 U	4 U	4 U	4 U
Vanadium	19	µg/L	0.47 J	0.61 J	0.41 J	0.4 U	1.6 J
Zinc	26.72	µg/L	75.099998	20 U	20 U	20 U	155
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	6 U	NA	NA	NA
Antimony	30	µg/L	NA	3 U	NA	NA	NA
Arsenic	3.1	µg/L	NA	1.21	NA	NA	NA
Barium	3.9	µg/L	NA	200 U	NA	NA	NA
Beryllium	0.17	µg/L	NA	0.3 U	NA	NA	NA
Cadmium	0.25	µg/L	NA	0.2 U	NA	NA	NA
Calcium	- -	µg/L	NA	9,010	NA	NA	NA
Chromium	11	µg/L	NA	0.4 U	NA	NA	NA
Cobalt	3	µg/L	NA	0.5 U	NA	NA	NA
Copper	2.87	µg/L	NA	25 U	NA	NA	NA
Iron	1,000	µg/L	NA	372	NA	NA	NA
Lead	0.32	µg/L	NA	1.1 J	NA	NA	NA
Magnesium	- -	µg/L	NA	5,000 U	NA	NA	NA
Manganese	50	µg/L	NA	242	NA	NA	NA
Mercury	0.0122	µg/L	NA	0.14 U	NA	NA	NA
Nickel	40.28	µg/L	NA	40 U	NA	NA	NA
Potassium	- -	µg/L	NA	5,000 U	NA	NA	NA
Selenium	5	µg/L	NA	3 U	NA	NA	NA
Silver	0.36	µg/L	NA	0.6 U	NA	NA	NA
Sodium	- -	µg/L	NA	32,500	NA	NA	NA
Thallium	1	µg/L	NA	4 U	NA	NA	NA
Vanadium	19	µg/L	NA	0.4 U	NA	NA	NA
Zinc	26.72	µg/L	NA	20 U	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-006-UI SW-006-UI 8/29/2003 352761 303287	SE-007-UI SW-007-UI 9/2/2003 352484 303117	SE-008-BR SW-008-BR 9/2/2003 352735 302367	SE-009-WT SW-009-WT 9/3/2003 352646 304086	SE-010-WT SW-010-WT 9/3/2003 352842 304421
Metals and Cyanide							
Aluminum	87	µg/L	200 U	993	200 U	200 U	200 U
Antimony	30	µg/L	3 U	3 U	3 U	3 U	3 U
Arsenic	3.1	µg/L	1.8	1.88	2.41	0.673	0.931
Barium	3.9	µg/L	200 U	200 U	200 U	200 U	200 U
Beryllium	0.17	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Cadmium	0.25	µg/L	0.37 J	1.1 J	0.2 U	0.2 U	0.2 U
Calcium	- -	µg/L	9,410	8,960	12,800	16,700	15,900
Chromium	11	µg/L	2.2 J	11.9	1.7 J	0.4 U	0.56 J
Cobalt	3	µg/L	50 U	50 U	0.5 U	0.5 U	50 U
Copper	2.87	µg/L	25 U	25 U	25 U	0.8 U	0.8 U
Cyanide	5.2	µg/L	4 U	4 U	4 U	4 U	4 U
Iron	1,000	µg/L	1,370	3,340	1,480	1,460	2,450
Lead	0.32	µg/L	6	18.9	6	1.6 J	2.7 J
Magnesium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Manganese	50	µg/L	377	302	200	126	111
Mercury	0.0122	µg/L	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Nickel	40.28	µg/L	40 U	40 U	40 U	40 U	40 U
Potassium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	3,050 J
Selenium	5	µg/L	3 U	3 U	3 U	3 U	3 U
Silver	0.36	µg/L	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Sodium	- -	µg/L	31,800	28,300	52,000	30,200	30,900
Thallium	1	µg/L	4 U	4 U	4 U	4 U	4 U
Vanadium	19	µg/L	0.79 J	2.3 J	0.9 J	0.65 J	1.4 J
Zinc	26.72	µg/L	26.5	59.400002	20 U	3 U	20 U
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-011-WT SW-011-WT 9/3/2003 352504 304330	SE-012-WT SW-012-WT 9/3/2003 351470 305229	SE-013-WT SW-013-WT 9/4/2003 352327 304194	SE-014-WT SW-014-WT 9/4/2003 351040 305533	SE-015-WT SW-015-WT 9/4/2003 351365 305705
Metals and Cyanide							
Aluminum	87	µg/L	200 U	200 U	260	934	200 U
Antimony	30	µg/L	3 U	3 U	3 U	3 U	3 U
Arsenic	3.1	µg/L	0.781	0.608	0.845	1.25	0.306
Barium	3.9	µg/L	200 U	200 U	200 U	200 U	200 U
Beryllium	0.17	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Cadmium	0.25	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	- -	µg/L	11,900	21,500	11,000	28,000	14,000
Chromium	11	µg/L	1 J	0.54 J	0.9 J	2 J	0.44 J
Cobalt	3	µg/L	0.5 U	1.5 J	0.72 J	1.9 J	0.66 J
Copper	2.87	µg/L	25 U	25 U	25 U	25 U	0.8 U
Cyanide	5.2	µg/L	4 U	4 U	4 U	4 U	6 J
Iron	1,000	µg/L	1,340	1,010 J	691 J	2,030 J	422 J
Lead	0.32	µg/L	2.5 J	0.8 U	4.7	5.1	0.8 U
Magnesium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Manganese	50	µg/L	35.700001	47.299999 J	25 J	131 J	27.4 J
Mercury	0.0122	µg/L	0.14 U	0.13 U	0.13 U	0.14 U	0.13 U
Nickel	40.28	µg/L	40 U	40 U	40 U	40 U	40 U
Potassium	- -	µg/L	5,000 U	5,000 U	5,000 U	6,650	5,000 U
Selenium	5	µg/L	3 U	3 U	3 U	3 U	3 U
Silver	0.36	µg/L	0.6 U	0.6 UJ	0.6 UJ	0.6 UJ	0.6 UJ
Sodium	- -	µg/L	23,500	24,900 J	21,300 J	15,800 J	15,600 J
Thallium	1	µg/L	4 U	4 U	4 U	4 U	4 U
Vanadium	19	µg/L	1.1 J	0.4 U	2.1 J	2.8 J	0.62 J
Zinc	26.72	µg/L	20 U	20 U	20 U	20.9	20 U
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	6 U	NA	NA	NA	NA
Antimony	30	µg/L	3 U	NA	NA	NA	NA
Arsenic	3.1	µg/L	0.655	NA	NA	NA	NA
Barium	3.9	µg/L	200 U	NA	NA	NA	NA
Beryllium	0.17	µg/L	0.3 U	NA	NA	NA	NA
Cadmium	0.25	µg/L	0.2 U	NA	NA	NA	NA
Calcium	- -	µg/L	11,400	NA	NA	NA	NA
Chromium	11	µg/L	0.4 U	NA	NA	NA	NA
Cobalt	3	µg/L	0.5 U	NA	NA	NA	NA
Copper	2.87	µg/L	25 U	NA	NA	NA	NA
Iron	1,000	µg/L	333	NA	NA	NA	NA
Lead	0.32	µg/L	2.9 J	NA	NA	NA	NA
Magnesium	- -	µg/L	5,000 U	NA	NA	NA	NA
Manganese	50	µg/L	15 U	NA	NA	NA	NA
Mercury	0.0122	µg/L	0.15 U	NA	NA	NA	NA
Nickel	40.28	µg/L	40 U	NA	NA	NA	NA
Potassium	- -	µg/L	5,000 U	NA	NA	NA	NA
Selenium	5	µg/L	3 U	NA	NA	NA	NA
Silver	0.36	µg/L	0.6 U	NA	NA	NA	NA
Sodium	- -	µg/L	22,900	NA	NA	NA	NA
Thallium	1	µg/L	4 U	NA	NA	NA	NA
Vanadium	19	µg/L	0.4 U	NA	NA	NA	NA
Zinc	26.72	µg/L	20 U	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-016-WT SW-016-WT 9/4/2003 349270 306035	SE-017-WT SW-017-WT 9/5/2003 350890 305078	SE-020-LF SW-020-LF 9/5/2003 351481 303930	SE-021-NP SW-021-NP 9/5/2003 353121 303354	SE-022-BR SW-022-BR 9/5/2003 345490 312537
Metals and Cyanide							
Aluminum	87	µg/L	504	2,100	20,800	349	200 U
Antimony	30	µg/L	3 U	3 U	3 U	3 U	3 U
Arsenic	3.1	µg/L	2.82	1.22	17.5	4.08	2.29
Barium	3.9	µg/L	200 U	200 U	598 J	74.699997 J	200 U
Beryllium	0.17	µg/L	0.3 U	0.3 U	1.6 J	0.3 U	0.3 U
Cadmium	0.25	µg/L	0.2 U	1.2 J	19.9	0.71 J	0.28 J
Calcium	- -	µg/L	45,300	27,500	37,700	19,600	15,500
Chromium	11	µg/L	0.85 J	5.7 J	260	3.7 J	10 U
Cobalt	3	µg/L	1.2 J	6.7 J	9.2 J	1.4 J	0.54 J
Copper	2.87	µg/L	25 U	25 U	428	25 U	25 U
Cyanide	5.2	µg/L	4 U	179 J	10.6 J	4 U	4 U
Iron	1,000	µg/L	868 J	3,740 J	54,700 J	8,600 J	674 J
Lead	0.32	µg/L	1.9 J	4.7	330	8	2.3 J
Magnesium	- -	µg/L	6,830 J	5,000 U	16,900 J	5,000 U	5,000 U
Manganese	50	µg/L	67.800003 J	704 J	1,200 J	418 J	75.900002 J
Mercury	0.0122	µg/L	0.14 U	0.15 U	0.16 U	0.13 U	0.13 U
Nickel	40.28	µg/L	40 U	40 U	44.099998	3.6 J	3.8 J
Potassium	- -	µg/L	7,270	5,360	26,200	5,000 U	5,640
Selenium	5	µg/L	3 U	3 U	3 U	3 U	3.7 J
Silver	0.36	µg/L	0.6 UJ	0.6 UJ	15.2 J	0.6 UJ	0.6 UJ
Sodium	- -	µg/L	31,200 J	28,600 J	84,200 J	32,300 J	51,000 J
Thallium	1	µg/L	4 U	4 U	4 U	4 U	4 U
Vanadium	19	µg/L	1.6 J	5.1 J	60.400002	0.67 J	0.4 U
Zinc	26.72	µg/L	20 U	98.400002	751	38.700001	20 U
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-023-BR SW-023-BR 9/6/2003 352567 302605	SE-024-BR SW-024-BR 9/6/2003 352135 302922	SE-025-BR SW-025-BR 9/6/2003 351456 303575	SE-026-BR SW-026-BR 9/8/2003 352690 302735	SE-026-BR SW-FD-02 9/8/2003 352690 302735
Metals and Cyanide							
Aluminum	87	µg/L	589	200 U	200 U	200 U	200 U
Antimony	30	µg/L	3 U	3 U	3 U	3 U	3 U
Arsenic	3.1	µg/L	1.92	1.85	1.19	1.83	1.91
Barium	3.9	µg/L	200 U	200 U	200 U	200 U	200 U
Beryllium	0.17	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Cadmium	0.25	µg/L	0.67 J	0.2 U	0.2 U	0.25 J	0.27 J
Calcium	- -	µg/L	14,000	14,000	13,800	14,500	14,300
Chromium	11	µg/L	5.8 J	0.4 U	0.4 U	1 J	0.93 J
Cobalt	3	µg/L	1.5 J	0.98 J	0.56 J	0.5 UJ	0.54 J
Copper	2.87	µg/L	25 U	25 U	25 U	25 U	25 U
Cyanide	5.2	µg/L	4 U	4 U	4 U	4 U	4 U
Iron	1,000	µg/L	2,370 J	1,250 J	407 J	678 J	701 J
Lead	0.32	µg/L	13.6	3.4	1.1 J	1.9 J	2.3 J
Magnesium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Manganese	50	µg/L	681 J	622 J	203 J	94.5 J	94.699997 J
Mercury	0.0122	µg/L	0.14 U	0.14 U	0.14 U	0.12 U	0.14 U
Nickel	40.28	µg/L	3.1 J	1.8 J	1.8 J	3.5 J	3.9 J
Potassium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Selenium	5	µg/L	3 U	3 U	3 U	3 U	3 U
Silver	0.36	µg/L	0.6 UJ	0.6 UJ	0.6 UJ	0.6 UJ	0.6 UJ
Sodium	- -	µg/L	50,700 J	49,400 J	53,100 J	49,200 J	48,300 J
Thallium	1	µg/L	4 U	4 U	4 U	4 U	4 U
Vanadium	19	µg/L	1.8 J	50 U	0.58 J	0.52 J	0.42 J
Zinc	26.72	µg/L	34.900002	3 U	20 U	20 U	17.700001 J
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	6 U	6 U
Antimony	30	µg/L	NA	NA	NA	3 U	3 U
Arsenic	3.1	µg/L	NA	NA	NA	1.87	1.54
Barium	3.9	µg/L	NA	NA	NA	200 U	200 U
Beryllium	0.17	µg/L	NA	NA	NA	0.3 U	0.3 U
Cadmium	0.25	µg/L	NA	NA	NA	0.2 U	0.2 U
Calcium	- -	µg/L	NA	NA	NA	13,900	13,900
Chromium	11	µg/L	NA	NA	NA	0.4 U	0.52 J
Cobalt	3	µg/L	NA	NA	NA	0.5 U	0.5 U
Copper	2.87	µg/L	NA	NA	NA	25 U	25 U
Iron	1,000	µg/L	NA	NA	NA	363 J	360 J
Lead	0.32	µg/L	NA	NA	NA	1.1 J	1.3 J
Magnesium	- -	µg/L	NA	NA	NA	5,000 U	5,000 U
Manganese	50	µg/L	NA	NA	NA	128 J	84.5 J
Mercury	0.0122	µg/L	NA	NA	NA	0.12 U	0.13 U
Nickel	40.28	µg/L	NA	NA	NA	3.5 J	3.3 J
Potassium	- -	µg/L	NA	NA	NA	5,000 U	5,000 U
Selenium	5	µg/L	NA	NA	NA	3 U	3 U
Silver	0.36	µg/L	NA	NA	NA	0.6 UJ	0.6 UJ
Sodium	- -	µg/L	NA	NA	NA	47,700 J	49,600 J
Thallium	1	µg/L	NA	NA	NA	4 U	4 U
Vanadium	19	µg/L	NA	NA	NA	0.4 U	0.4 U
Zinc	26.72	µg/L	NA	NA	NA	20 U	14.8 J

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-026-BR SW-042-BR 8/31/2004 352690 302735	SE-027-BR SW-027-BR 9/8/2003 352779 303669	SE-028-BR SW-028-BR 9/8/2003 352320 303984	SE-029-BR SW-029-BR 9/9/2003 351551 303889	SE-029-BR SW-FD-03 9/9/2003 351551 303889
Metals and Cyanide							
Aluminum	87	µg/L	43.3	200 U	200 U	49.5 J	47.700001 J
Antimony	30	µg/L	3 UJ	3 U	3 U	3 U	3 U
Arsenic	3.1	µg/L	1.7	1.95	2.07	1.9	1.89
Barium	3.9	µg/L	29.7 U	200 U	200 U	200 U	200 U
Beryllium	0.17	µg/L	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U
Cadmium	0.25	µg/L	0.28 J	0.25 J	0.23 J	0.32 J	0.28 J
Calcium	- -	µg/L	18,000	14,200	13,900	14,600	14,500
Chromium	11	µg/L	0.73 UJ	0.9 J	0.71 J	0.9 J	0.83 J
Cobalt	3	µg/L	0.53 UJ	0.5 UJ	0.5 UJ	0.83 J	0.78 J
Copper	2.87	µg/L	5.7 U	25 U	25 U	25 U	25 U
Cyanide	5.2	µg/L	3 UJ	10 U	4 U	4 U	4 U
Iron	1,000	µg/L	368 UJ	596 J	578 J	633	643
Lead	0.32	µg/L	2 UJ	1.6 J	1.9 J	2.5 J	2.4 J
Magnesium	- -	µg/L	3,260	5,000 U	5,000 U	2,930 J	2,900 J
Manganese	50	µg/L	90 J	80.300003 J	79.099998 J	98.300003 J	97.300003 J
Mercury	0.0122	µg/L	0.14 UJ	0.15 U	0.13 U	0.15 U	0.13 U
Nickel	40.28	µg/L	4.1 U	3.6 J	3.4 J	4.4 J	4.2 J
Potassium	- -	µg/L	5,630	5,000 U	5,000 U	5,130 J	5,160 J
Selenium	5	µg/L	R	3 U	3 U	3 UJ	3 UJ
Silver	0.36	µg/L	2 UJ	0.6 UJ	0.6 UJ	0.6 UJ	0.6 UJ
Sodium	- -	µg/L	59,900	47,800 J	47,600 J	49,100	49,100
Thallium	1	µg/L	3 UJ	4 U	4 U	4 U	4 U
Vanadium	19	µg/L	0.8 J	0.55 J	0.58 J	0.64 J	0.61 J
Zinc	26.72	µg/L	20 U	20 U	20 U	24.299999	23.299999
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-030-BR SW-030-BR 9/9/2003 350958 304015	SE-031-BR SW-031-BR 9/9/2003 350323 304420	SE-032-BR SW-032-BR 9/10/2003 349117 305833	SE-033-BR SW-033-BR 9/10/2003 347976 306035	SE-034-BR SW-034-BR 9/10/2003 347020 307232
Metals and Cyanide							
Aluminum	87	µg/L	48.200001 J	41.400002 J	83.599998 J	200 U	200 U
Antimony	30	µg/L	3 U	3 U	3 U	3 U	3 U
Arsenic	3.1	µg/L	2.25	1.82	4.04	1.6	1.57
Barium	3.9	µg/L	200 U	200 U	200 U	200 U	200 U
Beryllium	0.17	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Cadmium	0.25	µg/L	0.3 J	0.26 J	0.3 J	0.2 U	0.2 U
Calcium	- -	µg/L	14,500	14,300	15,200	14,200	14,600
Chromium	11	µg/L	0.68 J	0.65 J	1 J	10 U	10 U
Cobalt	3	µg/L	0.64 J	0.59 J	0.66 J	50 U	50 U
Copper	2.87	µg/L	25 U	25 U	25 U	25 U	25 U
Cyanide	5.2	µg/L	4 U	4 U	4 U	4 U	4 U
Iron	1,000	µg/L	763	540	606	493	530
Lead	0.32	µg/L	2.2 J	2.1 J	3 J	1.8 J	2.5 J
Magnesium	- -	µg/L	2,950 J	2,860 J	2,990 J	5,000 U	5,000 U
Manganese	50	µg/L	104 J	89.099998 J	97.900002 J	83.699997 J	93.5 J
Mercury	0.0122	µg/L	0.14 U	0.15 U	0.14 U	0.13 U	0.15 U
Nickel	40.28	µg/L	4 J	3.9 J	3.8 J	4.1 J	3.9 J
Potassium	- -	µg/L	5,240 J	5,020 J	5,040 J	5,000 U	5,000 U
Selenium	5	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Silver	0.36	µg/L	0.6 UJ	0.6 UJ	0.6 UJ	0.6 UJ	0.6 UJ
Sodium	- -	µg/L	49,600	50,100	49,800	49,300	50,900
Thallium	1	µg/L	4 U	4 U	4 U	4 U	4 U
Vanadium	19	µg/L	0.4 U	0.77 J	0.6 J	50 U	50 U
Zinc	26.72	µg/L	20.700001	20 U	20 U	20 U	20.799999
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	6 U	NA	NA	6 U	NA
Antimony	30	µg/L	3 U	NA	NA	3 U	NA
Arsenic	3.1	µg/L	1.77	NA	NA	1.69	NA
Barium	3.9	µg/L	200 U	NA	NA	200 U	NA
Beryllium	0.17	µg/L	0.3 U	NA	NA	0.3 U	NA
Cadmium	0.25	µg/L	0.2 U	NA	NA	0.2 U	NA
Calcium	- -	µg/L	14,200	NA	NA	13,800	NA
Chromium	11	µg/L	0.42 J	NA	NA	0.4 U	NA
Cobalt	3	µg/L	0.73 J	NA	NA	50 U	NA
Copper	2.87	µg/L	25 U	NA	NA	25 U	NA
Iron	1,000	µg/L	395	NA	NA	291	NA
Lead	0.32	µg/L	1.5 J	NA	NA	4.5	NA
Magnesium	- -	µg/L	2,900 J	NA	NA	5,000 U	NA
Manganese	50	µg/L	85.300003 J	NA	NA	60 J	NA
Mercury	0.0122	µg/L	0.15 U	NA	NA	0.14 U	NA
Nickel	40.28	µg/L	3.9 J	NA	NA	3.5 J	NA
Potassium	- -	µg/L	5,000 U	NA	NA	5,000 U	NA
Selenium	5	µg/L	3 UJ	NA	NA	3 UJ	NA
Silver	0.36	µg/L	0.6 UJ	NA	NA	0.6 UJ	NA
Sodium	- -	µg/L	48,900	NA	NA	48,900	NA
Thallium	1	µg/L	4 U	NA	NA	4 U	NA
Vanadium	19	µg/L	0.55 J	NA	NA	50 U	NA
Zinc	26.72	µg/L	14.4 J	NA	NA	20 U	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-041-BR SW-041-BR 8/30/2004 351597 303879	SE-043-BR SW-043-BR 8/30/2004 350184 304781	SE-044-BR SW-044-BR 8/30/2004 347061 307158	SE-046-BR SW-046-BR 8/30/2004 352890 303046	SE-046-BR SW-FD-11 8/30/2004 352890 303046
Metals and Cyanide							
Aluminum	87	µg/L	38.5	46.8	49	38.3	42.7
Antimony	30	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Arsenic	3.1	µg/L	1.49	1.49	1.45	1.62	1.64
Barium	3.9	µg/L	38.7 U	28.1 U	31.8 U	28.8 U	27.8 U
Beryllium	0.17	µg/L	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ
Cadmium	0.25	µg/L	0.24 J	0.3 J	0.31 J	0.41 J	0.26 J
Calcium	- -	µg/L	18,100	18,200	18,100	18,200	17,600
Chromium	11	µg/L	1.1 UJ	1.4 UJ	0.68 UJ	0.4 UJ	0.66 UJ
Cobalt	3	µg/L	0.57 UJ	0.58 UJ	0.62 UJ	0.41 UJ	0.49 UJ
Copper	2.87	µg/L	7 U	4.8 U	9.2 U	8 U	6.3 U
Cyanide	5.2	µg/L	4 UJ	4.7 UJ	4.8 UJ	3.9 UJ	4.6 UJ
Iron	1,000	µg/L	1,940 UJ	442 UJ	443 UJ	407 UJ	423 UJ
Lead	0.32	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Magnesium	- -	µg/L	3,250	3,280	3,280	3,280	3,210
Manganese	50	µg/L	115 J	114 J	126 J	103 J	104 J
Mercury	0.0122	µg/L	0.13 UJ	0.46 J	0.12 UJ	0.14 UJ	0.13 UJ
Nickel	40.28	µg/L	3.6 U	3.9 U	3.9 U	3.4 U	3.5 U
Potassium	- -	µg/L	5,530	5,600	5,600	5,610	5,490
Selenium	5	µg/L	R	R	R	R	R
Silver	0.36	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Sodium	- -	µg/L	59,400	59,800	59,700	60,400	58,200
Thallium	1	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Vanadium	19	µg/L	0.89 J	0.71 J	1.1 J	0.7 UJ	0.72 J
Zinc	26.72	µg/L	20 U	20 U	20 U	20 U	20 U
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-047-BR SW-047-BR 8/30/2004 350628 304243	SE-048B-BR SW-048-BR 8/31/2004 349566 305538	SE-051-DF SW-051-DF 8/31/2004 349116 305924	SE-052-WT SW-052-WT 9/1/2004 349324 306113	SE-053B-WT SW-053-WT 9/9/2004 352950 304500
Metals and Cyanide							
Aluminum	87	µg/L	39.2	49.1	2,070	513	261
Antimony	30	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Arsenic	3.1	µg/L	1.74	1.59	4.64	3.42	0.5
Barium	3.9	µg/L	29 U	29.1 U	93.4 U	61.6 U	29.8 U
Beryllium	0.17	µg/L	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ
Cadmium	0.25	µg/L	0.31 J	0.31 J	0.47 J	0.24 J	0.21 UJ
Calcium	- -	µg/L	18,500	18,400	51,200	60,600	6,940
Chromium	11	µg/L	2.1 U	0.73 UJ	8.5	0.4 UJ	2.8
Cobalt	3	µg/L	0.56 UJ	0.58 UJ	2.1 U	1.2 UJ	0.56 UJ
Copper	2.87	µg/L	4.9 U	4.7 U	13.3 U	1.6 UJ	8.8 U
Cyanide	5.2	µg/L	3.9 UJ	3.5 UJ	4.1 UJ	8.4 UJ	3 UJ
Iron	1,000	µg/L	458 UJ	372 UJ	3,700 J	751 UJ	453 J
Lead	0.32	µg/L	2 UJ	2 UJ	8.6	2 UJ	3.9
Magnesium	- -	µg/L	3,350	3,300	8,760	8,870	5,000 U
Manganese	50	µg/L	107 J	110 J	295 J	432 J	15.4 J
Mercury	0.0122	µg/L	0.31 J	0.14 UJ	0.15 UJ	0.14 UJ	0.14 UJ
Nickel	40.28	µg/L	5.4 U	3.7 U	5.7 U	2.7 U	3.3 U
Potassium	- -	µg/L	5,590	5,660	10,400	9,800	5,000 U
Selenium	5	µg/L	R	R	R	R	R
Silver	0.36	µg/L	2 UJ	2 UJ	2 UJ	2.8 J	2 UJ
Sodium	- -	µg/L	59,600	61,500	43,400	44,300	8,110
Thallium	1	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Vanadium	19	µg/L	0.91 J	0.95 J	4.2	1.3 J	1.6 J
Zinc	26.72	µg/L	20 U	20 U	37.9	20 U	40.6
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-057-WT SW-057-WT 9/2/2004 352084 304607	SE-058-WT SW-058-WT 9/1/2004 352774 304071	SE-059-WT SW-059-WT 9/1/2004 351440 305562	SE-060-WT SW-060-WT 9/2/2004 351895 304852	SE-061-WT SW-061-WT 9/1/2004 352372 304608
Metals and Cyanide							
Aluminum	87	µg/L	883	118	30.9	177	254
Antimony	30	µg/L	3 UJ	3 UJ	3 UJ	2 UJ	3 UJ
Arsenic	3.1	µg/L	1.59	1.16	0.29	0.666	2.31
Barium	3.9	µg/L	61.1	40.9 U	35.4 U	27.7 U	35.7 U
Beryllium	0.17	µg/L	0.3 UJ	0.3 UJ	0.3 UJ	0.2 UJ	0.3 UJ
Cadmium	0.25	µg/L	0.21 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ
Calcium	- -	µg/L	17,200	16,300	14,500	17,200	15,900
Chromium	11	µg/L	2.1 U	0.7 UJ	0.4 UJ	0.92 UJ	1.5 UJ
Cobalt	3	µg/L	1.8 U	0.43 UJ	0.4 UJ	1.2 UJ	0.68 UJ
Copper	2.87	µg/L	5 U	3.1 UJ	0.9 UJ	3.8 UJ	2.3 UJ
Cyanide	5.2	µg/L	8 J	4.1 UJ	3 UJ	3 UJ	3.7 UJ
Iron	1,000	µg/L	2,370	1,200 UJ	381 UJ	998	1,320 UJ
Lead	0.32	µg/L	3.9	2 UJ	2 UJ	1.9 J	2.6 J
Magnesium	- -	µg/L	3,400	3,180	2,930	3,410	3,020
Manganese	50	µg/L	415	88.2 J	20.8 J	117	56.1 J
Mercury	0.0122	µg/L	0.14 UJ	0.15 UJ	0.14 UJ	0.14 UJ	0.13 UJ
Nickel	40.28	µg/L	3.6 U	1.9 UJ	2.5 U	2.2 U	2.2 UJ
Potassium	- -	µg/L	2,870	2,650	2,470	2,300	2,630
Selenium	5	µg/L	R	R	R	R	R
Silver	0.36	µg/L	2 UJ	2 UJ	2 UJ	0.4 UJ	2 UJ
Sodium	- -	µg/L	24,100	24,400	20,800	23,300	22,900
Thallium	1	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Vanadium	19	µg/L	2.9 J	2.1 J	0.7 UJ	1.5 J	2.7 J
Zinc	26.72	µg/L	20 U	20 U	20 U	20 U	20 U
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-062-WT SW-062-WT 9/1/2004 351508 305289	SE-064-BR SW-064-BR 9/2/2004 351791 303170	SE-065-BR SW-065-BR 9/2/2004 352478 302602	SE-066-BR SW-066-BR 9/3/2004 352272 302718	SE-067-BR SW-067-BR 9/3/2004 352007 302937
Metals and Cyanide							
Aluminum	87	µg/L	150	60.8	49.6	237	100
Antimony	30	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Arsenic	3.1	µg/L	0.555	1.58	1.42	1.41	1.29
Barium	3.9	µg/L	42.2 U	41.6	37.4	42.7	37
Beryllium	0.17	µg/L	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ
Cadmium	0.25	µg/L	0.2 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.21 UJ
Calcium	- -	µg/L	16,800	15,500	14,800	15,100	15,200
Chromium	11	µg/L	1.1 UJ	1 UJ	0.59 UJ	1.5 UJ	0.75 UJ
Cobalt	3	µg/L	0.69 UJ	0.79 UJ	0.63 UJ	0.73 UJ	0.64 UJ
Copper	2.87	µg/L	0.9 UJ	3.5 UJ	3.6 UJ	5.6 U	2.6 UJ
Cyanide	5.2	µg/L	5.8 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Iron	1,000	µg/L	872 UJ	961	556	949	716
Lead	0.32	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Magnesium	- -	µg/L	3,140	3,170	3,040	3,130	3,130
Manganese	50	µg/L	88.3 J	269	182	181	185
Mercury	0.0122	µg/L	0.14 UJ	0.13 UJ	0.13 UJ	0.13 UJ	0.17 UJ
Nickel	40.28	µg/L	2 UJ	4.1 U	2.7 U	2.9 U	2.4 UJ
Potassium	- -	µg/L	2,450	4,610	4,630	4,640	4,630
Selenium	5	µg/L	R	R	R	R	R
Silver	0.36	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Sodium	- -	µg/L	23,500	54,500	53,300	53,800	53,800
Thallium	1	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Vanadium	19	µg/L	1.5 J	0.7 UJ	0.75 J	0.99 J	0.7 UJ
Zinc	26.72	µg/L	20 U	20 U	20 U	20 U	20 U
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-068-BR SW-068-BR 9/6/2004 351730 303184	SE-069-NP SW-069-NP 9/2/2004 353122 303341	SE-069-NP SW-FD-12 9/2/2004 353122 303341	SE-071-BR SW-071-BR 9/6/2004 351567 303403	SE-072-BR SW-072-BR 9/6/2004 351393 303624
Metals and Cyanide							
Aluminum	87	µg/L	103	277	274	23.9 J	96.7
Antimony	30	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Arsenic	3.1	µg/L	1.36	3.65	3.53	1.41	1.46
Barium	3.9	µg/L	47 U	52.1	50.9	48.9 U	51.6 U
Beryllium	0.17	µg/L	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ
Cadmium	0.25	µg/L	0.22 UJ	0.44 UJ	0.46 UJ	0.2 UJ	0.2 UJ
Calcium	- -	µg/L	15,000	17,300	16,800	15,000	14,100
Chromium	11	µg/L	1.3 J	5	4.9	0.43 J	0.72 J
Cobalt	3	µg/L	0.7 UJ	1.9 U	0.7 UJ	0.58 UJ	1.1 UJ
Copper	2.87	µg/L	6.4 U	10 U	7.3 U	3.8 UJ	6.9 U
Cyanide	5.2	µg/L	4.7 J	3 UJ	3 UJ	3 UJ	3 UJ
Iron	1,000	µg/L	994 J	6,470	6,370	744 J	979 J
Lead	0.32	µg/L	2 UJ	6.6	8.7	2 UJ	2 UJ
Magnesium	- -	µg/L	5,000 U	3,350	3,320	5,000 U	5,000 U
Manganese	50	µg/L	155 J	212	182	148 J	296 J
Mercury	0.0122	µg/L	0.13 UJ	0.15 UJ	0.14 UJ	0.14 UJ	0.13 UJ
Nickel	40.28	µg/L	2.5 U	7 U	4.1 U	2.3 UJ	2 UJ
Potassium	- -	µg/L	5,000 U	4,170	4,260	5,000 U	5,000 U
Selenium	5	µg/L	R	R	R	R	R
Silver	0.36	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Sodium	- -	µg/L	55,700	37,500	37,700	55,100	55,200
Thallium	1	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Vanadium	19	µg/L	0.95 J	2.7 J	1.5 J	0.7 UJ	0.7 UJ
Zinc	26.72	µg/L	20 U	20 U	20 U	20 U	20 U
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-074-LF SW-074-LF 9/10/2004 351471 303952	SE-075-UI SW-075-UI 9/3/2004 352417 303137	SE-077-UI SW-077-UI 9/6/2004 351696 303493	SE-078-UI SW-078-UI 9/6/2004 352438 303325	SE-079-UI SW-079-UI 9/7/2004 352447 303531
Metals and Cyanide							
Aluminum	87	µg/L	188	4,250	24 J	24.7 J	33.4 J
Antimony	30	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Arsenic	3.1	µg/L	2.06	5.09	1.82	0.446	2.43
Barium	3.9	µg/L	68.6	81.5	38.2 U	275	34.7 U
Beryllium	0.17	µg/L	0.3 UJ	0.37 J	0.3 UJ	0.3 UJ	0.3 UJ
Cadmium	0.25	µg/L	0.91 UJ	4.7	0.2 UJ	0.2 UJ	0.2 UJ
Calcium	- -	µg/L	16,400	10,400	17,000	28,000	10,500
Chromium	11	µg/L	2.7	58.7	0.4 UJ	2.9	0.4 UJ
Cobalt	3	µg/L	0.64 UJ	3.3 U	1.4 UJ	0.75 UJ	0.62 UJ
Copper	2.87	µg/L	10.8 U	70.3	6.2 U	15 U	4 UJ
Cyanide	5.2	µg/L	3 UJ	3 UJ	4.8 J	3 UJ	3 UJ
Iron	1,000	µg/L	1,230 J	9,350	5,670 J	21,200 J	1,460 J
Lead	0.32	µg/L	3.2	82.6	2 UJ	3.3	2 UJ
Magnesium	- -	µg/L	5,000 U	2,920	5,000 U	5,000 U	5,000 U
Manganese	50	µg/L	85.2 J	505	1,160 J	815 J	427 J
Mercury	0.0122	µg/L	0.13 UJ	0.13 UJ	0.13 UJ	0.13 UJ	0.14 UJ
Nickel	40.28	µg/L	4.8 U	13.5	2.6 U	0.5 UJ	2.6 U
Potassium	- -	µg/L	7,330	2,210	6,090	5,000 U	5,000 U
Selenium	5	µg/L	R	R	R	R	R
Silver	0.36	µg/L	2 UJ	2 UJ	2.6 J	2 UJ	2 UJ
Sodium	- -	µg/L	56,700	30,600	33,300	32,900	33,500
Thallium	1	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Vanadium	19	µg/L	1.4 J	9.8	0.7 UJ	0.72 J	0.7 UJ
Zinc	26.72	µg/L	27.1	209	20 U	32.1	20 U
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-079-UI SW-FD-13 9/7/2004 352447 303531	SE-080-UI SW-080-UI 9/7/2004 351994 303594	SE-081-BR SW-081-BR 9/7/2004 352703 302372	SE-082-BR SW-082-BR 9/6/2004 352820 302413	SE-083-BR SW-083-BR 9/6/2004 352717 302444
Metals and Cyanide							
Aluminum	87	µg/L	32.4 J	57.2	27.7 J	83.9	995
Antimony	30	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Arsenic	3.1	µg/L	2.35	2.32	1.47	1.55	1.56
Barium	3.9	µg/L	35.2 U	35.4 U	42.5 U	39.5 U	63
Beryllium	0.17	µg/L	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ
Cadmium	0.25	µg/L	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	1.2 UJ
Calcium	- -	µg/L	10,600	10,700	14,700	14,600	14,500
Chromium	11	µg/L	0.4 UJ	0.4 UJ	0.89 J	1.6 J	10
Cobalt	3	µg/L	0.73 UJ	0.59 UJ	0.46 UJ	0.37 UJ	2.3 U
Copper	2.87	µg/L	3.3 UJ	3.2 UJ	3.4 UJ	7.2 U	23.5 U
Cyanide	5.2	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Iron	1,000	µg/L	1,460 J	1,720 J	1,790 J	1,510 J	4,910 J
Lead	0.32	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	19.6
Magnesium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Manganese	50	µg/L	434 J	386 J	129 J	96.9 J	1,010 J
Mercury	0.0122	µg/L	0.15 UJ	0.14 UJ	0.12 UJ	0.14 UJ	0.14 UJ
Nickel	40.28	µg/L	2.3 UJ	2.5 U	2.5 U	2.5 U	5.4
Potassium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Selenium	5	µg/L	R	R	R	R	R
Silver	0.36	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	2.1 J
Sodium	- -	µg/L	33,000	33,100	57,800	58,800	57,700
Thallium	1	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	3 UJ
Vanadium	19	µg/L	0.7 UJ	0.7 UJ	0.7 UJ	0.7 UJ	3.2 J
Zinc	26.72	µg/L	20 U	20 U	20 U	20 U	46.4
Metals and Cyanide, Dissolved							
Aluminum	87	µg/L	NA	NA	NA	NA	NA
Antimony	30	µg/L	NA	NA	NA	NA	NA
Arsenic	3.1	µg/L	NA	NA	NA	NA	NA
Barium	3.9	µg/L	NA	NA	NA	NA	NA
Beryllium	0.17	µg/L	NA	NA	NA	NA	NA
Cadmium	0.25	µg/L	NA	NA	NA	NA	NA
Calcium	- -	µg/L	NA	NA	NA	NA	NA
Chromium	11	µg/L	NA	NA	NA	NA	NA
Cobalt	3	µg/L	NA	NA	NA	NA	NA
Copper	2.87	µg/L	NA	NA	NA	NA	NA
Iron	1,000	µg/L	NA	NA	NA	NA	NA
Lead	0.32	µg/L	NA	NA	NA	NA	NA
Magnesium	- -	µg/L	NA	NA	NA	NA	NA
Manganese	50	µg/L	NA	NA	NA	NA	NA
Mercury	0.0122	µg/L	NA	NA	NA	NA	NA
Nickel	40.28	µg/L	NA	NA	NA	NA	NA
Potassium	- -	µg/L	NA	NA	NA	NA	NA
Selenium	5	µg/L	NA	NA	NA	NA	NA
Silver	0.36	µg/L	NA	NA	NA	NA	NA
Sodium	- -	µg/L	NA	NA	NA	NA	NA
Thallium	1	µg/L	NA	NA	NA	NA	NA
Vanadium	19	µg/L	NA	NA	NA	NA	NA
Zinc	26.72	µg/L	NA	NA	NA	NA	NA

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-084-UI SW-084-UI 9/7/2004 352049 303465	SE-085-UI SW-085-UI 9/7/2004 352447 303427	SE-086-UI SW-086-UI 9/7/2004 352149 303734	SE-087-UI SW-087-UI 9/7/2004 352478 303603	SW-1 ash SW-1 ash 4/4/2005	SW-2 ash SW-2 ash 4/4/2005
Metals and Cyanide								
Aluminum	87	µg/L	51	51.9	48.3	39.4	360	310
Antimony	30	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	0.5 U	0.5 U
Arsenic	3.1	µg/L	2.29	2.32	2.13	2.39	1.9	1.9
Barium	3.9	µg/L	34.1 U	34.3 U	29.6 U	33 U	25	25
Beryllium	0.17	µg/L	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.14 UJ	0.14 UJ
Cadmium	0.25	µg/L	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.82	0.77
Calcium	- -	µg/L	10,700	10,700	10,500	10,700	6,900	6,700
Chromium	11	µg/L	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	2.8	2.4
Cobalt	3	µg/L	0.85 UJ	0.56 UJ	0.65 UJ	0.61 UJ	0.54	0.51
Copper	2.87	µg/L	4.2 UJ	2.9 UJ	2.5 UJ	6.5 U	10	9.8
Cyanide	5.2	µg/L	3 UJ	3 UJ	3 UJ	3.2 J	NA	NA
Iron	1,000	µg/L	1,440 J	1,410 J	1,050 J	1,160 J	840	780
Lead	0.32	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	11 J	8.7 J
Magnesium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	1,400	1,400
Manganese	50	µg/L	385 J	367 J	323 J	362 J	98	94
Mercury	0.0122	µg/L	0.14 UJ	0.13 UJ	0.13 UJ	0.13 UJ	0.019	0.019
Nickel	40.28	µg/L	2.8 U	2.7 U	2.7 U	2.5 U	3.1	3
Potassium	- -	µg/L	5,000 U	5,000 U	5,000 U	5,000 U	1,800	1,800
Selenium	5	µg/L	R	R	R	R	0.5 U	0.5 U
Silver	0.36	µg/L	2 UJ	2 UJ	2 UJ	2 UJ	0.13 UJ	0.13 UJ
Sodium	- -	µg/L	33,300	33,200	33,100	33,800	31,000	30,000
Thallium	1	µg/L	3 UJ	3 UJ	3 UJ	3 UJ	0.1 U	0.1 U
Vanadium	19	µg/L	0.7 UJ	0.7 UJ	0.7 UJ	0.7 UJ	2.1	2.1
Zinc	26.72	µg/L	20 U	20 U	20 U	20 U	35 U	32 U
Metals and Cyanide, Dissolved								
Aluminum	87	µg/L	NA	NA	NA	NA	60	64
Antimony	30	µg/L	NA	NA	NA	NA	0.5 U	0.5 U
Arsenic	3.1	µg/L	NA	NA	NA	NA	0.91	0.96
Barium	3.9	µg/L	NA	NA	NA	NA	17	19
Beryllium	0.17	µg/L	NA	NA	NA	NA	0.14 UJ	0.14 UJ
Cadmium	0.25	µg/L	NA	NA	NA	NA	0.33 J	0.37 J
Calcium	- -	µg/L	NA	NA	NA	NA	6,500	7,000
Chromium	11	µg/L	NA	NA	NA	NA	2 U	2 U
Cobalt	3	µg/L	NA	NA	NA	NA	0.5 U	0.5 U
Copper	2.87	µg/L	NA	NA	NA	NA	3.8	3.9
Iron	1,000	µg/L	NA	NA	NA	NA	190	200
Lead	0.32	µg/L	NA	NA	NA	NA	0.59	0.68
Magnesium	- -	µg/L	NA	NA	NA	NA	1,300	1,300
Manganese	50	µg/L	NA	NA	NA	NA	61	63
Mercury	0.0122	µg/L	NA	NA	NA	NA	0.005 U	0.005 U
Nickel	40.28	µg/L	NA	NA	NA	NA	2.2	2.2
Potassium	- -	µg/L	NA	NA	NA	NA	1,800	1,700
Selenium	5	µg/L	NA	NA	NA	NA	0.5 U	0.5 U
Silver	0.36	µg/L	NA	NA	NA	NA	0.13 UJ	0.13 UJ
Sodium	- -	µg/L	NA	NA	NA	NA	30,000	31,000
Thallium	1	µg/L	NA	NA	NA	NA	0.1 U	0.1 U
Vanadium	19	µg/L	NA	NA	NA	NA	1.2	1.4
Zinc	26.72	µg/L	NA	NA	NA	NA	24	22

TABLE 4-36
SURFACE-WATER RESULTS FOR INORGANICS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SW-3 Pratt SW-3 Pratt 4/4/2005	SW-3 Pratt Cumberland SW-3 Pratt Cumberland 4/4/2005	SW-4 Pratt SW-4 Pratt 4/4/2005	SW-4 Pratt Lincoln SW-4 Pratt Lincoln 4/4/2005
Metals and Cyanide						
Aluminum	87	µg/L	350	NA	270	NA
Antimony	30	µg/L	0.5 U	NA	0.5 U	NA
Arsenic	3.1	µg/L	2.1	NA	1.9	NA
Barium	3.9	µg/L	24	NA	23	NA
Beryllium	0.17	µg/L	0.14 UJ	NA	0.14 UJ	NA
Cadmium	0.25	µg/L	0.74	NA	0.66	NA
Calcium	- -	µg/L	6,800	NA	7,000	NA
Chromium	11	µg/L	3.4	NA	2.1	NA
Cobalt	3	µg/L	0.51	NA	0.5 U	NA
Copper	2.87	µg/L	9.6	NA	7.7	NA
Cyanide	5.2	µg/L	NA	NA	NA	NA
Iron	1,000	µg/L	820	NA	630	NA
Lead	0.32	µg/L	8.5 J	NA	5.6 J	NA
Magnesium	- -	µg/L	1,500	NA	1,400	NA
Manganese	50	µg/L	93	NA	84	NA
Mercury	0.0122	µg/L	0.014	NA	0.016	NA
Nickel	40.28	µg/L	3.5	NA	2.8	NA
Potassium	- -	µg/L	1,900	NA	1,800	NA
Selenium	5	µg/L	0.65	NA	0.5 U	NA
Silver	0.36	µg/L	0.13 UJ	NA	0.13 UJ	NA
Sodium	- -	µg/L	30,000	NA	31,000	NA
Thallium	1	µg/L	0.1 U	NA	0.1 U	NA
Vanadium	19	µg/L	2.2	NA	2	NA
Zinc	26.72	µg/L	32	NA	31	NA
Metals and Cyanide, Dissolved						
Aluminum	87	µg/L	58	NA	56	NA
Antimony	30	µg/L	0.53	NA	0.5 U	NA
Arsenic	3.1	µg/L	0.94	NA	0.96	NA
Barium	3.9	µg/L	18	NA	18	NA
Beryllium	0.17	µg/L	0.14 UJ	NA	0.14 UJ	NA
Cadmium	0.25	µg/L	0.34 J	NA	0.33 J	NA
Calcium	- -	µg/L	7,300	NA	7,000	NA
Chromium	11	µg/L	2 U	NA	2 U	NA
Cobalt	3	µg/L	0.5 U	NA	0.5 U	NA
Copper	2.87	µg/L	3.8	NA	3.9	NA
Iron	1,000	µg/L	210	NA	210	NA
Lead	0.32	µg/L	0.61	NA	0.63	NA
Magnesium	- -	µg/L	1,300	NA	1,200	NA
Manganese	50	µg/L	62	NA	65	NA
Mercury	0.0122	µg/L	0.005 U	NA	0.005 U	NA
Nickel	40.28	µg/L	2.2	NA	2.2	NA
Potassium	- -	µg/L	1,700	NA	1,700	NA
Selenium	5	µg/L	0.5 U	NA	0.5 U	NA
Silver	0.36	µg/L	0.13 UJ	NA	0.13 UJ	NA
Sodium	- -	µg/L	31,000	NA	29,000	NA
Thallium	1	µg/L	0.1 U	NA	0.1 U	NA
Vanadium	19	µg/L	1.2	NA	1.4	NA
Zinc	26.72	µg/L	18	NA	22	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-001-UI SW-001-UI 8/28/2003 352478 303295	SE-002-UI SW-002-UI 8/28/2003 352322 303548	SE-003-UI SW-003-UI 8/29/2003 352279 303356	SE-003-UI SW-FD01 8/29/2003 352279 303356	SE-005-UI SW-005-UI 8/29/2003 351747 303610	SE-006-UI SW-006-UI 8/29/2003 352761 303287	SE-007-UI SW-007-UI 9/2/2003 352484 303117	SE-008-BR SW-008-BR 9/2/2003 352735 302367
Conventional Params										
Total Organic Carbon	- -	mg/L	8.1	7.7	6.6	8	9.2	8.6	29	13
Water Parameters										
Ammonia	- -	mg/L	NA	0.37	NA	NA	NA	NA	NA	NA
Biochemical oxygen demand	- -	mg/L	NA	7	NA	NA	NA	NA	NA	NA
Chloride	- -	mg/L	57	50	50	50	50	50	41	78
Dissolved oxygen	- -	mg/L	1.96	8.65	6.47	NA	7.98	6.88	1.19	5.15
Fecal Coliform	- -	MPN/100m	NA	7	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	6.67	7.38	7.27	NA	7.06	7.2	6.45	6.76
Field Specific Conductance	- -	µS/cm	NA	NA	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	710	462	485	NA	494	486	207	351
Field turbidity	- -	NTU	40	5.37	7.05	NA	7.13	6.51	15.5	5.84
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	NA	30	NA	NA	NA	NA	NA	NA
Nitrate	- -	mg/L	NA	1 U	NA	NA	NA	NA	NA	NA
Nitrite	- -	mg/L	NA	0.01 U	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	94	182.100006	206.100006	NA	58.400002	112	51.099998	171.399994
Ortho-Phosphate	- -	mg/L	NA	0.06 U	NA	NA	NA	NA	NA	NA
Sulfate	- -	mg/L	NA	13	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	18.77	25.799999	24.1	NA	25.77	25.23	18.469999	20.950001
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-009-WT SW-009-WT 9/3/2003 352646 304086	SE-010-WT SW-010-WT 9/3/2003 352842 304421	SE-011-WT SW-011-WT 9/3/2003 352504 304330	SE-012-WT SW-012-WT 9/3/2003 351470 305229	SE-013-WT SW-013-WT 9/4/2003 352327 304194	SE-014-WT SW-014-WT 9/4/2003 351040 305533	SE-015-WT SW-015-WT 9/4/2003 351365 305705	SE-016-WT SW-016-WT 9/4/2003 349270 306035
Conventional Params										
Total Organic Carbon	- -	mg/L	8.5	11	11	27	7.3	6.9	10	6 U
Water Parameters										
Ammonia	- -	mg/L	NA	NA	0.4	NA	NA	NA	NA	NA
Biochemical oxygen demand	- -	mg/L	NA	NA	3 U	NA	NA	NA	NA	NA
Chloride	- -	mg/L	52	53	40	35	39	18	26	51
Dissolved oxygen	- -	mg/L	2.47	3.82	9.64	6.6	5.8	7.65	8.92	7.8
Fecal Coliform	- -	MPN/100m	NA	NA	900	NA	NA	NA	NA	NA
Field pH	- -	s.u.	6.74	6.47	7.15	6.67	6.8	7.09	7.31	6.81
Field Specific Conductance	- -	µS/cm	NA	NA	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	270	300	194	272	218	293	187	468
Field turbidity	- -	NTU	3.3	7.75	5.1	4.82	6.71	62.5	1.9	8.42
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	NA	NA	40 U	NA	NA	NA	NA	NA
Nitrate	- -	mg/L	NA	NA	0.05 U	NA	NA	NA	NA	NA
Nitrite	- -	mg/L	NA	NA	0.01 U	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	44.400002	133.600006	292.299988	59.900002	140.800003	54.400002	213.800003	117.5
Ortho-Phosphate	- -	mg/L	NA	NA	0.16 J	NA	NA	NA	NA	NA
Sulfate	- -	mg/L	NA	NA	17	NA	NA	NA	NA	NA
Temperature	- -	°C	18.360001	16.91	19.07	19.559999	20.200001	18.33	17.34	18.540001
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-017-WT SW-017-WT 9/5/2003 350890 305078	SE-020-LF SW-020-LF 9/5/2003 351481 303930	SE-021-NP SW-021-NP 9/5/2003 353121 303354	SE-022-BR SW-022-BR 9/5/2003 345490 312537	SE-023-BR SW-023-BR 9/6/2003 352567 302605	SE-024-BR SW-024-BR 9/6/2003 352135 302922	SE-025-BR SW-025-BR 9/6/2003 351456 303575	SE-026-BR SW-026-BR 9/8/2003 352690 302735
Conventional Params										
Total Organic Carbon	- -	mg/L	12	39	6.9	6 U	6 U	6 U	6 U	11
Water Parameters										
Ammonia	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	0.44
Biochemical oxygen demand	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	3 U
Chloride	- -	mg/L	35	94	53	83	79	79	83	81
Dissolved oxygen	- -	mg/L	5.52	3.38	4.46	6.25	5.3	5.64	6.01	7.39
Fecal Coliform	- -	MPN/100m	NA	NA	NA	NA	NA	NA	NA	80
Field pH	- -	s.u.	5.7	6.32	6.38	7.36	6.7	6.81	6.65	7.09
Field Specific Conductance	- -	µS/cm	NA	NA	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	359	825	318	394	364	364	377	363
Field turbidity	- -	NTU	9.9	65.5	60.299999	2.57	4.98	5.68	0.36	1.71
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	48
Nitrate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	1.3
Nitrite	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	0.01 U
ORP/Eh	- -	mv	201.5	51.299999	19.200001	137	113.599998	166.699997	64.199997	62.099998
Ortho-Phosphate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	0.49
Sulfate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	17
Temperature	- -	°C	18.950001	22.33	20.780001	20.799999	20.209999	20.469999	20.27	20.34
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-026-BR SW-FD-02 9/8/2003 352690 302735	SE-026-BR SW-042-BR 8/31/2004 352690 302735	SE-027-BR SW-027-BR 9/8/2003 352779 303669	SE-028-BR SW-028-BR 9/8/2003 352320 303984	SE-029-BR SW-029-BR 9/9/2003 351551 303889	SE-029-BR SW-FD-03 9/9/2003 351551 303889	SE-030-BR SW-030-BR 9/9/2003 350958 304015	SE-031-BR SW-031-BR 9/9/2003 350323 304420
Conventional Params										
Total Organic Carbon	- -	mg/L	6.7	NA	13	6 U	6 U	6 U	6 U	7
Water Parameters										
Ammonia	- -	mg/L	0.3	NA	NA	NA	NA	NA	0.54	NA
Biochemical oxygen demand	- -	mg/L	10	NA	NA	NA	NA	NA	22	NA
Chloride	- -	mg/L	80	NA	80	79	81	80	80	81
Dissolved oxygen	- -	mg/L	NA	10.66	8.43	8.78	8.76	NA	8.08	8.65
Fecal Coliform	- -	MPN/100m	30	NA	NA	NA	NA	NA	220	NA
Field pH	- -	s.u.	NA	7.34	7.34	7.4	7.26	NA	7.32	7.64
Field Specific Conductance	- -	µS/cm	NA	463	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	NA	NA	362	363	375	NA	379	379
Field turbidity	- -	NTU	NA	1.7	1.7	1.23	1.37	NA	1.73	1.43
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	47	NA	NA	NA	NA	NA	48	NA
Nitrate	- -	mg/L	1.2	NA	NA	NA	NA	NA	1.3	NA
Nitrite	- -	mg/L	0.01 U	NA	NA	NA	NA	NA	0.01 U	NA
ORP/Eh	- -	mv	NA	R	46.599998	32.5	39.099998	NA	28.1	30.299999
Ortho-Phosphate	- -	mg/L	0.49	NA	NA	NA	NA	NA	0.5	NA
Sulfate	- -	mg/L	19	NA	NA	NA	NA	NA	17	NA
Temperature	- -	°C	NA	25.42	21.35	21.73	20.1	NA	20.629999	21.27
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-032-BR SW-032-BR 9/10/2003 349117 305833	SE-033-BR SW-033-BR 9/10/2003 347976 306035	SE-034-BR SW-034-BR 9/10/2003 347020 307232	SE-041-BR SW-041-BR 8/30/2004 351597 303879	SE-043-BR SW-043-BR 8/30/2004 350184 304781	SE-044-BR SW-044-BR 8/30/2004 347061 307158	SE-046-BR SW-046-BR 8/30/2004 352890 303046	SE-046-BR SW-FD-11 8/30/2004 352890 303046
Conventional Params										
Total Organic Carbon	- -	mg/L	14	6 U	10	NA	NA	NA	NA	NA
Water Parameters										
Ammonia	- -	mg/L	NA	0.34	NA	NA	NA	NA	NA	NA
Biochemical oxygen demand	- -	mg/L	NA	8	NA	NA	NA	NA	NA	NA
Chloride	- -	mg/L	81	82	83	NA	NA	NA	NA	NA
Dissolved oxygen	- -	mg/L	7.83	8.95	3.8	13.55	17.23	10.29	10.96	NA
Fecal Coliform	- -	MPN/100m	NA	33	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	7.34	7.71	7.84	7.13	7.47	7.55	7.99	NA
Field Specific Conductance	- -	µS/cm	NA	NA	NA	445	443	439	440	NA
Field Specific Conductance	- -	umhos/cm	388	376	382	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	2.96	1.36	1.33	3.29	3.01	2.1	2.4	NA
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	NA	47	NA	NA	NA	NA	NA	NA
Nitrate	- -	mg/L	NA	1.3	NA	NA	NA	NA	NA	NA
Nitrite	- -	mg/L	NA	0.01 U	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	92.099998	152.100006	174.100006	126.5	167	R	R	NA
Ortho-Phosphate	- -	mg/L	NA	0.53	NA	NA	NA	NA	NA	NA
Sulfate	- -	mg/L	NA	19	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	18.57	20.26	21.129999	24.57	26.03	24.86	25.95	NA
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-047-BR SW-047-BR 8/30/2004 350628 304243	SE-048B-BR SW-048-BR 8/31/2004 349566 305538	SE-051-DF SW-051-DF 8/31/2004 349116 305924	SE-052-WT SW-052-WT 9/1/2004 349324 306113	SE-053B-WT SW-053-WT 9/9/2004 352950 304500	SE-057-WT SW-057-WT 9/2/2004 352084 304607	SE-058-WT SW-058-WT 9/1/2004 352774 304071	SE-059-WT SW-059-WT 9/1/2004 351440 305562
Conventional Params										
Total Organic Carbon	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters										
Ammonia	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical oxygen demand	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen	- -	mg/L	14.12	8.97	2.53	6.61	6.45	4.55	5.21	8.77
Fecal Coliform	- -	MPN/100m	NA	NA	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	7.15	7.33	6.62	7.66	7.6	6.46	6.64	7.71
Field Specific Conductance	- -	µS/cm	447	457	562	631	96	262	254	219
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	3.18	4.27	26.9	16.9	8.44	3.6	2.1	4.11
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	132.7	180.5	-2.7	199.2	259.8	R	R	80.9
Ortho-Phosphate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	26.29	25.68	24.47	19.64	21.64	23.86	25.68	18.7
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station **Sample Name** **Date Collected** **RISP East (ft)** **RISP North (ft)**	**PAL**	**Units**	**SE-060-WT** **SW-060-WT** **9/2/2004** **351895** **304852**	**SE-061-WT** **SW-061-WT** **9/1/2004** **352372** **304608**	**SE-062-WT** **SW-062-WT** **9/1/2004** **351508** **305289**	**SE-064-BR** **SW-064-BR** **9/2/2004** **351791** **303170**	**SE-065-BR** **SW-065-BR** **9/2/2004** **352478** **302602**	**SE-066-BR** **SW-066-BR** **9/3/2004** **352272** **302718**	**SE-067-BR** **SW-067-BR** **9/3/2004** **352007** **302937**	**SE-068-BR** **SW-068-BR** **9/6/2004** **351730** **303184**
Conventional Params										
Total Organic Carbon	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters										
Ammonia	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical oxygen demand	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen	- -	mg/L	2.8	8.3	6.52	9.63	8.88	7.35	8.5	6.71
Fecal Coliform	- -	MPN/100m	NA	NA	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	6.52	7.23	7.15	6.92	7.58	7.25	7.16	7.88
Field Specific Conductance	- -	µS/cm	257	249	251	397	395	393	396	382
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	16	3.3	5.76	5.72	5.76	9.32	6.03	9.75
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	R	R	31.4	178.5	167.6	67.2	132.5	27.5
Ortho-Phosphate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	17.92	30.09	20.16	23.21	22.64	22.34	23.58	19.57
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-069-NP SW-069-NP 9/2/2004 353122 303341	SE-069-NP SW-FD-12 9/2/2004 353122 303341	SE-071-BR SW-071-BR 9/6/2004 351567 303403	SE-072-BR SW-072-BR 9/6/2004 351393 303624	SE-074-LF SW-074-LF 9/10/2004 351471 303952	SE-075-UI SW-075-UI 9/3/2004 352417 303137	SE-077-UI SW-077-UI 9/6/2004 351696 303493	SE-078-UI SW-078-UI 9/6/2004 352438 303325
Conventional Params										
Total Organic Carbon	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters										
Ammonia	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical oxygen demand	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen	- -	mg/L	2.14	NA	6.88	5.28	8.72	4.65	1.38	0.82
Fecal Coliform	- -	MPN/100m	NA	NA	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	6.35	NA	7.38	7.11	8.27	6.07	6.37	6.42
Field Specific Conductance	- -	µS/cm	365	NA	382	388	432	233	287	333
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	55	NA	5.41	5.6	3.27	9.6	18	110
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	R	NA	61.3	114.8	217.5	R	R	R
Ortho-Phosphate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	20.77	NA	19.59	19.88	22.86	23.5	15.72	15.83
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-079-UI SW-079-UI 9/7/2004 352447 303531	SE-079-UI SW-FD-13 9/7/2004 352447 303531	SE-080-UI SW-080-UI 9/7/2004 351994 303594	SE-081-BR SW-081-BR 9/7/2004 352703 302372	SE-082-BR SW-082-BR 9/6/2004 352820 302413	SE-083-BR SW-083-BR 9/6/2004 352717 302444	SE-084-UI SW-084-UI 9/7/2004 352049 303465	SE-085-UI SW-085-UI 9/7/2004 352447 303427
Conventional Params										
Total Organic Carbon	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters										
Ammonia	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical oxygen demand	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen	- -	mg/L	9.51	NA	6.77	5.26	7.08	5.6	9.57	9.65
Fecal Coliform	- -	MPN/100m	NA	NA	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	6.81	NA	7.86	6.62	6.43	6.34	7.05	7.54
Field Specific Conductance	- -	µS/cm	256	NA	255	404	387	389	249	248
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	7.1	NA	18	9.6	6.8	4.9	9.27	9.27
Hardness	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (as CaCO3)	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	R	NA	R	R	R	R	109.8	178
Ortho-Phosphate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	22.41	NA	23.57	22.46	21.71	22.65	22.5	22.34
Total Dissolved Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-37
SURFACE-WATER RESULTS FOR MISCELLANEOUS PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	SE-086-UI SW-086-UI 9/7/2004 352149 303734	SE-087-UI SW-087-UI 9/7/2004 352478 303603	SW-1 ash SW-1 ash 4/4/2005	SW-2 ash SW-2 ash 4/4/2005	SW-3 Pratt SW-3 Pratt 4/4/2005	SW-3 Pratt Cumberland SW-3 Pratt Cumberland 4/4/2005	SW-4 Pratt SW-4 Pratt 4/4/2005	SW-4 Pratt Lincoln SW-4 Pratt Lincoln 4/4/2005
Conventional Params										
Total Organic Carbon	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Water Parameters										
Ammonia	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical oxygen demand	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen	- -	mg/L	12.94	13.15	NA	NA	NA	NA	NA	NA
Fecal Coliform	- -	MPN/100m	NA	NA	NA	NA	NA	NA	NA	NA
Field pH	- -	s.u.	8.87	9.04	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	µS/cm	254	252	NA	NA	NA	NA	NA	NA
Field Specific Conductance	- -	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA
Field turbidity	- -	NTU	23.4	23.6	NA	NA	NA	NA	NA	NA
Hardness	- -	ug/L	NA	NA	23,000	22,000	23,000	NA	23,000	NA
Hardness (as CaCO3)	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
ORP/Eh	- -	mv	142.7	126	NA	NA	NA	NA	NA	NA
Ortho-Phosphate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	- -	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	- -	°C	25.36	23.92	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	- -	mg/L	NA	NA	98	22	NA	130	NA	120
Total Suspended Solids	- -	mg/L	NA	NA	13	12	NA	10	NA	12

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name	Consumption	BR1-FI-113-FILL	BR1-FI-114-FILL	BR1-FI-115-FILL	BR1-FI-116-FILL	BR1-FI-117-FILL	BR1-FI-118-FILL	BR1-FI-119-FILL	BR1-FI-120-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Sample Weight (g)		477.81	406.6	153.72	94.87	140.93	107.69	508.05	420.53
Total Field Weight (g)		1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)		1.7	1.7	2.4	1.8	1.6	2	1.8	1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PAH									
2-Methylnaphthalene	540	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Acenaphthene	8,100	9.6	8.5	9.8	7.8 U	7.7 U	7.6	7.8 U	7.7 U
Acenaphthylene	8,100	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Anthracene	41,000	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Benzo(a)pyrene	0.43	8 U	8.6	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Benzo(b)fluoranthene	4.3	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Benzo(g,h,i)perylene	4,100	8 UJ	7.9 UJ	7.6 UJ	7.8 UJ	7.7 UJ	7.6 UJ	7.8 UJ	7.7 U
Benzo(k)fluoranthene	43	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Benzo[a]anthracene	4.3	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Chrysene	430	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Dibenz[a,h]anthracene	0.43	8 U	9.8	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Fluoranthene	5,400	15	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Fluorene	5,400	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Indeno(1,2,3-cd)pyrene	4.3	8 U	8.6	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Naphthalene	270	9.5	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Phenanthrene	41,000	11	7.9 U	10	7.8 U	7.7 U	7.6 U	7.8 U	10
Pyrene	4,100	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Total PAHs	- -	45.1	35.5	19.8	ND	ND	7.6	ND	10

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	Consumption	BR1-FI-121-FILL	BR1-FI-122-FILL	BR1-FI-123-FILL	BR1-FI-124-FILL	BR1-FI-125-FILL	BR1-FI-126-FILL	BR1-FI-127-FILL	BR1-FI-128-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Sample Weight (g)		90.2	68.76	68.69	66.11	111.48	73.54	93.95	70.99
Total Field Weight (g)		222	191	192	183	274	205	258	209
Percent Lipids (%)		0.95	1.1	1.4	0.7	0.98	0.75	1	1.1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PAH									
2-Methylnaphthalene	540	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Acenaphthene	8,100	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Acenaphthylene	8,100	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Anthracene	41,000	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Benzo(a)pyrene	0.43	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Benzo(b)fluoranthene	4.3	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Benzo(g,h,i)perylene	4,100	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Benzo(k)fluoranthene	43	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Benzo[a]anthracene	4.3	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Chrysene	430	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Dibenz[a,h]anthracene	0.43	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Fluoranthene	5,400	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	8.1	8 U	8 U
Fluorene	5,400	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Indeno(1,2,3-cd)pyrene	4.3	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Naphthalene	270	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Phenanthrene	41,000	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	13	8	12
Pyrene	4,100	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Total PAHs	- -	ND	ND	ND	ND	ND	21.1	8	12

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name	Consumption	BR2-FI-73-FILL	BR2-FI-74-FILL	BR2-FI-75-FILL	BR2-FI-76-FILL	BR2-FI-77-FILL	BR2-FI-78-FILL	BR2-FI-79-FILL	BR2-FI-80-FILL
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		30.7	30	30.4	25.2	25.8	25.4	25	24.3
Sample Weight (g)		217.66	182.08	235.21	99.93	110.83	110.22	97.48	101.78
Total Field Weight (g)		471	414	543	231	264	260	229	236
Percent Lipids (%)		1.4	1.4	1.6	1.1	1.5	1	1.2	1
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PAH									
2-Methylnaphthalene	540	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Acenaphthene	8,100	11	10	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Acenaphthylene	8,100	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Anthracene	41,000	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo(a)pyrene	0.43	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo(b)fluoranthene	4.3	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo(g,h,i)perylene	4,100	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo(k)fluoranthene	43	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo[a]anthracene	4.3	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Chrysene	430	7.4 U	7.5	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Dibenz[a,h]anthracene	0.43	7.6	10	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Fluoranthene	5,400	7.4 U	10	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Fluorene	5,400	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Indeno(1,2,3-cd)pyrene	4.3	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Naphthalene	270	9.9	9.8	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Phenanthrene	41,000	7.4 U	8.4	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Pyrene	4,100	7.4 U	8	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Total PAHs	- -	28.5	63.7	ND	ND	ND	ND	ND	ND

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name	Consumption	BR2-FI-81-FILL	BR2-FI-82-FILL	BR2-FI-83-FILL	BR2-FI-84-FILL	BR2-FI-85-FILL	BR2-FI-86-FILL	BR2-FI-87-FILL	BR2-FI-88-FILL
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Sample Weight (g)		405.96	264.32	224.24	250.34	249.08	154.39	273.96	210.7
Total Field Weight (g)		968	697	509	643	600	398	714	521
Percent Lipids (%)		2.8	2.4	1.7	2.6	1.2	1.3	2.6	1.5
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PAH									
2-Methylnaphthalene	540	7.7 U	7.6 U	7.6 U	38	7.5 U	7.8 U	7.4 U	7.3 U
Acenaphthene	8,100	7.7 U	7.6 U	7.6 U	15	48	7.8 U	7.8	7.3 U
Acenaphthylene	8,100	7.7 U	7.6 U	7.6 U	15	7.5 U	9.3	7.4 U	7.3 U
Anthracene	41,000	7.7 U	7.6 U	7.6 U	14	7.5 U	7.8 U	7.4 U	7.3 U
Benzo(a)pyrene	0.43	7.7 UJ	7.6 UJ	7.6 U	28	7.5 U	7.8 U	7.4 U	7.3 U
Benzo(b)fluoranthene	4.3	7.7 UJ	7.6 UJ	7.6 U	14	7.5 U	7.8 U	8	7.3 U
Benzo(g,h,i)perylene	4,100	7.7 UJ	7.6 UJ	7.6 UJ	13 J	7.5 UJ	7.8 UJ	7.4 UJ	7.3 UJ
Benzo(k)fluoranthene	43	7.7 UJ	7.6 UJ	7.6 U	21	7.5 U	7.8 U	8.9	7.3 U
Benzo[a]anthracene	4.3	7.7 U	7.6 U	7.6 U	29	7.5 U	7.8 U	7.4 U	7.3 U
Chrysene	430	7.7 U	7.6 U	7.6 U	32	7.5 U	7.8 U	7.8	7.3 U
Dibenz[a,h]anthracene	0.43	7.7 UJ	7.6 UJ	7.6 UJ	7.3 UJ	7.5 UJ	7.8 UJ	7.4 UJ	7.3 UJ
Fluoranthene	5,400	7.7 U	7.6 U	7.6 U	7.3 U	7.5 U	7.8 U	7.4 U	7.3 U
Fluorene	5,400	7.7 U	7.6 U	7.6 U	15	7.5 U	7.8 U	7.4 U	7.3 U
Indeno(1,2,3-cd)pyrene	4.3	7.7 UJ	7.6 UJ	7.6 UJ	12 J	7.5 UJ	7.8 UJ	7.4 UJ	7.3 UJ
Naphthalene	270	7.7 U	7.6 U	7.6 U	39	7.5 U	7.8 U	7.4 U	7.3 U
Phenanthrene	41,000	7.7 U	7.6 U	7.6 U	38	7.5 U	7.8 U	7.4 U	7.3 U
Pyrene	4,100	7.7 U	7.6 U	7.6 U	54	7.5 U	7.8 U	7.4 U	7.3 U
Total PAHs	- -	ND	ND	ND	377 J	48	9.3	32.5	ND

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name	Consumption	BR3-FI-1-FILL	BR3-FI-2-FILL	BR3-FI-3-FILL	BR3-FI-4-FILL	BR3-FI-5-FILL	BR3-FI-6-FILL	BR3-FI-7-FILL	BR3-FI-8-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		33.9	31.1	28.4	26.9	25.3	35.2	40.9	38.3
Sample Weight (g)		316.18	225.59	167.4	117.46	105.82	348.42	473.42	425.87
Total Field Weight (g)		729	502	383	263	239	753	1092	931
Percent Lipids (%)		1.4	0.89	1.2	0.61	1	0.95	0.74	0.77
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
PAH									
2-Methylnaphthalene	540	7.4 U	7.5 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Acenaphthene	8,100	7.6	7.5 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Acenaphthylene	8,100	7.4 U	7.5 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Anthracene	41,000	9.8	8.2	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Benzo(a)pyrene	0.43	12	8.6	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Benzo(b)fluoranthene	4.3	12	7.5 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Benzo(g,h,i)perylene	4,100	16 U	10 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Benzo(k)fluoranthene	43	12	7.9	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Benzo[a]anthracene	4.3	13	8.2	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Chrysene	430	12	8.3	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Dibenz[a,h]anthracene	0.43	17 J	12 J	8.4 J	7.5 UJ	7.4 UJ	7.5 UJ	7.4 UJ	7.2 UJ
Fluoranthene	5,400	12	11	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Fluorene	5,400	8.1	7.6	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Indeno(1,2,3-cd)pyrene	4.3	16	11	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Naphthalene	270	7.4 U	7.5 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Phenanthrene	41,000	10	8.5	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Pyrene	4,100	7.7 J	7.5 UJ	7.5 UJ	7.5 UJ	7.4 UJ	7.5 UJ	7.4 UJ	7.2 UJ
Total PAHs	- -	149 J	91.3 J	8.4 J	ND	ND	ND	ND	ND

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13	BR3-FI-14	BR3-FI-15	BR3-FI-16
Sample Name	Consumption	BR3-FI-9-FILL	BR3-FI-10-FILL	BR3-FI-11-FILL	BR3-FI-12-FILL	BR3-FI-13-FILL	BR3-FI-14-FILL	BR3-FI-15-FILL	BR3-FI-16-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		31.9	34.1	31.7	39.8	41.5	36.8	35.1	37.6
Sample Weight (g)		166.27	211.08	161.52	299.16	343.42	187.27	197.01	205.79
Total Field Weight (g)		392	499	418	757	872	439	478	558
Percent Lipids (%)		2.6	4.2	3	3.3	4.5	1.8	0.89	3.9
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
PAH									
2-Methylnaphthalene	540	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Acenaphthene	8,100	7.3 U	7.4 U	7.3 U	7.4 U	7.4	7.5 U	7.7 U	7.4 U
Acenaphthylene	8,100	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Anthracene	41,000	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo(a)pyrene	0.43	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo(b)fluoranthene	4.3	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo(g,h,i)perylene	4,100	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo(k)fluoranthene	43	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzo[a]anthracene	4.3	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Chrysene	430	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Dibenz[a,h]anthracene	0.43	7.3 UJ	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Fluoranthene	5,400	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	10	7.7 U	7.4 U
Fluorene	5,400	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Indeno(1,2,3-cd)pyrene	4.3	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Naphthalene	270	7.3 U	7.4 U	7.3 U	7.4 U	7.4	7.5 U	7.7 U	7.4 U
Phenanthrene	41,000	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Pyrene	4,100	7.3 UJ	7.4 U	7.3 U	7.4 U	7.4 U	12	7.7 U	7.4 U
Total PAHs	- -	ND	ND	ND	ND	14.8	22	ND	ND

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name	Consumption	P1-FI-25-FILL	P1-FI-26-FILL	P1-FI-27-FILL	P1-FI-28-FILL	P1-FI-29-FILL	P1-FI-30-FILL	P1-FI-31-FILL	P1-FI-32-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Sample Weight (g)		395.28	336.56	219.15	207.46	194.02	373.02	205.92	345.35
Total Field Weight (g)		865	739	472	471	425	861	460	799
Percent Lipids (%)		0.74	0.77	0.61	9.6	0.45	0.41	0.4	0.51
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PAH									
2-Methylnaphthalene	540	7.7 UJ	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Acenaphthene	8,100	7.7 UJ	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Acenaphthylene	8,100	7.7 UJ	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Anthracene	41,000	10	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Benzo(a)pyrene	0.43	13	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Benzo(b)fluoranthene	4.3	12	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Benzo(g,h,i)perylene	4,100	16	10	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Benzo(k)fluoranthene	43	13	7.5	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Benzo[a]anthracene	4.3	10	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Chrysene	430	10	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Dibenz[a,h]anthracene	0.43	18	11	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Fluoranthene	5,400	9.2	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Fluorene	5,400	7.7 U	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Indeno(1,2,3-cd)pyrene	4.3	16	9.7	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Naphthalene	270	7.7 UJ	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Phenanthrene	41,000	12	10	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Pyrene	4,100	7.7 U	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Total PAHs	- -	139	48.2	ND	ND	ND	ND	ND	ND

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name	Consumption	P1-FI-33-FILL	P1-FI-34-FILL	P1-FI-35-FILL	P1-FI-36-FILL	P1-FI-37-FILL	P1-FI-38-FILL	P1-FI-39-FILL	P1-FI-40-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Sample Weight (g)		313.54	217.93	268.92	278.52	396.84	298.28	286.44	287.6
Total Field Weight (g)		704	467	585	747	930	664	725	627
Percent Lipids (%)		2	1.4	2.8	1.6	2.4	1.8	3.5	2.8
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PAH									
2-Methylnaphthalene	540	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Acenaphthene	8,100	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	8.4	7.4 U
Acenaphthylene	8,100	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Anthracene	41,000	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Benzo(a)pyrene	0.43	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Benzo(b)fluoranthene	4.3	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Benzo(g,h,i)perylene	4,100	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Benzo(k)fluoranthene	43	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Benzo[a]anthracene	4.3	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Chrysene	430	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Dibenz[a,h]anthracene	0.43	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Fluoranthene	5,400	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Fluorene	5,400	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	11	7.4 U
Indeno(1,2,3-cd)pyrene	4.3	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Naphthalene	270	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Phenanthrene	41,000	10	7.6 U	15	11	11	13	30	12
Pyrene	4,100	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Total PAHs	- -	10	ND	15	11	11	13	49.4	12

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	Consumption	P2-FI-49-FILL	P2-FI-50-FILL	P2-FI-51-FILL	P2-FI-52-FILL	P2-FI-53-FILL	P2-FI-54-FILL	P2-FI-55-FILL	P2-FI-56-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Sample Weight (g)		36.14	49.56	58.88	49.58	40.85	48.99	65.44	76.52
Total Field Weight (g)		104	151	159	154	154	131	166	219
Percent Lipids (%)		0.49	0.78	0.88	0.57	0.58	0.8	0.77	0.57
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PAH									
2-Methylnaphthalene	540	9.4	10	11	16 J	13	7.9	12 J	8.1
Acenaphthene	8,100	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 J	7.3 U
Acenaphthylene	8,100	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Anthracene	41,000	7.6 U	7.5 U	7.3 UJ	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Benzo(a)pyrene	0.43	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Benzo(b)fluoranthene	4.3	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Benzo(g,h,i)perylene	4,100	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Benzo(k)fluoranthene	43	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Benzo[a]anthracene	4.3	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Chrysene	430	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Dibenz[a,h]anthracene	0.43	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Fluoranthene	5,400	7.6 U	7.5 U	7.3 UJ	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Fluorene	5,400	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Indeno(1,2,3-cd)pyrene	4.3	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Naphthalene	270	7.6 UJ	7.5 UJ	7.3 UJ	7.5 UJ	7.5 UJ	7.4 UJ	7.4 UJ	7.3 UJ
Phenanthrene	41,000	7.6 U	9.4	8.7 J	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.7
Pyrene	4,100	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Total PAHs	- -	9.4	19.4	19.7 J	16 J	13	7.9	19.4 J	15.8

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name		P2-FI-57-FILL	P2-FI-58-FILL	P2-FI-59-FILL	P2-FI-60-FILL	P2-FI-61-FILL	P2-FI-62-FILL	P2-FI-63-FILL	P2-FI-64-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		39.1	34.6	40.4	34.9	37	33	35.9	34.6
Sample Weight (g)		286.31	195.81	296.88	197.58	243.33	165.42	232.46	197.22
Total Field Weight (g)		693	501	755	442	595	380	532	460
Percent Lipids (%)		2.1	1.6	2.4	1.6	3.6	1.4	1.9	2.9
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PAH									
2-Methylnaphthalene	540	7.4 U	7.5 U	9.2	7.7	7.6 U	7.4 U	7.4 U	7.4 U
Acenaphthene	8,100	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Acenaphthylene	8,100	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Anthracene	41,000	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Benzo(a)pyrene	0.43	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Benzo(b)fluoranthene	4.3	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Benzo(g,h,i)perylene	4,100	7.4 U	7.5 U	7.4 U	8.9	7.6 U	7.4 U	7.4 U	7.4 U
Benzo(k)fluoranthene	43	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Benzo[a]anthracene	4.3	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Chrysene	430	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Dibenz[a,h]anthracene	0.43	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Fluoranthene	5,400	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Fluorene	5,400	7.4 U	7.5 U	7.4 U	10	12	7.4 U	7.4 U	8.8
Indeno(1,2,3-cd)pyrene	4.3	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Naphthalene	270	8.9	10	7.4 UJ	12	11	11	12	10
Phenanthrene	41,000	15	16	17	16	32	18	14	22
Pyrene	4,100	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Total PAHs	- -	23.9	26	26.2	54.6	55	29	26	40.8

TABLE 4-38
RESULTS FOR PAHs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103	P6-FI-104
Sample Name	Consumption	P6-FI-97-FILL	P6-FI-98-FILL	P6-FI-99-FILL	P6-FI-100-FILL	P6-FI-101-FILL	P6-FI-102-FILL	P6-FI-103-FILL	P6-FI-104-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		34.6	36.6	31.4	38.5	29.9	31.9	31.3	39
Sample Weight (g)		246.51	322.08	163.93	322.83	147.5	192.86	197.95	404.87
Total Field Weight (g)		567	731	402	814	373	442	447	907
Percent Lipids (%)		0.56	0.73	0.58	0.51	0.88	0.71	0.71	0.67
Location		P6	P6	P6	P6	P6	P6	P6	P6
PAH									
2-Methylnaphthalene	540	5	4.4	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Acenaphthene	8,100	5.6	4.7	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Acenaphthylene	8,100	7.3	5.2	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	4.8
Anthracene	41,000	7.8	4	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Benzo(a)pyrene	0.43	9.3	6.3	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Benzo(b)fluoranthene	4.3	11	5.5	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Benzo(g,h,i)perylene	4,100	11	8.6	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Benzo(k)fluoranthene	43	11	5.2	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Benzo[a]anthracene	4.3	10	5.2	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Chrysene	430	10	5.5	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Dibenz[a,h]anthracene	0.43	11	6.7	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Fluoranthene	5,400	9.5 J	3.7 U	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Fluorene	5,400	7.6	5.2	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Indeno(1,2,3-cd)pyrene	4.3	11	6.6	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Naphthalene	270	5.4	4.6	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Phenanthrene	41,000	9.4	6	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Pyrene	4,100	7.9	4	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Total PAHs	- -	150 J	87.7	ND	ND	ND	ND	ND	4.8

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name	Receptor Food	BR1-FI-113-CALC	BR1-FI-114-CALC	BR1-FI-115-CALC	BR1-FI-116-CALC	BR1-FI-117-CALC	BR1-FI-118-CALC	BR1-FI-119-CALC	BR1-FI-120-CALC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Sample Weight (g)									
Total Field Weight (g)		1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)		4.6	5.9	6.1	4.4	3.6	3.5	6.1	1.3
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PAH									
2-Methylnaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	- -	240	260	260	ND	ND	210	ND	ND
Acenaphthylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	ND	260	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	ND	260	ND	ND	ND	ND	ND	ND
Fluoranthene	- -	240	ND	ND	ND	ND	ND	ND	ND
Fluorene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	ND	260	ND	ND	ND	ND	ND	ND
Naphthalene	- -	240	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	- -	240	ND	260	ND	ND	ND	ND	210
Pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Total PAHs	- -	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	Receptor Food	BR1-FI-121-CALC	BR1-FI-122-CALC	BR1-FI-123-CALC	BR1-FI-124-CALC	BR1-FI-125-CALC	BR1-FI-126-CALC	BR1-FI-127-CALC	BR1-FI-128-CALC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Sample Weight (g)									
Total Field Weight (g)		222	191	192	183	274	205	258	209
Percent Lipids (%)		4.1	6.5	9.7	3.6	6	7.5	5.8	6
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PAH									
2-Methylnaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	- -	ND	ND	ND	ND	ND	250	ND	ND
Fluorene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	- -	ND	ND	ND	ND	ND	250	230	240
Pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Total PAHs	- -	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR1-FI-129 BR1-FI-129-COMP 9/29/2005 Common Shiner Whole body 14.6 - 15.4 119.38 122 8 BR-1	BR1-FI-130 BR1-FI-130-COMP 9/29/2005 Common Shiner Whole body 13.9 - 15.4 118.6 120 8.1 BR-1	BR1-FI-131 BR1-FI-131-COMP 9/29/2005 Common Shiner Whole body 14.4 - 15.9 124.79 127 11 BR-1	BR1-FI-132 BR1-FI-132-COMP 9/29/2005 Common Shiner Whole body 15.2 - 15.6 126.57 129 8.4 BR-1	BR1-FI-133 BR1-FI-133-COMP 9/29/2005 Common Shiner Whole body 13.8 - 14.8 109.79 112 7.6 BR-1	BR1-FI-134 BR1-FI-134-COMP 9/29/2005 Common Shiner Whole body 11.5 - 14.7 94.42 96 6.6 BR-1	BR1-FI-135 BR1-FI-135-COMP 9/29/2005 Common Shiner Whole body 11.6 - 15.3 102.17 104 7 BR-1	BR1-FI-136 BR1-FI-136-COMP 9/29/2005 Common Shiner Whole body 11.9 - 14.2 122.47 126 9.1 BR-1
PAH									
2-Methylnaphthalene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Acenaphthene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Acenaphthylene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Anthracene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Benzo(a)pyrene	1,980	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Benzo(b)fluoranthene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Benzo(g,h,i)perylene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Benzo(k)fluoranthene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Benzo[a]anthracene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Chrysene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Dibenz[a,h]anthracene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Fluoranthene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Fluorene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Indeno(1,2,3-cd)pyrene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Naphthalene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Phenanthrene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Pyrene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Total PAHs	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name	Receptor Food	BR2-FI-73-CALC	BR2-FI-74-CALC	BR2-FI-75-CALC	BR2-FI-76-CALC	BR2-FI-77-CALC	BR2-FI-78-CALC	BR2-FI-79-CALC	BR2-FI-80-CALC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		30.7	30	30.4	25.2	25.8	25.4	25	24.3
Sample Weight (g)									
Total Field Weight (g)		471	414	543	231	264	260	229	236
Percent Lipids (%)		2.9	4.3	5.9	3.4	6.8	3.7	4	5.1
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PAH									
2-Methylnaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	- -	200	200	ND	ND	ND	ND	ND	ND
Acenaphthylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	- -	ND	200	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	200	200	ND	ND	ND	ND	ND	ND
Fluoranthene	- -	ND	200	ND	ND	ND	ND	ND	ND
Fluorene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	- -	200	200	ND	ND	ND	ND	ND	ND
Phenanthrene	- -	ND	200	ND	ND	ND	ND	ND	ND
Pyrene	- -	ND	200	ND	ND	ND	ND	ND	ND
Total PAHs	- -	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name	Receptor Food	BR2-FI-81-CALC	BR2-FI-82-CALC	BR2-FI-83-CALC	BR2-FI-84-CALC	BR2-FI-85-CALC	BR2-FI-86-CALC	BR2-FI-87-CALC	BR2-FI-88-CALC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Sample Weight (g)									
Total Field Weight (g)		968	697	509	643	600	398	714	521
Percent Lipids (%)		8.4	5.1	5	6.9	3.3	3	5.7	2.8
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PAH									
2-Methylnaphthalene	- -	ND	ND	ND	240	ND	ND	ND	ND
Acenaphthene	- -	ND	ND	ND	230	230	ND	220	ND
Acenaphthylene	- -	ND	ND	ND	230	ND	220	ND	ND
Anthracene	- -	ND	ND	ND	230	ND	ND	ND	ND
Benzo(a)pyrene	1,980	ND	ND	ND	230	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	ND	ND	ND	230	ND	ND	220	ND
Benzo(g,h,i)perylene	- -	ND	ND	ND	230 J	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	ND	ND	ND	230	ND	ND	220	ND
Benzo[a]anthracene	- -	ND	ND	ND	230	ND	ND	ND	ND
Chrysene	- -	ND	ND	ND	230	ND	ND	220	ND
Dibenz[a,h]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	- -	ND	ND	ND	230	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	ND	ND	ND	230 J	ND	ND	ND	ND
Naphthalene	- -	ND	ND	ND	240	ND	ND	ND	ND
Phenanthrene	- -	ND	ND	ND	240	ND	ND	ND	ND
Pyrene	- -	ND	ND	ND	240	ND	ND	ND	ND
Total PAHs	- -	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-89	BR2-FI-90	BR2-FI-91	BR2-FI-92	BR2-FI-93	BR2-FI-94	BR2FI-95
Sample Name	Receptor Food	BR2-FI-89-COMP	BR2-FI-90-COMP	BR2-FI-91-COMP	BR2-FI-92-COMP	BR2-FI-93-COMP	BR2-FI-94-COMP	BR2-FI-95-COMP
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		10.8 - 15	10.8 - 13.5	11.6 - 12.2	10.6 - 13.2	10.4 - 14.9	9.9 - 11.7	
Sample Weight (g)		89.65	71.84	64.89	70.27	79.29	53.12	70.52
Total Field Weight (g)		91	72	65	71	80	55	
Percent Lipids (%)		9.4	8.8	7.6	6.9	7.5	8.9	7.5
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PAH								
2-Methylnaphthalene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Acenaphthene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Acenaphthylene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Anthracene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Benzo(a)pyrene	1,980	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Benzo(b)fluoranthene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Benzo(g,h,i)perylene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Benzo(k)fluoranthene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Benzo[a]anthracene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Chrysene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Dibenz[a,h]anthracene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Fluoranthene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Fluorene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Indeno(1,2,3-cd)pyrene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Naphthalene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Phenanthrene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Pyrene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U
Total PAHs	- -	ND	ND	ND	ND	ND	ND	ND

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-96	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7
Sample Name	Receptor Food	BR2-FI-96-COMP	BR3-FI-1-CALC	BR3-FI-2-CALC	BR3-FI-3-CALC	BR3-FI-4-CALC	BR3-FI-5-CALC	BR3-FI-6-CALC	BR3-FI-7-CALC
Date Collected		9/28/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005
Species Common Name		Common Shiner	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		10.6 - 14.2	33.9	31.1	28.4	26.9	25.3	35.2	40.9
Sample Weight (g)		171.03							
Total Field Weight (g)		176	729	502	383	263	239	753	1092
Percent Lipids (%)		6.8	3.3	2.9	4.5	1.6	3	2.6	3.5
Location		BR-2	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b
PAH									
2-Methylnaphthalene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	- -	740 U	210	ND	ND	ND	ND	ND	ND
Acenaphthylene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	740 U	210	200	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	740 U	210	200	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	740 U	210	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	740 U	210	200	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	740 U	210	200	ND	ND	ND	ND	ND
Chrysene	- -	740 U	210	200	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	740 U	210 J	200 J	200 J	ND	ND	ND	ND
Fluoranthene	- -	740 U	210	200	ND	ND	ND	ND	ND
Fluorene	- -	740 U	210	200	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	740 U	210	200	ND	ND	ND	ND	ND
Naphthalene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	- -	740 U	210	200	ND	ND	ND	ND	ND
Pyrene	- -	740 U	210 J	ND	ND	ND	ND	ND	ND
Total PAHs	- -	ND	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR3-FI-8	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13	BR3-FI-14	BR3-FI-15
Sample Name	Receptor Food	BR3-FI-8-CALC	BR3-FI-9-CALC	BR3-FI-10-CALC	BR3-FI-11-CALC	BR3-FI-12-CALC	BR3-FI-13-CALC	BR3-FI-14-CALC	BR3-FI-15-CALC
Date Collected		9/28/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		38.3	31.9	34.1	31.7	39.8	41.5	36.8	35.1
Sample Weight (g)									
Total Field Weight (g)		931	392	499	418	757	872	439	478
Percent Lipids (%)		2.8	3.5	5.2	4.8	6.5	10	3	1.3
Location		BR-3b	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b
PAH									
2-Methylnaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	- -	ND	ND	ND	ND	ND	220	ND	ND
Acenaphthylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	- -	ND	ND	ND	ND	ND	ND	210	ND
Fluorene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	- -	ND	ND	ND	ND	ND	220	ND	ND
Phenanthrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	- -	ND	ND	ND	ND	ND	ND	210	ND
Total PAHs	- -	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR3-FI-16	BR3-FI-17	BR3-FI-18	BR3-FI-19	BR3-FI-20	BR3-FI-21	BR3-FI-22	BR3-FI-23
Sample Name	Receptor Food	BR3-FI-16-CALC	BR3-FI-17-COMP	BR3-FI-18-COMP	BR3-FI-19-COMP	BR3-FI-20-COMP	BR3-FI-21-COMP	BR3-FI-22-COMP	BR3-FI-23-COMP
Date Collected		9/28/2005	9/28/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner
Tissue Type		Calc whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		37.6	11.3 - 13.9	11.2 - 14.7	14.2 - 15.1	14.1 - 14.9	14.4 - 15.2	11.6 - 15.2	11.1 - 15.5
Sample Weight (g)			43.41	51.94	73.56	78.91	79.12	61.1	54.77
Total Field Weight (g)		558	44	54	74	79	80	63	57
Percent Lipids (%)		6.6	2.1	4.9	5.7	4.1	4.2	7.6	2.8
Location		BR-3b	BR-3b	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3
PAH									
2-Methylnaphthalene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Acenaphthene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Acenaphthylene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Anthracene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Benzo(a)pyrene	1,980	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Benzo(b)fluoranthene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Benzo(g,h,i)perylene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Benzo(k)fluoranthene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Benzo[a]anthracene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Chrysene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Dibenz[a,h]anthracene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Fluoranthene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Fluorene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Indeno(1,2,3-cd)pyrene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Naphthalene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Phenanthrene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Pyrene	- -	ND	740 U	760 U	730 U	750 U	740 U	750 U	760 U
Total PAHs	- -	NA	ND	ND	ND	ND	ND	ND	ND

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR3-FI-24	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31
Sample Name	Receptor Food	BR3-FI-24-COMP	P1-FI-25-CALC	P1-FI-26-CALC	P1-FI-27-CALC	P1-FI-28-CALC	P1-FI-29-CALC	P1-FI-30-CALC	P1-FI-31-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Common Shiner	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		13.4 - 15.7	36.2	35.8	31.5	32.1	30.7	37.9	32.4
Sample Weight (g)		266.34							
Total Field Weight (g)		268	865	739	472	471	425	861	460
Percent Lipids (%)		4.6	4	3.3	3.5	6.3	2.6	2.4	1.3
Location		BR-3	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PAH									
2-Methylnaphthalene	- -	750 U	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	- -	750 U	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	- -	750 U	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	750 U	200	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	750 U	200	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	750 U	200	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	750 U	200	210	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	750 U	200	210	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	750 U	200	ND	ND	ND	ND	ND	ND
Chrysene	- -	750 U	200	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	750 U	200	210	ND	ND	ND	ND	ND
Fluoranthene	- -	750 U	200	ND	ND	ND	ND	ND	ND
Fluorene	- -	750 U	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	750 U	200	210	ND	ND	ND	ND	ND
Naphthalene	- -	750 U	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	- -	750 U	200	210	ND	ND	ND	ND	ND
Pyrene	- -	750 U	ND	ND	ND	ND	ND	ND	ND
Total PAHs	- -	ND	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-32	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39
Sample Name	Receptor Food	P1-FI-32-CALC	P1-FI-33-CALC	P1-FI-34-CALC	P1-FI-35-CALC	P1-FI-36-CALC	P1-FI-37-CALC	P1-FI-38-CALC	P1-FI-39-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Largemouth Bass	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		37.1	40.1	35.1	37.2	43.4	43.1	36.3	40.4
Sample Weight (g)									
Total Field Weight (g)		799	704	467	585	747	930	664	725
Percent Lipids (%)		3.2	6.2	3.3	7.4	5.1	8.1	5.3	2.3
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PAH									
2-Methylnaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	- -	ND	ND	ND	ND	ND	ND	ND	210
Acenaphthylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	- -	ND	ND	ND	ND	ND	ND	ND	220
Indeno(1,2,3-cd)pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	- -	ND	200	ND	200	230	210	190	220
Pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Total PAHs	- -	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-40	P1-FI-41	P1-FI-42	P1-FI-43	P1-FI-44	P1-FI-45	P1-FI-46	P1-FI-47
Sample Name	Receptor Food	P1-FI-40-CALC	P1-FI-41-COMP	P1-FI-42-COMP	P1-FI-43-COMP	P1-FI-44-COMP	P1-FI-45-COMP	P1-FI-46-COMP	P1-FI-47-COMP
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Calc whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		36.4	11.1 - 12.8	9.6 - 11	10.4 - 10.7	10.1 - 11.7	8.9 - 12.6	8.9 - 11.4	9.2 - 12
Sample Weight (g)			105.24	64.53	69.91	87.43	62.28	70.9	73.37
Total Field Weight (g)		627	108	67	73	90	65	74	76
Percent Lipids (%)		6.5	4.6	4.2	4.5	3.9	2.8	5.1	6
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PAH									
2-Methylnaphthalene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Acenaphthene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Acenaphthylene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Anthracene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Benzo(a)pyrene	1,980	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Benzo(b)fluoranthene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Benzo(g,h,i)perylene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Benzo(k)fluoranthene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Benzo[a]anthracene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Chrysene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Dibenz[a,h]anthracene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Fluoranthene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Fluorene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Indeno(1,2,3-cd)pyrene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Naphthalene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Phenanthrene	- -	200	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Pyrene	- -	ND	760 U	750 U	740 U	750 U	730 U	750 U	740 U
Total PAHs	- -	NA	ND	ND	ND	ND	ND	ND	ND

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-48	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55
Sample Name	Receptor Food	P1-FI-48-COMP	P2-FI-49-CALC	P2-FI-50-CALC	P2-FI-51-CALC	P2-FI-52-CALC	P2-FI-53-CALC	P2-FI-54-CALC	P2-FI-55-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		7.6 - 12.3	17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5
Sample Weight (g)		187.55							
Total Field Weight (g)		195	104	151	159	154	154	131	166
Percent Lipids (%)		4.2	1.4	3.1	3.3	1.2	1.6	3.4	2.9
Location		Pond A	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PAH									
2-Methylnaphthalene	- -	740 U	190	230	220	240 J	270	220	210 J
Acenaphthene	- -	740 U	ND	ND	ND	ND	ND	ND	210 J
Acenaphthylene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	740 U	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Chrysene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Fluorene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Naphthalene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	- -	740 U	ND	230	220 J	ND	ND	ND	ND
Pyrene	- -	740 U	ND	ND	ND	ND	ND	ND	ND
Total PAHs	- -	ND	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-56	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63
Sample Name	Receptor Food	P2-FI-56-CALC	P2-FI-57-CALC	P2-FI-58-CALC	P2-FI-59-CALC	P2-FI-60-CALC	P2-FI-61-CALC	P2-FI-62-CALC	P2-FI-63-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Pumpkin Seed	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		13 - 13.9	39.1	34.6	40.4	34.9	37	33	35.9
Sample Weight (g)									
Total Field Weight (g)		219	693	501	755	442	595	380	532
Percent Lipids (%)		2.1	4.7	2.7	7.4	4.4	9.2	2.7	4.2
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PAH									
2-Methylnaphthalene	- -	220	ND	ND	210	180	ND	ND	ND
Acenaphthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	ND	ND	ND	ND	180	ND	ND	ND
Benzo(k)fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	- -	ND	ND	ND	ND	180	200	ND	ND
Indeno(1,2,3-cd)pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	- -	ND	210	210	ND	180	200	200	190
Phenanthrene	- -	220	210	210	220	180	210	200	190
Pyrene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Total PAHs	- -	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-64	P2-FI-65	P2-FI-66	P2-FI-67	P2-FI-68	P2-FI-69	P2-FI-70	P2-FI-71
Sample Name	Receptor Food	P2-FI-64-CALC	P2-FI-65-COMP	P2-FI-66-COMP	P2-FI-67-COMP	P2-FI-68-COMP	P2-FI-69-COMP	P2-FI-70-COMP	P2-FI-71-COMP
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner
Tissue Type		Calc whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		34.6	14.7 - 16.4	14.4 - 15.8	13.7 - 14.4	13.8 - 15.4	13.4 - 16.4	15 - 15.9	14.1 - 16
Sample Weight (g)			136.68	115.06	107.8	113.04	109.31	83.78	87.56
Total Field Weight (g)		460	141	119	112	117	112	86	89
Percent Lipids (%)		4.7	3.9	3.6	3.2	3.6	3.7	3.2	2.4
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PAH									
2-Methylnaphthalene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Acenaphthene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Acenaphthylene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Anthracene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Benzo(a)pyrene	1,980	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Benzo(b)fluoranthene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Benzo(g,h,i)perylene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Benzo(k)fluoranthene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Benzo[a]anthracene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Chrysene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Dibenz[a,h]anthracene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Fluoranthene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Fluorene	- -	200	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Indeno(1,2,3-cd)pyrene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Naphthalene	- -	200	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Phenanthrene	- -	200	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Pyrene	- -	ND	730 U	730 U	740 U	740 U	730 U	770 U	760 U
Total PAHs	- -	NA	ND	ND	ND	ND	ND	ND	ND

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-72	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103
Sample Name	Receptor Food	P2-FI-72-COMP	P6-FI-97-CALC	P6-FI-98-CALC	P6-FI-99-CALC	P6-FI-100-CALC	P6-FI-101-CALC	P6-FI-102-CALC	P6-FI-103-CALC
Date Collected		9/27/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Gold Shiner	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		15.4 - 16.3	34.6	36.6	31.4	38.5	29.9	31.9	31.3
Sample Weight (g)		90.81							
Total Field Weight (g)		92	567	731	402	814	373	442	447
Percent Lipids (%)		3.3	1.5	2.3	1.7	1.3	2.8	2.3	2.5
Location		Pond F	P6	P6	P6	P6	P6	P6	P6
PAH									
2-Methylnaphthalene	- -	730 U	110	100	ND	ND	ND	ND	ND
Acenaphthene	- -	730 U	110	100	ND	ND	ND	ND	ND
Acenaphthylene	- -	730 U	110	100	ND	ND	ND	ND	ND
Anthracene	- -	730 U	110	100	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,980	730 U	110	100	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	- -	730 U	110	100	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	730 U	110	100	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	- -	730 U	110	100	ND	ND	ND	ND	ND
Benzo[a]anthracene	- -	730 U	110	100	ND	ND	ND	ND	ND
Chrysene	- -	730 U	110	100	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	- -	730 U	110	100	ND	ND	ND	ND	ND
Fluoranthene	- -	730 U	110 J	ND	ND	ND	ND	ND	ND
Fluorene	- -	730 U	110	100	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	- -	730 U	110	100	ND	ND	ND	ND	ND
Naphthalene	- -	730 U	110	100	ND	ND	ND	ND	ND
Phenanthrene	- -	730 U	110	100	ND	ND	ND	ND	ND
Pyrene	- -	730 U	110	100	ND	ND	ND	ND	ND
Total PAHs	- -	ND	NA	NA	NA	NA	NA	NA	NA

TABLE 4-39
RESULTS FOR PAHs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P6-FI-104	P6-FI-105	P6-FI-106	P6-FI-107	P6-FI-108	P6-FI-109	P6-FI-110	P6-FI-111	P6-FI-112
Sample Name	Receptor Food	P6-FI-104-CALC	P6-FI-105-COMP	P6-FI-106-COMP	P6-FI-107-COMP	P6-FI-108-COMP	P6-FI-109-COMP	P6-FI-110-COMP	P6-FI-111-COMP	P6-FI-112-COMP
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Largemouth Bass	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Calc whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		39	9.3 - 12.4	8.1 - 12.1	10.3 - 11.6	9.4 - 11.1	10 - 11.4	12.7 - 13.9	11.5 - 13.8	11.1 - 13.6
Sample Weight (g)			69.58	54.53	67.6	50.15	62.67	75.59	72.36	69.46
Total Field Weight (g)		907	71	56	69	51	65	77	75	71
Percent Lipids (%)		2.8	2.4	1.7	2.2	1.6	2.7	1.4	1.4	1.9
Location		P6	P6	P6	P6	P6	P6	P6	P6	P6
PAH										
2-Methylnaphthalene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Acenaphthene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Acenaphthylene	- -	100	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Anthracene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Benzo(a)pyrene	1,980	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Benzo(b)fluoranthene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Benzo(g,h,i)perylene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Benzo(k)fluoranthene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Benzo[a]anthracene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Chrysene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Dibenz[a,h]anthracene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Fluoranthene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Fluorene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Indeno(1,2,3-cd)pyrene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Naphthalene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Phenanthrene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Pyrene	- -	ND	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Total PAHs	- -	NA	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name	Consumption	BR1-FI-113-FILL	BR1-FI-114-FILL	BR1-FI-115-FILL	BR1-FI-116-FILL	BR1-FI-117-FILL	BR1-FI-118-FILL	BR1-FI-119-FILL	BR1-FI-120-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Sample Weight (g)		477.81	406.6	153.72	94.87	140.93	107.69	508.05	420.53
Total Field Weight (g)		1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)		1.7	1.7	2.4	1.8	1.6	2	1.8	1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
SVOC									
1,1'-Biphenyl	6,800	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2,2'-oxybis(1-Chloropropane)	45	13	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
2,4,5-Trichlorophenol	14,000	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2,4,6-Trichlorophenol	290	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2,4-Dichlorophenol	410	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2,4-Dimethylphenol	2,700	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2,4-Dinitrophenol	270	400 UJ	400 UJ	380 UJ	390 UJ	380 UJ	380 UJ	390 UJ	380 UJ
2,4-Dinitrotoluene	270	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2,6-Dinitrotoluene	140	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2-Chloronaphthalene	11,000	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2-Chlorophenol	680	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2-Methylphenol	6,800	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2-Nitroaniline	410	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
2-Nitrophenol	- -	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
3,3'-Dichlorobenzidine	7	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
3-Nitroaniline	40	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 UJ
4,6-Dinitro-2-methylphenol	14	160 UJ	160 UJ	150 UJ	160 UJ	150 UJ	150 UJ	160 UJ	150 UJ
4-Bromophenyl-phenylether	- -	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
4-Chloro-3-methylphenol	- -	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
4-Chloroaniline	58	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 UJ
4-Chlorophenyl-phenylether	- -	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
4-Methylphenol	680	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
4-Nitroaniline	160	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
4-Nitrophenol	- -	160 UJ	160 UJ	150 UJ	160 UJ	150 UJ	150 UJ	160 UJ	150 U
Acetophenone	14,000	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Atrazine	14	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Benzaldehyde	14,000	88 J	160 UJ	150 UJ	160 UJ	150 UJ	150 UJ	160 UJ	170 J
bis(2-Chloroethoxy)methane	- -	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
bis(2-Chloroethyl)ether	2.9	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
bis(2-Ethylhexyl)phthalate	230	96 J	140 J	230	130 J	170	130 J	200	110 J
Butyl benzyl phthalate	1,700	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Caprolactam	68,000	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Carbazole	160	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 UJ
Dibenzofuran	270	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Diethylphthalate	110,000	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Dimethyl phthalate	1,400,000	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Di-N-Butyl phthalate	14,000	1,100	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Di-N-Octyl phthalate	5,400	160 U	160 U	150 U	160 UJ	150 UJ	150 UJ	160 U	150 UJ
Hexachlorobenzene	2	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
Hexachlorobutadiene	27	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Hexachlorocyclopentadiene	810	R	160 U	150 U	160 U	150 U	150 U	160 U	150 UJ
Hexachloroethane	135	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Isophorone	3,300	160 U	160 U	150 U	160 U	150 U	150 U	86 J	150 U
Nitrobenzene	68	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
N-Nitroso-di-N-propylamine	0.45	8 U	7.9 U	7.6 U	7.8 U	7.7 U	7.6 U	7.8 U	7.7 U
N-Nitrosodiphenylamine	640	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U
Pentachlorophenol	26	R	R	R	R	R	R	R	R
Phenol	41,000	160 U	160 U	150 U	160 U	150 U	150 U	160 U	150 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	Consumption	BR1-FI-121-FILL	BR1-FI-122-FILL	BR1-FI-123-FILL	BR1-FI-124-FILL	BR1-FI-125-FILL	BR1-FI-126-FILL	BR1-FI-127-FILL	BR1-FI-128-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Sample Weight (g)		90.2	68.76	68.69	66.11	111.48	73.54	93.95	70.99
Total Field Weight (g)		222	191	192	183	274	205	258	209
Percent Lipids (%)		0.95	1.1	1.4	0.7	0.98	0.75	1	1.1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
SVOC									
1,1'-Biphenyl	6,800	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2,2'-oxybis(1-Chloropropane)	45	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
2,4,5-Trichlorophenol	14,000	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2,4,6-Trichlorophenol	290	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2,4-Dichlorophenol	410	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2,4-Dimethylphenol	2,700	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2,4-Dinitrophenol	270	390 UJ	400 UJ	390 UJ	390 UJ	390 UJ	380 UJ	400 UJ	400 UJ
2,4-Dinitrotoluene	270	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2,6-Dinitrotoluene	140	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2-Chloronaphthalene	11,000	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2-Chlorophenol	680	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2-Methylphenol	6,800	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2-Nitroaniline	410	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
2-Nitrophenol	- -	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
3,3'-Dichlorobenzidine	7	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
3-Nitroaniline	40	160 UJ	160 U	160 U	160 U	160 U	150 U	160 U	160 U
4,6-Dinitro-2-methylphenol	14	160 UJ	160 UJ	160 UJ	160 UJ	160 UJ	150 UJ	160 UJ	160 UJ
4-Bromophenyl-phenylether	- -	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
4-Chloro-3-methylphenol	- -	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
4-Chloroaniline	58	160 UJ	160 U	160 U	160 U	160 U	150 U	160 U	160 U
4-Chlorophenyl-phenylether	- -	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
4-Methylphenol	680	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
4-Nitroaniline	160	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
4-Nitrophenol	- -	160 U	160 UJ	160 UJ	160 UJ	160 UJ	150 UJ	160 UJ	160 UJ
Acetophenone	14,000	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Atrazine	14	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Benzaldehyde	14,000	160 UJ	100 J	160 UJ	86 J	160 UJ	150 UJ	160 UJ	160 UJ
bis(2-Chloroethoxy)methane	- -	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
bis(2-Chloroethyl)ether	2.9	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
bis(2-Ethylhexyl)phthalate	230	160 U	120 J	140 J	110 J	120 J	84 J	88 J	120 J
Butyl benzyl phthalate	1,700	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Caprolactam	68,000	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Carbazole	160	160 UJ	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Dibenzofuran	270	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Diethylphthalate	110,000	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Dimethyl phthalate	1,400,000	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Di-N-Butyl phthalate	14,000	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Di-N-Octyl phthalate	5,400	160 U	160 UJ	160 UJ	160 UJ	160 UJ	150 UJ	160 UJ	160 UJ
Hexachlorobenzene	2	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
Hexachlorobutadiene	27	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Hexachlorocyclopentadiene	810	160 UJ	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Hexachloroethane	135	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Isophorone	3,300	160 U	160 U	160 U	100 J	140 J	150 U	160 U	220
Nitrobenzene	68	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
N-Nitroso-di-N-propylamine	0.45	7.8 U	7.9 U	7.8 U	7.8 U	7.8 U	7.7 U	8 U	8 U
N-Nitrosodiphenylamine	640	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U
Pentachlorophenol	26	R	R	R	R	R	R	R	R
Phenol	41,000	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name		BR2-FI-73-FILL	BR2-FI-74-FILL	BR2-FI-75-FILL	BR2-FI-76-FILL	BR2-FI-77-FILL	BR2-FI-78-FILL	BR2-FI-79-FILL	BR2-FI-80-FILL
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		30.7	30	30.4	25.2	25.8	25.4	25	24.3
Sample Weight (g)		217.66	182.08	235.21	99.93	110.83	110.22	97.48	101.78
Total Field Weight (g)		471	414	543	231	264	260	229	236
Percent Lipids (%)		1.4	1.4	1.6	1.1	1.5	1	1.2	1
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
SVOC									
1,1'-Biphenyl	6,800	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2,2'-oxybis(1-Chloropropane)	45	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
2,4,5-Trichlorophenol	14,000	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2,4,6-Trichlorophenol	290	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2,4-Dichlorophenol	410	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2,4-Dimethylphenol	2,700	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2,4-Dinitrophenol	270	740 UJ	740 UJ	760 UJ	740 UJ	740 UJ	750 UJ	770 UJ	740 UJ
2,4-Dinitrotoluene	270	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2,6-Dinitrotoluene	140	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2-Chloronaphthalene	11,000	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2-Chlorophenol	680	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2-Methylphenol	6,800	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2-Nitroaniline	410	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
2-Nitrophenol	- -	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
3,3'-Dichlorobenzidine	7	300 UJ	290 U	300 U	300 U	300 U	300 U	310 UJ	300 UJ
3-Nitroaniline	40	300 UJ	290 UJ	300 UJ	300 UJ	300 UJ	300 UJ	310 UJ	300 UJ
4,6-Dinitro-2-methylphenol	14	740 UJ	740 UJ	760 UJ	740 UJ	740 UJ	750 UJ	770 UJ	740 UJ
4-Bromophenyl-phenylether	- -	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
4-Chloro-3-methylphenol	- -	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
4-Chloroaniline	58	300 UJ	290 UJ	300 UJ	300 UJ	300 UJ	300 UJ	310 UJ	300 UJ
4-Chlorophenyl-phenylether	- -	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
4-Methylphenol	680	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
4-Nitroaniline	160	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
4-Nitrophenol	- -	300 UJ	290 UJ	300 UJ	300 UJ	300 UJ	300 UJ	310 UJ	300 UJ
Acetophenone	14,000	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Atrazine	14	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Benzaldehyde	14,000	300 UJ	290 UJ	300 UJ	300 UJ	300 UJ	300 UJ	310 UJ	300 UJ
bis(2-Chloroethoxy)methane	- -	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
bis(2-Chloroethyl)ether	2.9	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
bis(2-Ethylhexyl)phthalate	230	160 J	290 U	300 U	300 U	300 U	150 J	310 UJ	300 UJ
Butyl benzyl phthalate	1,700	300 U	290 U	300 U	300 U	300 U	300 U	310 UJ	300 UJ
Caprolactam	68,000	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Carbazole	160	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Dibenzofuran	270	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Diethylphthalate	110,000	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Dimethyl phthalate	1,400,000	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Di-N-Butyl phthalate	14,000	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Di-N-Octyl phthalate	5,400	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 UJ
Hexachlorobenzene	2	7.4 U	7.9	7.6 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Hexachlorobutadiene	27	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Hexachlorocyclopentadiene	810	R	290 UJ	300 UJ	300 UJ	300 UJ	300 UJ	310 UJ	300 UJ
Hexachloroethane	135	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Isophorone	3,300	280 J	410	210 J	300 U	300 U	300 U	310 U	520
Nitrobenzene	68	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
N-Nitroso-di-N-propylamine	0.45	7.4 UJ	7.4 UJ	7.6 UJ	7.4 UJ	7.4 UJ	7.5 UJ	7.7 UJ	7.4 UJ
N-Nitrosodiphenylamine	640	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U
Pentachlorophenol	26	740 UJ	740 UJ	760 UJ	740 UJ	740 UJ	750 UJ	770 UJ	740 UJ
Phenol	41,000	300 U	290 U	300 U	300 U	300 U	300 U	310 U	300 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name	Consumption	BR2-FI-81-FILL	BR2-FI-82-FILL	BR2-FI-83-FILL	BR2-FI-84-FILL	BR2-FI-85-FILL	BR2-FI-86-FILL	BR2-FI-87-FILL	BR2-FI-88-FILL
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Sample Weight (g)		405.96	264.32	224.24	250.34	249.08	154.39	273.96	210.7
Total Field Weight (g)		968	697	509	643	600	398	714	521
Percent Lipids (%)		2.8	2.4	1.7	2.6	1.2	1.3	2.6	1.5
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
SVOC									
1,1'-Biphenyl	6,800	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2,2'-oxybis(1-Chloropropane)	45	7.7 U	7.6 U	7.6 U	7.3 U	7.5 U	7.8 U	7.4 U	7.3 U
2,4,5-Trichlorophenol	14,000	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2,4,6-Trichlorophenol	290	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2,4-Dichlorophenol	410	310 U	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2,4-Dimethylphenol	2,700	310 U	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2,4-Dinitrophenol	270	770 UJ	760 UJ	760 UJ	730 UJ	750 UJ	780 UJ	740 UJ	730 UJ
2,4-Dinitrotoluene	270	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2,6-Dinitrotoluene	140	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2-Chloronaphthalene	11,000	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2-Chlorophenol	680	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2-Methylphenol	6,800	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2-Nitroaniline	410	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
2-Nitrophenol	- -	310 U	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
3,3'-Dichlorobenzidine	7	310 UJ	310 UJ	300 UJ	290 UJ	300 U	310 U	300 UJ	290 UJ
3-Nitroaniline	40	310 UJ	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ	290 UJ
4,6-Dinitro-2-methylphenol	14	770 UJ	760 UJ	760 UJ	730 UJ	750 UJ	780 UJ	740 UJ	730 UJ
4-Bromophenyl-phenylether	- -	310 UJ	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
4-Chloro-3-methylphenol	- -	310 U	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
4-Chloroaniline	58	310 UJ	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ	290 UJ
4-Chlorophenyl-phenylether	- -	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
4-Methylphenol	680	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
4-Nitroaniline	160	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
4-Nitrophenol	- -	310 UJ	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ	290 UJ
Acetophenone	14,000	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Atrazine	14	7.7 U	7.6 U	7.6 U	7.3 U	7.5 U	7.8 U	7.4 U	7.3 U
Benzaldehyde	14,000	310 UJ	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ	290 UJ
bis(2-Chloroethoxy)methane	- -	310 U	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
bis(2-Chloroethyl)ether	2.9	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
bis(2-Ethylhexyl)phthalate	230	250 J	310 UJ	300 UJ	470 J	300 U	220 J	300 UJ	190 J
Butyl benzyl phthalate	1,700	310 UJ	310 UJ	300 UJ	290 UJ	300 U	310 U	300 UJ	290 UJ
Caprolactam	68,000	310 U	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Carbazole	160	310 UJ	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Dibenzofuran	270	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Diethylphthalate	110,000	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Dimethyl phthalate	1,400,000	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Di-N-Butyl phthalate	14,000	310 UJ	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Di-N-Octyl phthalate	5,400	310 UJ	310 UJ	300 UJ	290 UJ	300 U	310 U	300 UJ	290 UJ
Hexachlorobenzene	2	7.7 U	7.6 U	7.6 U	7.3 U	7.5 U	7.8 U	7.4 U	7.3 U
Hexachlorobutadiene	27	310 U	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Hexachlorocyclopentadiene	810	310 UJ	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ	290 UJ
Hexachloroethane	135	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Isophorone	3,300	310	260 J	300 UJ	290 UJ	300 U	310 U	360	290 U
Nitrobenzene	68	310 U	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
N-Nitroso-di-N-propylamine	0.45	7.7 UJ	7.6 UJ	7.6 UJ	7.3 UJ	7.5 UJ	7.8 UJ	7.4 UJ	7.3 UJ
N-Nitrosodiphenylamine	640	310 UJ	310 UJ	300 UJ	290 UJ	300 U	310 U	300 U	290 U
Pentachlorophenol	26	770 UJ	760 UJ	760 UJ	730 UJ	750 UJ	780 UJ	740 UJ	730 UJ
Phenol	41,000	310 U	310 U	300 UJ	290 UJ	300 U	310 U	300 U	290 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name	Consumption	BR3-FI-1-FILL	BR3-FI-2-FILL	BR3-FI-3-FILL	BR3-FI-4-FILL	BR3-FI-5-FILL	BR3-FI-6-FILL	BR3-FI-7-FILL	BR3-FI-8-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		33.9	31.1	28.4	26.9	25.3	35.2	40.9	38.3
Sample Weight (g)		316.18	225.59	167.4	117.46	105.82	348.42	473.42	425.87
Total Field Weight (g)		729	502	383	263	239	753	1092	931
Percent Lipids (%)		1.4	0.89	1.2	0.61	1	0.95	0.74	0.77
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
SVOC									
1,1'-Biphenyl	6,800	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2,2'-oxybis(1-Chloropropane)	45	7.4 U	7.5 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
2,4,5-Trichlorophenol	14,000	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2,4,6-Trichlorophenol	290	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2,4-Dichlorophenol	410	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2,4-Dimethylphenol	2,700	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2,4-Dinitrophenol	270	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ
2,4-Dinitrotoluene	270	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2,6-Dinitrotoluene	140	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2-Chloronaphthalene	11,000	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2-Chlorophenol	680	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2-Methylphenol	6,800	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2-Nitroaniline	410	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
2-Nitrophenol	- -	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
3,3'-Dichlorobenzidine	7	300 UJ	300 U	300 U	300 U	300 U	300 U	300 U	290 U
3-Nitroaniline	40	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
4,6-Dinitro-2-methylphenol	14	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ
4-Bromophenyl-phenylether	- -	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
4-Chloro-3-methylphenol	- -	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
4-Chloroaniline	58	300 UJ	300 U	300 U	300 U	300 U	300 U	300 U	290 U
4-Chlorophenyl-phenylether	- -	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
4-Methylphenol	680	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
4-Nitroaniline	160	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
4-Nitrophenol	- -	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Acetophenone	14,000	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Atrazine	14	150 UJ	150 UJ	150 UJ	150 UJ	150 UJ	150 UJ	150 UJ	140 UJ
Benzaldehyde	14,000	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ
bis(2-Chloroethoxy)methane	- -	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
bis(2-Chloroethyl)ether	2.9	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ
bis(2-Ethylhexyl)phthalate	230	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Butyl benzyl phthalate	1,700	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Caprolactam	68,000	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Carbazole	160	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Dibenzofuran	270	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Diethylphthalate	110,000	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Dimethyl phthalate	1,400,000	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Di-N-Butyl phthalate	14,000	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Di-N-Octyl phthalate	5,400	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Hexachlorobenzene	2	7.4 U	7.5 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
Hexachlorobutadiene	27	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Hexachlorocyclopentadiene	810	R	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ
Hexachloroethane	135	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Isophorone	3,300	300 U	180 J	300 U	300 U	340	300 U	300 U	290 U
Nitrobenzene	68	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
N-Nitroso-di-N-propylamine	0.45	7.4 U	7.5 U	7.5 U	7.5 U	7.4 U	7.5 U	7.4 UJ	7.2 U
N-Nitrosodiphenylamine	640	300 U	300 U	300 U	300 U	300 U	300 U	300 U	290 U
Pentachlorophenol	26	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	2,900 UJ
Phenol	41,000	300 U	540 U	300 U	870 U	650 U	500 U	300 U	290 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13	BR3-FI-14	BR3-FI-15	BR3-FI-16
Sample Name	Consumption	BR3-FI-9-FILL	BR3-FI-10-FILL	BR3-FI-11-FILL	BR3-FI-12-FILL	BR3-FI-13-FILL	BR3-FI-14-FILL	BR3-FI-15-FILL	BR3-FI-16-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		31.9	34.1	31.7	39.8	41.5	36.8	35.1	37.6
Sample Weight (g)		166.27	211.08	161.52	299.16	343.42	187.27	197.01	205.79
Total Field Weight (g)		392	499	418	757	872	439	478	558
Percent Lipids (%)		2.6	4.2	3	3.3	4.5	1.8	0.89	3.9
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
SVOC									
1,1'-Biphenyl	6,800	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2,2'-oxybis(1-Chloropropane)	45	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
2,4,5-Trichlorophenol	14,000	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2,4,6-Trichlorophenol	290	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2,4-Dichlorophenol	410	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2,4-Dimethylphenol	2,700	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2,4-Dinitrophenol	270	290 UJ	290 UJ	290 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ
2,4-Dinitrotoluene	270	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2,6-Dinitrotoluene	140	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2-Chloronaphthalene	11,000	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2-Chlorophenol	680	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2-Methylphenol	6,800	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2-Nitroaniline	410	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
2-Nitrophenol	- -	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
3,3'-Dichlorobenzidine	7	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 UJ
3-Nitroaniline	40	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
4,6-Dinitro-2-methylphenol	14	290 UJ	290 UJ	290 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ
4-Bromophenyl-phenylether	- -	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
4-Chloro-3-methylphenol	- -	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
4-Chloroaniline	58	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
4-Chlorophenyl-phenylether	- -	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
4-Methylphenol	680	290 U	290 U	290 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ
4-Nitroaniline	160	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
4-Nitrophenol	- -	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Acetophenone	14,000	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Atrazine	14	150 UJ	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Benzaldehyde	14,000	290 UJ	290 UJ	290 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ
bis(2-Chloroethoxy)methane	- -	290 U	290 U	290 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ
bis(2-Chloroethyl)ether	2.9	290 UJ	290 UJ	290 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ
bis(2-Ethylhexyl)phthalate	230	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 UJ
Butyl benzyl phthalate	1,700	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 UJ
Caprolactam	68,000	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Carbazole	160	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Dibenzofuran	270	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Diethylphthalate	110,000	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Dimethyl phthalate	1,400,000	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Di-N-Butyl phthalate	14,000	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Di-N-Octyl phthalate	5,400	290 U	290 UJ	290 U	300 U	290 U	300 U	310 U	300 UJ
Hexachlorobenzene	2	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
Hexachlorobutadiene	27	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Hexachlorocyclopentadiene	810	290 UJ	290 UJ	290 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ
Hexachloroethane	135	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Isophorone	3,300	290 U	290 U	290 UJ	300 UJ	290 UJ	300 UJ	310 UJ	300 UJ
Nitrobenzene	68	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
N-Nitroso-di-N-propylamine	0.45	7.3 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.7 U	7.4 U
N-Nitrosodiphenylamine	640	290 U	290 U	290 U	300 U	290 U	300 U	310 U	300 U
Pentachlorophenol	26	2,900 UJ	2,900 UJ	2,900 UJ	3,000 UJ	2,900 UJ	3,000 UJ	3,100 UJ	3,000 UJ
Phenol	41,000	290 U	290 U	290 U	300 U	290 U	360 U	310 U	300 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name		P1-FI-25-FILL	P1-FI-26-FILL	P1-FI-27-FILL	P1-FI-28-FILL	P1-FI-29-FILL	P1-FI-30-FILL	P1-FI-31-FILL	P1-FI-32-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Sample Weight (g)		395.28	336.56	219.15	207.46	194.02	373.02	205.92	345.35
Total Field Weight (g)		865	739	472	471	425	861	460	799
Percent Lipids (%)		0.74	0.77	0.61	9.6	0.45	0.41	0.4	0.51
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
SVOC									
1,1'-Biphenyl	6,800	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
2,2'-oxybis(1-Chloropropane)	45	7.7 UJ	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
2,4,5-Trichlorophenol	14,000	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
2,4,6-Trichlorophenol	290	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
2,4-Dichlorophenol	410	310 U	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
2,4-Dimethylphenol	2,700	310 UJ	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
2,4-Dinitrophenol	270	770 UJ	750 UJ	730 UJ	750 UJ	770 UJ	720 UJ	740 UJ	740 UJ
2,4-Dinitrotoluene	270	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
2,6-Dinitrotoluene	140	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
2-Chloronaphthalene	11,000	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
2-Chlorophenol	680	310 U	300 U	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
2-Methylphenol	6,800	310 U	300 U	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
2-Nitroaniline	410	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
2-Nitrophenol	- -	310 U	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
3,3'-Dichlorobenzidine	7	R	300 U	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
3-Nitroaniline	40	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
4,6-Dinitro-2-methylphenol	14	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
4-Bromophenyl-phenylether	- -	310 U	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
4-Chloro-3-methylphenol	- -	230 J	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
4-Chloroaniline	58	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
4-Chlorophenyl-phenylether	- -	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
4-Methylphenol	680	310 U	300 U	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
4-Nitroaniline	160	310 UJ	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
4-Nitrophenol	- -	1,000 J	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
Acetophenone	14,000	310 U	300 U	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
Atrazine	14	7.7 UJ	7.5 UJ	7.3 UJ	7.5 UJ	7.7 UJ	7.2 UJ	7.4 UJ	7.4 UJ
Benzaldehyde	14,000	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
bis(2-Chloroethoxy)methane	- -	310 U	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
bis(2-Chloroethyl)ether	2.9	310 U	300 U	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
bis(2-Ethylhexyl)phthalate	230	510 U	640 U	510 UJ	510 UJ	580 UJ	510 UJ	590 UJ	560 UJ
Butyl benzyl phthalate	1,700	310 U	300 U	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
Caprolactam	68,000	310 U	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
Carbazole	160	310 U	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
Dibenzofuran	270	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
Diethylphthalate	110,000	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
Dimethyl phthalate	1,400,000	310 U	300 U	290 U	300 U	310 U	290 U	300 UJ	300 UJ
Di-N-Butyl phthalate	14,000	310 U	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
Di-N-Octyl phthalate	5,400	770 U	750 U	730 UJ	750 UJ	770 UJ	720 UJ	740 UJ	740 UJ
Hexachlorobenzene	2	7.7 U	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
Hexachlorobutadiene	27	310 U	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
Hexachlorocyclopentadiene	810	R	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
Hexachloroethane	135	310 UJ	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
Isophorone	3,300	410	340	260 J	360	580 J	420 J	220 J	710 J
Nitrobenzene	68	310 U	300 U	290 U	300 U	310 UJ	290 UJ	300 UJ	300 UJ
N-Nitroso-di-N-propylamine	0.45	7.7 UJ	7.5 U	7.3 U	7.5 U	7.7 U	7.2 U	7.4 U	7.4 U
N-Nitrosodiphenylamine	640	310 U	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
Pentachlorophenol	26	310 UJ	300 UJ	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ
Phenol	41,000	310 U	300 U	290 UJ	300 UJ	310 UJ	290 UJ	300 UJ	300 UJ

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name	Consumption	P1-FI-33-FILL	P1-FI-34-FILL	P1-FI-35-FILL	P1-FI-36-FILL	P1-FI-37-FILL	P1-FI-38-FILL	P1-FI-39-FILL	P1-FI-40-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Sample Weight (g)		313.54	217.93	268.92	278.52	396.84	298.28	286.44	287.6
Total Field Weight (g)		704	467	585	747	930	664	725	627
Percent Lipids (%)		2	1.4	2.8	1.6	2.4	1.8	3.5	2.8
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
SVOC									
1,1'-Biphenyl	6,800	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2,2'-oxybis(1-Chloropropane)	45	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
2,4,5-Trichlorophenol	14,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2,4,6-Trichlorophenol	290	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2,4-Dichlorophenol	410	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2,4-Dimethylphenol	2,700	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2,4-Dinitrophenol	270	740 UJ	760 UJ	740 UJ	730 UJ	740 UJ	740 UJ	750 UJ	740 UJ
2,4-Dinitrotoluene	270	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2,6-Dinitrotoluene	140	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2-Chloronaphthalene	11,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2-Chlorophenol	680	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2-Methylphenol	6,800	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2-Nitroaniline	410	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
2-Nitrophenol	- -	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
3,3'-Dichlorobenzidine	7	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
3-Nitroaniline	40	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
4,6-Dinitro-2-methylphenol	14	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
4-Bromophenyl-phenylether	- -	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
4-Chloro-3-methylphenol	- -	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
4-Chloroaniline	58	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
4-Chlorophenyl-phenylether	- -	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
4-Methylphenol	680	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
4-Nitroaniline	160	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
4-Nitrophenol	- -	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
Acetophenone	14,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Atrazine	14	7.4 UJ	7.6 UJ	7.4 UJ	7.3 UJ	7.4 UJ	7.4 UJ	7.5 UJ	7.4 UJ
Benzaldehyde	14,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
bis(2-Chloroethoxy)methane	- -	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
bis(2-Chloroethyl)ether	2.9	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
bis(2-Ethylhexyl)phthalate	230	300 UJ	560 UJ	550 UJ	590 UJ	530 UJ	290 UJ	630 UJ	660 U
Butyl benzyl phthalate	1,700	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Caprolactam	68,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Carbazole	160	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Dibenzofuran	270	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Diethylphthalate	110,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Dimethyl phthalate	1,400,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Di-N-Butyl phthalate	14,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Di-N-Octyl phthalate	5,400	740 UJ	760 UJ	740 UJ	730 UJ	740 UJ	740 UJ	750 UJ	740 U
Hexachlorobenzene	2	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Hexachlorobutadiene	27	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Hexachlorocyclopentadiene	810	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
Hexachloroethane	135	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Isophorone	3,300	250 J	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Nitrobenzene	68	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
N-Nitroso-di-N-propylamine	0.45	7.4 U	7.6 U	7.4 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
N-Nitrosodiphenylamine	640	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U
Pentachlorophenol	26	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 UJ
Phenol	41,000	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ	290 UJ	300 UJ	300 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	Consumption	P2-FI-49-FILL	P2-FI-50-FILL	P2-FI-51-FILL	P2-FI-52-FILL	P2-FI-53-FILL	P2-FI-54-FILL	P2-FI-55-FILL	P2-FI-56-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Sample Weight (g)		36.14	49.56	58.88	49.58	40.85	48.99	65.44	76.52
Total Field Weight (g)		104	151	159	154	154	131	166	219
Percent Lipids (%)		0.49	0.78	0.88	0.57	0.58	0.8	0.77	0.57
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
SVOC									
1,1'-Biphenyl	6,800	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2,2'-oxybis(1-Chloropropane)	45	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
2,4,5-Trichlorophenol	14,000	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2,4,6-Trichlorophenol	290	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2,4-Dichlorophenol	410	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2,4-Dimethylphenol	2,700	300 UJ	300 UJ	290 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ
2,4-Dinitrophenol	270	3,000 UJ	3,000 UJ	2,900 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	2,900 UJ
2,4-Dinitrotoluene	270	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2,6-Dinitrotoluene	140	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2-Chloronaphthalene	11,000	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2-Chlorophenol	680	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2-Methylphenol	6,800	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2-Nitroaniline	410	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
2-Nitrophenol	- -	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
3,3'-Dichlorobenzidine	7	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
3-Nitroaniline	40	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
4,6-Dinitro-2-methylphenol	14	760 UJ	750 UJ	730 UJ	750 UJ	750 UJ	740 UJ	740 UJ	730 UJ
4-Bromophenyl-phenylether	- -	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
4-Chloro-3-methylphenol	- -	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
4-Chloroaniline	58	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
4-Chlorophenyl-phenylether	- -	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
4-Methylphenol	680	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
4-Nitroaniline	160	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
4-Nitrophenol	- -	3,000 UJ	3,000 UJ	2,900 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	2,900 UJ
Acetophenone	14,000	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Atrazine	14	7.6 UJ	7.5 UJ	7.3 UJ	7.5 UJ	7.5 UJ	7.4 UJ	7.4 UJ	7.3 UJ
Benzaldehyde	14,000	3,000 UJ	3,000 UJ	2,900 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	2,900 UJ
bis(2-Chloroethoxy)methane	- -	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
bis(2-Chloroethyl)ether	2.9	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
bis(2-Ethylhexyl)phthalate	230	610 U	520 U	480 U	570 U	520 U	530 U	490 U	540 U
Butyl benzyl phthalate	1,700	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Caprolactam	68,000	760 U	750 U	730 U	750 U	750 U	740 U	740 U	730 U
Carbazole	160	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Dibenzofuran	270	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Diethylphthalate	110,000	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Dimethyl phthalate	1,400,000	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Di-N-Butyl phthalate	14,000	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Di-N-Octyl phthalate	5,400	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Hexachlorobenzene	2	7.6 U	7.5 U	7.3 U	7.5 UJ	7.5 UJ	7.4 U	7.4 UJ	7.3 U
Hexachlorobutadiene	27	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Hexachlorocyclopentadiene	810	300 UJ	300 UJ	290 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ
Hexachloroethane	135	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Isophorone	3,300	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Nitrobenzene	68	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
N-Nitroso-di-N-propylamine	0.45	15 U	15 U	15 U	15 UJ	15 UJ	15 U	15 UJ	15 U
N-Nitrosodiphenylamine	640	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U
Pentachlorophenol	26	300 UJ	300 UJ	290 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ
Phenol	41,000	300 U	300 U	290 U	300 U	300 U	300 U	300 U	290 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name	Consumption	P2-FI-57-FILL	P2-FI-58-FILL	P2-FI-59-FILL	P2-FI-60-FILL	P2-FI-61-FILL	P2-FI-62-FILL	P2-FI-63-FILL	P2-FI-64-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		39.1	34.6	40.4	34.9	37	33	35.9	34.6
Sample Weight (g)		286.31	195.81	296.88	197.58	243.33	165.42	232.46	197.22
Total Field Weight (g)		693	501	755	442	595	380	532	460
Percent Lipids (%)		2.1	1.6	2.4	1.6	3.6	1.4	1.9	2.9
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
SVOC									
1,1'-Biphenyl	6,800	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2,2'-oxybis(1-Chloropropane)	45	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
2,4,5-Trichlorophenol	14,000	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2,4,6-Trichlorophenol	290	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2,4-Dichlorophenol	410	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2,4-Dimethylphenol	2,700	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ
2,4-Dinitrophenol	270	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	2,900 UJ	3,000 UJ
2,4-Dinitrotoluene	270	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2,6-Dinitrotoluene	140	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2-Chloronaphthalene	11,000	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2-Chlorophenol	680	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2-Methylphenol	6,800	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2-Nitroaniline	410	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
2-Nitrophenol	- -	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
3,3'-Dichlorobenzidine	7	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
3-Nitroaniline	40	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
4,6-Dinitro-2-methylphenol	14	740 UJ	750 UJ	740 UJ	740 UJ	760 UJ	740 UJ	740 UJ	740 UJ
4-Bromophenyl-phenylether	- -	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
4-Chloro-3-methylphenol	- -	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
4-Chloroaniline	58	300 U	300 U	300 UJ	300 U	300 U	300 U	290 U	300 U
4-Chlorophenyl-phenylether	- -	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
4-Methylphenol	680	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
4-Nitroaniline	160	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ
4-Nitrophenol	- -	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	3,000 UJ	2,900 UJ	3,000 UJ
Acetophenone	14,000	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Atrazine	14	7.4 U	7.5 U	7.4 UJ	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Benzaldehyde	14,000	270 J	490 J	3,000 UJ	300 J	3,000 UJ	320 J	260 J	3,000 UJ
bis(2-Chloroethoxy)methane	- -	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
bis(2-Chloroethyl)ether	2.9	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
bis(2-Ethylhexyl)phthalate	230	520 U	550 U	500 U	520 U	520 U	650 U	480 U	500 U
Butyl benzyl phthalate	1,700	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Caprolactam	68,000	740 U	750 U	740 U	740 U	760 U	740 U	740 U	740 U
Carbazole	160	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Dibenzofuran	270	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Diethylphthalate	110,000	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Dimethyl phthalate	1,400,000	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Di-N-Butyl phthalate	14,000	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Di-N-Octyl phthalate	5,400	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Hexachlorobenzene	2	7.4 U	7.5 U	7.4 U	7.4 U	7.6 U	7.4 U	7.4 U	7.4 U
Hexachlorobutadiene	27	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Hexachlorocyclopentadiene	810	300 UJ	300 UJ	R	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ
Hexachloroethane	135	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Isophorone	3,300	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Nitrobenzene	68	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
N-Nitroso-di-N-propylamine	0.45	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
N-Nitrosodiphenylamine	640	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U
Pentachlorophenol	26	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	290 UJ	300 UJ
Phenol	41,000	300 U	300 U	300 U	300 U	300 U	300 U	290 U	300 U

TABLE 4-40
RESULTS FOR SVOCs IN FISH FILLET SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103	P6-FI-104
Sample Name		P6-FI-97-FILL	P6-FI-98-FILL	P6-FI-99-FILL	P6-FI-100-FILL	P6-FI-101-FILL	P6-FI-102-FILL	P6-FI-103-FILL	P6-FI-104-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		34.6	36.6	31.4	38.5	29.9	31.9	31.3	39
Sample Weight (g)		246.51	322.08	163.93	322.83	147.5	192.86	197.95	404.87
Total Field Weight (g)		567	731	402	814	373	442	447	907
Percent Lipids (%)		0.56	0.73	0.58	0.51	0.88	0.71	0.71	0.67
Location		P6	P6	P6	P6	P6	P6	P6	P6
SVOC									
1,1'-Biphenyl	6,800	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2,2'-oxybis(1-Chloropropane)	45	3.8 U	3.7 U	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
2,4,5-Trichlorophenol	14,000	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2,4,6-Trichlorophenol	290	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2,4-Dichlorophenol	410	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2,4-Dimethylphenol	2,700	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2,4-Dinitrophenol	270	R	R	R	R	R	R	R	R
2,4-Dinitrotoluene	270	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2,6-Dinitrotoluene	140	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2-Chloronaphthalene	11,000	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2-Chlorophenol	680	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2-Methylphenol	6,800	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2-Nitroaniline	410	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
2-Nitrophenol	- -	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
3,3'-Dichlorobenzidine	7	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
3-Nitroaniline	40	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
4,6-Dinitro-2-methylphenol	14	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ
4-Bromophenyl-phenylether	- -	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
4-Chloro-3-methylphenol	- -	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
4-Chloroaniline	58	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
4-Chlorophenyl-phenylether	- -	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
4-Methylphenol	680	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
4-Nitroaniline	160	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
4-Nitrophenol	- -	380 UJ	370 UJ	380 UJ	370 UJ	380 UJ	380 UJ	380 UJ	370 UJ
Acetophenone	14,000	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Atrazine	14	3.8 U	3.7 U	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Benzaldehyde	14,000	200 J	130 J	110 J	150 UJ	140 J	150 UJ	150 UJ	150 UJ
bis(2-Chloroethoxy)methane	- -	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
bis(2-Chloroethyl)ether	2.9	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
bis(2-Ethylhexyl)phthalate	230	300 U	280 U	270 U	270 U	300 U	280 U	290 U	250 U
Butyl benzyl phthalate	1,700	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Caprolactam	68,000	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Carbazole	160	150 UJ	150 UJ	150 UJ	150 UJ	150 UJ	150 UJ	150 UJ	150 UJ
Dibenzofuran	270	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Diethylphthalate	110,000	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ
Dimethyl phthalate	1,400,000	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Di-N-Butyl phthalate	14,000	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Di-N-Octyl phthalate	5,400	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Hexachlorobenzene	2	7.4	5.4	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.7 U
Hexachlorobutadiene	27	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Hexachlorocyclopentadiene	810	R	370 U	380 U	370 U	380 U	380 U	380 U	370 U
Hexachloroethane	135	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Isophorone	3,300	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Nitrobenzene	68	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
N-Nitroso-di-N-propylamine	0.45	7.6 U	7.4 U	7.6 U	7.4 U	7.6 U	7.6 U	7.6 U	7.3 U
N-Nitrosodiphenylamine	640	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Pentachlorophenol	26	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ	1,500 UJ
Phenol	41,000	150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name	Receptor Food	BR1-FI-113-CALC	BR1-FI-114-CALC	BR1-FI-115-CALC	BR1-FI-116-CALC	BR1-FI-117-CALC	BR1-FI-118-CALC	BR1-FI-119-CALC	BR1-FI-120-CALC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Sample Weight (g)									
Total Field Weight (g)		1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)		4.6	5.9	6.1	4.4	3.6	3.5	6.1	1.3
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	240	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	R	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	630 J	420 J	ND	350 J	420 J	280 J	390 J	320 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	280 J	310 J	340	290 J	310	270 J	300	250 J
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	680	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	R	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	ND	ND	ND	ND	ND	ND	250 J	ND
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	R	R	R	R	R	R	R	R
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	Receptor Food	BR1-FI-121-CALC	BR1-FI-122-CALC	BR1-FI-123-CALC	BR1-FI-124-CALC	BR1-FI-125-CALC	BR1-FI-126-CALC	BR1-FI-127-CALC	BR1-FI-128-CALC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Sample Weight (g)									
Total Field Weight (g)		222	191	192	183	274	205	258	209
Percent Lipids (%)		4.1	6.5	9.7	3.6	6	7.5	5.8	6
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	1,100 J	1,600 J	890 J	1,200 J	510 J	880 J	860 J	3,400 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	ND	290 J	290 J	380 J	270 J	280 J	270 J	280 J
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	2,700	2,800	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	ND	ND	ND	280 J	280 J	ND	ND	320
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	R	R	R	R	R	R	R	R
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR1-FI-129	BR1-FI-130	BR1-FI-131	BR1-FI-132	BR1-FI-133	BR1-FI-134	BR1-FI-135	BR1-FI-136
Sample Name	Receptor Food	BR1-FI-129-COMP	BR1-FI-130-COMP	BR1-FI-131-COMP	BR1-FI-132-COMP	BR1-FI-133-COMP	BR1-FI-134-COMP	BR1-FI-135-COMP	BR1-FI-136-COMP
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		14.6 - 15.4	13.9 - 15.4	14.4 - 15.9	15.2 - 15.6	13.8 - 14.8	11.5 - 14.7	11.6 - 15.3	11.9 - 14.2
Sample Weight (g)		119.38	118.6	124.79	126.57	109.79	94.42	102.17	122.47
Total Field Weight (g)		122	120	127	129	112	96	104	126
Percent Lipids (%)		8	8.1	11	8.4	7.6	6.6	7	9.1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
SVOC									
1,1'-Biphenyl	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2,2'-oxybis(1-Chloropropane)	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2,4,5-Trichlorophenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2,4,6-Trichlorophenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2,4-Dichlorophenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2,4-Dimethylphenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2,4-Dinitrophenol	- -	R	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	740 UJ	730 UJ	740 UJ	740 UJ	740 UJ	750 UJ	750 UJ	750 UJ
2,6-Dinitrotoluene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2-Chloronaphthalene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2-Chlorophenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2-Methylphenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
2-Nitroaniline	- -	740 UJ	730 UJ	740 UJ	740 UJ	740 UJ	750 UJ	750 UJ	750 UJ
2-Nitrophenol	- -	1,900 U	1,800 U	1,800 U	1,900 U	1,800 U	1,900 U	1,900 U	1,900 U
3,3'-Dichlorobenzidine	- -	740 UJ	730 U	740 U	740 U	740 U	750 U	750 U	750 U
3-Nitroaniline	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
4,6-Dinitro-2-methylphenol	- -	R	R	R	R	R	R	R	R
4-Bromophenyl-phenylether	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
4-Chloro-3-methylphenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
4-Chloroaniline	- -	740 UJ	730 UJ	740 UJ	740 UJ	740 UJ	750 UJ	750 UJ	750 UJ
4-Chlorophenyl-phenylether	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
4-Methylphenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
4-Nitroaniline	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
4-Nitrophenol	- -	1,900 UJ	1,800 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,900 UJ	1,900 UJ	1,900 UJ
Acetophenone	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Atrazine	- -	1,900 UJ	1,800 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,900 UJ	1,900 UJ	1,900 UJ
Benzaldehyde	- -	1,900 J	2,700 J	3,700 J	2,600 J	2,900 J	2,800 J	1,800 J	2,800 J
bis(2-Chloroethoxy)methane	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
bis(2-Chloroethyl)ether	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
bis(2-Ethylhexyl)phthalate	910	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Butyl benzyl phthalate	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Caprolactam	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Carbazole	- -	740 UJ	730 UJ	740 UJ	740 UJ	740 UJ	750 UJ	750 UJ	750 UJ
Dibenzofuran	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Diethylphthalate	9,084,000	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Dimethyl phthalate	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Di-N-Butyl phthalate	879	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Di-N-Octyl phthalate	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Hexachlorobenzene	330	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Hexachlorobutadiene	1,300	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Hexachlorocyclopentadiene	- -	R	7,300 UJ	7,400 UJ	7,400 UJ	7,400 UJ	7,500 UJ	7,500 UJ	7,500 UJ
Hexachloroethane	14,000	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Isophorone	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Nitrobenzene	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
N-Nitroso-di-N-propylamine	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
N-Nitrosodiphenylamine	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U
Pentachlorophenol	879	1,900 UJ	1,800 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,900 UJ	1,900 UJ	1,900 UJ
Phenol	- -	740 U	730 U	740 U	740 U	740 U	750 U	750 U	750 U

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name	Receptor Food	BR2-FI-73-CALC	BR2-FI-74-CALC	BR2-FI-75-CALC	BR2-FI-76-CALC	BR2-FI-77-CALC	BR2-FI-78-CALC	BR2-FI-79-CALC	BR2-FI-80-CALC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		30.7	30	30.4	25.2	25.8	25.4	25	24.3
Sample Weight (g)									
Total Field Weight (g)		471	414	543	231	264	260	229	236
Percent Lipids (%)		2.9	4.3	5.9	3.4	6.8	3.7	4	5.1
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	R	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	R	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	1,300 J	2,100 J	3,100 J	1,500 J	1,200 J	2,000 J	3,600 J	3,400 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	270 J	270 J	ND	ND	290 J	730 J	340 J	310 J
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	200	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	R	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	330 J	390	300 J	ND	ND	ND	ND	440
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	ND	ND	ND	ND	ND	ND	R	R
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name	Receptor Food	BR2-FI-81-CALC	BR2-FI-82-CALC	BR2-FI-83-CALC	BR2-FI-84-CALC	BR2-FI-85-CALC	BR2-FI-86-CALC	BR2-FI-87-CALC	BR2-FI-88-CALC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Sample Weight (g)									
Total Field Weight (g)		968	697	509	643	600	398	714	521
Percent Lipids (%)		8.4	5.1	5	6.9	3.3	3	5.7	2.8
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	340 J	310 J	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	530 J	430 J	600 J	460 J	370 J	570 J	410 J	390 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	310 J	ND	ND	420 J	ND	300 J	ND	300 J
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	340	320 J	ND	ND	ND	ND	370	ND
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	R	R	R	R	R	R	R	R
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-89	BR2-FI-90	BR2-FI-91	BR2-FI-92	BR2-FI-93	BR2-FI-94	BR2FI-95	BR2-FI-96
Sample Name	Receptor Food	BR2-FI-89-COMP	BR2-FI-90-COMP	BR2-FI-91-COMP	BR2-FI-92-COMP	BR2-FI-93-COMP	BR2-FI-94-COMP	BR2-FI-95-COMP	BR2-FI-96-COMP
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		10.8 - 15	10.8 - 13.5	11.6 - 12.2	10.6 - 13.2	10.4 - 14.9	9.9 - 11.7		10.6 - 14.2
Sample Weight (g)		89.65	71.84	64.89	70.27	79.29	53.12	70.52	171.03
Total Field Weight (g)		91	72	65	71	80	55		176
Percent Lipids (%)		9.4	8.8	7.6	6.9	7.5	8.9	7.5	6.8
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
SVOC									
1,1'-Biphenyl	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2,2'-oxybis(1-Chloropropane)	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2,4,5-Trichlorophenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2,4,6-Trichlorophenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2,4-Dichlorophenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2,4-Dimethylphenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2,4-Dinitrophenol	- -	R	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	760 UJ	750 UJ	750 UJ	730 UJ	760 UJ	770 U	750 UJ	740 UJ
2,6-Dinitrotoluene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2-Chloronaphthalene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2-Chlorophenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2-Methylphenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
2-Nitroaniline	- -	760 UJ	750 UJ	750 UJ	730 UJ	760 UJ	770 U	750 UJ	740 UJ
2-Nitrophenol	- -	1,900 U	1,900 U	750 U	730 U	760 U	770 U	750 U	740 U
3,3'-Dichlorobenzidine	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
3-Nitroaniline	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
4,6-Dinitro-2-methylphenol	- -	R	R	1,900 UJ	1,800 UJ	1,900 UJ	7,700 UJ	1,900 UJ	1,800 UJ
4-Bromophenyl-phenylether	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
4-Chloro-3-methylphenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
4-Chloroaniline	- -	760 UJ	750 UJ	750 UJ	730 UJ	760 UJ	770 U	750 UJ	740 UJ
4-Chlorophenyl-phenylether	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
4-Methylphenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
4-Nitroaniline	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
4-Nitrophenol	- -	1,900 UJ	1,900 UJ	750 UJ	730 UJ	760 UJ	1,900 U	750 UJ	740 UJ
Acetophenone	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Atrazine	- -	1,900 UJ	1,900 UJ	750 U	730 U	760 U	770 U	750 U	740 U
Benzaldehyde	- -	760 UJ	2,500 J	2,500 J	2,300 J	2,900 J	1,100	2,200 J	2,400 J
bis(2-Chloroethoxy)methane	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
bis(2-Chloroethyl)ether	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
bis(2-Ethylhexyl)phthalate	910	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Butyl benzyl phthalate	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Caprolactam	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Carbazole	- -	760 UJ	750 UJ	750 U	730 U	760 U	770 U	750 U	740 U
Dibenzofuran	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Diethylphthalate	9,084,000	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Dimethyl phthalate	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Di-N-Butyl phthalate	879	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Di-N-Octyl phthalate	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Hexachlorobenzene	330	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Hexachlorobutadiene	1,300	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Hexachlorocyclopentadiene	- -	7,600 UJ	7,500 UJ	750 UJ	730 UJ	760 UJ	770 U	750 UJ	740 UJ
Hexachloroethane	14,000	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Isophorone	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Nitrobenzene	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
N-Nitroso-di-N-propylamine	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
N-Nitrosodiphenylamine	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U
Pentachlorophenol	879	1,900 UJ	1,900 UJ	1,900 UJ	1,800 UJ	1,900 UJ	7,700 UJ	1,900 UJ	1,800 UJ
Phenol	- -	760 U	750 U	750 U	730 U	760 U	770 U	750 U	740 U

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name	Receptor Food	BR3-FI-1-CALC	BR3-FI-2-CALC	BR3-FI-3-CALC	BR3-FI-4-CALC	BR3-FI-5-CALC	BR3-FI-6-CALC	BR3-FI-7-CALC	BR3-FI-8-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		33.9	31.1	28.4	26.9	25.3	35.2	40.9	38.3
Sample Weight (g)									
Total Field Weight (g)		729	502	383	263	239	753	1092	931
Percent Lipids (%)		3.3	2.9	4.5	1.6	3	2.6	3.5	2.8
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	ND	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	480	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	2,600 J	1,300 J	1,600 J	1,700 J	940 J	1,100 J	950 J	1,600 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	R	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	ND	280 J	ND	ND	360	ND	ND	ND
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	ND	R	R	R	R	R	R	R
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13	BR3-FI-14	BR3-FI-15	BR3-FI-16
Sample Name	Receptor Food	BR3-FI-9-CALC	BR3-FI-10-CALC	BR3-FI-11-CALC	BR3-FI-12-CALC	BR3-FI-13-CALC	BR3-FI-14-CALC	BR3-FI-15-CALC	BR3-FI-16-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		31.9	34.1	31.7	39.8	41.5	36.8	35.1	37.6
Sample Weight (g)									
Total Field Weight (g)		392	499	418	757	872	439	478	558
Percent Lipids (%)		3.5	5.2	4.8	6.5	10	3	1.3	6.6
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	R	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	450 J	590 J	2,000 J	2,600 J	5,800 J	2,100 J	2,300 J	1,700 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	R	R	R	R	R	R	R	R
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR3-FI-17	BR3-FI-18	BR3-FI-19	BR3-FI-20	BR3-FI-21	BR3-FI-22	BR3-FI-23	BR3-FI-24
Sample Name	Receptor Food	BR3-FI-17-COMP	BR3-FI-18-COMP	BR3-FI-19-COMP	BR3-FI-20-COMP	BR3-FI-21-COMP	BR3-FI-22-COMP	BR3-FI-23-COMP	BR3-FI-24-COMP
Date Collected		9/28/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		11.3 - 13.9	11.2 - 14.7	14.2 - 15.1	14.1 - 14.9	14.4 - 15.2	11.6 - 15.2	11.1 - 15.5	13.4 - 15.7
Sample Weight (g)		43.41	51.94	73.56	78.91	79.12	61.1	54.77	266.34
Total Field Weight (g)		44	54	74	79	80	63	57	268
Percent Lipids (%)		2.1	4.9	5.7	4.1	4.2	7.6	2.8	4.6
Location		BR-3b	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3
SVOC									
1,1'-Biphenyl	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2,2'-oxybis(1-Chloropropane)	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2,4,5-Trichlorophenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2,4,6-Trichlorophenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2,4-Dichlorophenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2,4-Dimethylphenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2,4-Dinitrophenol	- -	R	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2,6-Dinitrotoluene	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2-Chloronaphthalene	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2-Chlorophenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2-Methylphenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2-Nitroaniline	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
2-Nitrophenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
3,3'-Dichlorobenzidine	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
3-Nitroaniline	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
4,6-Dinitro-2-methylphenol	- -	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 UJ	760 UJ	750 UJ
4-Bromophenyl-phenylether	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
4-Chloro-3-methylphenol	- -	450 J	760 U	730 U	750 U	740 U	750 U	760 U	750 U
4-Chloroaniline	- -	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 UJ	760 UJ	750 UJ
4-Chlorophenyl-phenylether	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
4-Methylphenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
4-Nitroaniline	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
4-Nitrophenol	- -	2,000	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Acetophenone	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Atrazine	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Benzaldehyde	- -	970	4,100	3,200	3,800	3,900	3,500	2,800	3,700
bis(2-Chloroethoxy)methane	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
bis(2-Chloroethyl)ether	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
bis(2-Ethylhexyl)phthalate	910	820	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Butyl benzyl phthalate	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Caprolactam	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Carbazole	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Dibenzofuran	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Diethylphthalate	9,084,000	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Dimethyl phthalate	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Di-N-Butyl phthalate	879	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Di-N-Octyl phthalate	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Hexachlorobenzene	330	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Hexachlorobutadiene	1,300	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Hexachlorocyclopentadiene	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Hexachloroethane	14,000	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Isophorone	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Nitrobenzene	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
N-Nitroso-di-N-propylamine	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
N-Nitrosodiphenylamine	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U
Pentachlorophenol	879	R	R	R	R	R	R	R	R
Phenol	- -	740 U	760 U	730 U	750 U	740 U	750 U	760 U	750 U

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name	Receptor Food	P1-FI-25-CALC	P1-FI-26-CALC	P1-FI-27-CALC	P1-FI-28-CALC	P1-FI-29-CALC	P1-FI-30-CALC	P1-FI-31-CALC	P1-FI-32-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Sample Weight (g)									
Total Field Weight (g)		865	739	472	471	425	861	460	799
Percent Lipids (%)		4	3.3	3.5	6.3	2.6	2.4	1.3	3.2
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	R	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	R	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	R	R	R	R	R	R	R	R
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	310 J	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	2,400 J	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	13,000 J	12,000 J	12,000 J	11,000 J	16,000 J	9,300 J	20,000 J	16,000 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	R	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	390	360	320 J	370	480 J	390 J	300 J	520 J
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	R	R	R	R	R	R	R	R
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological Receptor Food	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name		P1-FI-33-CALC	P1-FI-34-CALC	P1-FI-35-CALC	P1-FI-36-CALC	P1-FI-37-CALC	P1-FI-38-CALC	P1-FI-39-CALC	P1-FI-40-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Sample Weight (g)									
Total Field Weight (g)		704	467	585	747	930	664	725	627
Percent Lipids (%)		6.2	3.3	7.4	5.1	8.1	5.3	2.3	6.5
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	R	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	R	R	R	R	R	R	R	R
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	9,000 J	2,400 J	14,000 J	5,900 J	7,100 J	13,000 J	ND	6,800 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	320 J	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	R	R	R	R	R	R	R	R
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-41	P1-FI-42	P1-FI-43	P1-FI-44	P1-FI-45	P1-FI-46	P1-FI-47	P1-FI-48
Sample Name	Receptor Food	P1-FI-41-COMP	P1-FI-42-COMP	P1-FI-43-COMP	P1-FI-44-COMP	P1-FI-45-COMP	P1-FI-46-COMP	P1-FI-47-COMP	P1-FI-48-COMP
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		11.1 - 12.8	9.6 - 11	10.4 - 10.7	10.1 - 11.7	8.9 - 12.6	8.9 - 11.4	9.2 - 12	7.6 - 12.3
Sample Weight (g)		105.24	64.53	69.91	87.43	62.28	70.9	73.37	187.55
Total Field Weight (g)		108	67	73	90	65	74	76	195
Percent Lipids (%)		4.6	4.2	4.5	3.9	2.8	5.1	6	4.2
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
SVOC									
1,1'-Biphenyl	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2,2'-oxybis(1-Chloropropane)	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2,4,5-Trichlorophenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2,4,6-Trichlorophenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2,4-Dichlorophenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2,4-Dimethylphenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2,4-Dinitrophenol	- -	7,600 U	7,500 UJ	7,400 UJ	7,500 UJ	7,300 UJ	7,500 UJ	7,400 UJ	7,400 UJ
2,4-Dinitrotoluene	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2,6-Dinitrotoluene	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2-Chloronaphthalene	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2-Chlorophenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2-Methylphenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2-Nitroaniline	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
2-Nitrophenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
3,3'-Dichlorobenzidine	- -	760 UJ	750 U	740 U	750 U	730 U	750 U	740 U	740 U
3-Nitroaniline	- -	760 UJ	750 U	740 U	750 U	730 U	750 U	740 U	740 U
4,6-Dinitro-2-methylphenol	- -	7,600 U	7,500 UJ	7,400 UJ	7,500 UJ	7,300 UJ	7,500 UJ	7,400 UJ	7,400 UJ
4-Bromophenyl-phenylether	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
4-Chloro-3-methylphenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
4-Chloroaniline	- -	760 UJ	750 U	740 U	750 U	730 U	750 U	740 U	740 U
4-Chlorophenyl-phenylether	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
4-Methylphenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
4-Nitroaniline	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
4-Nitrophenol	- -	1,900 U	1,900 U	1,800 U	1,900 U	1,800 U	1,900 U	1,900 U	1,800 U
Acetophenone	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Atrazine	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Benzaldehyde	- -	7,300 J	7,300 J	6,400 J	8,500 J	5,500 J	4,800 J	5,100 J	6,300 J
bis(2-Chloroethoxy)methane	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
bis(2-Chloroethyl)ether	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
bis(2-Ethylhexyl)phthalate	910	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Butyl benzyl phthalate	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Caprolactam	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Carbazole	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Dibenzofuran	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Diethylphthalate	9,084,000	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Dimethyl phthalate	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Di-N-Butyl phthalate	879	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Di-N-Octyl phthalate	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Hexachlorobenzene	330	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Hexachlorobutadiene	1,300	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Hexachlorocyclopentadiene	- -	R	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Hexachloroethane	14,000	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Isophorone	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Nitrobenzene	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
N-Nitroso-di-N-propylamine	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
N-Nitrosodiphenylamine	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U
Pentachlorophenol	879	7,600 UJ	R	R	R	R	R	R	R
Phenol	- -	760 U	750 U	740 U	750 U	730 U	750 U	740 U	740 U

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	Receptor Food	P2-FI-49-CALC	P2-FI-50-CALC	P2-FI-51-CALC	P2-FI-52-CALC	P2-FI-53-CALC	P2-FI-54-CALC	P2-FI-55-CALC	P2-FI-56-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Sample Weight (g)									
Total Field Weight (g)		104	151	159	154	154	131	166	219
Percent Lipids (%)		1.4	3.1	3.3	1.2	1.6	3.4	2.9	2.1
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	14,000 J	8,700 J	24,000 J	16,000 J	43,000 J	14,000 J	7,800 J	3,200 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	ND	ND	ND	R	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological Receptor Food	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name		P2-FI-57-CALC	P2-FI-58-CALC	P2-FI-59-CALC	P2-FI-60-CALC	P2-FI-61-CALC	P2-FI-62-CALC	P2-FI-63-CALC	P2-FI-64-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		39.1	34.6	40.4	34.9	37	33	35.9	34.6
Sample Weight (g)									
Total Field Weight (g)		693	501	755	442	595	380	532	460
Percent Lipids (%)		4.7	2.7	7.4	4.4	9.2	2.7	4.2	4.7
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	12,000 J	5,100 J	4,000 J	4,800 J	6,100 J	3,100 J	2,600 J	3,500 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	ND	ND	R	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-65	P2-FI-66	P2-FI-67	P2-FI-68	P2-FI-69	P2-FI-70	P2-FI-71	P2-FI-72
Sample Name	Receptor Food	P2-FI-65-COMP	P2-FI-66-COMP	P2-FI-67-COMP	P2-FI-68-COMP	P2-FI-69-COMP	P2-FI-70-COMP	P2-FI-71-COMP	P2-FI-72-COMP
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		14.7 - 16.4	14.4 - 15.8	13.7 - 14.4	13.8 - 15.4	13.4 - 16.4	15 - 15.9	14.1 - 16	15.4 - 16.3
Sample Weight (g)		136.68	115.06	107.8	113.04	109.31	83.78	87.56	90.81
Total Field Weight (g)		141	119	112	117	112	86	89	92
Percent Lipids (%)		3.9	3.6	3.2	3.6	3.7	3.2	2.4	3.3
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
SVOC									
1,1'-Biphenyl	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2,2'-oxybis(1-Chloropropane)	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2,4,5-Trichlorophenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2,4,6-Trichlorophenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2,4-Dichlorophenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2,4-Dimethylphenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2,4-Dinitrophenol	- -	730 UJ	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2,6-Dinitrotoluene	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2-Chloronaphthalene	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2-Chlorophenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2-Methylphenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2-Nitroaniline	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
2-Nitrophenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
3,3'-Dichlorobenzidine	- -	730 UJ	730 U	740 U	740 U	730 U	770 U	760 U	730 U
3-Nitroaniline	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
4,6-Dinitro-2-methylphenol	- -	730 UJ	730 UJ	740 UJ	740 UJ	730 UJ	770 UJ	760 UJ	730 UJ
4-Bromophenyl-phenylether	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
4-Chloro-3-methylphenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
4-Chloroaniline	- -	730 UJ	730 UJ	740 UJ	740 UJ	730 UJ	770 UJ	760 UJ	730 UJ
4-Chlorophenyl-phenylether	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
4-Methylphenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
4-Nitroaniline	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
4-Nitrophenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Acetophenone	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Atrazine	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Benzaldehyde	- -	1,900 J	2,500	1,900	2,600	2,300	1,600	2,900	2,200
bis(2-Chloroethoxy)methane	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
bis(2-Chloroethyl)ether	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
bis(2-Ethylhexyl)phthalate	910	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Butyl benzyl phthalate	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Caprolactam	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Carbazole	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Dibenzofuran	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Diethylphthalate	9,084,000	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Dimethyl phthalate	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Di-N-Butyl phthalate	879	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Di-N-Octyl phthalate	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Hexachlorobenzene	330	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Hexachlorobutadiene	1,300	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Hexachlorocyclopentadiene	- -	730 UJ	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Hexachloroethane	14,000	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Isophorone	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Nitrobenzene	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
N-Nitroso-di-N-propylamine	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
N-Nitrosodiphenylamine	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U
Pentachlorophenol	879	7,300 UJ	R	R	R	R	R	R	R
Phenol	- -	730 U	730 U	740 U	740 U	730 U	770 U	760 U	730 U

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103	P6-FI-104
Sample Name	Receptor Food	P6-FI-97-CALC	P6-FI-98-CALC	P6-FI-99-CALC	P6-FI-100-CALC	P6-FI-101-CALC	P6-FI-102-CALC	P6-FI-103-CALC	P6-FI-104-CALC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		34.6	36.6	31.4	38.5	29.9	31.9	31.3	39
Sample Weight (g)									
Total Field Weight (g)		567	731	402	814	373	442	447	907
Percent Lipids (%)		1.5	2.3	1.7	1.3	2.8	2.3	2.5	2.8
Location		P6	P6	P6	P6	P6	P6	P6	P6
SVOC									
1,1'-Biphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	- -	R	R	R	R	R	R	R	R
2,4-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	- -	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	- -	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	- -	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	- -	2,200 J	1,900 J	6,400 J	1,700 J	3,500 J	3,000 J	3,800 J	3,200 J
bis(2-Chloroethoxy)methane	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	- -	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	910	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	- -	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	- -	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	9,084,000	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butyl phthalate	879	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl phthalate	- -	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	330	110	100	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1,300	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	- -	R	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	14,000	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	- -	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-N-propylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	- -	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	879	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	- -	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-41
RESULTS FOR SVOCs IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LICOLN, RHODE ISLAND

Fish ID	PAL Ecological	P6-FI-105	P6-FI-106	P6-FI-107	P6-FI-108	P6-FI-109	P6-FI-110	P6-FI-111	P6-FI-112
Sample Name	Receptor Food	P6-FI-105-COMP	P6-FI-106-COMP	P6-FI-107-COMP	P6-FI-108-COMP	P6-FI-109-COMP	P6-FI-110-COMP	P6-FI-111-COMP	P6-FI-112-COMP
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		9.3 - 12.4	8.1 - 12.1	10.3 - 11.6	9.4 - 11.1	10 - 11.4	12.7 - 13.9	11.5 - 13.8	11.1 - 13.6
Sample Weight (g)		69.58	54.53	67.6	50.15	62.67	75.59	72.36	69.46
Total Field Weight (g)		71	56	69	51	65	77	75	71
Percent Lipids (%)		2.4	1.7	2.2	1.6	2.7	1.4	1.4	1.9
Location		P6	P6	P6	P6	P6	P6	P6	P6
SVOC									
1,1'-Biphenyl	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2,2'-oxybis(1-Chloropropane)	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2,4,5-Trichlorophenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2,4,6-Trichlorophenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2,4-Dichlorophenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2,4-Dimethylphenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2,4-Dinitrophenol	- -	7,500 UJ	7,400 UJ	7,400 UJ	7,300 UJ	7,700 UJ	7,600 UJ	7,300 UJ	7,400 UJ
2,4-Dinitrotoluene	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2,6-Dinitrotoluene	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2-Chloronaphthalene	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2-Chlorophenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2-Methylphenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2-Nitroaniline	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
2-Nitrophenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
3,3'-Dichlorobenzidine	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
3-Nitroaniline	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
4,6-Dinitro-2-methylphenol	- -	7,500 UJ	7,400 UJ	7,400 UJ	7,300 UJ	7,700 UJ	7,600 UJ	7,300 UJ	7,400 UJ
4-Bromophenyl-phenylether	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
4-Chloro-3-methylphenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
4-Chloroaniline	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
4-Chlorophenyl-phenylether	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
4-Methylphenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
4-Nitroaniline	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
4-Nitrophenol	- -	1,900 U	1,800 U	1,800 U	1,800 U	1,900 U	1,900 U	1,800 U	1,800 U
Acetophenone	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Atrazine	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Benzaldehyde	- -	12,000 J	12,000 J	14,000 J	5,800 J	9,100 J	15,000 J	11,000 J	6,700 J
bis(2-Chloroethoxy)methane	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
bis(2-Chloroethyl)ether	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
bis(2-Ethylhexyl)phthalate	910	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Butyl benzyl phthalate	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Caprolactam	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Carbazole	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Dibenzofuran	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Diethylphthalate	9,084,000	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Dimethyl phthalate	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Di-N-Butyl phthalate	879	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Di-N-Octyl phthalate	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Hexachlorobenzene	330	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Hexachlorobutadiene	1,300	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Hexachlorocyclopentadiene	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Hexachloroethane	14,000	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Isophorone	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Nitrobenzene	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
N-Nitroso-di-N-propylamine	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
N-Nitrosodiphenylamine	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U
Pentachlorophenol	879	R	R	R	R	R	R	R	R
Phenol	- -	750 U	740 U	740 U	730 U	770 U	760 U	730 U	740 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name	Consumption	BR1-FI-113-FILL	BR1-FI-114-FILL	BR1-FI-115-FILL	BR1-FI-116-FILL	BR1-FI-117-FILL	BR1-FI-118-FILL	BR1-FI-119-FILL	BR1-FI-120-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Sample Weight (g)		477.81	406.6	153.72	94.87	140.93	107.69	508.05	420.53
Total Field Weight (g)		1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)		1.7	1.7	2.4	1.8	1.6	2	1.8	1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PCBs									
Monochlorobiphenyls	- -	0.16 U	0.16 U	0.16 U	0.16 U	0.16 UJ	0.17 U	0.17 U	0.17 U
Dichlorobiphenyls	- -	0.16 U	0.16 U	0.16 U	0.16 U	0.16 UJ	0.17 U	0.17 U	0.17 U
Trichlorobiphenyls	- -	3.4	4.2	2.8	1.7	1.7 J	1.8	2	1.3
Tetrachlorobiphenyls	- -	58	87	37	26	23 J	24	33	27
Pentachlorobiphenyls	- -	260 J	370	100	75	60 J	68	94	88
Hexachlorobiphenyls	- -	330	500	96	63	60 J	62	97	110
Heptachlorobiphenyls	- -	110	280	43	30	30 J	32	53	65
Octachlorobiphenyls	- -	48	79	12	8.2	9.7 J	9.6	16	21
Nonachlorobiphenyls	- -	5.4	16	2.9	2	2 J	2.2	3.6	4.4
Decachlorobiphenyl	- -	1.2	2.7	0.44	0.27	0.27 J	0.28	0.62	0.62
Total Homologs	50	820 J	1,300	300	210	190 J	200	300	320
Pesticides									
4,4'-DDD	13	9.1	13	6.6	3.3	3.7	3.5	6.2	4.1
4,4'-DDE	9.3	34	56 J	13 J	7.8 J	7.7	7.1 J	14	14
4,4'-DDT	9.3	3.7 J	6.3 J	2.7 J	1.1 J	0.89 J	1 J	15 J	6 J
Aldrin	0.19	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
alpha-BHC	0.5	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
alpha-Chlordane	9	6.7	9.4	5.4	3.2	3.6	3.6	6.7	4.7
beta-BHC	1.8	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
Delta-BHC	- -	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
Dieldrin	0.2	12 J	16 J	12	7.4	9.3	7.8	10	7.4 J
Endosulfan I	810	2.6 J	3.8 J	4.8 J	2.9	2.9	3	0.33 U	0.33 U
Endosulfan II	810	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
Endosulfan Sulfate	810	4.5 J	4.8 J	2 J	0.88 J	0.99 J	2.2 J	1.7 J	1.6 J
Endrin	41	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
Endrin Aldehyde	41	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.7 U	1.6 U	1.7 U
Endrin Ketone	41	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
Gamma-BHC	2.4	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
Gamma-Chlordane	9	4.1 J	5.6	4.8 J	3 J	3.2 J	3.4 J	4.2	4.7 J
Heptachlor	0.7	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
Heptachlor Epoxide	0.35	0.33 U	2.3 J	0.97 J	2.9 J	0.57 J	2.7 J	0.36 J	0.35 J
Methoxychlor	680	0.33 U	0.33 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U
Toxaphene	2.9	33 U	33 U	33 U	32 U	32 U	33 U	33 U	33 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	Consumption	BR1-FI-121-FILL	BR1-FI-122-FILL	BR1-FI-123-FILL	BR1-FI-124-FILL	BR1-FI-125-FILL	BR1-FI-126-FILL	BR1-FI-127-FILL	BR1-FI-128-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Sample Weight (g)		90.2	68.76	68.69	66.11	111.48	73.54	93.95	70.99
Total Field Weight (g)		222	191	192	183	274	205	258	209
Percent Lipids (%)		0.95	1.1	1.4	0.7	0.98	0.75	1	1.1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PCBs									
Monochlorobiphenyls	- -	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U
Dichlorobiphenyls	- -	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U
Trichlorobiphenyls	- -	0.96	1.4	1.3	0.57	0.64	0.51	0.88	0.86
Tetrachlorobiphenyls	- -	14	16	20	7.6	7.1	5.7	11	10
Pentachlorobiphenyls	- -	59	56	69	31	25	22	33	36
Hexachlorobiphenyls	- -	56	52	87	33	23	24	38	36
Heptachlorobiphenyls	- -	23	28	51	18	12	13	19	19
Octachlorobiphenyls	- -	6.9	9.8	15	5.9	4	4.1	7.4	6.4
Nonachlorobiphenyls	- -	3.1	2.6	2.7	1.4	1.2	1.5	1.5	1.5
Decachlorobiphenyl	- -	0.66	0.28	0.33	0.18	0.18	0.22	0.25	0.22
Total Homologs	50	160	170	240	97	73	70	110	110
Pesticides									
4,4'-DDD	13	2.6	2.9 J	2.7	1.9 J	2.1 J	1.6 J	1.9	2 J
4,4'-DDE	9.3	8.1	5.8	8.7	4.4	2.8	3.4 J	4 J	4.8 J
4,4'-DDT	9.3	2.6 J	1.2 J	0.91 J	0.47 J	0.43 J	0.61 J	0.42 J	0.32 U
Aldrin	0.19	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
alpha-BHC	0.5	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
alpha-Chlordane	9	1.3	1.7	1.3	0.84	0.9	0.69 J	0.87	1
beta-BHC	1.8	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Delta-BHC	- -	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Dieldrin	0.2	8 J	8.5	9.1	5.2	5.8	3.9	5.3	6.4
Endosulfan I	810	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Endosulfan II	810	0.32 U	0.51 J	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Endosulfan Sulfate	810	0.89 J	1 J	1.1 J	1.2 J	0.85 J	0.9 J	1.2 J	1.6 J
Endrin	41	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Endrin Aldehyde	41	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.7 U	1.6 U
Endrin Ketone	41	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Gamma-BHC	2.4	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Gamma-Chlordane	9	1.8	0.33 U	1.4 J	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Heptachlor	0.7	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Heptachlor Epoxide	0.35	0.32 U	0.71 J	0.38 J	0.32 U	0.33 J	0.49 J	0.4 J	0.44 J
Methoxychlor	680	0.32 U	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.32 U
Toxaphene	2.9	32 U	33 U	32 U	32 U	33 U	33 U	33 U	32 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Human Consumption	BR2-FI-73 BR2-FI-73-FILL 9/28/2005 Largemouth Bass Fillet 30.7 217.66 471 1.4 BR-2	BR2-FI-74 BR2-FI-74-FILL 9/28/2005 Largemouth Bass Fillet 30 182.08 414 1.4 BR-2	BR2-FI-75 BR2-FI-75-FILL 9/28/2005 Largemouth Bass Fillet 30.4 235.21 543 1.6 BR-2	BR2-FI-76 BR2-FI-76-FILL 9/28/2005 Largemouth Bass Fillet 25.2 99.93 231 1.1 BR-2	BR2-FI-77 BR2-FI-77-FILL 9/28/2005 Largemouth Bass Fillet 25.8 110.83 264 1.5 BR-2	BR2-FI-78 BR2-FI-78-FILL 9/28/2005 Largemouth Bass Fillet 25.4 110.22 260 1 BR-2	BR2-FI-79 BR2-FI-79-FILL 9/28/2005 Largemouth Bass Fillet 25 97.48 229 1.2 BR-2	BR2-FI-80 BR2-FI-80-FILL 9/28/2005 Largemouth Bass Fillet 24.3 101.78 236 1 BR-2
PCBs									
Monochlorobiphenyls	- -	0.78 UJ	0.8 UJ	0.8 UJ	0.79 UJ	0.78 UJ	0.77 UJ	0.79 UJ	0.78 UJ
Dichlorobiphenyls	- -	0.78 UJ	0.8 UJ	0.8 UJ	0.79 UJ	0.78 UJ	0.77 UJ	0.79 U	0.78 UJ
Trichlorobiphenyls	- -	2.5 J	0.8 UJ	0.8 UJ	0.79 UJ	0.78 UJ	0.77 UJ	0.79 U	0.78 UJ
Tetrachlorobiphenyls	- -	31 J	24 J	53 J	22 J	50 J	24 J	40	20 J
Pentachlorobiphenyls	- -	150 J	120 J	200 J	90 J	160 J	120 J	200	81 J
Hexachlorobiphenyls	- -	160 J	110 J	210 J	100 J	170 J	120 J	200	85 J
Heptachlorobiphenyls	- -	69 J	41 J	77 J	30 J	67 J	49 J	83	36 J
Octachlorobiphenyls	- -	25 J	16 J	27 J	16 J	23 J	19 J	30	17 J
Nonachlorobiphenyls	- -	2.4 J	1.7 J	2.7 J	1.6 J	2.6 J	1.7 J	2.7	1.4 J
Decachlorobiphenyl	- -	0.78 UJ	0.8 UJ	0.8 UJ	0.79 UJ	0.78 UJ	0.77 UJ	0.79 U	0.78 UJ
Total Homologs	50	440 J	310 J	570 J	260 J	480 J	340 J	560	240 J
Pesticides									
4,4'-DDD	13	5.8	2.9	6.7	5	6.8	4.2	6.8	4
4,4'-DDE	9.3	18	12	25	13	22	15	23	9.7
4,4'-DDT	9.3	2.2 J	1.5 J	0.32 U	2.2 J	0.31 U	0.31 U	0.32 U	0.95 J
Aldrin	0.19	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
alpha-BHC	0.5	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
alpha-Chlordane	9	2.8	2.2	5	3.8	5	2.6	5.1	2.6
beta-BHC	1.8	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Delta-BHC	- -	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Dieldrin	0.2	8.8	7.9	14 J	9.8 J	14	9.4 J	14 J	9 J
Endosulfan I	810	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Endosulfan II	810	0.31 U	0.32 U	0.32 U	0.38 J	0.31 U	0.31 U	0.32 U	0.31 U
Endosulfan Sulfate	810	5.2 J	2.9	5.3 J	2.9 J	3.5	3	6.7 J	2.9 J
Endrin	41	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Endrin Aldehyde	41	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Endrin Ketone	41	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Gamma-BHC	2.4	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Gamma-Chlordane	9	3.1 J	2.7 J	3.9 J	4.1	3.7	2.8 J	4.6	3 J
Heptachlor	0.7	0.31 U	0.32 U	0.32 U	0.32 U	1 J	0.31 U	0.32 U	0.31 U
Heptachlor Epoxide	0.35	0.34 J	0.32 U	0.42 J	0.35 J	0.33 J	0.42 J	0.7 J	0.31 U
Methoxychlor	680	0.31 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Toxaphene	2.9	31 U	32 U	32 U	32 U	31 U	31 U	32 U	31 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name	Consumption	BR2-FI-81-FILL	BR2-FI-82-FILL	BR2-FI-83-FILL	BR2-FI-84-FILL	BR2-FI-85-FILL	BR2-FI-86-FILL	BR2-FI-87-FILL	BR2-FI-88-FILL
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Sample Weight (g)		405.96	264.32	224.24	250.34	249.08	154.39	273.96	210.7
Total Field Weight (g)		968	697	509	643	600	398	714	521
Percent Lipids (%)		2.8	2.4	1.7	2.6	1.2	1.3	2.6	1.5
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PCBs									
Monochlorobiphenyls	- -	0.78 UJ	0.78 UJ	0.78 UJ	0.79 UJ	0.77 UJ	0.78 UJ	0.77 UJ	0.78 UJ
Dichlorobiphenyls	- -	0.78 U	0.78 U	0.78 U	0.79 U	0.77 UJ	0.78 U	0.77 U	0.78 UJ
Trichlorobiphenyls	- -	0.78 U	0.78 U	0.78 U	0.79 U	0.77 UJ	0.78 U	0.77 U	0.78 UJ
Tetrachlorobiphenyls	- -	61	130	160	120	110 J	80	71	36 J
Pentachlorobiphenyls	- -	220	630	330	410	560 J	280	290	250 J
Hexachlorobiphenyls	- -	250	780	240	480	570 J	300	300	360 J
Heptachlorobiphenyls	- -	110	340	82	210	200 J	120	130	180 J
Octachlorobiphenyls	- -	37	110	29	66	58 J	41	45	62 J
Nonachlorobiphenyls	- -	3.9	12	2.8	7.7	5.6 J	4	4.9	6.2 J
Decachlorobiphenyl	- -	0.86	2.4	0.78 U	1.8	1.1 J	0.86	0.94	1 J
Total Homologs	50	680	2,000	840	1,300	1,500 J	830	850	890 J
Pesticides									
4,4'-DDD	13	19	22	7.1	15	13	7.4	12	5.2
4,4'-DDE	9.3	35	85 J	26	51	59	36 J	44	36
4,4'-DDT	9.3	2.2 J	8.6 J	0.31 U	5.4 J	0.31 U	0.31 U	1.5 J	0.31 U
Aldrin	0.19	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
alpha-BHC	0.5	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
alpha-Chlordane	9	7.7	11	5.3	12	4.6	5.2	8.7	2.8
beta-BHC	1.8	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Delta-BHC	- -	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Dieldrin	0.2	21 J	22 J	14 J	21 J	15 J	9.6 J	20 J	7.9 J
Endosulfan I	810	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endosulfan II	810	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endosulfan Sulfate	810	5.3	15 J	7 J	11 J	18 J	9.4 J	10 J	12 J
Endrin	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endrin Aldehyde	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endrin Ketone	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Gamma-BHC	2.4	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Gamma-Chlordane	9	6.8	7.9	5.8 J	7.3	3.6	4.6	9.2	3.7 J
Heptachlor	0.7	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Heptachlor Epoxide	0.35	0.44 J	0.7 J	0.38 J	0.38 J	0.31 U	0.31 U	0.31 U	0.31 U
Methoxychlor	680	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Toxaphene	2.9	31 U	31 U	31 U	31 U	31 U	31 U	31 U	31 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name	Consumption	BR3-FI-1-FILL	BR3-FI-2-FILL	BR3-FI-3-FILL	BR3-FI-4-FILL	BR3-FI-5-FILL	BR3-FI-6-FILL	BR3-FI-7-FILL	BR3-FI-8-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		33.9	31.1	28.4	26.9	25.3	35.2	40.9	38.3
Sample Weight (g)		316.18	225.59	167.4	117.46	105.82	348.42	473.42	425.87
Total Field Weight (g)		729	502	383	263	239	753	1092	931
Percent Lipids (%)		1.4	0.89	1.2	0.61	1	0.95	0.74	0.77
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
PCBs									
Monochlorobiphenyls	- -	0.8 U	0.8 U	0.81 U	0.8 U	0.78 U	0.78 U	0.79 U	0.8 U
Dichlorobiphenyls	- -	0.8 U	0.8 U	0.81 U	0.8 U	0.78 U	0.78 U	0.79 U	0.8 U
Trichlorobiphenyls	- -	2.6	1.2	1.9	0.8 U	1.8	0.78 U	3	0.8 U
Tetrachlorobiphenyls	- -	39	17	32	17	39	52	45	20
Pentachlorobiphenyls	- -	150	74	120	83	170	180	140	87
Hexachlorobiphenyls	- -	130	99	140	95	160	170	120	100
Heptachlorobiphenyls	- -	70	46	71	45	79	76	44	48
Octachlorobiphenyls	- -	26	12	20	16	25	18	13	16
Nonachlorobiphenyls	- -	0.8 U	0.8 U	0.81 U	0.8 U	16	15	0.79 U	2.2
Decachlorobiphenyl	- -	0.8 U	0.8 U	0.81 U	0.8 U	0.78 U	0.78 U	0.79 U	0.8 U
Total Homologs	50	420	250	380	260	500	510	360	270
Pesticides									
4,4'-DDD	13	5.1	3	4.4	2	4.1	5.5	3.3	3.6
4,4'-DDE	9.3	12 J	6.7 J	11 J	6.2 J	12 J	13 J	8.8 J	8.8 J
4,4'-DDT	9.3	1.2 J	3.8 J	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Aldrin	0.19	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
alpha-BHC	0.5	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
alpha-Chlordane	9	4.6	1.5	2.9	1.5 J	2.7	2.8	1.5	2.4
beta-BHC	1.8	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Delta-BHC	- -	0.32 UJ	0.32 UJ	0.32 UJ	0.32 UJ	0.31 UJ	0.31 UJ	0.32 UJ	0.32 UJ
Dieldrin	0.2	11 J	5.5	8.5	4.4 J	8.5 J	10	7.2 J	8.3 J
Endosulfan I	810	4.4 J	2.8 J	4 J	0.32 U	0.31 U	0.31 U	0.68 J	0.69 J
Endosulfan II	810	0.33 J	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.4 J	0.38 J
Endosulfan Sulfate	810	3.7 J	3.8 J	4.9 J	3.6 J	4.6	5.5 J	3.8 J	3.3 J
Endrin	41	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Endrin Aldehyde	41	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Endrin Ketone	41	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Gamma-BHC	2.4	0.43	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Gamma-Chlordane	9	3.2	1.7 J	3.4 J	0.32 U	2.4	2.8 J	1.8	2.6 J
Heptachlor	0.7	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Heptachlor Epoxide	0.35	0.45 J	0.62 J	0.49 J	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Methoxychlor	680	0.32 U	0.32 U	0.32 U	0.32 U	0.31 U	0.31 U	0.32 U	0.32 U
Toxaphene	2.9	32 U	32 U	32 U	32 U	31 U	31 U	32 U	32 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13	BR3-FI-14	BR3-FI-15	BR3-FI-16
Sample Name	Consumption	BR3-FI-9-FILL	BR3-FI-10-FILL	BR3-FI-11-FILL	BR3-FI-12-FILL	BR3-FI-13-FILL	BR3-FI-14-FILL	BR3-FI-15-FILL	BR3-FI-16-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		31.9	34.1	31.7	39.8	41.5	36.8	35.1	37.6
Sample Weight (g)		166.27	211.08	161.52	299.16	343.42	187.27	197.01	205.79
Total Field Weight (g)		392	499	418	757	872	439	478	558
Percent Lipids (%)		2.6	4.2	3	3.3	4.5	1.8	0.89	3.9
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
PCBs									
Monochlorobiphenyls	- -	0.77 U	0.78 U	0.78 U	0.78 U	0.77 U	0.81 U	0.81 U	0.78 U
Dichlorobiphenyls	- -	0.77 U	0.78 U	0.78 U	0.78 U	0.77 U	0.81 U	0.81 U	0.78 U
Trichlorobiphenyls	- -	5.3	7	5.4	5.9	7.3	4	1.8	6.2
Tetrachlorobiphenyls	- -	110	130	100	150	100	86	38	76
Pentachlorobiphenyls	- -	360	340	300	450	360	290	160	270
Hexachlorobiphenyls	- -	300	310	250	350	400	270	210	310
Heptachlorobiphenyls	- -	110	140	110	110	190	120	110	140
Octachlorobiphenyls	- -	27	45	33	35	51	34	38	41
Nonachlorobiphenyls	- -	9.9	18	14	16	18	17	17	16
Decachlorobiphenyl	- -	0.86	1	0.78 U	0.98	1.1	0.87	1.1	1.2
Total Homologs	50	920	990	820	1,100	1,100	820	590	860
Pesticides									
4,4'-DDD	13	12	16 J	9.4	7.7	18	11	4.6	11
4,4'-DDE	9.3	20 J	27 J	18 J	17 J	44 J	21 J	14 J	23 J
4,4'-DDT	9.3	2 J	6.4 J	2.2 J	4 J	3.8 J	4.4 J	3.8 J	9.8 J
Aldrin	0.19	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
alpha-BHC	0.5	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
alpha-Chlordane	9	5.1 J	6	5.1	3.8	10	6.1	3	11 J
beta-BHC	1.8	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
Delta-BHC	- -	0.31 UJ	0.31 UJ	0.31 UJ	0.31 UJ	0.31 UJ	0.32 UJ	0.32 UJ	0.31 UJ
Dieldrin	0.2	13 J	18	12	11 J	30 J	17 J	5.9 J	35
Endosulfan I	810	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
Endosulfan II	810	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
Endosulfan Sulfate	810	9.2 J	10 J	7.2 J	9.8 J	12 J	7.8 J	5.5 J	8.9 J
Endrin	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
Endrin Aldehyde	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
Endrin Ketone	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
Gamma-BHC	2.4	0.31 U	0.31 U	0.31 U	0.31 U	0.63	0.32 U	0.32 U	0.31 U
Gamma-Chlordane	9	4.4	5.3	4.2	4	8.5	3.4	4.2 J	7.4 J
Heptachlor	0.7	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
Heptachlor Epoxide	0.35	0.81 J	0.68 J	0.34 J	0.31 U	0.75 J	0.32 U	0.32 U	0.39 J
Methoxychlor	680	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.32 U	0.32 U	0.31 U
Toxaphene	2.9	31 U	31 U	31 U	31 U	31 U	32 U	32 U	31 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name	Consumption	P1-FI-25-FILL	P1-FI-26-FILL	P1-FI-27-FILL	P1-FI-28-FILL	P1-FI-29-FILL	P1-FI-30-FILL	P1-FI-31-FILL	P1-FI-32-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Sample Weight (g)		395.28	336.56	219.15	207.46	194.02	373.02	205.92	345.35
Total Field Weight (g)		865	739	472	471	425	861	460	799
Percent Lipids (%)		0.74	0.77	0.61	9.6	0.45	0.41	0.4	0.51
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PCBs									
Monochlorobiphenyls	- -	0.78 U	0.77 U	0.78 U	0.77 U	0.77 U	0.78 U	0.78 U	0.77 U
Dichlorobiphenyls	- -	0.78 U	0.77 U	0.78 U	0.77 U	0.77 U	0.78 U	0.78 U	0.77 U
Trichlorobiphenyls	- -	1.7	0.95	0.89	0.77 U	0.82	0.78 U	0.78 U	0.77 U
Tetrachlorobiphenyls	- -	62	19	15	16	13	11	19	11
Pentachlorobiphenyls	- -	280	89	82	79	80	52	120	57
Hexachlorobiphenyls	- -	260	98	77	100	81	60	140	68
Heptachlorobiphenyls	- -	100	44	34	44	35	34	67	39
Octachlorobiphenyls	- -	31	17	15	24	14	16	21	15
Nonachlorobiphenyls	- -	3.8	1.7	1.6	2.4	1.8	1.4	2.6	1.1
Decachlorobiphenyl	- -	1	0.77 U	0.78 U	0.77 U	0.77 U	0.78 U	0.9	0.77 U
Total Homologs	50	740	270	230	270	230	180	370	190
Pesticides									
4,4'-DDD	13	6.1	3.1	2.6	2.7	2.2	1.7	3 J	2.2
4,4'-DDE	9.3	25 J	8.2 J	7.2 J	8.4 J	6.8 J	5.2 J	13 J	6.2 J
4,4'-DDT	9.3	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Aldrin	0.19	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
alpha-BHC	0.5	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
alpha-Chlordane	9	2.1 J	1.2	0.9	0.83 J	0.91 J	0.75	1.1	0.76
beta-BHC	1.8	0.78 U	0.77 U	0.78 U	0.77 U	0.77 U	0.78 U	0.78 U	0.77 U
Delta-BHC	- -	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Dieldrin	0.2	7.6 J	4.3 J	3.3 J	2.7	2.7	2 J	2.7 J	2.6 J
Endosulfan I	810	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endosulfan II	810	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endosulfan Sulfate	810	4 J	1.8 J	1 J	1.4 J	1.9 J	0.99 J	2.2 J	1.1 J
Endrin	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endrin Aldehyde	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endrin Ketone	41	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Gamma-BHC	2.4	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Gamma-Chlordane	9	1.7 J	1.6 J	0.65	0.6	0.59	0.53	0.98 J	0.77 J
Heptachlor	0.7	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Heptachlor Epoxide	0.35	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Methoxychlor	680	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Toxaphene	2.9	31 U	31 U	31 U	31 U	31 U	31 U	31 U	31 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name	Consumption	P1-FI-33-FILL	P1-FI-34-FILL	P1-FI-35-FILL	P1-FI-36-FILL	P1-FI-37-FILL	P1-FI-38-FILL	P1-FI-39-FILL	P1-FI-40-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Sample Weight (g)		313.54	217.93	268.92	278.52	396.84	298.28	286.44	287.6
Total Field Weight (g)		704	467	585	747	930	664	725	627
Percent Lipids (%)		2	1.4	2.8	1.6	2.4	1.8	3.5	2.8
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PCBs									
Monochlorobiphenyls	- -	0.79 U	0.78 U	0.79 U	0.78 U	0.78 U	0.77 U	0.77 U	0.78 U
Dichlorobiphenyls	- -	0.79 U	0.78 U	0.79 U	0.78 U	0.78 U	0.77 U	0.77 U	0.78 U
Trichlorobiphenyls	- -	0.79 U	0.78 U	0.79 U	0.78 U	0.78 U	0.77 U	0.77 U	0.78 U
Tetrachlorobiphenyls	- -	44	44	65	48	57	40	160	70
Pentachlorobiphenyls	- -	100	85	100	190	130	94	590	120
Hexachlorobiphenyls	- -	110	99	100	230	140	86	750	130
Heptachlorobiphenyls	- -	50	51	46	110	60	37	350	57
Octachlorobiphenyls	- -	18	19	20	36	22	13	110	22
Nonachlorobiphenyls	- -	2.1	12	15	14	16	12	37	14
Decachlorobiphenyl	- -	0.79 U	0.78 U	0.84	2	1.5	0.77 U	6.5	1
Total Homologs	50	330	310	360	630	420	280	2,000	410
Pesticides									
4,4'-DDD	13	5.8	3.8	6	7.2	7.1	4.5	27	5.8
4,4'-DDE	9.3	12 J	10 J	10 J	21 J	13 J	9.6 J	68 J	13 J
4,4'-DDT	9.3	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.81 J
Aldrin	0.19	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
alpha-BHC	0.5	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
alpha-Chlordane	9	3.6	2	3.9 J	7.3 J	5.3	2.8	14	3.8 J
beta-BHC	1.8	0.79 U	0.78 U	0.79 U	0.78 U	0.79 U	0.77 U	0.77 U	0.77 U
Delta-BHC	- -	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Dieldrin	0.2	6.7 J	3.5 J	7.4	8.1	8.2	5.3 J	15 J	6.9 J
Endosulfan I	810	0.41 J	0.31 U	0.71 J	0.34 J	0.31 U	0.31 U	0.31 U	0.31 U
Endosulfan II	810	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endosulfan Sulfate	810	1.6 J	1.6 J	2.1 J	3 J	2.5 J	1.8 J	6.5 J	3.9 J
Endrin	41	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endrin Aldehyde	41	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endrin Ketone	41	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Gamma-BHC	2.4	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Gamma-Chlordane	9	2.4	2.5 J	3.2 J	3.3 J	3.1 J	3.5 J	11	3.6 J
Heptachlor	0.7	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	2.4	0.31 U
Heptachlor Epoxide	0.35	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Methoxychlor	680	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Toxaphene	2.9	32 U	31 U	32 U	31 U	31 U	31 U	31 U	31 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	Consumption	P2-FI-49-FILL	P2-FI-50-FILL	P2-FI-51-FILL	P2-FI-52-FILL	P2-FI-53-FILL	P2-FI-54-FILL	P2-FI-55-FILL	P2-FI-56-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Sample Weight (g)		36.14	49.56	58.88	49.58	40.85	48.99	65.44	76.52
Total Field Weight (g)		104	151	159	154	154	131	166	219
Percent Lipids (%)		0.49	0.78	0.88	0.57	0.58	0.8	0.77	0.57
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PCBs									
Monochlorobiphenyls	- -	0.79 U	0.79 U	0.78 U	0.78 U	0.79 U	0.78 U	0.78 U	0.79 U
Dichlorobiphenyls	- -	0.79 U	0.79 U	0.78 U	0.78 U	0.79 U	0.78 U	0.78 U	0.79 U
Trichlorobiphenyls	- -	0.79 U	0.79 U	1.2	0.78 U	0.79 U	0.78 U	0.78 U	0.79 U
Tetrachlorobiphenyls	- -	26	17	24	11	15	12	20	14
Pentachlorobiphenyls	- -	87	39	69	26	57	31	38	54
Hexachlorobiphenyls	- -	100	34	64	29	68	31	37	61
Heptachlorobiphenyls	- -	48	16	30	17	36	16	18	33
Octachlorobiphenyls	- -	14	6.4	8.7	6.5	10	5.4	6.5	9.9
Nonachlorobiphenyls	- -	5	0.79 U	3.6	0.78 U	3.9	0.78 U	0.78 U	4.8
Decachlorobiphenyl	- -	0.79 U	0.79 U	0.78 U	0.78 U	0.79 U	0.78 U	0.78 U	0.79 U
Total Homologs	50	280	110	200	90	190	96	120	180
Pesticides									
4,4'-DDD	13	2	1.4 J	2.8	1.2	1.9	1.4	1.6 J	0.32 U
4,4'-DDE	9.3	7.5 J	3.7	6 J	2.9	6.4	3.4	4.1	4.5 J
4,4'-DDT	9.3	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Aldrin	0.19	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
alpha-BHC	0.5	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
alpha-Chlordane	9	0.47 J	1.3 J	1.4	0.73 J	0.99	0.87 J	0.8	0.32 U
beta-BHC	1.8	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Delta-BHC	- -	0.31 UJ	0.32 UJ	0.31 UJ	0.31 UJ	0.32 UJ	0.31 UJ	0.31 UJ	0.32 UJ
Dieldrin	0.2	4.1 J	4.3 J	8.6 J	3.3 J	5 J	5.3 J	5.4 J	4.9 J
Endosulfan I	810	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Endosulfan II	810	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Endosulfan Sulfate	810	3 J	0.54 J	0.94 J	0.53 J	1.1 J	0.44 J	0.74 J	1.5 J
Endrin	41	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Endrin Aldehyde	41	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Endrin Ketone	41	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Gamma-BHC	2.4	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Gamma-Chlordane	9	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Heptachlor	0.7	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Heptachlor Epoxide	0.35	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U
Methoxychlor	680	12 U	11 U	6.3 U	5 U	2.9 U	0.31 U	4.1 U	4.6 U
Toxaphene	2.9	32 U	32 U	31 U	31 U	32 U	31 U	31 U	32 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name	Consumption	P2-FI-57-FILL	P2-FI-58-FILL	P2-FI-59-FILL	P2-FI-60-FILL	P2-FI-61-FILL	P2-FI-62-FILL	P2-FI-63-FILL	P2-FI-64-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		39.1	34.6	40.4	34.9	37	33	35.9	34.6
Sample Weight (g)		286.31	195.81	296.88	197.58	243.33	165.42	232.46	197.22
Total Field Weight (g)		693	501	755	442	595	380	532	460
Percent Lipids (%)		2.1	1.6	2.4	1.6	3.6	1.4	1.9	2.9
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PCBs									
Monochlorobiphenyls	- -	0.78 U	0.8 U	0.8 U	0.78 U	0.78 U	0.78 U	0.77 U	0.77 U
Dichlorobiphenyls	- -	0.78 U	0.8 U	0.8 U	0.78 U	0.78 U	0.78 U	0.77 U	0.77 U
Trichlorobiphenyls	- -	3.3	2.2	3.7	3	6.4	3.1	2.7	5.4 J
Tetrachlorobiphenyls	- -	76	44	95	53	140	54	53	130 J
Pentachlorobiphenyls	- -	290	130	270	160	450	180	160	320 J
Hexachlorobiphenyls	- -	280	140	270	160	390	180	160	320 J
Heptachlorobiphenyls	- -	130	62	110	68	170	85	74	140 J
Octachlorobiphenyls	- -	36	18	31	19	45	24	21	38 J
Nonachlorobiphenyls	- -	10	5.3	7.5	6.1	10	6	9.6	8.8 J
Decachlorobiphenyl	- -	1.5	0.8 U	1.1	0.78 U	1.5	0.84	0.8	0.89 J
Total Homologs	50	820	410	790	460	1,200	540	480	960 J
Pesticides									
4,4'-DDD	13	12	7.6	14	9.3	24	9.5	9.4	21 J
4,4'-DDE	9.3	22 J	14 J	28	16 J	38 J	17 J	15 J	31 J
4,4'-DDT	9.3	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Aldrin	0.19	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.93 J	0.31 U
alpha-BHC	0.5	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
alpha-Chlordane	9	8.1	5.2	12 J	6.6	18	7.1	8.1	14
beta-BHC	1.8	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Delta-BHC	- -	0.31 UJ	0.32 UJ	0.32 UJ	0.31 UJ	0.31 UJ	0.31 UJ	0.31 UJ	0.31 UJ
Dieldrin	0.2	19 J	13 J	28 J	18 J	43 J	18 J	18	31 J
Endosulfan I	810	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endosulfan II	810	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endosulfan Sulfate	810	3.5 J	2.8 J	5.2 J	3.8 J	6.1 J	3.7 J	3.4 J	4.8 J
Endrin	41	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endrin Aldehyde	41	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Endrin Ketone	41	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Gamma-BHC	2.4	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Gamma-Chlordane	9	6	4	6.4 J	4.5 J	8.7	5.2	4.4 J	7.1
Heptachlor	0.7	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Heptachlor Epoxide	0.35	0.31 U	0.32 U	0.32 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Methoxychlor	680	10 U	11 U	0.32 U	9.8 U	0.31 U	0.31 U	6.4 U	17 U
Toxaphene	2.9	31 U	32 U	32 U	31 U	31 U	31 U	31 U	31 U

TABLE 4-42
RESULTS FOR PCBs AND PESTICIDES IN FISH FILLETS SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103	P6-FI-104
Sample Name	Consumption	P6-FI-97-FILL	P6-FI-98-FILL	P6-FI-99-FILL	P6-FI-100-FILL	P6-FI-101-FILL	P6-FI-102-FILL	P6-FI-103-FILL	P6-FI-104-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		34.6	36.6	31.4	38.5	29.9	31.9	31.3	39
Sample Weight (g)		246.51	322.08	163.93	322.83	147.5	192.86	197.95	404.87
Total Field Weight (g)		567	731	402	814	373	442	447	907
Percent Lipids (%)		0.56	0.73	0.58	0.51	0.88	0.71	0.71	0.67
Location		P6	P6	P6	P6	P6	P6	P6	P6
PCBs									
Monochlorobiphenyls	- -	0.78 U	0.77 U	0.77 U	0.8 U	0.77 U	0.79 U	0.8 U	0.79 U
Dichlorobiphenyls	- -	0.78 U	0.77 U	0.77 U	0.8 U	0.77 U	0.79 U	0.8 U	0.79 U
Trichlorobiphenyls	- -	0.78 U	0.77 U	0.77 U	0.8 U	0.77 U	0.79 U	0.8 U	0.79 U
Tetrachlorobiphenyls	- -	0.78 U	0.77 U	0.77 U	0.8 U	0.77 U	0.79 U	0.8 U	1.1
Pentachlorobiphenyls	- -	6.3	7.5	6.9	7.5	5.7	5.9	6.8	18
Hexachlorobiphenyls	- -	10	13	13	6.4	9.2	8.2	12	50
Heptachlorobiphenyls	- -	5.7	6.6	8.2	4.1	5.9	4.6	6.6	32
Octachlorobiphenyls	- -	1.8	1.7	1.7	1.3	1.5	1.3	2	8.8
Nonachlorobiphenyls	- -	0.78 U	0.77 U	0.77 U	0.8 U	0.77 U	0.79 U	0.8 U	0.79 U
Decachlorobiphenyl	- -	0.78 U	0.77 U	0.77 U	0.8 U	0.77 U	0.79 U	0.8 U	0.79 U
Total Homologs	50	24	34	29	19	22	20	27	110
Pesticides									
4,4'-DDD	13	0.42 J	0.65	0.42	0.32 U	0.48	0.31 U	0.82	0.61
4,4'-DDE	9.3	2.6	3.6	2.7	1.4	3.2	3.2	2.8	2.6 J
4,4'-DDT	9.3	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Aldrin	0.19	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
alpha-BHC	0.5	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
alpha-Chlordane	9	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
beta-BHC	1.8	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Delta-BHC	- -	0.31 UJ	0.31 UJ	0.31 UJ	0.32 UJ	0.31 UJ	0.31 UJ	0.32 UJ	0.31 UJ
Dieldrin	0.2	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Endosulfan I	810	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Endosulfan II	810	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Endosulfan Sulfate	810	1.1 J	0.45 J	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.88 J
Endrin	41	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Endrin Aldehyde	41	0.36	0.46 J	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Endrin Ketone	41	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Gamma-BHC	2.4	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Gamma-Chlordane	9	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Heptachlor	0.7	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Heptachlor Epoxide	0.35	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Methoxychlor	680	0.31 U	0.31 U	0.31 U	0.32 U	0.31 U	0.31 U	0.32 U	0.31 U
Toxaphene	2.9	31 U	31 U	31 U	32 U	31 U	32 U	32 U	32 U

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR1-FI-113 BR1-FI-113-CALC 9/29/2005 White Sucker Calc whole body 45.6 1255 4.6 BR-1	BR1-FI-114 BR1-FI-114-CALC 9/29/2005 White Sucker Calc whole body 47.4 1221 5.9 BR-1	BR1-FI-115 BR1-FI-115-CALC 9/29/2005 White Sucker Calc whole body 31.9 437 6.1 BR-1	BR1-FI-116 BR1-FI-116-CALC 9/29/2005 White Sucker Calc whole body 29.5 300 4.4 BR-1	BR1-FI-117 BR1-FI-117-CALC 9/29/2005 White Sucker Calc whole body 32.5 405 3.6 BR-1	BR1-FI-118 BR1-FI-118-CALC 9/29/2005 White Sucker Calc whole body 27.8 249 3.5 BR-1	BR1-FI-119 BR1-FI-119-CALC 9/29/2005 White Sucker Calc whole body 44.1 1130 6.1 BR-1	BR1-FI-120 BR1-FI-120-CALC 9/29/2005 White Sucker Calc whole body 45.2 1048 1.3 BR-1
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	19	31	23	18	0.79 J	3.5	4.8	0.68
Tetrachlorobiphenyls	- -	140	190	100	72	67 J	52	94	28
Pentachlorobiphenyls	- -	560 J	770	260	210	170 J	140	240	95
Hexachlorobiphenyls	- -	730 J	1,100	240	190	170 J	130	270	120
Heptachlorobiphenyls	- -	410	630	120	93	89 J	67	160	73
Octachlorobiphenyls	- -	120 J	180	29	24	24 J	19	45	22
Nonachlorobiphenyls	- -	19 J	35	6.1	5.1	3.2 J	2.7	6.8	3.4
Decachlorobiphenyl	- -	2.6	5.6	1.1	0.73	0.7 J	0.55	1.6	0.6
Total Homologs	111	2,100 J	2,900	790	610	520 J	410	820	340
Pesticides									
4,4'-DDD	2	20	35	20	12	10	8.4	19	6.3
4,4'-DDE	2	64 J	120 J	35 J	17 J	22 J	15 J	48 J	18
4,4'-DDT	2	5.1 J	16 J	4.5 J	2.7 J	2.3 J	1.6 J	32 J	5.5 J
Aldrin	733	ND	ND	0.56 J	ND	ND	ND	0.57 J	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	14	21	13	9.3	8.6	7.5	18	5.4
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	25 J	36 J	30	20	22	17	27	8.8 J
Endosulfan I	550	5.9 J	7.2 J	10 J	9.2	7	5.9	8.4 J	1.4 J
Endosulfan II	550	0.37 J	ND	ND	ND	ND	ND	0.37 J	ND
Endosulfan Sulfate	550	7.2 J	9.5 J	3.1 J	2.4 J	2.6 J	2.3 J	3.6 J	2 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	0.59	0.65 J	0.63	0.65 J	0.78 J	0.45	0.75 J	ND
Gamma-Chlordane	1,800	8.2 J	11	12 J	7.3 J	7.2 J	6.7 J	11	4.5 J
Heptachlor	476	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	0.49 J	0.98 J	0.82 J	1.3 J	3.7 J	1.4 J	0.31 J	0.3 J
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR1-FI-121 BR1-FI-121-CALC 9/29/2005 Blue Gill Calc whole body 21.2 222 4.1 BR-1	BR1-FI-122 BR1-FI-122-CALC 9/29/2005 Blue Gill Calc whole body 19.9 191 6.5 BR-1	BR1-FI-123 BR1-FI-123-CALC 9/29/2005 Blue Gill Calc whole body 18.7 192 9.7 BR-1	BR1-FI-124 BR1-FI-124-CALC 9/29/2005 Blue Gill Calc whole body 19.4 183 3.6 BR-1	BR1-FI-125 BR1-FI-125-CALC 9/29/2005 Blue Gill Calc whole body 17.2 - 18.2 274 6 BR-1	BR1-FI-126 BR1-FI-126-CALC 9/29/2005 Pumpkin Seed Calc whole body 15.9 - 16.2 205 7.5 BR-1	BR1-FI-127 BR1-FI-127-CALC 9/29/2005 Pumpkin Seed Calc whole body 15.7 - 17.8 258 5.8 BR-1	BR1-FI-128 BR1-FI-128-CALC 9/29/2005 Pumpkin Seed Calc whole body 15.8 - 16 209 6 BR-1
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	0.23
Trichlorobiphenyls	- -	3.9	8.4	9.1	3.9	4.5	5.6	7.4	8.8
Tetrachlorobiphenyls	- -	67	120	130	61	59	75	87	71
Pentachlorobiphenyls	- -	250	310	460	190	160	230	230	210
Hexachlorobiphenyls	- -	270	330	600	240	170	260	250	230
Heptachlorobiphenyls	- -	110	180	370	140	100	140	140	130
Octachlorobiphenyls	- -	29	46	98	38	30	41	40	36
Nonachlorobiphenyls	- -	7.5	6	11	4.6	4.2	5.7	5.6	5
Decachlorobiphenyl	- -	3.1	1.2	2.2	0.8	1	1.5	1.3	1.2
Total Homologs	111	740	980	1,700	650	530	750	750	710
Pesticides									
4,4'-DDD	2	13	15 J	19	12 J	10 J	13 J	12	12 J
4,4'-DDE	2	43 J	45 J	62	34 J	22 J	42 J	29 J	27 J
4,4'-DDT	2	7.3 J	5.3 J	2.6 J	2.8 J	2.7 J	11 J	2.4 J	2.1 J
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	7.3	9.8	12	7	8.2 J	6.9 J	6.8	6.4
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	28 J	53	54	29	35	41	33	33
Endosulfan I	550	9	14	13 J	9.8	9.5	10	7.7	9.2
Endosulfan II	550	ND	0.37 J	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	550	3.4 J	3.5 J	7.2 J	3 J	2.2 J	4.2 J	3 J	3.8 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	0.85 J	1.6 J	1.7	ND	0.9 J	1.2 J	1.2 J	0.85 J
Gamma-Chlordane	1,800	4.9	5.2 J	5.3 J	4.4	4.6	4.9 J	4.4 J	3.9 J
Heptachlor	476	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	2.9 J	0.45 J	8.1 J	5 J	9 J	6.8 J	5.1 J	4.7 J
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR1-FI-129 BR1-FI-129-COMP 9/29/2005 Common Shiner Whole body 14.6 - 15.4 119.38 122 8 BR-1	BR1-FI-130 BR1-FI-130-COMP 9/29/2005 Common Shiner Whole body 13.9 - 15.4 118.6 120 8.1 BR-1	BR1-FI-131 BR1-FI-131-COMP 9/29/2005 Common Shiner Whole body 14.4 - 15.9 124.79 127 11 BR-1	BR1-FI-132 BR1-FI-132-COMP 9/29/2005 Common Shiner Whole body 15.2 - 15.6 126.57 129 8.4 BR-1	BR1-FI-133 BR1-FI-133-COMP 9/29/2005 Common Shiner Whole body 13.8 - 14.8 109.79 112 7.6 BR-1	BR1-FI-134 BR1-FI-134-COMP 9/29/2005 Common Shiner Whole body 11.5 - 14.7 94.42 96 6.6 BR-1	BR1-FI-135 BR1-FI-135-COMP 9/29/2005 Common Shiner Whole body 11.6 - 15.3 102.17 104 7 BR-1	BR1-FI-136 BR1-FI-136-COMP 9/29/2005 Common Shiner Whole body 11.9 - 14.2 122.47 126 9.1 BR-1
PCBs									
Monochlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.5 U	1.6 U
Dichlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.5 U	1.6 U
Trichlorobiphenyls	- -	13	13	18	13	12	9.7	11	12
Tetrachlorobiphenyls	- -	170	170	210	170	180	140	160	170
Pentachlorobiphenyls	- -	440	450	540	420	450	350	390	420
Hexachlorobiphenyls	- -	450	450	550	420	470	350	400	430
Heptachlorobiphenyls	- -	240	240	280	220	240	180	210	220
Octachlorobiphenyls	- -	67	65	77	58	68	46	52	56
Nonachlorobiphenyls	- -	12	12	12	11	11	8.3	9.5	9.2
Decachlorobiphenyl	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.5 U	1.6 U
Total Homologs	111	1,400	1,400	1,700	1,300	1,400	1,100	1,200	1,300
Pesticides									
4,4'-DDD	2	18	20	19	16	17	14	16	18
4,4'-DDE	2	55 J	52 J	59 J	48 J	54 J	39 J	49 J	50 J
4,4'-DDT	2	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Aldrin	733	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
alpha-BHC	1,470	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
alpha-Chlordane	1,800	18	17	22	19	15	15 J	16	16
beta-BHC	1,470	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Delta-BHC	1,470	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Dieldrin	73	32	37	49	37 J	29	25	27	37 J
Endosulfan I	550	15	15 J	17	15 J	14 J	12 J	13	15
Endosulfan II	550	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Endosulfan Sulfate	550	4.4 J	4.4 J	5.5 J	4.2 J	5.2 J	3.5 J	4.2 J	4.3 J
Endrin	8	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Endrin Aldehyde	8	0.62 UJ	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Endrin Ketone	8	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Gamma-BHC	1,660	0.81	1.1 J	1.2	0.64 U	0.63 U	0.62 U	1	0.96
Gamma-Chlordane	1,800	13	12	15	12	11 J	11	11	11
Heptachlor	476	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Heptachlor Epoxide	476	0.62 U	0.63 U	0.62 U	0.64 U	0.63 U	0.62 U	0.61 U	0.64 U
Methoxychlor	14,700	6.1 J	7.7 J	9.3 J	6.5 J	2.5 J	8.1 J	16 J	15 J
Toxaphene	29,300	62 U	63 U	62 U	64 U	63 U	62 U	61 U	64 U

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR2-FI-73 BR2-FI-73-CALC 9/28/2005 Largemouth Bass Calc whole body 30.7 471 2.9 BR-2	BR2-FI-74 BR2-FI-74-CALC 9/28/2005 Largemouth Bass Calc whole body 30 414 4.3 BR-2	BR2-FI-75 BR2-FI-75-CALC 9/28/2005 Largemouth Bass Calc whole body 30.4 543 5.9 BR-2	BR2-FI-76 BR2-FI-76-CALC 9/28/2005 Largemouth Bass Calc whole body 25.2 231 3.4 BR-2	BR2-FI-77 BR2-FI-77-CALC 9/28/2005 Largemouth Bass Calc whole body 25.8 264 6.8 BR-2	BR2-FI-78 BR2-FI-78-CALC 9/28/2005 Largemouth Bass Calc whole body 25.4 260 3.7 BR-2	BR2-FI-79 BR2-FI-79-CALC 9/28/2005 Largemouth Bass Calc whole body 25 229 4 BR-2	BR2-FI-80 BR2-FI-80-CALC 9/28/2005 Largemouth Bass Calc whole body 24.3 236 5.1 BR-2
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	6 J	4.8	8.9	6.2	13	5.3	6.2	7.8
Tetrachlorobiphenyls	- -	120 J	110 J	250 J	120 J	290 J	130 J	160	160 J
Pentachlorobiphenyls	- -	590 J	540 J	1,100 J	500 J	1,100 J	600 J	750	580 J
Hexachlorobiphenyls	- -	700 J	650 J	1,000 J	520 J	1,000 J	710 J	800	640 J
Heptachlorobiphenyls	- -	340 J	320 J	480 J	260 J	500 J	350 J	380	310 J
Octachlorobiphenyls	- -	95 J	100 J	130 J	78 J	120 J	96 J	110	90 J
Nonachlorobiphenyls	- -	20 J	25 J	34 J	20 J	28 J	21 J	18	24 J
Decachlorobiphenyl	- -	1.8	1.9	2	1.8	2.1	1.8	1.8	1.6
Total Homologs	111	1,900 J	1,700 J	3,000 J	1,500 J	3,100 J	2,000 J	2,200	1,800 J
Pesticides									
4,4'-DDD	2	21	19	28	25	35	19	26	26
4,4'-DDE	2	65 J	60 J	93 J	58 J	99 J	67 J	76 J	59 J
4,4'-DDT	2	1.2 J	0.86 J	ND	7 J	ND	ND	ND	0.6 J
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	11	11	18	15	23	13	18	18
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	30	31	50 J	37 J	67	38 J	46 J	49 J
Endosulfan I	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	550	ND	ND	ND	0.34 J	ND	ND	ND	ND
Endosulfan Sulfate	550	10 J	8.4 J	11 J	6.1 J	10 J	8.5 J	10 J	7.3 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	0.59	0.54	0.78	0.51	1	0.67	0.6	0.78
Gamma-Chlordane	1,800	7.2 J	7.2 J	11 J	9.5	14	7.9 J	10	11 J
Heptachlor	476	ND	ND	0.58	0.59	1.1 J	ND	0.67	0.72 J
Heptachlor Epoxide	476	0.94 J	1 J	1.5 J	1.2 J	1.9 J	1.2 J	1.5 J	1.3 J
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR2-FI-81 BR2-FI-81-CALC 9/28/2005 White Sucker Calc whole body 44.9 968 8.4 BR-2	BR2-FI-82 BR2-FI-82-CALC 9/28/2005 White Sucker Calc whole body 39.8 697 5.1 BR-2	BR2-FI-83 BR2-FI-83-CALC 9/28/2005 White Sucker Calc whole body 35.6 509 5 BR-2	BR2-FI-84 BR2-FI-84-CALC 9/28/2005 White Sucker Calc whole body 39 643 6.9 BR-2	BR2-FI-85 BR2-FI-85-CALC 9/28/2005 White Sucker Calc whole body 38.1 600 3.3 BR-2	BR2-FI-86 BR2-FI-86-CALC 9/28/2005 White Sucker Calc whole body 32.3 398 3 BR-2	BR2-FI-87 BR2-FI-87-CALC 9/28/2005 White Sucker Calc whole body 39.3 714 5.7 BR-2	BR2-FI-88 BR2-FI-88-CALC 9/28/2005 White Sucker Calc whole body 37.6 521 2.8 BR-2
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	11	8.5	41	11	5.8 J	4.3	8.4	4.6
Tetrachlorobiphenyls	- -	230	280	500	250	310 J	140	160	110 J
Pentachlorobiphenyls	- -	760	1,300	1,100	1,000	1,500 J	510	770	760 J
Hexachlorobiphenyls	- -	880	1,600	740	1,100	1,600 J	580	830	1,100 J
Heptachlorobiphenyls	- -	450	790	270	570	700 J	290	420	660 J
Octachlorobiphenyls	- -	120	210	82	160	180 J	73	120	190 J
Nonachlorobiphenyls	- -	29	40	22	29	31 J	21	27	39 J
Decachlorobiphenyl	- -	2.4	4.3	1.5	3	3.2 J	1.5	2.2	3.3 J
Total Homologs	111	2,500	4,100	2,700	3,200	4,400 J	1,600	2,400	2,900 J
Pesticides									
4,4'-DDD	2	43	40	23	40	28	16	34	15
4,4'-DDE	2	87 J	130 J	58 J	100 J	120 J	55 J	89 J	81 J
4,4'-DDT	2	1.2 J	3.7 J	ND	2.4 J	ND	ND	0.8 J	ND
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	24	20	15	22	10	10	22	6.5
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	52 J	40 J	39 J	46 J	32 J	19 J	42 J	20 J
Endosulfan I	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	550	9.5 J	17 J	10 J	13 J	22 J	8.8 J	11 J	14 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	0.73	0.58	0.97 J	0.76	ND	ND	0.71	ND
Gamma-Chlordane	1,800	16	13	10 J	15	6.8	8.3	17	5.8 J
Heptachlor	476	0.68	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	1.6 J	0.47 J	0.34 J	0.67 J	ND	ND	1.1 J	ND
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR2-FI-89 BR2-FI-89-COMP 9/28/2005 Common Shiner Whole body 10.8 - 15 89.65 91 9.4 BR-2	BR2-FI-90 BR2-FI-90-COMP 9/28/2005 Common Shiner Whole body 10.8 - 13.5 71.84 72 8.8 BR-2	BR2-FI-91 BR2-FI-91-COMP 9/28/2005 Common Shiner Whole body 11.6 - 12.2 64.89 65 7.6 BR-2	BR2-FI-92 BR2-FI-92-COMP 9/28/2005 Common Shiner Whole body 10.6 - 13.2 70.27 71 6.9 BR-2	BR2-FI-93 BR2-FI-93-COMP 9/28/2005 Common Shiner Whole body 10.4 - 14.9 79.29 80 7.5 BR-2	BR2-FI-94 BR2-FI-94-COMP 9/28/2005 Common Shiner Whole body 9.9 - 11.7 53.12 55 8.9 BR-2	BR2FI-95 BR2-FI-95-COMP 9/28/2005 Common Shiner Whole body 70.52 7.5 BR-2	BR2-FI-96 BR2-FI-96-COMP 9/28/2005 Common Shiner Whole body 10.6 - 14.2 171.03 176 6.8 BR-2
PCBs									
Monochlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.5 UJ
Dichlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.5 UJ
Trichlorobiphenyls	- -	13	12	9.1	7.8	10	10	9.6	9 J
Tetrachlorobiphenyls	- -	200	190	160	150	160	180	180	150 J
Pentachlorobiphenyls	- -	570	610	480	440	510	550	520	430 J
Hexachlorobiphenyls	- -	600	650	520	450	520	580	560	450 J
Heptachlorobiphenyls	- -	320	340	280	240	270	300	300	230 J
Octachlorobiphenyls	- -	84	91	72	62	70	80	79	63 J
Nonachlorobiphenyls	- -	13	17	14	10	12	13	14	11 J
Decachlorobiphenyl	- -	1.6 U	1.8	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.5 UJ
Total Homologs	111	1,800	1,900	1,500	1,400	1,600	1,700	1,700	1,400 J
Pesticides									
4,4'-DDD	2	20	20	17	16	18	18	18	18
4,4'-DDE	2	66 J	72 J	55 J	49 J	56	56 J	57 J	52 J
4,4'-DDT	2	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
Aldrin	733	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
alpha-BHC	1,470	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
alpha-Chlordane	1,800	18	18	16	13	15	15	18	14
beta-BHC	1,470	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
Delta-BHC	1,470	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
Dieldrin	73	38	36 J	31 J	28 J	32 J	30	29	28
Endosulfan I	550	19 J	18 J	16 J	14 J	15	16 J	16 J	14 J
Endosulfan II	550	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	6.5 J	0.64 U	0.62 U
Endosulfan Sulfate	550	6.2 J	6.2 J	5.1 J	4.5 J	5.1 J	5 J	5 J	5.3 J
Endrin	8	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
Endrin Aldehyde	8	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
Endrin Ketone	8	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
Gamma-BHC	1,660	1 J	0.88	0.79 J	0.77	0.62 U	0.64 U	0.64 U	0.62 U
Gamma-Chlordane	1,800	10	12	7.9	8.5	10	9.6	11	9.3
Heptachlor	476	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
Heptachlor Epoxide	476	0.63 U	0.63 U	0.63 U	0.62 U	0.62 U	0.64 U	0.64 U	0.62 U
Methoxychlor	14,700	4.1 J	0.63 U	0.63 U	0.62 U	9.9 J	11 J	22 J	18 J
Toxaphene	29,300	64 U	63 U	63 U	62 U	62 U	64 U	64 U	62 U

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR3-FI-1 BR3-FI-1-CALC 9/27/2005 Largemouth Bass Calc whole body 33.9 729 3.3 BR-3	BR3-FI-2 BR3-FI-2-CALC 9/27/2005 Largemouth Bass Calc whole body 31.1 502 2.9 BR-3	BR3-FI-3 BR3-FI-3-CALC 9/27/2005 Largemouth Bass Calc whole body 28.4 383 4.5 BR-3	BR3-FI-4 BR3-FI-4-CALC 9/27/2005 Largemouth Bass Calc whole body 26.9 263 1.6 BR-3	BR3-FI-5 BR3-FI-5-CALC 9/27/2005 Largemouth Bass Calc whole body 25.3 239 3 BR-3	BR3-FI-6 BR3-FI-6-CALC 9/28/2005 Largemouth Bass Calc whole body 35.2 753 2.6 BR-3b	BR3-FI-7 BR3-FI-7-CALC 9/28/2005 Largemouth Bass Calc whole body 40.9 1092 3.5 BR-3b	BR3-FI-8 BR3-FI-8-CALC 9/28/2005 Largemouth Bass Calc whole body 38.3 931 2.8 BR-3b
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	8.1	5.6	6.8	2.8	7.9	7.9	19	7.5
Tetrachlorobiphenyls	- -	150	72	130	67	180	210	420	220
Pentachlorobiphenyls	- -	560	340	490	310	680	720	1,300	540
Hexachlorobiphenyls	- -	570	430	590	370	730	710	1,100	500
Heptachlorobiphenyls	- -	280	220	290	190	320	320	450	220
Octachlorobiphenyls	- -	87	69	80	61	98	96	120	70
Nonachlorobiphenyls	- -	22	24	22	16	31	34	29	20
Decachlorobiphenyl	- -	1.8	1.7	1.6	1.3	2.1	2.5	3.3	1.4
Total Homologs	111	1,700	1,200	1,600	1,000	2,000	2,100	3,500	1,600
Pesticides									
4,4'-DDD	2	24	17	22	11	22	20	29	19
4,4'-DDE	2	51 J	40 J	50 J	31 J	54 J	51 J	70 J	38 J
4,4'-DDT	2	4 J	22 J	ND	ND	ND	ND	ND	ND
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	15	8.7	13	5.3 J	12	10	13	11
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	43 J	28	40	17 J	33 J	35 J	49 J	26 J
Endosulfan I	550	13 J	8.2 J	15 J	5.5 J	11 J	ND	0.48 J	0.49 J
Endosulfan II	550	0.32 J	ND	ND	ND	ND	ND	0.35 J	0.34 J
Endosulfan Sulfate	550	1.9 J	1.9 J	2.4 J	1.8 J	2.3	3 J	1.9 J	1.7 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	1.3	1	0.94	ND	ND	ND	ND	ND
Gamma-Chlordane	1,800	9.5	6.1 J	8.1 J	2.9	8.2	6.1 J	6.3	7.5 J
Heptachlor	476	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	1.5 J	0.93 J	1.5 J	0.78 J	0.94 J	ND	ND	ND
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR3-FI-9 BR3-FI-9-CALC 9/27/2005 White Sucker Calc whole body 31.9 392 3.5 BR-3	BR3-FI-10 BR3-FI-10-CALC 9/27/2005 White Sucker Calc whole body 34.1 499 5.2 BR-3	BR3-FI-11 BR3-FI-11-CALC 9/27/2005 White Sucker Calc whole body 31.7 418 4.8 BR-3	BR3-FI-12 BR3-FI-12-CALC 9/27/2005 White Sucker Calc whole body 39.8 757 6.5 BR-3	BR3-FI-13 BR3-FI-13-CALC 9/27/2005 White Sucker Calc whole body 41.5 872 10 BR-3	BR3-FI-14 BR3-FI-14-CALC 9/28/2005 White Sucker Calc whole body 36.8 439 3 BR-3b	BR3-FI-15 BR3-FI-15-CALC 9/28/2005 White Sucker Calc whole body 35.1 478 1.3 BR-3b	BR3-FI-16 BR3-FI-16-CALC 9/28/2005 White Sucker Calc whole body 37.6 558 6.6 BR-3b
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	14	18	7.3	8.9 J	9.5	8.9	3.8	9.1
Tetrachlorobiphenyls	- -	410	340	160	210 J	190	190	100	160
Pentachlorobiphenyls	- -	1,100	1,000	580	670 J	510	680	410	530
Hexachlorobiphenyls	- -	890	1,100	650	530 J	490	720	550	640
Heptachlorobiphenyls	- -	310	550	320	190 J	220	290	280	300
Octachlorobiphenyls	- -	83	150	110	64 J	65	81	95	89
Nonachlorobiphenyls	- -	28	38	30	28 J	29	32	33	32
Decachlorobiphenyl	- -	2.2	2.7	2.6	1.3 J	1.6	2.1	2.9	2.6
Total Homologs	111	2,900	3,200	1,900	1,700 J	1,500	2,000	1,500	1,800
Pesticides									
4,4'-DDD	2	26	57 J	26	24	24	38	14	26
4,4'-DDE	2	49 J	89 J	51 J	37 J	48 J	55 J	36 J	51 J
4,4'-DDT	2	1.1 J	3.1 J	1.1 J	1.9 J	1.7 J	2.2 J	1.9 J	4.1 J
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	10 J	24	13	9.2	12	18 J	9.7	20 J
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	31 J	55	43	24 J	33 J	45 J	18 J	74
Endosulfan I	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	550	4.4 J	4.7 J	3.2 J	4.3 J	5.1 J	3.7 J	2.6 J	3.7 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	0.83	1.2	ND	ND	0.76	ND	ND	ND
Gamma-Chlordane	1,800	9	17	8.7	8.1	10	8.1 J	7.4 J	12 J
Heptachlor	476	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	0.55 J	0.47 J	0.32 J	ND	0.49 J	ND	ND	1.5 J
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	BR3-FI-17 BR3-FI-17-COMP 9/28/2005 Common Shiner Whole body 11.3 - 13.9 43.41 44 2.1 BR-3b	BR3-FI-18 BR3-FI-18-COMP 9/27/2005 Common Shiner Whole body 11.2 - 14.7 51.94 54 4.9 BR-3	BR3-FI-19 BR3-FI-19-COMP 9/27/2005 Common Shiner Whole body 14.2 - 15.1 73.56 74 5.7 BR-3	BR3-FI-20 BR3-FI-20-COMP 9/27/2005 Common Shiner Whole body 14.1 - 14.9 78.91 79 4.1 BR-3	BR3-FI-21 BR3-FI-21-COMP 9/27/2005 Common Shiner Whole body 14.4 - 15.2 79.12 80 4.2 BR-3	BR3-FI-22 BR3-FI-22-COMP 9/27/2005 Common Shiner Whole body 11.6 - 15.2 61.1 63 7.6 BR-3	BR3-FI-23 BR3-FI-23-COMP 9/27/2005 Common Shiner Whole body 11.1 - 15.5 54.77 57 2.8 BR-3	BR3-FI-24 BR3-FI-24-COMP 9/27/2005 Common Shiner Whole body 13.4 - 15.7 266.34 268 4.6 BR-3
PCBs									
Monochlorobiphenyls	- -	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Dichlorobiphenyls	- -	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Trichlorobiphenyls	- -	4.8	7.1	9.6	6.5	5.5	61	5.3	16
Tetrachlorobiphenyls	- -	100	100	200	100	97	300	86	150
Pentachlorobiphenyls	- -	320	280	630	280	260	490	260	290
Hexachlorobiphenyls	- -	320	280	520	280	260	480	240	290
Heptachlorobiphenyls	- -	170	140	220	140	130	240	110	160
Octachlorobiphenyls	- -	42	40	54	37	38	60	33	40
Nonachlorobiphenyls	- -	8.3	7.7	13	8.8	7.4	12	7	8.5
Decachlorobiphenyl	- -	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Total Homologs	111	970	860	1,600	850	800	1,600	740	950
Pesticides									
4,4'-DDD	2	13	11	15	12	11	16	8	12
4,4'-DDE	2	48 J	39 J	47 J	36 J	41 J	60 J	22 J	41 J
4,4'-DDT	2	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Aldrin	733	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
alpha-BHC	1,470	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
alpha-Chlordane	1,800	8.9	12	11	10	7.6	15	8	9.1
beta-BHC	1,470	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Delta-BHC	1,470	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Dieldrin	73	19 J	18	23 J	18 J	18	30 J	12 J	19 J
Endosulfan I	550	1 J	5.1 J	6.4 J	3.1 J	5.7 J	10 J	5 J	6.5 J
Endosulfan II	550	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Endosulfan Sulfate	550	2.9 J	2.7 J	5.1 J	2.6 J	2.2 J	4.6 J	2.2 J	3.3 J
Endrin	8	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Endrin Aldehyde	8	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Endrin Ketone	8	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Gamma-BHC	1,660	0.63 U	0.71	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Gamma-Chlordane	1,800	4.9	7.1	9.6	5.9	5.1	8.5	4.5 J	7 J
Heptachlor	476	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Heptachlor Epoxide	476	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Methoxychlor	14,700	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.62 U	0.64 U	0.63 U
Toxaphene	29,300	63 U	62 U	62 U	64 U	62 U	62 U	64 U	63 U

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name	Receptor Food	P1-FI-25-CALC	P1-FI-26-CALC	P1-FI-27-CALC	P1-FI-28-CALC	P1-FI-29-CALC	P1-FI-30-CALC	P1-FI-31-CALC	P1-FI-32-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Sample Weight (g)									
Total Field Weight (g)		865	739	472	471	425	861	460	799
Percent Lipids (%)		4	3.3	3.5	6.3	2.6	2.4	1.3	3.2
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	1.2	0.87	0.84	ND	0.81	ND	ND	ND
Tetrachlorobiphenyls	- -	130 J	67	69	59	64	76	84	87
Pentachlorobiphenyls	- -	760 J	290	410	360	400	450	500	430
Hexachlorobiphenyls	- -	620 J	320	430	430	450	540	650	560
Heptachlorobiphenyls	- -	250 J	160	200	210	230	280	300	300
Octachlorobiphenyls	- -	67 J	51	54	65	64	89	79	94
Nonachlorobiphenyls	- -	16 J	12	12	16	14	23	18	21
Decachlorobiphenyl	- -	2 J	2	2.1	2.2	2.1	3.1	3.6	3.1
Total Homologs	111	1,800 J	920	1,100	1,100	1,200	1,400	1,600	1,500
Pesticides									
4,4'-DDD	2	31	14	15	13	17	15	13 J	17
4,4'-DDE	2	120 J	33 J	45 J	40 J	45 J	45 J	55 J	55 J
4,4'-DDT	2	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	7.3 J	5.2	6.7	3.4 J	6.2 J	5.6	3.7	5.6
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	32 J	16 J	19 J	11	16	13 J	10 J	16 J
Endosulfan I	550	0.96 J	1 J	1.6 J	0.77 J	0.86 J	0.53 J	ND	0.73 J
Endosulfan II	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	550	16 J	6.1 J	7.2 J	7.1 J	6.1 J	5.8 J	8 J	7.1 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-Chlordane	1,800	5.3 J	3.2 J	4.3 J	2.9	3.8 J	3.1	2.8 J	4.4 J
Heptachlor	476	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	P1-FI-33 P1-FI-33-CALC 9/27/2005 White Sucker Calc whole body 40.1 704 6.2 Pond A	P1-FI-34 P1-FI-34-CALC 9/27/2005 White Sucker Calc whole body 35.1 467 3.3 Pond A	P1-FI-35 P1-FI-35-CALC 9/27/2005 White Sucker Calc whole body 37.2 585 7.4 Pond A	P1-FI-36 P1-FI-36-CALC 9/27/2005 White Sucker Calc whole body 43.4 747 5.1 Pond A	P1-FI-37 P1-FI-37-CALC 9/27/2005 White Sucker Calc whole body 43.1 930 8.1 Pond A	P1-FI-38 P1-FI-38-CALC 9/27/2005 White Sucker Calc whole body 36.3 664 5.3 Pond A	P1-FI-39 P1-FI-39-CALC 9/27/2005 White Sucker Calc whole body 40.4 725 2.3 Pond A	P1-FI-40 P1-FI-40-CALC 9/27/2005 White Sucker Calc whole body 36.4 627 6.5 Pond A
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorobiphenyls	- -	89	57	81	110	100	63	95	84
Pentachlorobiphenyls	- -	310	180	230	510	360	210	370	240
Hexachlorobiphenyls	- -	310	210	230	640	380	210	440	260
Heptachlorobiphenyls	- -	140	110	100	310	170	89	210	120
Octachlorobiphenyls	- -	45	34	29	92	50	24	65	39
Nonachlorobiphenyls	- -	10	12	13	27	23	11	23	16
Decachlorobiphenyl	- -	1.5	1.2	1.6	5.3	3.7	1.1	3.9	2.2
Total Homologs	111	890	600	680	1,700	1,100	600	1,200	760
Pesticides									
4,4'-DDD	2	17	8.8	15	22	23	14	18	14
4,4'-DDE	2	32 J	21 J	25 J	62 J	41 J	24 J	45 J	27 J
4,4'-DDT	2	ND	ND	ND	ND	ND	ND	ND	0.56 J
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	10	4.2	8 J	11 J	13	7.5	8.5	7 J
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	18 J	8.7 J	16	19 J	25	14 J	10 J	15 J
Endosulfan I	550	1.1 J	0.41 J	1.6 J	0.91 J	1.2 J	1.2 J	ND	0.9 J
Endosulfan II	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	550	4.4 J	2.8 J	3.7 J	8.4 J	5.3 J	3.4 J	4.8 J	4.7 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-Chlordane	1,800	5.8	3.7 J	5.6 J	6.9 J	7.4 J	6.2 J	7.5 J	6 J
Heptachlor	476	ND	ND	ND	ND	ND	ND	1.2	ND
Heptachlor Epoxide	476	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-41	P1-FI-42	P1-FI-43	P1-FI-44	P1-FI-45	P1-FI-46	P1-FI-47	P1-FI-48
Sample Name	Receptor Food	P1-FI-41-COMP	P1-FI-42-COMP	P1-FI-43-COMP	P1-FI-44-COMP	P1-FI-45-COMP	P1-FI-46-COMP	P1-FI-47-COMP	P1-FI-48-COMP
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		11.1 - 12.8	9.6 - 11	10.4 - 10.7	10.1 - 11.7	8.9 - 12.6	8.9 - 11.4	9.2 - 12	7.6 - 12.3
Sample Weight (g)		105.24	64.53	69.91	87.43	62.28	70.9	73.37	187.55
Total Field Weight (g)		108	67	73	90	65	74	76	195
Percent Lipids (%)		4.6	4.2	4.5	3.9	2.8	5.1	6	4.2
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PCBs									
Monochlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Dichlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Trichlorobiphenyls	- -	4	3.1	3.4	3.4	3.2	3.2	3.1	3.1
Tetrachlorobiphenyls	- -	72	56	52	51	54	65	57	78
Pentachlorobiphenyls	- -	140	120	120	120	120	110	120	120
Hexachlorobiphenyls	- -	130	110	98	120	110	100	100	120
Heptachlorobiphenyls	- -	53	44	39	48	47	43	42	48
Octachlorobiphenyls	- -	15	14	11	15	14	14	12	14
Nonachlorobiphenyls	- -	5.8	5.6	5	6.5	5	8	5.1	6.2
Decachlorobiphenyl	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Total Homologs	111	420	350	320	360	350	340	340	390
Pesticides									
4,4'-DDD	2	8.3	5.8	5.5	5.5	4.6	5.8	5.2	6.6 J
4,4'-DDE	2	15 J	12 J	8.2 J	12 J	11 J	11 J	11 J	11 J
4,4'-DDT	2	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Aldrin	733	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
alpha-BHC	1,470	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
alpha-Chlordane	1,800	4.1 J	2.9 J	2.6 J	2.5	1.9	2.9	2.7	2.7 J
beta-BHC	1,470	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Delta-BHC	1,470	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Dieldrin	73	15	14 J	11 J	12 J	9.3 J	16 J	15 J	14 J
Endosulfan I	550	0.64 U	0.66 J	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Endosulfan II	550	0.64 U	0.63 U	2	0.62 U	1.2 J	1.5 J	0.63 U	1 J
Endosulfan Sulfate	550	2.6 J	2.3 J	1.2 J	1.9 J	1.4 J	1.2 J	1.2 J	1.7 J
Endrin	8	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Endrin Aldehyde	8	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Endrin Ketone	8	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Gamma-BHC	1,660	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Gamma-Chlordane	1,800	1.5	2 J	0.62 U	1.6	1.7 J	1.7 J	2.1 J	1.4 J
Heptachlor	476	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Heptachlor Epoxide	476	0.64 U	0.63 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.63 U
Methoxychlor	14,700	5.8 U	7.4 U	3.9 U	2.3 U	2.5 U	4.5 U	2.3 U	0.63 U
Toxaphene	29,300	64 U	63 U	62 U	62 U	64 U	62 U	63 U	63 U

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	P2-FI-49 P2-FI-49-CALC 9/27/2005 Blue Gill Calc whole body 17.4 104 1.4 Pond F	P2-FI-50 P2-FI-50-CALC 9/27/2005 Blue Gill Calc whole body 15.2 - 15.6 151 3.1 Pond F	P2-FI-51 P2-FI-51-CALC 9/27/2005 Blue Gill Calc whole body 13.9 - 17 159 3.3 Pond F	P2-FI-52 P2-FI-52-CALC 9/27/2005 Blue Gill Calc whole body 15.6 - 15.9 154 1.2 Pond F	P2-FI-53 P2-FI-53-CALC 9/27/2005 Blue Gill Calc whole body 14.7 - 17.5 154 1.6 Pond F	P2-FI-54 P2-FI-54-CALC 9/27/2005 Blue Gill Calc whole body 15 - 15.2 131 3.4 Pond F	P2-FI-55 P2-FI-55-CALC 9/27/2005 Blue Gill Calc whole body 14.1 - 14.5 166 2.9 Pond F	P2-FI-56 P2-FI-56-CALC 9/27/2005 Pumpkin Seed Calc whole body 13 - 13.9 219 2.1 Pond F
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	ND	3.4	3.5	ND	ND	4.5	4	2.6
Tetrachlorobiphenyls	- -	61	57	66	26	41	68	75	58
Pentachlorobiphenyls	- -	340	200	250	140	230	220	250	280
Hexachlorobiphenyls	- -	440	190	250	92	270	210	240	340
Heptachlorobiphenyls	- -	220	93	120	57	140	100	110	190
Octachlorobiphenyls	- -	59	30	31	19	41	28	31	49
Nonachlorobiphenyls	- -	14	7.6	7.3	2.2	12	7	7.3	14
Decachlorobiphenyl	- -	1.8	ND	ND	ND	ND	ND	ND	1.8
Total Homologs	111	1,100	580	720	340	720	610	710	960
Pesticides									
4,4'-DDD	2	6.8	11 J	12	4	7.2	13	13 J	12
4,4'-DDE	2	31 J	22	25 J	6.9 J	22	23 J	26	29 J
4,4'-DDT	2	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	1.9 J	6.7 J	5.5	1.5 J	2.9 J	5.9 J	4.9 J	5.7
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	14 J	32 J	34 J	9.4 J	16 J	35 J	30 J	24 J
Endosulfan I	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	550	ND	ND	ND	ND	ND	5.2 J	ND	ND
Endosulfan Sulfate	550	5.5 J	3.9 J	3.4 J	3.4 J	3.3 J	3.3 J	5.1 J	4.6 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-Chlordane	1,800	0.73	2.9	2.2	ND	ND	2.2 J	3.3 J	1.8
Heptachlor	476	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	P2-FI-57 P2-FI-57-CALC 9/27/2005 White Sucker Calc whole body 39.1 693 4.7 Pond F	P2-FI-58 P2-FI-58-CALC 9/27/2005 White Sucker Calc whole body 34.6 501 2.7 Pond F	P2-FI-59 P2-FI-59-CALC 9/27/2005 White Sucker Calc whole body 40.4 755 7.4 Pond F	P2-FI-60 P2-FI-60-CALC 9/27/2005 White Sucker Calc whole body 34.9 442 4.4 Pond F	P2-FI-61 P2-FI-61-CALC 9/27/2005 White Sucker Calc whole body 37 595 9.2 Pond F	P2-FI-62 P2-FI-62-CALC 9/27/2005 White Sucker Calc whole body 33 380 2.7 Pond F	P2-FI-63 P2-FI-63-CALC 9/27/2005 White Sucker Calc whole body 35.9 532 4.2 Pond F	P2-FI-64 P2-FI-64-CALC 9/27/2005 White Sucker Calc whole body 34.6 460 4.7 Pond F
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	1.9	4.7 J	8.5	6.2	11	4.6	1.8	6.3 J
Tetrachlorobiphenyls	- -	95 J	87 J	220	120	270	88	81 J	170 J
Pentachlorobiphenyls	- -	360 J	270 J	680	360	730	300	270 J	430 J
Hexachlorobiphenyls	- -	370 J	280 J	690	350	710	310	260 J	420 J
Heptachlorobiphenyls	- -	180 J	130 J	310	160	310	140	130 J	190 J
Octachlorobiphenyls	- -	49 J	33 J	77	41	80	39	34 J	49 J
Nonachlorobiphenyls	- -	13 J	8.5 J	16	9.3	16	10	12 J	10 J
Decachlorobiphenyl	- -	1.7 J	ND	2.4	0.95	2.4	1.3	1.2 J	0.82 J
Total Homologs	111	1,100 J	800 J	2,000	1,000	2,100	880	790 J	1,300 J
Pesticides									
4,4'-DDD	2	19	15	35	20	44	18 J	15	28 J
4,4'-DDE	2	35 J	24 J	59 J	33 J	62 J	27 J	24 J	41 J
4,4'-DDT	2	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	733	ND	ND	ND	ND	ND	ND	0.62 J	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	15 J	10	24 J	16	30	12	12	17
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	32 J	21 J	61 J	36 J	67 J	29 J	29 J	40 J
Endosulfan I	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	550	12 J	ND	1.1 J	ND	ND	3.2 J	ND	ND
Endosulfan Sulfate	550	5.2 J	3.4 J	7.3 J	5.3 J	7.1 J	3.7 J	4.3 J	5.5 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-Chlordane	1,800	8.8	7.4	14 J	8.9 J	15	8.2	8.7 J	12
Heptachlor	476	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-65	P2-FI-66	P2-FI-67	P2-FI-68	P2-FI-69	P2-FI-70	P2-FI-71	P2-FI-72
Sample Name	Receptor Food	P2-FI-65-COMP	P2-FI-66-COMP	P2-FI-67-COMP	P2-FI-68-COMP	P2-FI-69-COMP	P2-FI-70-COMP	P2-FI-71-COMP	P2-FI-72-COMP
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		14.7 - 16.4	14.4 - 15.8	13.7 - 14.4	13.8 - 15.4	13.4 - 16.4	15 - 15.9	14.1 - 16	15.4 - 16.3
Sample Weight (g)		136.68	115.06	107.8	113.04	109.31	83.78	87.56	90.81
Total Field Weight (g)		141	119	112	117	112	86	89	92
Percent Lipids (%)		3.9	3.6	3.2	3.6	3.7	3.2	2.4	3.3
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PCBs									
Monochlorobiphenyls	- -	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Dichlorobiphenyls	- -	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Trichlorobiphenyls	- -	5	4.3	4.1	1.6 U	11	6.3	5.6	3.9
Tetrachlorobiphenyls	- -	130	140	98	140	110	110	72	99
Pentachlorobiphenyls	- -	290	280	220	290	240	250	160	210
Hexachlorobiphenyls	- -	240	220	190	240	210	220	140	180
Heptachlorobiphenyls	- -	94	89	79	99	86	94	55	76
Octachlorobiphenyls	- -	22	21	20	24	19	22	13	19
Nonachlorobiphenyls	- -	5.6	5.9	5.7	6.5	5	5.6	4.9	4.6
Decachlorobiphenyl	- -	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Total Homologs	111	780	760	620	800	680	700	460	600
Pesticides									
4,4'-DDD	2	20	14	14 J	17	15	15	11	12
4,4'-DDE	2	24 J	22 J	17 J	24 J	20 J	21 J	13 J	18 J
4,4'-DDT	2	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Aldrin	733	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
alpha-BHC	1,470	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
alpha-Chlordane	1,800	12	11	8.4	11	9.7	9.4	6.9	9.3
beta-BHC	1,470	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Delta-BHC	1,470	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Dieldrin	73	31	23 J	22 J	30 J	26 J	23 J	20 J	21 J
Endosulfan I	550	1.1 J	1.3 J	0.77 J	0.9 J	0.84 J	0.73 J	0.72 J	0.67 J
Endosulfan II	550	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Endosulfan Sulfate	550	2.4 J	3.1 J	1.5 J	2 J	1.8 J	1.8 J	1.1 J	1.6 J
Endrin	8	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Endrin Aldehyde	8	0.63 UJ	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Endrin Ketone	8	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Gamma-BHC	1,660	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Gamma-Chlordane	1,800	7.5	8.5 J	6.1	8.6 J	6.7	6.3	4.6	6 J
Heptachlor	476	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Heptachlor Epoxide	476	0.63 U	0.62 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Methoxychlor	14,700	0.63 U	3.1 U	0.64 U	0.62 U	0.62 U	0.63 U	0.62 U	0.64 U
Toxaphene	29,300	63 U	62 U	64 U	62 U	62 U	63 U	62 U	64 U

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	P6-FI-97 P6-FI-97-CALC 9/29/2005 Largemouth Bass Calc whole body 34.6 567 1.5 P6	P6-FI-98 P6-FI-98-CALC 9/29/2005 Largemouth Bass Calc whole body 36.6 731 2.3 P6	P6-FI-99 P6-FI-99-CALC 9/29/2005 Largemouth Bass Calc whole body 31.4 402 1.7 P6	P6-FI-100 P6-FI-100-CALC 9/29/2005 Largemouth Bass Calc whole body 38.5 814 1.3 P6	P6-FI-101 P6-FI-101-CALC 9/29/2005 Largemouth Bass Calc whole body 29.9 373 2.8 P6	P6-FI-102 P6-FI-102-CALC 9/29/2005 Largemouth Bass Calc whole body 31.9 442 2.3 P6	P6-FI-103 P6-FI-103-CALC 9/29/2005 Largemouth Bass Calc whole body 31.3 447 2.5 P6	P6-FI-104 P6-FI-104-CALC 9/29/2005 Largemouth Bass Calc whole body 39 907 2.8 P6
PCBs									
Monochlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorobiphenyls	- -	5	8.4	5.9	6.1	6.1	6.7	6.7	12
Pentachlorobiphenyls	- -	19	25	24	20	23	29	27	100
Hexachlorobiphenyls	- -	59	57	60	37	53	69	65	360
Heptachlorobiphenyls	- -	33	25	29	18	24	32	32	210
Octachlorobiphenyls	- -	6.3	6.1	6.4	4	5.3	7.1	5.7	39
Nonachlorobiphenyls	- -	ND	ND	ND	ND	ND	ND	ND	5.4
Decachlorobiphenyl	- -	ND	ND	ND	ND	ND	ND	ND	ND
Total Homologs	111	120	120	130	85	110	140	140	750
Pesticides									
4,4'-DDD	2	1.9 J	2.7	2.2	1.8	2.8	3	2.8	4.3 J
4,4'-DDE	2	14	13	13	8.8	17	29	14	15 J
4,4'-DDT	2	0.84 J	ND	ND	0.89 J	1.4 J	1.7 J	ND	ND
Aldrin	733	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1,800	0.67 J	0.83 J	0.76	0.6	0.89	1.2	0.77	0.71
beta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1,470	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	73	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan I	550	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	550	2.8 J	1 J	ND	1.5	1.5 J	2.7	1.5 J	4.8
Endosulfan Sulfate	550	1.4 J	0.86 J	ND	0.66	0.89 J	1.2 J	0.94 J	0.57 J
Endrin	8	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	8	0.33	0.38 J	ND	ND	ND	ND	ND	ND
Endrin Ketone	8	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	1,660	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-Chlordane	1,800	0.73 J	ND	ND	ND	ND	1.1 J	ND	ND
Heptachlor	476	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	476	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	14,700	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	29,300	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-43
RESULTS FOR PCBs AND PESTICIDES IN FISH WHOLE BODY SAMPLES (ug/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological Receptor Food	P6-FI-105	P6-FI-106	P6-FI-107	P6-FI-108	P6-FI-109	P6-FI-110	P6-FI-111	P6-FI-112
Sample Name		P6-FI-105-COMP	P6-FI-106-COMP	P6-FI-107-COMP	P6-FI-108-COMP	P6-FI-109-COMP	P6-FI-110-COMP	P6-FI-111-COMP	P6-FI-112-COMP
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		9.3 - 12.4	8.1 - 12.1	10.3 - 11.6	9.4 - 11.1	10 - 11.4	12.7 - 13.9	11.5 - 13.8	11.1 - 13.6
Sample Weight (g)		69.58	54.53	67.6	50.15	62.67	75.59	72.36	69.46
Total Field Weight (g)		71	56	69	51	65	77	75	71
Percent Lipids (%)		2.4	1.7	2.2	1.6	2.7	1.4	1.4	1.9
Location		P6	P6	P6	P6	P6	P6	P6	P6
PCBs									
Monochlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 UJ	1.6 U	1.6 U
Dichlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 UJ	1.6 U	1.6 U
Trichlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 UJ	1.6 U	1.6 U
Tetrachlorobiphenyls	- -	7.9	7.2	9	6	8	5.7 J	5.7	8
Pentachlorobiphenyls	- -	22	20	21	16	23	14 J	18	20
Hexachlorobiphenyls	- -	58	40	38	36	54	25 J	40	43
Heptachlorobiphenyls	- -	29	18	16	17	23	12 J	18	16
Octachlorobiphenyls	- -	7.8	3.9	3.4	4.5	5	1.6 UJ	2.8	2.7
Nonachlorobiphenyls	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 UJ	1.6 U	1.6 U
Decachlorobiphenyl	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 UJ	1.6 U	1.6 U
Total Homologs	111	120	89	88	80	110	56 J	85	89
Pesticides									
4,4'-DDD	2	2.3	1.8	2.2	1.3	2.6	1.6	1.7	2.6
4,4'-DDE	2	8.7	10	6.9	7.4	10	6.5	8.8	9.4
4,4'-DDT	2	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Aldrin	733	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
alpha-BHC	1,470	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
alpha-Chlordane	1,800	0.62 U	0.62 U	0.62 U	0.63 U	0.69	0.62 U	0.62 U	0.94
beta-BHC	1,470	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Delta-BHC	1,470	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Dieldrin	73	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Endosulfan I	550	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Endosulfan II	550	1.5	1	0.62 U	0.63 U	0.85 J	0.62 U	0.62 U	0.62 U
Endosulfan Sulfate	550	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Endrin	8	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Endrin Aldehyde	8	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Endrin Ketone	8	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Gamma-BHC	1,660	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Gamma-Chlordane	1,800	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Heptachlor	476	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Heptachlor Epoxide	476	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Methoxychlor	14,700	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.62 U
Toxaphene	29,300	62 U	62 U	62 U	63 U	63 U	62 U	62 U	62 U

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name		BR1-FI-113-FILL	BR1-FI-114-FILL	BR1-FI-115-FILL	BR1-FI-116-FILL	BR1-FI-117-FILL	BR1-FI-118-FILL	BR1-FI-119-FILL	BR1-FI-120-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Sample Weight (g)		477.81	406.6	153.72	94.87	140.93	107.69	508.05	420.53
Total Field Weight (g)		1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)		1.7	1.7	2.4	1.8	1.6	2	1.8	1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
Metals									
Aluminum	140	2.2 U	2.5 U	2.2 U	2 U	2.5 U	2 U	2.3 U	2.1 U
Antimony	0.054	0.056 U	0.062 U	0.055 U	0.051 U	0.062 U	0.049 U	0.057 U	0.053 U
Arsenic	0.0021	0.071	0.076	0.13	0.094	0.072	0.12	0.065	0.075
Barium	9.5	0.22 U	0.25 U	0.22 U	0.2 U	0.25 U	0.2 U	0.23 U	0.21 U
Beryllium	0.27	0.022 U	0.025 U	0.022 U	0.02 U	0.025 U	0.02 U	0.023 U	0.021 U
Cadmium	0.14	0.018	0.027	0.014	0.025	0.026	0.036	0.013	0.041
Calcium	- -	440 J	300 J	300 J	830 J	430 J	1,200 J	150 J	390 J
Chromium	0.41	2.3	1.6	2.8	0.8	1.5	1.1	1.8	1.6
Cobalt	2.7	0.018	0.012 U	0.022	0.01 U	0.013 U	0.011	0.011 U	0.011 U
Copper	5.4	0.36	0.33	0.65	0.34	0.34	0.4	0.3	0.48
Iron	41	18	16	22	14	13	19	13	17
Lead	- -	0.022 U	0.025 U	0.022 U	0.02 U	0.025 U	0.02 U	0.023 U	0.024
Magnesium	- -	290	250	530	290	280	290	270	260
Manganese	19	1.4 J	0.76 J	0.73 J	2 J	1.4 J	2.4 J	0.38 J	0.81 J
Mercury	0.041	0.18	0.22	0.046	0.032	0.035	0.028	0.16	0.18
Nickel	2.7	1.1	0.71	1.5	0.31	0.61	0.49	0.74	0.74
Potassium	- -	4,000	3,400	7,300	3,400	3,600	3,700	3,500	3,500
Selenium	0.68	0.67	0.54	1.1	0.58	0.54	0.42	0.63	0.64
Silver	0.68	0.022 U	0.025 U	0.022 U	0.02 U	0.025 U	0.02 U	0.023 U	0.021 U
Sodium	- -	530	540	900	620	560	660	510	660
Thallium	0.0095	0.011 U	0.012 U	0.011 U	0.01 U	0.013 U	0.0099 U	0.011 U	0.011 U
Vanadium	0.14	0.058	0.062 U	0.074	0.07	0.076	0.052	0.061	0.053 U
Zinc	41	10	9.1	16	6.8	6.8	9.9	6.4	8.8

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID **Sample Name** **Date Collected** **Species Common Name** **Tissue Type** **Length (cm)** **Sample Weight (g)** **Total Field Weight (g)** **Percent Lipids (%)** **Location**	**PAL Human Consumption**	**BR1-FI-121** **BR1-FI-121-FILL** **9/29/2005** **Blue Gill** **Fillet** **21.2** **90.2** **222** **0.95** **BR-1**	**BR1-FI-122** **BR1-FI-122-FILL** **9/29/2005** **Blue Gill** **Fillet** **19.9** **68.76** **191** **1.1** **BR-1**	**BR1-FI-123** **BR1-FI-123-FILL** **9/29/2005** **Blue Gill** **Fillet** **18.7** **68.69** **192** **1.4** **BR-1**	**BR1-FI-124** **BR1-FI-124-FILL** **9/29/2005** **Blue Gill** **Fillet** **19.4** **66.11** **183** **0.7** **BR-1**	**BR1-FI-125** **BR1-FI-125-FILL** **9/29/2005** **Blue Gill** **Fillet** **17.2 - 18.2** **111.48** **274** **0.98** **BR-1**	**BR1-FI-126** **BR1-FI-126-FILL** **9/29/2005** **Pumpkin Seed** **Fillet** **15.9 - 16.2** **73.54** **205** **0.75** **BR-1**	**BR1-FI-127** **BR1-FI-127-FILL** **9/29/2005** **Pumpkin Seed** **Fillet** **15.7 - 17.8** **93.95** **258** **1** **BR-1**	**BR1-FI-128** **BR1-FI-128-FILL** **9/29/2005** **Pumpkin Seed** **Fillet** **15.8 - 16** **70.99** **209** **1.1** **BR-1**
Metals									
Aluminum	140	2.1 U	2.2 U	2.5 U	2.4 U	2.2 U	2.4 U	1.8 U	1.9 U
Antimony	0.054	0.052 U	0.054 U	0.062 U	0.059 U	0.055 U	0.061 U	0.046 U	0.049 U
Arsenic	0.0021	0.037	0.041	0.047	0.045	0.054	0.057	0.09	0.094
Barium	9.5	0.21 U	0.22 U	0.25 U	0.24 U	0.22 U	0.24 U	0.18 U	0.19 U
Beryllium	0.27	0.021 U	0.022 U	0.025 U	0.024 U	0.022 U	0.024 U	0.018 U	0.019 U
Cadmium	0.14	0.01 U	0.011 U	0.013 U	0.012 U	0.011 U	0.015	0.023	0.013
Calcium	- -	250 J	220 J	200 J	1,000 J	900 J	550 J	480 J	1,200 J
Chromium	0.41	0.84	2	5.4	2.4	1.5	1.1	2.1	1.2
Cobalt	2.7	0.01 U	0.011 U	0.025	0.012 U	0.011 U	0.012 U	0.0098	0.0097 U
Copper	5.4	0.23	0.31	0.32	0.26	0.25	0.25	0.28	0.24
Iron	41	8	14	30	26	17	15	18	19
Lead	- -	0.021 U	0.022 U	0.025 U	0.024 U	0.022 U	0.029	0.018 U	0.019 U
Magnesium	- -	280	290	290	310	300	300	280	310
Manganese	19	0.32 J	0.54 J	0.94 J	0.76 J	0.83 J	1.1 J	0.83 J	0.81 J
Mercury	0.041	0.11	0.065	0.074	0.2	0.1	0.069	0.11	0.064
Nickel	2.7	0.36	0.99	2.8	1.2	0.71	0.5	0.96	0.57
Potassium	- -	3,300	3,400	3,400	3,400	3,300	3,100	3,200	3,200
Selenium	0.68	0.63	0.46	0.52	0.58	0.51	0.45	0.58	0.46
Silver	0.68	0.021 U	0.022 U	0.025 U	0.024 U	0.022 U	0.024 U	0.018 U	0.019 U
Sodium	- -	530	620	510	530	640	600	730	780
Thallium	0.0095	0.01 U	0.011 U	0.013 U	0.012 U	0.011 U	0.012 U	0.0092 U	0.0097 U
Vanadium	0.14	0.052 U	0.054 U	0.07	0.059 U	0.055 U	0.061 U	0.055	0.072
Zinc	41	8.6	8.3	10	11	7.6	10	10	9

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name		BR2-FI-73-FILL	BR2-FI-74-FILL	BR2-FI-75-FILL	BR2-FI-76-FILL	BR2-FI-77-FILL	BR2-FI-78-FILL	BR2-FI-79-FILL	BR2-FI-80-FILL
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		30.7	30	30.4	25.2	25.8	25.4	25	24.3
Sample Weight (g)		217.66	182.08	235.21	99.93	110.83	110.22	97.48	101.78
Total Field Weight (g)		471	414	543	231	264	260	229	236
Percent Lipids (%)		1.4	1.4	1.6	1.1	1.5	1	1.2	1
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
Metals									
Aluminum	140	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1.2 U
Antimony	0.054	0.026 U	0.026 U	0.026 U	0.028 U	0.027 U	0.026 U	0.028 U	0.03 U
Arsenic	0.0021	0.06	0.05	0.04	0.1	0.053	0.06	0.059	0.069
Barium	9.5	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.11 U	0.12 U
Beryllium	0.27	0.01 U	0.01 U	0.01 U	0.011 U	0.011 U	0.01 U	0.011 U	0.012 U
Cadmium	0.14	0.0051 U	0.0051 U	0.0052 U	0.0055 U	0.0055 U	0.0052 U	0.0056 U	0.006 U
Calcium	- -	220 J	270 J	120 J	270 J	190 J	210 J	320 J	170 J
Chromium	0.41	3.6 J	2.9 J	1.6 J	2.6 J	3.2 J	3.9 J	3.4 J	3.2 J
Cobalt	2.7	0.022	0.019	0.0091	0.016	0.019	0.023	0.02	0.019
Copper	5.4	0.27	0.25	0.24	0.26	0.27	0.28	0.28	0.31
Iron	41	21	18	9.2	16	19	22	20	18
Lead	- -	0.01 U	0.01 U	0.01 U	0.011 U	0.011 U	0.01 U	0.011 U	0.012 U
Magnesium	- -	260	290	260	270	270	280	250	290
Manganese	19	0.59 J	0.43 J	0.32 J	0.49 J	1.2 J	0.57 J	0.51 J	0.5 J
Mercury	0.041	0.097 J	0.12 J	0.037 J	0.11 J	0.086 J	0.085 J	0.084 J	0.059 J
Nickel	2.7	2	1.7	0.79	1.6	1.8	2.2	1.9	1.8
Potassium	- -	3,700	4,000	3,800	3,600	3,900	3,900	3,600	4,000
Selenium	0.68	0.54 J	0.57 J	0.5 J	0.73 J	0.51 J	0.67 J	0.44 J	0.46 J
Silver	0.68	0.01 U	0.01 U	0.01 U	0.011 U	0.011 U	0.01 U	0.011 U	0.012 U
Sodium	- -	470 J	440 J	420 J	520 J	520 J	560 J	490 J	540 J
Thallium	0.0095	0.0051 U	0.0051 U	0.0052 U	0.0055 U	0.0055 U	0.0052 U	0.0056 U	0.006 U
Vanadium	0.14	0.026 U	0.026 U	0.026 U	0.028 U	0.027 U	0.026 U	0.028 U	0.03 U
Zinc	41	6.5 J	7 J	5.5 J	6.7 J	6.8 J	7.2 J	6.6 J	7.2 J

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name		BR2-FI-81-FILL	BR2-FI-82-FILL	BR2-FI-83-FILL	BR2-FI-84-FILL	BR2-FI-85-FILL	BR2-FI-86-FILL	BR2-FI-87-FILL	BR2-FI-88-FILL
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Sample Weight (g)		405.96	264.32	224.24	250.34	249.08	154.39	273.96	210.7
Total Field Weight (g)		968	697	509	643	600	398	714	521
Percent Lipids (%)		2.8	2.4	1.7	2.6	1.2	1.3	2.6	1.5
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
Metals									
Aluminum	140	1.1 U	1.1 U	1 U	1.1 U	1 U	1 U	1.1 U	1 U
Antimony	0.054	0.027 U	0.027 U	0.025 U	0.027 U	0.026 U	0.025 U	0.026 U	0.026 U
Arsenic	0.0021	0.067	0.056	0.058	0.06	0.064	0.072	0.065	0.075
Barium	9.5	0.14	0.19	0.1	0.14	0.26	0.16	0.22	0.15
Beryllium	0.27	0.011 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Cadmium	0.14	0.0078	0.013	0.0075	0.024	0.017	0.013	0.013	0.015
Calcium	- -	470 J	340 J	120 J	350 J	920 J	330 J	900 J	180 J
Chromium	0.41	1.4 J	1.7 J	1.3 J	2.3 J	1.2 J	1.8 J	0.85 J	2.1 J
Cobalt	2.7	0.014	0.018	0.012	0.021	0.017	0.018	0.014	0.022
Copper	5.4	0.38	0.36	0.28	0.4	0.31	0.32	0.32	0.36
Iron	41	15	18	9.5	19	17	15	15	19
Lead	- -	0.011 U	0.011 U	0.01	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Magnesium	- -	260	230	230	250	250	240	270	250
Manganese	19	1.4 J	0.7 J	0.8 J	1.4 J	2.2 J	1.5 J	2.4 J	0.76 J
Mercury	0.041	0.11 J	0.15 J	0.032 J	0.1 J	0.15 J	0.062 J	0.089 J	0.15 J
Nickel	2.7	0.76	0.7	0.67	1.2	0.63	1.1	0.4	1.2
Potassium	- -	4,100	4,000	4,200	4,200	4,200	4,100	4,200	3,900
Selenium	0.68	0.53 J	0.48 J	0.36 J	0.46 J	0.66 J	0.41 J	0.55 J	0.66 J
Silver	0.68	0.011 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Sodium	- -	510 J	580 J	560 J	580 J	610 J	570 J	570 J	700 J
Thallium	0.0095	0.0054 U	0.0055 U	0.005 U	0.0054 U	0.0052 U	0.005 U	0.0053 U	0.0052 U
Vanadium	0.14	0.027 U	0.027 U	0.025 U	0.027 U	0.026 U	0.025 U	0.026 U	0.026 U
Zinc	41	8.2 J	12 J	7.1 J	9.9 J	10 J	7.1 J	7.1 J	12 J

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name		**BR3-FI-1-FILL**	**BR3-FI-2-FILL**	**BR3-FI-3-FILL**	**BR3-FI-4-FILL**	**BR3-FI-5-FILL**	**BR3-FI-6-FILL**	**BR3-FI-7-FILL**	**BR3-FI-8-FILL**
Date Collected		**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/28/2005**	**9/28/2005**	**9/28/2005**
Species Common Name		**Largemouth Bass**	**Largemouth Bass**	**Largemouth Bass**	**Largemouth Bass**	**Largemouth Bass**	**Largemouth Bass**	**Largemouth Bass**	**Largemouth Bass**
Tissue Type		**Fillet**	**Fillet**	**Fillet**	**Fillet**	**Fillet**	**Fillet**	**Fillet**	**Fillet**
Length (cm)		**33.9**	**31.1**	**28.4**	**26.9**	**25.3**	**35.2**	**40.9**	**38.3**
Sample Weight (g)		**316.18**	**225.59**	**167.4**	**117.46**	**105.82**	**348.42**	**473.42**	**425.87**
Total Field Weight (g)		**729**	**502**	**383**	**263**	**239**	**753**	**1092**	**931**
Percent Lipids (%)		**1.4**	**0.89**	**1.2**	**0.61**	**1**	**0.95**	**0.74**	**0.77**
Location		**BR-3**	**BR-3**	**BR-3**	**BR-3**	**BR-3**	**BR-3b**	**BR-3b**	**BR-3b**
Metals									
Aluminum	140	2.1	5.6	1.9	1.2 U	1.1 U	1 U	2.3	1 U
Antimony	0.054	0.027 U	0.029 U	0.026 U	0.029 U	0.029 U	0.026 U	0.027 U	0.026 U
Arsenic	0.0021	0.038	0.031	0.024	0.044	0.034	0.023	0.02	0.024
Barium	9.5	0.11 U	0.12 U	0.1 U	0.12 U	0.11 U	0.1 U	0.11 U	0.1 U
Beryllium	0.27	0.011 U	0.012 U	0.01 U	0.012 U	0.011 U	0.01 U	0.011 U	0.01 U
Cadmium	0.14	0.0055 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0051 U	0.0054 U	0.0051 U
Calcium	- -	190	660	510	970	710	310	250	260
Chromium	0.41	4.6	2.5	2.7	4.1	0.73	1.3	1.4	2.7
Cobalt	2.7	0.034	0.022	0.021	0.036	0.0082	0.013	0.013	0.021
Copper	5.4	0.36	0.33	0.29	0.33	0.3	0.22	0.22	0.25
Iron	41	26	20	20	34	12	11	11	16
Lead	- -	0.014 U	0.014 U	0.013 U	0.015 U	0.014 U	0.013 U	0.013 U	0.013 U
Magnesium	- -	280	310	290	320	300	260	270	270
Manganese	19	0.59	0.46	0.43	0.7	0.29	0.26	0.24	0.42
Mercury	0.041	0.092	0.084	0.078	0.098	0.075	0.14	0.19	0.13
Nickel	2.7	2.6	1.5	1.6	2.5	0.38	0.73	0.84	1.6
Potassium	- -	3,700	4,200	3,900	3,600	4,100	4,000	4,000	4,200
Selenium	0.68	0.53 J	0.53 J	0.48 J	0.67 J	0.56 J	0.62 J	0.56 J	0.58 J
Silver	0.68	0.011 U	0.012 U	0.01 U	0.012 U	0.011 U	0.01 U	0.011 U	0.01 U
Sodium	- -	560	520	430	530	440	460	470	430
Thallium	0.0095	0.0055 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0051 U	0.0054 U	0.0051 U
Vanadium	0.14	0.039	0.029 U	0.026 U	0.029 U	0.029 U	0.026 U	0.027 U	0.026 U
Zinc	41	6.9	8.1	6.9	8.8	8.1	6.4	6.9	7.9

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13	BR3-FI-14	BR3-FI-15	BR3-FI-16
Sample Name		BR3-FI-9-FILL	BR3-FI-10-FILL	BR3-FI-11-FILL	BR3-FI-12-FILL	BR3-FI-13-FILL	BR3-FI-14-FILL	BR3-FI-15-FILL	BR3-FI-16-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		31.9	34.1	31.7	39.8	41.5	36.8	35.1	37.6
Sample Weight (g)		166.27	211.08	161.52	299.16	343.42	187.27	197.01	205.79
Total Field Weight (g)		392	499	418	757	872	439	478	558
Percent Lipids (%)		2.6	4.2	3	3.3	4.5	1.8	0.89	3.9
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
Metals									
Aluminum	140	1.1 U	1.2 U	1 U	1.1 U	2.4	1.2 U	0.96 U	1.1 U
Antimony	0.054	0.027 U	0.031 U	0.026 U	0.027 U	0.028 U	0.031 U	0.024 U	0.028 U
Arsenic	0.0021	0.044	0.061	0.04	0.051	0.045	0.056	0.029	0.038
Barium	9.5	0.13	0.12 U	0.18	0.11 U	0.16	0.12 U	0.1	0.14
Beryllium	0.27	0.011 U	0.012 U	0.01 U	0.011 U	0.011 U	0.012 U	0.0096 U	0.011 U
Cadmium	0.14	0.015	0.0068	0.0087	0.013	0.0088	0.0095	0.019	0.0069
Calcium	- -	810	220	710	270	410	370	450	440
Chromium	0.41	0.46	0.79	1.5	1.2	1.6	1.5	0.73	0.97
Cobalt	2.7	0.011	0.0082	0.018	0.016	0.018	0.02	0.016	0.014
Copper	5.4	0.42	0.37	0.4	0.39	0.41	0.28	0.37	0.35
Iron	41	12	9.6	19	13	18	14	12	13
Lead	- -	0.013 U	0.015 U	0.013 U	0.014 U	0.014 U	0.016 U	0.012 U	0.014 U
Magnesium	- -	250	260	260	260	270	260	230	230
Manganese	19	1.7	0.91	2.8	1.7	1.4	0.67	0.73	0.74
Mercury	0.041	0.038	0.038	0.03	0.07	0.12	0.11	0.12	0.11
Nickel	2.7	0.2	0.31	0.75	0.59	0.84	0.81	0.38	0.48
Potassium	- -	4,000	4,000	3,900	4,100	3,900	3,900	3,800	3,800
Selenium	0.68	0.49 J	0.63 J	0.51 J	0.62 J	0.54 J	0.41 J	0.47 J	0.43 J
Silver	0.68	0.011 U	0.012 U	0.01 U	0.011 U	0.011 U	0.012 U	0.0096 U	0.011 U
Sodium	- -	490	500	550	490	620	620	500	580
Thallium	0.0095	0.0054 U	0.0061 U	0.0051 U	0.0054 U	0.0056 U	0.0062 U	0.0048 U	0.0057 U
Vanadium	0.14	0.027 U	0.031 U	0.026 U	0.027 U	0.028 U	0.031 U	0.024 U	0.028 U
Zinc	41	7	7.9	8	8.4	9.2	11	11	9.8

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name		P1-FI-25-FILL	P1-FI-26-FILL	P1-FI-27-FILL	P1-FI-28-FILL	P1-FI-29-FILL	P1-FI-30-FILL	P1-FI-31-FILL	P1-FI-32-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Sample Weight (g)		395.28	336.56	219.15	207.46	194.02	373.02	205.92	345.35
Total Field Weight (g)		865	739	472	471	425	861	460	799
Percent Lipids (%)		0.74	0.77	0.61	9.6	0.45	0.41	0.4	0.51
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
Metals									
Aluminum	140	1.6 U	1.9 U	1.8 U	1.7 U	1.9 U	2 U	1.9 U	1.8
Antimony	0.054	0.041 U	0.048 U	0.046 U	0.043 U	0.049 U	0.049 U	0.047 U	0.042 U
Arsenic	0.0021	0.017	0.019 U	0.019	0.017 U	0.019 U	0.02 U	0.019 U	0.017 U
Barium	9.5	0.17 U	0.19 U	0.18 U	0.17 U	0.19 U	0.2 U	0.19 U	0.17 U
Beryllium	0.27	0.017 U	0.019 U	0.018 U	0.017 U	0.019 U	0.02 U	0.019 U	0.017 U
Cadmium	0.14	0.0083 U	0.0096 U	0.0092 U	0.0087 U	0.0097 U	0.0099 U	0.0093 U	0.0084 U
Calcium	- -	180 J	310 J	1,000 J	130 J	890 J	100 J	1,200 J	570 J
Chromium	0.41	1.9	1.4	1.7	1	1.8	0.5	1.2	2.4
Cobalt	2.7	0.013	0.012	0.012	0.0087 U	0.012	0.0099 U	0.011	0.016
Copper	5.4	0.21	0.17	0.21	0.16	0.22	0.16	0.2	0.2
Iron	41	12	11	19	6.6	19	3.9	22	20
Lead	- -	0.017 U	0.019 U	0.018 U	0.017 U	0.019 U	0.02 U	0.019 U	0.017 U
Magnesium	- -	300	280	310	270	300	300	310	310
Manganese	19	0.29	0.21	0.32	0.17 U	0.33	0.2 U	0.34	0.37
Mercury	0.041	0.16	0.12	0.078	0.11	0.083	0.18	0.14	0.19
Nickel	2.7	0.86	0.58	0.85	0.43	0.9	0.095	0.61	1.3
Potassium	- -	4,000	3,400	3,800	3,500	3,700	3,900	3,700	3,700
Selenium	0.68	0.34	0.31	0.32	0.33	0.39	0.39	0.36	0.31
Silver	0.68	0.017 U	0.019 U	0.018 U	0.017 U	0.019 U	0.02 U	0.019 U	0.017 U
Sodium	- -	520	500	480	540	540	550	540	580
Thallium	0.0095	0.0083 U	0.0096 U	0.0092 U	0.0087 U	0.0097 U	0.0099 U	0.0093 U	0.0084 U
Vanadium	0.14	0.074	0.082	0.095	0.096	0.27	0.1	0.11	0.067
Zinc	41	7.1	7.6	6.6	7.9	7.3	4.7	7.7	6.9

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human Consumption	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name		P1-FI-33-FILL	P1-FI-34-FILL	P1-FI-35-FILL	P1-FI-36-FILL	P1-FI-37-FILL	P1-FI-38-FILL	P1-FI-39-FILL	P1-FI-40-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Sample Weight (g)		313.54	217.93	268.92	278.52	396.84	298.28	286.44	287.6
Total Field Weight (g)		704	467	585	747	930	664	725	627
Percent Lipids (%)		2	1.4	2.8	1.6	2.4	1.8	3.5	2.8
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
Metals									
Aluminum	140	1.7 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	2	1.8 U
Antimony	0.054	0.043 U	0.048 U	0.049 U	0.047 U	0.045 U	0.044 U	0.038 U	0.046 U
Arsenic	0.0021	0.04	0.023	0.021	0.03	0.044	0.018 U	0.056	0.022
Barium	9.5	0.17 U	0.19 U	0.19 U	0.29	0.18 U	0.18 U	1.9	0.31
Beryllium	0.27	0.017 U	0.019 U	0.019 U	0.019 U	0.018 U	0.018 U	0.015 U	0.019 U
Cadmium	0.14	0.0087 U	0.0096 U	0.0097 U	0.023	0.009 U	0.0088 U	0.21	0.0093 U
Calcium	- -	230 J	430 J	600 J	580 J	250 J	230 J	14,000 J	1,300 J
Chromium	0.41	2.7	4.2	4.4	4.8	2.9	3.5	0.48	2.4
Cobalt	2.7	0.015	0.029	0.032	0.039	0.024	0.026	0.084	0.021
Copper	5.4	0.29	0.32	0.47	0.44	0.32	0.4	0.82	0.35
Iron	41	22	26	30	45	20	23	210	32
Lead	- -	0.017 U	0.019 U	0.019 U	0.019 U	0.018 U	0.018 U	0.2	0.037
Magnesium	- -	280	280	310	250	260	290	380	310
Manganese	19	0.5	1.3	1.8	1.3	1.1	2	17	3.5
Mercury	0.041	0.056	0.031	0.032	0.12	0.064	0.027	0.049	0.042
Nickel	2.7	0.61	2	2.1	2.4	1.4	1.7	1.1	1.3
Potassium	- -	3,600	3,600	3,300	3,100	3,400	3,500	2,600	3,700
Selenium	0.68	0.37	0.41	0.32	0.35	0.38	0.31	0.29	0.43
Silver	0.68	0.017 U	0.019 U	0.019 U	0.019 U	0.018 U	0.018 U	0.015 U	0.019 U
Sodium	- -	520	570	550	660	500	530	1,200	560
Thallium	0.0095	0.0087 U	0.0096 U	0.0097 U	0.0094 U	0.009 U	0.0088 U	0.0076 U	0.0093 U
Vanadium	0.14	0.043 U	0.048 U	0.049 U	0.05	0.045 U	0.044 U	0.059	0.046 U
Zinc	41	11	8.4	10	15	12	8.2	23	8.5

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	Consumption	P2-FI-49-FILL	P2-FI-50-FILL	P2-FI-51-FILL	P2-FI-52-FILL	P2-FI-53-FILL	P2-FI-54-FILL	P2-FI-55-FILL	P2-FI-56-FILL
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Sample Weight (g)		36.14	49.56	58.88	49.58	40.85	48.99	65.44	76.52
Total Field Weight (g)		104	151	159	154	154	131	166	219
Percent Lipids (%)		0.49	0.78	0.88	0.57	0.58	0.8	0.77	0.57
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
Metals									
Aluminum	140	1.6	1.4 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.5
Antimony	0.054	0.035 U	0.034 U	0.032 U	0.034 U	0.034 U	0.033 U	0.033 U	0.034 U
Arsenic	0.0021	0.055	0.037	0.05	0.042	0.042	0.039	0.038	0.068
Barium	9.5	0.14 U	0.14 U	0.13 U	0.14 U	0.16	0.13 U	0.13 U	0.14 U
Beryllium	0.27	0.014 U	0.014 U	0.013 U	0.014 U	0.013 U	0.013 U	0.013 U	0.014 U
Cadmium	0.14	0.039	0.011	0.011	0.031	0.012	0.0066 U	0.0066 U	0.027
Calcium	- -	800	360	540	970	1,700	1,000	620	1,500
Chromium	0.41	9.4	10	10	2.4	1.4	0.9	0.78	0.79
Cobalt	2.7	0.061	0.064	0.068	0.027	0.02	0.015	0.01	0.015
Copper	5.4	0.39	0.35	0.35	0.22	0.19	0.16	0.17	0.2
Iron	41	48	48	49	23	26	15	11	21
Lead	- -	0.014 U	0.014 U	0.013 U	0.014 U	0.013 U	0.013 U	0.013 U	0.016
Magnesium	- -	240 J	240 J	250 J	250 J	250 J	270 J	270 J	240 J
Manganese	19	2.5	1.8	2.3	2.9	1.8	1.1	0.95	0.87
Mercury	0.041	0.1	0.089	0.066	0.14	0.12	0.11	0.081	0.06
Nickel	2.7	5.2	5.4	5.1	1.1	0.61	0.38	0.29	0.38
Potassium	- -	3,200	3,100	3,100	3,200	2,900	3,200	3,200	2,600
Selenium	0.68	0.46	0.39	0.44	0.53	0.44	0.42	0.45	0.57
Silver	0.68	0.014 U	0.014 U	0.013 U	0.014 U	0.013 U	0.013 U	0.013 U	0.014 U
Sodium	- -	770	630	660	830	780	670	720	820
Thallium	0.0095	0.0071 U	0.0069 U	0.0063 U	0.0068 U	0.0067 U	0.0066 U	0.0066 U	0.0068 U
Vanadium	0.14	0.1	0.087	0.085	0.059	0.044	0.045	0.051	0.045
Zinc	41	10	8.5	9.1	10	13	9.2	9	10

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Human Consumption	P2-FI-57 P2-FI-57-FILL 9/27/2005 White Sucker Fillet 39.1 286.31 693 2.1 Pond F	P2-FI-58 P2-FI-58-FILL 9/27/2005 White Sucker Fillet 34.6 195.81 501 1.6 Pond F	P2-FI-59 P2-FI-59-FILL 9/27/2005 White Sucker Fillet 40.4 296.88 755 2.4 Pond F	P2-FI-60 P2-FI-60-FILL 9/27/2005 White Sucker Fillet 34.9 197.58 442 1.6 Pond F	P2-FI-61 P2-FI-61-FILL 9/27/2005 White Sucker Fillet 37 243.33 595 3.6 Pond F	P2-FI-62 P2-FI-62-FILL 9/27/2005 White Sucker Fillet 33 165.42 380 1.4 Pond F	P2-FI-63 P2-FI-63-FILL 9/27/2005 White Sucker Fillet 35.9 232.46 532 1.9 Pond F	P2-FI-64 P2-FI-64-FILL 9/27/2005 White Sucker Fillet 34.6 197.22 460 2.9 Pond F
Metals									
Aluminum	140	1.4 U	1.3 U	1.3 U	1.3 U	1.4	1.3 U	1.3 U	1.4 U
Antimony	0.054	0.035 U	0.032 U	0.033 U	0.034 U	0.033 U	0.032 U	0.034 U	0.035 U
Arsenic	0.0021	0.091	0.046	0.1	0.095	0.051	0.03	0.036	0.055
Barium	9.5	0.14 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14 U
Beryllium	0.27	0.014 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.014 U
Cadmium	0.14	0.0093	0.0067	0.017	0.0091	0.028	0.023	0.013	0.024
Calcium	- -	300	360	600	400	640	280	500	320
Chromium	0.41	0.6	0.53	0.52	0.69	0.63	0.46	0.39	0.56
Cobalt	2.7	0.0086	0.008	0.011	0.009	0.012	0.011	0.0098	0.011
Copper	5.4	0.24	0.32	0.29	0.26	0.29	0.27	0.28	0.26
Iron	41	9	9.9	12	11	13	10	9.6	8.2
Lead	- -	0.014 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.014 U
Magnesium	- -	230 J	250 J	280 J	270 J	270 J	240 J	230 J	230 J
Manganese	19	0.44	0.68	0.65	1.1	0.8	1.1	1.2	0.87
Mercury	0.041	0.091	0.065	0.16	0.07	0.13	0.059	0.054	0.071
Nickel	2.7	0.18	0.2	0.19	0.24	0.22	0.14	0.12	0.23
Potassium	- -	3,400	3,300	3,200	3,100	3,100	3,100	3,300	3,400
Selenium	0.68	0.45	0.41	0.41	0.42	0.42	0.44	0.42	0.34
Silver	0.68	0.014 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.014 U
Sodium	- -	620	630	700	680	630	730	600	580
Thallium	0.0095	0.007 U	0.0065 U	0.0067 U	0.0067 U	0.0066 U	0.0064 U	0.0067 U	0.0069 U
Vanadium	0.14	0.04	0.039	0.033 U	0.034 U	0.033 U	0.032 U	0.034 U	0.035 U
Zinc	41	7.7	9.2	9.9	7.3	8.3	7.1	7.6	7.2

TABLE 4-44
RESULTS FOR INORGANICS IN FISH FILLET SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Human	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103	P6-FI-104
Sample Name	Consumption	P6-FI-97-FILL	P6-FI-98-FILL	P6-FI-99-FILL	P6-FI-100-FILL	P6-FI-101-FILL	P6-FI-102-FILL	P6-FI-103-FILL	P6-FI-104-FILL
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet	Fillet
Length (cm)		34.6	36.6	31.4	38.5	29.9	31.9	31.3	39
Sample Weight (g)		246.51	322.08	163.93	322.83	147.5	192.86	197.95	404.87
Total Field Weight (g)		567	731	402	814	373	442	447	907
Percent Lipids (%)		0.56	0.73	0.58	0.51	0.88	0.71	0.71	0.67
Location		P6	P6	P6	P6	P6	P6	P6	P6
Metals									
Aluminum	140	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Antimony	0.054	0.031 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.034 U	0.032 U
Arsenic	0.0021	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
Barium	9.5	0.12 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Beryllium	0.27	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
Cadmium	0.14	0.0063 U	0.0066 U	0.0064 U	0.0066 U	0.0066 U	0.0063 U	0.0067 U	0.0064 U
Calcium	- -	140 J	300 J	360 J	120 J	300 J	900 J	170 J	360 J
Chromium	0.41	0.45	0.42	0.56	0.54	0.45	0.49	0.38	0.52
Cobalt	2.7	0.0063 U	0.0066 U	0.0064 U	0.0066 U	0.0066 U	0.0066	0.0067 U	0.0064 U
Copper	5.4	0.16	0.17	0.16	0.13	0.15	0.15	0.17	0.17
Iron	41	4.6	5.6	7	3.9	5.6	13	4.6	6.8
Lead	- -	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
Magnesium	- -	290	290	290	290	290	340	280	290
Manganese	19	0.15	0.19	0.23	0.13	0.2	0.23	0.16	0.22
Mercury	0.041	0.46	0.35	0.23	0.74	0.34	0.37	0.41	0.37
Nickel	2.7	0.2	0.18	0.24	0.22	0.21	0.21	0.16	0.22
Potassium	- -	3,800	3,800	3,900	3,600	3,600	4,000	3,700	3,600
Selenium	0.68	0.14 J	0.16 J	0.21 J	0.2 J	0.15 J	0.23 J	0.3 J	0.23 J
Silver	0.68	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
Sodium	- -	460	480	450	480	510	670	560	520
Thallium	0.0095	0.0063 U	0.0066 U	0.0064 U	0.0066 U	0.0066 U	0.0063 U	0.0067 U	0.0064 U
Vanadium	0.14	0.031 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.034 U	0.032 U
Zinc	41	5.7	5.6	6.2	4.8	4.7	4.7	4.6	4.9

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name	Receptor Food	BR1-FI-113-CALC	BR1-FI-114-CALC	BR1-FI-115-CALC	BR1-FI-116-CALC	BR1-FI-117-CALC	BR1-FI-118-CALC	BR1-FI-119-CALC	BR1-FI-120-CALC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Sample Weight (g)									
Total Field Weight (g)		1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)		4.6	5.9	6.1	4.4	3.6	3.5	6.1	1.3
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
Metals									
Aluminum	3.8	5.5 J	6.1 J	3.4 J	4.3 J	19 J	5.1 J	7.3 J	4.1 J
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.11	0.11	0.14	0.17	0.11	0.18	0.099	0.1
Barium	19.7	0.94	0.76	0.4	0.46	0.57	0.78	0.49	0.59
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.34	0.39	0.098	0.16	0.16	0.15	0.19	0.26
Calcium	- -	7,300 J	7,300 J	2,900 J	3,800 J	3,100 J	7,900 J	6,800 J	9,400 J
Chromium	0.83	3.1 J	2.3 J	1.5 J	1.6 J	5.5 J	2.9 J	1.9 J	2.5 J
Cobalt	- -	0.064	0.06	0.035	0.043	0.068	0.057	0.06	0.055
Copper	38.9	0.98	0.9	0.84	1.2	1.3	1.1	0.77	1.1
Iron	- -	110	100	56	60	88	110	100	120
Lead	0.94	0.41 J	0.29 J	0.091 J	0.079 J	0.1 J	0.083 J	0.17 J	0.19 J
Magnesium	- -	340 J	290 J	340 J	260 J	260 J	350 J	330 J	350 J
Manganese	322	21 J	17 J	5.1 J	9.5 J	14 J	16 J	9 J	11 J
Mercury	0.005	0.13	0.14	0.032	0.025	0.028	0.024	0.11	0.12
Nickel	64.08	1.2	1.4	0.78	0.87	3	1.8	1.1	1.6
Potassium	- -	2,900	2,400	4,400	2,900	3,100	3,100	2,700	2,700
Selenium	0.414	0.78	0.62	0.75	0.62	0.49	0.49	0.64	0.69
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	870	1,000	840	860	730	940	920	1,000
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.14	0.12	0.096	0.11	0.13	0.11	0.14	0.15
Zinc	12	16 J	14 J	14 J	13 J	11 J	16 J	12 J	14 J

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	Receptor Food	BR1-FI-121-CALC	BR1-FI-122-CALC	BR1-FI-123-CALC	BR1-FI-124-CALC	BR1-FI-125-CALC	BR1-FI-126-CALC	BR1-FI-127-CALC	BR1-FI-128-CALC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Sample Weight (g)									
Total Field Weight (g)		222	191	192	183	274	205	258	209
Percent Lipids (%)		4.1	6.5	9.7	3.6	6	7.5	5.8	6
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
Metals									
Aluminum	3.8	18 J	7.1 J	6.3 J	2.3 J	4.6 J	8.3 J	20 J	2.7 J
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.083	0.095	0.12	0.085	0.13	0.18	0.12	0.18
Barium	19.7	1.1	0.83	0.91	1.3	1.4	0.89	0.4	0.76
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.055	0.13	0.2	0.059	0.14	0.12	0.098	0.096
Calcium	- -	7,900 J	6,200 J	6,800 J	7,700 J	11,000 J	9,300 J	7,300 J	9,000 J
Chromium	0.83	7 J	3.6 J	5.8 J	2.9 J	3 J	5.8 J	1.9 J	1.9 J
Cobalt	- -	0.069	0.05	0.071	0.033	0.053	0.093	0.035	0.042
Copper	38.9	0.66	0.69	0.73	0.62	0.72	0.82	0.5	0.62
Iron	- -	140	120	130	110	180	380	110	130
Lead	0.94	0.23 J	0.18 J	0.21 J	0.11 J	0.24 J	0.56 J	0.16 J	0.16 J
Magnesium	- -	340 J	300 J	330 J	350 J	430 J	370 J	270 J	350 J
Manganese	322	10 J	17 J	25 J	4.6 J	11 J	17 J	9.2 J	8.2 J
Mercury	0.005	0.078	0.047	0.051	0.13	0.072	0.048	0.073	0.044
Nickel	64.08	4.3	2.2	3.4	1.8	2.3	3.5	1.3	1.4
Potassium	- -	2,600	2,600	2,600	2,500	2,700	2,600	2,300	2,700
Selenium	0.414	0.7	0.55	0.6	0.61	0.61	0.5	0.53	0.51
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	850	850	810	1,000	950	1,000	840	1,000
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.16	0.13	0.16	0.13	0.13	0.23	0.13	0.19
Zinc	12	15 J	15 J	15 J	18 J	16 J	17 J	12 J	15 J

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological Receptor Food	BR1-FI-129	BR1-FI-130	BR1-FI-131	BR1-FI-132	BR1-FI-133	BR1-FI-134	BR1-FI-135	BR1-FI-136
Sample Name		BR1-FI-129-COMP	BR1-FI-130-COMP	BR1-FI-131-COMP	BR1-FI-132-COMP	BR1-FI-133-COMP	BR1-FI-134-COMP	BR1-FI-135-COMP	BR1-FI-136-COMP
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		14.6 - 15.4	13.9 - 15.4	14.4 - 15.9	15.2 - 15.6	13.8 - 14.8	11.5 - 14.7	11.6 - 15.3	11.9 - 14.2
Sample Weight (g)		119.38	118.6	124.79	126.57	109.79	94.42	102.17	122.47
Total Field Weight (g)		122	120	127	129	112	96	104	126
Percent Lipids (%)		8	8.1	11	8.4	7.6	6.6	7	9.1
Location		BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
Metals									
Aluminum	3.8	4.4	6.5	6.6	6.3	7.2	10	9.2	7.6
Antimony	0.248	0.034 U	0.034 U	0.034 U	0.034 U	0.032 U	0.03 U	0.034 U	0.03 U
Arsenic	0.25	0.099	0.1	0.081	0.092	0.078	0.087	0.084	0.085
Barium	19.7	1.6	1.4	1.5	1.4	1.2	1.4	1.3	1.4
Beryllium	500	0.014 U	0.014 U	0.014 U	0.014 U	0.013 U	0.012 U	0.014 U	0.012 U
Cadmium	2.86	0.051	0.058	0.044	0.048	0.048	0.046	0.051	0.066
Calcium	- -	9,500 J	9,300 J	10,000 J	8,100 J	8,200 J	7,300 J	7,000 J	7,800 J
Chromium	0.83	1.3 J	1.2 J	0.76 J	0.72 J	0.75 J	2.6 J	1.4 J	0.79 J
Cobalt	- -	0.069	0.067	0.061	0.057	0.058	0.066	0.058	0.06
Copper	38.9	0.65	0.65	0.61	0.62	0.79	0.59	0.74	0.61
Iron	- -	150	150	160	140	140	140	130	140
Lead	0.94	0.095	0.12	0.12	0.14	0.14	0.18	0.18	0.14
Magnesium	- -	380	400	400	340	330	340	310	340
Manganese	322	11	9.2	10	9.6	9	10	9.3	10
Mercury	0.005	0.03	0.028	0.029	0.025	0.028	0.031	0.029	0.026
Nickel	64.08	1	0.98	0.77	0.67	0.67	1.4	0.88	0.67
Potassium	- -	3,000	3,100	2,900	2,800	2,500	2,700	2,700	2,800
Selenium	0.414	0.69	0.7	0.72	0.65	0.59	0.6	0.59	0.72
Silver	6	0.014 U	0.014 U	0.014 U	0.014 U	0.013 U	0.012 U	0.014 U	0.012 U
Sodium	- -	740	740	770	720	670	650	620	660
Thallium	0.027	0.0068 U	0.0069 U	0.0069 U	0.0068 U	0.0063 U	0.006 U	0.0068 U	0.006 U
Vanadium	0.714	0.057	0.068	0.062	0.057	0.061	0.069	0.063	0.053
Zinc	12	38	38	37	33	32	34	29	38

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological Receptor Food	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name		BR2-FI-73-CALC	BR2-FI-74-CALC	BR2-FI-75-CALC	BR2-FI-76-CALC	BR2-FI-77-CALC	BR2-FI-78-CALC	BR2-FI-79-CALC	BR2-FI-80-CALC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		30.7	30	30.4	25.2	25.8	25.4	25	24.3
Sample Weight (g)									
Total Field Weight (g)		471	414	543	231	264	260	229	236
Percent Lipids (%)		2.9	4.3	5.9	3.4	6.8	3.7	4	5.1
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
Metals									
Aluminum	3.8	ND	ND	2.1	7.9	1.8	ND	1.2	ND
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.059	0.056	0.05	0.087	0.059	0.056	0.058	0.064
Barium	19.7	0.46	0.54	0.46	0.73	0.63	0.26	0.57	0.22
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.073	0.077	0.043	0.066	0.084	0.073	0.048	0.032
Calcium	- -	8,900 J	8,800 J	7,200 J	7,200 J	5,100 J	4,700 J	5,300 J	5,400 J
Chromium	0.83	2.3 J	1.8 J	1.7 J	2.2 J	1.9 J	2.3 J	2.1 J	1.9 J
Cobalt	- -	0.043	0.041	0.035	0.044	0.038	0.034	0.036	0.034
Copper	38.9	0.65	0.54	0.76	1.4	1.1	0.58	0.89	0.48
Iron	- -	98 J	110 J	92 J	100 J	81 J	70 J	75 J	79 J
Lead	0.94	0.024	0.14	0.032	0.022	0.027	0.026	0.023	0.014
Magnesium	- -	330 J	340 J	300 J	300 J	280 J	280 J	260 J	300 J
Manganese	322	1.7 J	1.4 J	1.9 J	3.8 J	2.5 J	1.4 J	2.9 J	1.3 J
Mercury	0.005	0.072 J	0.094 J	0.041 J	0.081 J	0.068 J	0.065 J	0.065 J	0.045 J
Nickel	64.08	1.4 J	1.2 J	0.96 J	1.5 J	1.2 J	1.4 J	1.3 J	1.2 J
Potassium	- -	2,900	3,000	2,800	2,900	3,100	3,000	2,900	3,100
Selenium	0.414	0.61 J	0.55 J	0.54 J	0.68 J	0.62 J	0.7 J	0.5 J	0.58 J
Silver	6	ND	ND	ND	0.013	ND	ND	ND	ND
Sodium	- -	950 J	850 J	850 J	940 J	840 J	910 J	880 J	900 J
Thallium	0.027	0.0046	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.032	0.031	0.029	0.031	0.028	0.036	0.033	0.025
Zinc	12	12 J	12 J	10 J	12 J	11 J	12 J	11 J	12 J

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name	Receptor Food	BR2-FI-81-CALC	BR2-FI-82-CALC	BR2-FI-83-CALC	BR2-FI-84-CALC	BR2-FI-85-CALC	BR2-FI-86-CALC	BR2-FI-87-CALC	BR2-FI-88-CALC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Sample Weight (g)									
Total Field Weight (g)		968	697	509	643	600	398	714	521
Percent Lipids (%)		8.4	5.1	5	6.9	3.3	3	5.7	2.8
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
Metals									
Aluminum	3.8	1.6	1.9	11	50	13	12	9.6	15
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.073	0.082	0.091	0.073	0.11	0.1	0.074	0.073
Barium	19.7	0.72	0.79	0.84	1.3	0.95	1.1	0.8	0.85
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.17	0.18	0.088	0.25	0.21	0.13	0.13	0.13
Calcium	- -	8,500 J	8,400 J	4,700 J	6,000 J	4,500 J	5,400 J	4,100 J	5,900 J
Chromium	0.83	1 J	1.1 J	1.7 J	2 J	2.6 J	3 J	1.7 J	2.6 J
Cobalt	- -	0.05	0.065	0.052	0.073	0.069	0.071	0.05	0.063
Copper	38.9	0.72	0.64	0.76	0.87	0.98	0.7	0.7	0.81
Iron	- -	120 J	130 J	89 J	120 J	120 J	120 J	83 J	110 J
Lead	0.94	0.069	0.079	0.094	0.11	0.11	0.11	0.085	0.1
Magnesium	- -	320 J	280 J	240 J	250 J	250 J	270 J	240 J	240 J
Manganese	322	12 J	16 J	17 J	24 J	21 J	24 J	16 J	15 J
Mercury	0.005	0.075 J	0.12 J	0.029 J	0.066 J	0.11 J	0.041 J	0.053 J	0.097 J
Nickel	64.08	0.82 J	0.81 J	1.1 J	1.2 J	1.5 J	1.9 J	0.99 J	1.6 J
Potassium	- -	2,900	2,900	2,900	2,800	3,200	3,100	3,000	2,700
Selenium	0.414	0.55 J	0.46 J	0.39 J	0.42 J	0.58 J	0.39 J	0.47 J	0.5 J
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	840 J	830 J	710 J	680 J	880 J	770 J	690 J	760 J
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.058	0.089	0.1	0.12	0.11	0.11	0.076	0.09
Zinc	12	14 J	17 J	11 J	13 J	15 J	13 J	11 J	15 J

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR2-FI-89	BR2-FI-90	BR2-FI-91	BR2-FI-92	BR2-FI-93	BR2-FI-94	BR2FI-95	BR2-FI-96
Sample Name	Receptor Food	BR2-FI-89-COMP	BR2-FI-90-COMP	BR2-FI-91-COMP	BR2-FI-92-COMP	BR2-FI-93-COMP	BR2-FI-94-COMP	BR2-FI-95-COMP	BR2-FI-96-COMP
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		10.8 - 15	10.8 - 13.5	11.6 - 12.2	10.6 - 13.2	10.4 - 14.9	9.9 - 11.7		10.6 - 14.2
Sample Weight (g)		89.65	71.84	64.89	70.27	79.29	53.12	70.52	171.03
Total Field Weight (g)		91	72	65	71	80	55		176
Percent Lipids (%)		9.4	8.8	7.6	6.9	7.5	8.9	7.5	6.8
Location		BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
Metals									
Aluminum	3.8	7.4	8.8	4.9	15	5	3.4	6	10
Antimony	0.248	0.03 U	0.031 U	0.033 U	0.034 U	0.03 U	0.033 U	0.033 U	0.034 U
Arsenic	0.25	0.085	0.086	0.06	0.085	0.097	0.097	0.082	0.12
Barium	19.7	1.7	2.1	1.6	2.2	1.8	1.7	2	2
Beryllium	500	0.012 U	0.012 U	0.013 U	0.014 U	0.012 U	0.013 U	0.013 U	0.013 U
Cadmium	2.86	0.059	0.059	0.042	0.055	0.042	0.055	0.067	0.062
Calcium	- -	7,600 J	9,000 J	7,400 J	9,000 J	9,200 J	7,500 J	7,100 J	8,500 J
Chromium	0.83	2.7 J	0.68 J	0.56 J	0.64 J	0.36 J	0.53 J	0.48 J	1 J
Cobalt	- -	0.069	0.066	0.053	0.066	0.058	0.061	0.056	0.07
Copper	38.9	0.61	0.64	0.51	0.53	0.53	0.58	0.57	0.64
Iron	- -	150	160	130	180	160	150	140	170
Lead	0.94	0.14	0.14	0.082	0.14	0.098	0.056	0.11	0.16
Magnesium	- -	350	370	330	370	340	360	320	370
Manganese	322	15	11	7.5	12	9.7	9.4	8.2	11
Mercury	0.005	0.031	0.037	0.028	0.025	0.027	0.029	0.03	0.027
Nickel	64.08	1.4	0.71	0.6	0.7	0.6	0.63	0.54	0.89
Potassium	- -	2,900	2,900	2,400	2,800	2,400	2,800	2,700	2,900
Selenium	0.414	0.64	0.7	0.65	0.54	0.57	0.71	0.63	0.74
Silver	6	0.012 U	0.012 U	0.013 U	0.014 U	0.012 U	0.013 U	0.013 U	0.013 U
Sodium	- -	690	740	590	710	670	650	650	740
Thallium	0.027	0.006 U	0.0061 U	0.0066 U	0.0069 U	0.006 U	0.0067 U	0.0066 U	0.0067 U
Vanadium	0.714	0.071	0.051	0.049	0.064	0.048	0.04	0.049	0.065
Zinc	12	39	47	39	43	40	47	35	44

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological Receptor Food	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name		BR3-FI-1-CALC	BR3-FI-2-CALC	BR3-FI-3-CALC	BR3-FI-4-CALC	BR3-FI-5-CALC	BR3-FI-6-CALC	BR3-FI-7-CALC	BR3-FI-8-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		33.9	31.1	28.4	26.9	25.3	35.2	40.9	38.3
Sample Weight (g)									
Total Field Weight (g)		729	502	383	263	239	753	1092	931
Percent Lipids (%)		3.3	2.9	4.5	1.6	3	2.6	3.5	2.8
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
Metals									
Aluminum	3.8	1.7	2.9	1.2	ND	1.4	2.5	3	0.97
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.051	0.038	0.035	0.035	0.035	0.032	0.03	0.027
Barium	19.7	0.48	0.35	0.78	0.29	0.3	0.7	0.79	0.41
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.092	0.041	0.051	0.047	0.061	0.064	0.11	0.064
Calcium	- -	8,600	7,700	15,000	5,500	5,600	8,800	9,400	11,000
Chromium	0.83	2.6 J	1.5 J	1.6 J	2.6 J	1.1 J	1.3 J	1.1 J	1.7 J
Cobalt	- -	0.056	0.045	0.075	0.048	0.04	0.06	0.06	0.068
Copper	38.9	0.91	0.51	0.47	0.67	0.56	0.74	0.87	0.57
Iron	- -	120	110	200	91	87	140	150	160
Lead	0.94	0.067	0.031	0.031	0.016	0.023	0.061	0.05	0.033
Magnesium	- -	370 J	360 J	470 J	330 J	330 J	370 J	370 J	390 J
Manganese	322	3.1	1.4	2.2	1.3	1.9	2.9	3.2	2.4
Mercury	0.005	0.067 J	0.059 J	0.058 J	0.074 J	0.057 J	0.1 J	0.13 J	0.093 J
Nickel	64.08	1.8	1.2	1.7	1.9	0.93	1.2	1.1	1.6
Potassium	- -	3,000	3,200	3,100	3,100	3,300	3,100	3,100	3,200
Selenium	0.414	0.56 J	0.55 J	0.52 J	0.6 J	0.59 J	0.67 J	0.61 J	0.63 J
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	1,000	990	960	950	800	960	1,000	1,000
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.041	0.024	0.034	0.027	0.032	0.037	0.049	0.033
Zinc	12	13	12	12	13	12	11	12	13

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13	BR3-FI-14	BR3-FI-15	BR3-FI-16
Sample Name	Receptor Food	BR3-FI-9-CALC	BR3-FI-10-CALC	BR3-FI-11-CALC	BR3-FI-12-CALC	BR3-FI-13-CALC	BR3-FI-14-CALC	BR3-FI-15-CALC	BR3-FI-16-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		31.9	34.1	31.7	39.8	41.5	36.8	35.1	37.6
Sample Weight (g)									
Total Field Weight (g)		392	499	418	757	872	439	478	558
Percent Lipids (%)		3.5	5.2	4.8	6.5	10	3	1.3	6.6
Location		BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
Metals									
Aluminum	3.8	ND	8.5	15	24	17	2.2	7.5	1.9
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.043	0.062	0.081	0.085	0.062	0.066	0.052	0.045
Barium	19.7	0.27	0.58	0.89	0.6	0.77	0.79	0.72	0.65
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.04	0.04	0.056	0.081	0.12	0.11	0.17	0.075
Calcium	- -	2,200	4,800	5,400	3,800	4,800	11,000	5,800	4,000
Chromium	0.83	0.42 J	1.7 J	3.6 J	2 J	1.3 J	1.2 J	0.99 J	0.7 J
Cobalt	- -	0.022	0.044	0.071	0.065	0.063	0.085	0.074	0.048
Copper	38.9	0.52	0.62	0.92	0.92	0.99	0.78	0.89	0.8
Iron	- -	34	81	130	120	110	160	110	71
Lead	0.94	0.01	0.056	0.11	0.24	0.14	0.11	0.16	0.069
Magnesium	- -	210 J	260 J	270 J	250 J	270 J	410 J	290 J	230 J
Manganese	322	4.2	8.6	17	16	14	8.5	8.7	6.9
Mercury	0.005	0.029 J	0.028 J	0.027 J	0.05 J	0.076 J	0.073 J	0.08 J	0.069 J
Nickel	64.08	0.28	1.3	2.6	1.3	0.93	1.2	0.84	0.51
Potassium	- -	2,900	2,900	3,000	2,800	2,600	3,000	2,900	2,900
Selenium	0.414	0.42 J	0.38 J	0.42 J	0.46 J	0.52 J	0.42 J	0.42 J	0.34 J
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	580	630	720	660	760	1,100	840	820
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.036	0.078	0.092	0.087	0.071	0.072	0.084	0.072
Zinc	12	8.6	11	11	12	14	18	16	14

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological Receptor Food	BR3-FI-17	BR3-FI-18	BR3-FI-19	BR3-FI-20	BR3-FI-21	BR3-FI-22	BR3-FI-23	BR3-FI-24
Sample Name		BR3-FI-17-COMP	BR3-FI-18-COMP	BR3-FI-19-COMP	BR3-FI-20-COMP	BR3-FI-21-COMP	BR3-FI-22-COMP	BR3-FI-23-COMP	BR3-FI-24-COMP
Date Collected		9/28/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner	Common Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		11.3 - 13.9	11.2 - 14.7	14.2 - 15.1	14.1 - 14.9	14.4 - 15.2	11.6 - 15.2	11.1 - 15.5	13.4 - 15.7
Sample Weight (g)		43.41	51.94	73.56	78.91	79.12	61.1	54.77	266.34
Total Field Weight (g)		44	54	74	79	80	63	57	268
Percent Lipids (%)		2.1	4.9	5.7	4.1	4.2	7.6	2.8	4.6
Location		BR-3b	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3
Metals									
Aluminum	3.8	1.6	23	8.7	22	15	9.1	12	8.4
Antimony	0.248	0.031 U	0.03 U	0.031 U	0.032 U	0.036 U	0.03 U	0.032 U	0.032 U
Arsenic	0.25	0.069	0.24	0.15	0.2	0.2	0.13	0.15	0.13
Barium	19.7	1.8	2	1.3	2.4	1.9	1.8	2.7	1.9
Beryllium	500	0.012 UJ	0.012 UJ	0.012 UJ	0.013 UJ	0.014 UJ	0.012 UJ	0.013 UJ	0.013 UJ
Cadmium	2.86	0.045	0.077	0.061	0.066	0.065	0.052	0.067	0.058
Calcium	- -	10,000	7,600	7,900	8,600	8,500	9,500	9,800	12,000
Chromium	0.83	0.97 J	1.4 J	0.72 J	0.94 J	0.94 J	0.61 J	0.96 J	1.8 J
Cobalt	- -	0.057	0.095	0.064	0.089	0.077	0.063	0.07	0.081
Copper	38.9	0.5 J	0.9 J	0.66 J	0.96 J	0.76 J	0.55 J	0.69 J	0.68 J
Iron	- -	160	220	160	220	200	190	200	220
Lead	0.94	0.059	0.38	0.15	0.43	0.27	0.13	0.22	0.17
Magnesium	- -	380	380	370	400	390	400	410	430
Manganese	322	6.4	23	13	24	14	10	14	14
Mercury	0.005	0.033	0.024	0.024	0.024	0.025	0.026	0.023	0.023
Nickel	64.08	0.97	1.1	0.72	0.88	0.87	0.76	0.93	1.5
Potassium	- -	3,100	3,100	3,300	3,100	3,100	3,000	3,200	3,200
Selenium	0.414	0.51	0.59	0.64	0.63	0.66	0.61	0.71	0.59
Silver	6	0.012 U	0.012 U	0.012 U	0.013 U	0.014 U	0.012 U	0.013 U	0.013 U
Sodium	- -	720	820	750	790	830	720	830	750
Thallium	0.027	0.0062 U	0.0061 U	0.0062 U	0.0064 U	0.0071 U	0.006 U	0.0065 U	0.0063 U
Vanadium	0.714	0.031 U	0.12	0.09	0.12	0.12	0.084	0.1	0.092
Zinc	12	41	34	32	34	36	32	44	35

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	P1-FI-25 P1-FI-25-CALC 9/27/2005 Largemouth Bass Calc whole body 36.2 865 4 Pond A	P1-FI-26 P1-FI-26-CALC 9/27/2005 Largemouth Bass Calc whole body 35.8 739 3.3 Pond A	P1-FI-27 P1-FI-27-CALC 9/27/2005 Largemouth Bass Calc whole body 31.5 472 3.5 Pond A	P1-FI-28 P1-FI-28-CALC 9/27/2005 Largemouth Bass Calc whole body 32.1 471 6.3 Pond A	P1-FI-29 P1-FI-29-CALC 9/27/2005 Largemouth Bass Calc whole body 30.7 425 2.6 Pond A	P1-FI-30 P1-FI-30-CALC 9/27/2005 Largemouth Bass Calc whole body 37.9 861 2.4 Pond A	P1-FI-31 P1-FI-31-CALC 9/27/2005 Largemouth Bass Calc whole body 32.4 460 1.3 Pond A	P1-FI-32 P1-FI-32-CALC 9/27/2005 Largemouth Bass Calc whole body 37.1 799 3.2 Pond A
Metals									
Aluminum	3.8	ND	ND	ND	ND	ND	ND	ND	5.5
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.046	0.032	0.047	0.029	0.028	0.042	0.031	0.042
Barium	19.7	0.52	0.28	0.38	0.27	0.28	0.37	0.36	0.55
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.1	0.12	0.032	0.056	0.025	0.095	0.077	0.084
Calcium	- -	11,000 J	8,000 J	14,000 J	9,700 J	8,800 J	13,000 J	11,000 J	14,000 J
Chromium	0.83	1.2	0.95	1.2	0.89	1.4	0.56	0.86	2.2
Cobalt	- -	0.064	0.05	0.078	0.051	0.054	0.073	0.069	0.089
Copper	38.9	0.38	0.37	0.3	0.35	0.34	0.33	0.34	0.51
Iron	- -	160	120	210	150	140	200	200	240
Lead	0.94	0.072	0.068	0.033	0.025	0.03	0.07	0.043	0.051
Magnesium	- -	400	360	480	370	370	450	420	460
Manganese	322	1.3	1.6	1.8	1.3	1.6	1.7	1.8	2.2
Mercury	0.005	0.11	0.083	0.058	0.077	0.061	0.12	0.092	0.12
Nickel	64.08	1.1	0.91	1.4	0.95	1.2	1	1.2	2.1
Potassium	- -	3,000	2,800	3,100	2,900	2,900	3,000	3,000	2,900
Selenium	0.414	0.43	0.4	0.44	0.44	0.46	0.53	0.47	0.42
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	1,000	970	1,000	1,000	940	1,100	1,100	1,100
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.064	0.06	0.055	0.054	0.16	0.055	0.072	0.066
Zinc	12	13	13	14	15	12	12	14	15

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name	Receptor Food	P1-FI-33-CALC	P1-FI-34-CALC	P1-FI-35-CALC	P1-FI-36-CALC	P1-FI-37-CALC	P1-FI-38-CALC	P1-FI-39-CALC	P1-FI-40-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Sample Weight (g)									
Total Field Weight (g)		704	467	585	747	930	664	725	627
Percent Lipids (%)		6.2	3.3	7.4	5.1	8.1	5.3	2.3	6.5
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
Metals									
Aluminum	3.8	5.4	5	13	18	11	21	1.3	8.1
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.38	0.052	0.076	0.072	0.091	0.091	0.065	0.062
Barium	19.7	0.77	0.69	0.8	1.3	1.2	0.65	0.96	0.87
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.086	0.047	0.039	0.21	0.11	0.044	0.097	0.054
Calcium	- -	5,400 J	7,100 J	5,800 J	10,000 J	8,200 J	6,200 J	6,300 J	5,800 J
Chromium	0.83	1.8	2.7	3.8	2.9	3	5.5	1.8	3.4
Cobalt	- -	0.065	0.061	0.076	0.093	0.092	0.084	0.049	0.062
Copper	38.9	0.82	0.58	0.99	0.73	0.8	0.81	0.59	0.56
Iron	- -	210	130	170	230	190	170	110	140
Lead	0.94	0.088	0.048	0.43	0.32	0.17	0.11	0.093	0.19
Magnesium	- -	340	320	340	360	350	320	310	300
Manganese	322	13	12	16	10	19	17	7.9	13
Mercury	0.005	0.038	0.023	0.022	0.071	0.041	0.019	0.084	0.028
Nickel	64.08	0.87	1.7	2.2	2.1	2.1	3.1	1.3	2.4
Potassium	- -	2,900	3,000	2,700	2,400	2,700	2,900	3,200	3,100
Selenium	0.414	0.44	0.43	0.39	0.34	0.43	0.35	0.34	0.41
Silver	6	ND	ND	0.014	ND	ND	ND	ND	ND
Sodium	- -	880	880	880	1,100	930	870	890	840
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.045	0.071	0.088	0.092	0.086	0.092	0.064	0.093
Zinc	12	17	13	16	20	19	13	16	11

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P1-FI-41	P1-FI-42	P1-FI-43	P1-FI-44	P1-FI-45	P1-FI-46	P1-FI-47	P1-FI-48
Sample Name	Receptor Food	P1-FI-41-COMP	P1-FI-42-COMP	P1-FI-43-COMP	P1-FI-44-COMP	P1-FI-45-COMP	P1-FI-46-COMP	P1-FI-47-COMP	P1-FI-48-COMP
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		11.1 - 12.8	9.6 - 11	10.4 - 10.7	10.1 - 11.7	8.9 - 12.6	8.9 - 11.4	9.2 - 12	7.6 - 12.3
Sample Weight (g)		105.24	64.53	69.91	87.43	62.28	70.9	73.37	187.55
Total Field Weight (g)		108	67	73	90	65	74	76	195
Percent Lipids (%)		4.6	4.2	4.5	3.9	2.8	5.1	6	4.2
Location		Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
Metals									
Aluminum	3.8	4	4	2.9	5	3.6	4.3	1.5	4.1
Antimony	0.248	0.034 U	0.032 U	0.034 U	0.034 U	0.031 U	0.032 U	0.032 U	0.033 U
Arsenic	0.25	0.1	0.058	0.072	0.22	0.042	0.047	0.042	0.053
Barium	19.7	0.89	1.2	1.1	1.3	0.69	1.2	1.4	1.4
Beryllium	500	0.014 U	0.013 U	0.014 U	0.014 U	0.013 U	0.013 U	0.013 U	0.013 U
Cadmium	2.86	0.024	0.029	0.022	0.029	0.017	0.034	0.025	0.025
Calcium	- -	8,600	10,000	9,600	11,000	7,700	12,000	11,000	11,000
Chromium	0.83	2	1.1	0.76	0.8	0.41	0.84	0.57	0.65
Cobalt	- -	0.056	0.056	0.047	0.066	0.032	0.065	0.058	0.06
Copper	38.9	0.34	0.34	0.34	0.37	0.21	0.38	0.3	0.35
Iron	- -	160	150	150	230	140	200	190	190
Lead	0.94	0.12	0.15	0.12	0.2	0.074	0.23	0.13	0.17
Magnesium	- -	340 J	380 J	380 J	420 J	320 J	440 J	430 J	430 J
Manganese	322	11	14	13	16	8.3	9.8	14	14
Mercury	0.005	0.015	0.015	0.014	0.02	0.016	0.018	0.017	0.019
Nickel	64.08	1.2	0.84	0.63	0.75	0.35	0.82	0.65	0.69
Potassium	- -	2,300	2,600	2,600	2,700	1,600	2,800	2,700	2,600
Selenium	0.414	0.36 J	0.28 J	0.26 J	0.27 J	0.2 J	0.29 J	0.3 J	0.31 J
Silver	6	0.014 U	0.013 U	0.014 U	0.014 U	0.013 U	0.013 U	0.013 U	0.013 U
Sodium	- -	760	810	820	860	720	900	840	890
Thallium	0.027	0.0068 U	0.0065 U	0.0069 U	0.0068 U	0.0063 U	0.0065 U	0.0065 U	0.0066 U
Vanadium	0.714	0.048	0.044	0.036	0.05	0.036	0.032 U	0.034	0.051
Zinc	12	14	18	18	18	11	22	20	20

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	Receptor Food	P2-FI-49-CALC	P2-FI-50-CALC	P2-FI-51-CALC	P2-FI-52-CALC	P2-FI-53-CALC	P2-FI-54-CALC	P2-FI-55-CALC	P2-FI-56-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Sample Weight (g)									
Total Field Weight (g)		104	151	159	154	154	131	166	219
Percent Lipids (%)		1.4	3.1	3.3	1.2	1.6	3.4	2.9	2.1
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
Metals									
Aluminum	3.8	3.7	2.8	3.1	1.6	2.7	6	3.3	11
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.094	0.089	0.1	0.056	0.09	0.14	0.089	0.12
Barium	19.7	1.6	1	2.6	1.6	2.3	1.6	1.2	1.1
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.31	0.066	0.11	0.14	0.1	0.07	0.048	0.12
Calcium	- -	15,000	9,500	11,000	12,000	15,000	12,000	9,100	14,000
Chromium	0.83	5.9	5.7	5.9	1.2	0.89	0.85	0.96	1
Cobalt	- -	0.13	0.099	0.13	0.079	0.12	0.11	0.065	0.083
Copper	38.9	0.65	0.52	0.78	0.32	0.55	0.45	0.44	0.73
Iron	- -	210 J	180 J	190 J	150 J	230 J	240 J	180 J	220 J
Lead	0.94	0.25	0.14	0.12	0.15	0.15	0.17	0.11	0.33
Magnesium	- -	420 J	390 J	410 J	380 J	440 J	420 J	360 J	420 J
Manganese	322	48 J	29 J	70 J	45 J	62 J	47 J	18 J	10 J
Mercury	0.005	0.068	0.067	0.049	0.09	0.082	0.083	0.061	0.043
Nickel	64.08	4	3.5	3.6	1	1.1	0.91	0.85	1
Potassium	- -	2,700	2,800	2,600	2,300	2,300	2,700	2,700	2,400
Selenium	0.414	0.47	0.48	0.44	0.44	0.5	0.47	0.49	0.56
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	1,300	1,000	1,000	1,100	1,400	1,000	930	1,000
Thallium	0.027	0.0059	ND	0.0054	ND	ND	ND	ND	ND
Vanadium	0.714	0.11	0.11	0.099	0.074	0.076	0.082	0.078	0.12
Zinc	12	20	19	19	15	23	20	19	19

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name	Receptor Food	P2-FI-57-CALC	P2-FI-58-CALC	P2-FI-59-CALC	P2-FI-60-CALC	P2-FI-61-CALC	P2-FI-62-CALC	P2-FI-63-CALC	P2-FI-64-CALC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body	Calc whole body
Length (cm)		39.1	34.6	40.4	34.9	37	33	35.9	34.6
Sample Weight (g)									
Total Field Weight (g)		693	501	755	442	595	380	532	460
Percent Lipids (%)		4.7	2.7	7.4	4.4	9.2	2.7	4.2	4.7
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
Metals									
Aluminum	3.8	14	ND	1.5	5.4	1	2.3	9.2	3
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.12	0.065	0.11	0.11	0.075	0.049	0.063	0.078
Barium	19.7	0.91	0.55	0.72	0.68	0.48	0.54	0.53	0.46
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.076	0.04	0.088	0.034	0.083	0.058	0.034	0.053
Calcium	- -	9,000	6,900	8,900	6,200	5,700	5,800	5,700	4,400
Chromium	0.83	1.2	0.55	0.55	0.81	0.62	0.53	0.42	0.51
Cobalt	- -	0.07	0.044	0.055	0.044	0.048	0.048	0.043	0.041
Copper	38.9	0.77	0.47	0.67	0.55	0.68	0.59	0.52	0.51
Iron	- -	180 J	120 J	140 J	120 J	110 J	120 J	110 J	97 J
Lead	0.94	0.27	0.048	0.12	0.12	0.057	0.08	0.058	0.066
Magnesium	- -	370 J	330 J	350 J	330 J	300 J	300 J	290 J	280 J
Manganese	322	7.4 J	6.5 J	5.1 J	6.6 J	5 J	7.2 J	6.6 J	7.7 J
Mercury	0.005	0.062	0.047	0.1	0.053	0.11	0.043	0.04	0.051
Nickel	64.08	0.74	0.52	0.6	0.57	0.48	0.45	0.41	0.42
Potassium	- -	2,800	3,000	2,700	2,800	2,700	2,700	2,800	3,000
Selenium	0.414	0.5	0.43	0.48	0.43	0.46	0.45	0.44	0.37
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	1,000	950	990	870	830	970	850	850
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.084	0.061	0.05	0.049	0.042	0.046	0.045	0.055
Zinc	12	17	14	18	13	14	14	12	12

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P2-FI-65	P2-FI-66	P2-FI-67	P2-FI-68	P2-FI-69	P2-FI-70	P2-FI-71	P2-FI-72
Sample Name	Receptor Food	P2-FI-65-COMP	P2-FI-66-COMP	P2-FI-67-COMP	P2-FI-68-COMP	P2-FI-69-COMP	P2-FI-70-COMP	P2-FI-71-COMP	P2-FI-72-COMP
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner	Gold Shiner
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		14.7 - 16.4	14.4 - 15.8	13.7 - 14.4	13.8 - 15.4	13.4 - 16.4	15 - 15.9	14.1 - 16	15.4 - 16.3
Sample Weight (g)		136.68	115.06	107.8	113.04	109.31	83.78	87.56	90.81
Total Field Weight (g)		141	119	112	117	112	86	89	92
Percent Lipids (%)		3.9	3.6	3.2	3.6	3.7	3.2	2.4	3.3
Location		Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
Metals									
Aluminum	3.8	3.3	4.8	4.6	1.4 U	3.8	15	12	7.1
Antimony	0.248	0.032 U	0.034 U	0.032 U	0.034 U	0.034 U	0.034 U	0.032 U	0.032 U
Arsenic	0.25	0.077	0.061	0.085	0.061	0.088	0.092	0.061	0.08
Barium	19.7	1.4	1.4	1.4	1.4	2.1	1.7	1.5	1.8
Beryllium	500	0.013 UJ	0.014 UJ	0.013 UJ	0.014 UJ	0.013 UJ	0.014 UJ	0.013 UJ	0.013 UJ
Cadmium	2.86	0.035	0.021	0.022	0.017	0.023	0.029	0.025	0.026
Calcium	- -	11,000	10,000	10,000	11,000	12,000	10,000	9,500	11,000
Chromium	0.83	0.31 J	0.38 J	0.59 J	0.38 J	0.71 J	0.25 J	0.56 J	0.3 J
Cobalt	- -	0.065	0.062	0.073	0.065	0.083	0.083	0.074	0.074
Copper	38.9	0.48 J	0.46 J	0.52 J	0.42 J	0.53 J	0.54 J	0.65 J	0.49 J
Iron	- -	190	200	220	210	250	270	230	220
Lead	0.94	0.065	0.074	0.076	0.034	0.072	0.17	0.12	0.12
Magnesium	- -	470	430	440	450	480	450	420	460
Manganese	322	9.6	9.2	12	5.6	17	14	8.2	11
Mercury	0.005	0.046	0.048	0.049	0.048	0.042	0.043	0.055	0.042
Nickel	64.08	0.69	0.7	0.81	0.73	0.98	0.72	0.8	0.7
Potassium	- -	2,800	2,800	3,000	2,900	3,000	2,900	2,700	2,800
Selenium	0.414	0.45	0.4	0.44	0.42	0.46	0.44	0.36	0.38
Silver	6	0.013 U	0.014 U	0.013 U	0.014 U	0.013 U	0.014 U	0.013 U	0.013 U
Sodium	- -	800	810	750	850	870	890	740	840
Thallium	0.027	0.0063 U	0.0069 U	0.0065 U	0.0068 U	0.0067 U	0.0069 U	0.0063 U	0.0063 U
Vanadium	0.714	0.05	0.035	0.035	0.034 U	0.036	0.046	0.032 U	0.033
Zinc	12	26	24	27	26	28	24	27	24

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	PAL Ecological Receptor Food	P6-FI-97 P6-FI-97-CALC 9/29/2005 Largemouth Bass Calc whole body 34.6 567 1.5 P6	P6-FI-98 P6-FI-98-CALC 9/29/2005 Largemouth Bass Calc whole body 36.6 731 2.3 P6	P6-FI-99 P6-FI-99-CALC 9/29/2005 Largemouth Bass Calc whole body 31.4 402 1.7 P6	P6-FI-100 P6-FI-100-CALC 9/29/2005 Largemouth Bass Calc whole body 38.5 814 1.3 P6	P6-FI-101 P6-FI-101-CALC 9/29/2005 Largemouth Bass Calc whole body 29.9 373 2.8 P6	P6-FI-102 P6-FI-102-CALC 9/29/2005 Largemouth Bass Calc whole body 31.9 442 2.3 P6	P6-FI-103 P6-FI-103-CALC 9/29/2005 Largemouth Bass Calc whole body 31.3 447 2.5 P6	P6-FI-104 P6-FI-104-CALC 9/29/2005 Largemouth Bass Calc whole body 39 907 2.8 P6
Metals									
Aluminum	3.8	ND	ND	ND	ND	ND	ND	ND	ND
Antimony	0.248	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.25	0.016	0.035	0.028	0.022	0.032	0.029	0.038	0.021
Barium	19.7	0.85	0.57	0.66	0.56	0.58	0.63	0.52	0.56
Beryllium	500	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	2.86	0.11	ND	ND	0.009	ND	ND	ND	ND
Calcium	- -	12,000 J	14,000 J	12,000 J	11,000 J	11,000 J	11,000 J	11,000 J	11,000 J
Chromium	0.83	0.47	0.79	0.73	0.49	0.95	0.52	0.58	0.63
Cobalt	- -	0.054	0.067	0.059	0.054	0.06	0.058	0.061	0.06
Copper	38.9	0.36	0.26	0.27	0.26	0.29	0.25	0.26	0.27
Iron	- -	140 J	190 J	160 J	160 J	170 J	160 J	170 J	170 J
Lead	0.94	0.018	0.014	0.015	0.016	0.017	0.014	0.019	0.011
Magnesium	- -	450 J	440 J	420 J	380 J	400 J	430 J	410 J	400 J
Manganese	322	1.7	2.4	2.7	1.6	2.1	1.9	1.9	1.9
Mercury	0.005	0.32	0.25	0.16	0.49	0.24	0.26	0.29	0.25
Nickel	64.08	0.86	1.1	1	0.92	1	0.91	0.99	0.96
Potassium	- -	2,900	2,900	2,900	2,700	2,800	3,100	2,900	2,800
Selenium	0.414	0.33 J	0.34 J	0.38 J	0.32 J	0.37 J	0.36 J	0.47 J	0.4 J
Silver	6	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	- -	1,200	1,100	1,100	1,000	1,000	1,100	1,100	1,000
Thallium	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	0.714	0.027	0.039	0.038	0.034	0.034	0.036	0.036	0.027
Zinc	12	15 J	12 J	14 J	13 J	13 J	11 J	12 J	11 J

TABLE 4-45
RESULTS FOR INORGANICS IN FISH WHOLE BODY SAMPLES (mg/kg)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	PAL Ecological	P6-FI-105	P6-FI-106	P6-FI-107	P6-FI-108	P6-FI-109	P6-FI-110	P6-FI-111	P6-FI-112
Sample Name	Receptor Food	P6-FI-105-COMP	P6-FI-106-COMP	P6-FI-107-COMP	P6-FI-108-COMP	P6-FI-109-COMP	P6-FI-110-COMP	P6-FI-111-COMP	P6-FI-112-COMP
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body	Whole body
Length (cm)		9.3 - 12.4	8.1 - 12.1	10.3 - 11.6	9.4 - 11.1	10 - 11.4	12.7 - 13.9	11.5 - 13.8	11.1 - 13.6
Sample Weight (g)		69.58	54.53	67.6	50.15	62.67	75.59	72.36	69.46
Total Field Weight (g)		71	56	69	51	65	77	75	71
Percent Lipids (%)		2.4	1.7	2.2	1.6	2.7	1.4	1.4	1.9
Location		P6	P6	P6	P6	P6	P6	P6	P6
Metals									
Aluminum	3.8	5.3	5	4.4	2.3	6	7.2	3.1	1.4
Antimony	0.248	0.033 U	0.032 U	0.032 U	0.034 U	0.032 U	0.033 U	0.033 U	0.032 U
Arsenic	0.25	0.045	0.037	0.024	0.025	0.029	0.036	0.028	0.028
Barium	19.7	2.1	3.4	2.4	2.7	2.7	3.8	3.9	3.3
Beryllium	500	0.013 U	0.013 U	0.013 U	0.014 U	0.013 U	0.013 U	0.013 U	0.013 U
Cadmium	2.86	0.0066 U	0.0065 U	0.0064 U	0.0068 U	0.0065 U	0.0065 U	0.0066 U	0.0063 U
Calcium	- -	14,000	14,000	12,000	13,000	13,000	14,000	15,000	16,000
Chromium	0.83	0.93	0.32	0.55	0.31	0.33	1.3	0.88	1.9
Cobalt	- -	0.07	0.087	0.07	0.079	0.077	0.1	0.1	0.11
Copper	38.9	0.23	0.31	0.33	0.32	0.31	0.35	0.37	0.34
Iron	- -	250	230	200	220	230	270	280	290
Lead	0.94	0.09	0.1	0.066	0.047	0.1	0.13	0.14	0.027
Magnesium	- -	430 J	440 J	390 J	470 J	430 J	470 J	480 J	540 J
Manganese	322	5.4	13	10	8	6.5	24	20	13
Mercury	0.005	0.039	0.046	0.038	0.049	0.05	0.05	0.044	0.058
Nickel	64.08	0.85	0.74	0.7	0.71	0.67	1.1	1.1	1.7
Potassium	- -	1,800	2,500	2,100	2,500	2,300	2,700	2,800	2,800
Selenium	0.414	0.23 J	0.23 J	0.21 J	0.28 J	0.22 J	0.32 J	0.33 J	0.29 J
Silver	6	0.013 U	0.013 U	0.013 U	0.014 U	0.013 U	0.013 U	0.013 U	0.013 U
Sodium	- -	990	1,100	830	980	900	1,000	1,200	1,200
Thallium	0.027	0.0066 U	0.0065 U	0.0064 U	0.0068 U	0.0065 U	0.0065 U	0.0066 U	0.0063 U
Vanadium	0.714	0.074	0.052	0.041	0.035	0.039	0.055	0.052	0.032 U
Zinc	12	14	19	17	24	18	19	22	24

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name	BR1-FI-113-CARC	BR1-FI-114-CARC	BR1-FI-115-CARC	BR1-FI-116-CARC	BR1-FI-117-CARC	BR1-FI-118-CARC	BR1-FI-119-CARC	BR1-FI-120-CARC
Date Collected	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Lab Sample Weight (g)	698.62	763.9	248.86	159.45	205.33	116.92	549.23	503.04
Total Field Weight (g)	1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)	6.5	8.1	8.4	5.9	5	4.9	10	1.6
Location	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PAH								
2-Methylnaphthalene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Acenaphthene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Acenaphthylene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Anthracene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Benzo(a)pyrene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Benzo(b)fluoranthene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Benzo(g,h,i)perylene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Benzo(k)fluoranthene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Benzo[a]anthracene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Chrysene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Dibenz[a,h]anthracene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Fluoranthene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Fluorene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Indeno(1,2,3-cd)pyrene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Naphthalene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Phenanthrene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Pyrene	800 U	790 U	820 U	780 U	820 U	790 U	800 U	740 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	BR1-FI-121-CARC	BR1-FI-122-CARC	BR1-FI-123-CARC	BR1-FI-124-CARC	BR1-FI-125-CARC	BR1-FI-126-CARC	BR1-FI-127-CARC	BR1-FI-128-CARC
Date Collected	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Lab Sample Weight (g)	112.99	106.26	108.69	102.5	138.37	112.13	135.28	109.33
Total Field Weight (g)	222	191	192	183	274	205	258	209
Percent Lipids (%)	6.6	10	15	5.4	10	12	9.1	9.1
Location	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PAH								
2-Methylnaphthalene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Acenaphthene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Acenaphthylene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Anthracene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Benzo(a)pyrene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Benzo(b)fluoranthene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Benzo(g,h,i)perylene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Benzo(k)fluoranthene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Benzo[a]anthracene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Chrysene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Dibenz[a,h]anthracene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Fluoranthene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Fluorene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Indeno(1,2,3-cd)pyrene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Naphthalene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Phenanthrene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Pyrene	770 U	790 U	780 U	800 U	780 U	820 U	780 U	770 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name	BR2-FI-73-CARC	BR2-FI-74-CARC	BR2-FI-75-CARC	BR2-FI-76-CARC	BR2-FI-77-CARC	BR2-FI-78-CARC	BR2-FI-79-CARC	BR2-FI-80-CARC
Date Collected	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	30.7	30	30.4	25.2	25.8	25.4	25	24.3
Lab Sample Weight (g)	231.99	214.86	282.67	118.9	138.03	134.45	117.63	122.11
Total Field Weight (g)	471	414	543	231	264	260	229	236
Percent Lipids (%)	4.4	6.8	9.5	5.4	11	5.9	6.3	8.6
Location	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PAH								
2-Methylnaphthalene	760 U	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Acenaphthene	760 U	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Acenaphthylene	760 U	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Anthracene	760 U	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Benzo(a)pyrene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Benzo(b)fluoranthene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Benzo(g,h,i)perylene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Benzo(k)fluoranthene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Benzo[a]anthracene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Chrysene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Dibenz[a,h]anthracene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Fluoranthene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Fluorene	760 U	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Indeno(1,2,3-cd)pyrene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Naphthalene	760 U	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Phenanthrene	760 U	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Pyrene	760 UJ	740 UJ	760 UJ	730 UJ	750 UJ	740 UJ	750 U	730 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	**BR2-FI-81**	**BR2-FI-82**	**BR2-FI-83**	**BR2-FI-84**	**BR2-FI-85**	**BR2-FI-86**	**BR2-FI-87**	**BR2-FI-88**
Sample Name	**BR2-FI-81-CARC**	**BR2-FI-82-CARC**	**BR2-FI-83-CARC**	**BR2-FI-84-CARC**	**BR2-FI-85-CARC**	**BR2-FI-86-CARC**	**BR2-FI-87-CARC**	**BR2-FI-88-CARC**
Date Collected	**9/28/2005**	**9/28/2005**	**9/28/2005**	**9/28/2005**	**9/28/2005**	**9/28/2005**	**9/28/2005**	**9/28/2005**
Species Common Name	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**
Tissue Type	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**
Length (cm)	**44.9**	**39.8**	**35.6**	**39**	**38.1**	**32.3**	**39.3**	**37.6**
Lab Sample Weight (g)	**497.92**	**384.99**	**248.5**	**349.16**	**316.2**	**212.68**	**391.41**	**322.81**
Total Field Weight (g)	**968**	**697**	**509**	**643**	**600**	**398**	**714**	**521**
Percent Lipids (%)	**13**	**7**	**7.9**	**10**	**4.9**	**4.3**	**7.8**	**3.7**
Location	**BR-2**	**BR-2**	**BR-2**	**BR-2**	**BR-2**	**BR-2**	**BR-2**	**BR-2**
PAH								
2-Methylnaphthalene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Acenaphthene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Acenaphthylene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Anthracene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Benzo(a)pyrene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Benzo(b)fluoranthene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Benzo(g,h,i)perylene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Benzo(k)fluoranthene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Benzo[a]anthracene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Chrysene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Dibenz[a,h]anthracene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Fluoranthene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Fluorene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Indeno(1,2,3-cd)pyrene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Naphthalene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Phenanthrene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Pyrene	730 U	730 U	740 U	760 U	740 U	730 U	740 U	730 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name	BR3-FI-1-CARC	BR3-FI-2-CARC	BR3-FI-3-CARC	BR3-FI-4-CARC	BR3-FI-5-CARC	BR3-FI-6-CARC	BR3-FI-7-CARC	BR3-FI-8-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	33.9	31.1	28.4	26.9	25.3	35.2	40.9	38.3
Lab Sample Weight (g)	358.11	255.3	198.88	138.68	125.92	322.16	575.22	466.46
Total Field Weight (g)	729	502	383	263	239	753	1092	931
Percent Lipids (%)	5	4.7	7.2	2.4	4.7	4.4	5.7	4.7
Location	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
PAH								
2-Methylnaphthalene	770 U	750 U	740 U	750 U	750 U	740 U	750 U	740 UJ
Acenaphthene	770 U	750 U	740 U	750 U	750 U	740 U	750 U	740 UJ
Acenaphthylene	770 U	750 U	740 U	750 U	750 U	740 U	750 U	740 UJ
Anthracene	770 U	750 U	740 U	750 U	750 U	740 U	750 U	740 UJ
Benzo(a)pyrene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Benzo(b)fluoranthene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Benzo(g,h,i)perylene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Benzo(k)fluoranthene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Benzo[a]anthracene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Chrysene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Dibenz[a,h]anthracene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Fluoranthene	770 U	750 U	740 U	750 U	750 U	740 U	750 U	740 UJ
Fluorene	770 U	750 U	740 U	750 U	750 U	740 U	750 U	740 UJ
Indeno(1,2,3-cd)pyrene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Naphthalene	770 U	750 U	740 U	750 U	750 U	740 U	750 U	740 UJ
Phenanthrene	770 U	750 U	740 U	750 U	750 U	740 U	750 U	740 UJ
Pyrene	770 U	750 U	740 UJ	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	**BR3-FI-9**	**BR3-FI-10**	**BR3-FI-11**	**BR3-FI-12**	**BR3-FI-13**	**BR3-FI-14**	**BR3-FI-15**	**BR3-FI-16**
Sample Name	**BR3-FI-9-CARC**	**BR3-FI-10-CARC**	**BR3-FI-11-CARC**	**BR3-FI-12-CARC**	**BR3-FI-13-CARC**	**BR3-FI-14-CARC**	**BR3-FI-15-CARC**	**BR3-FI-16-CARC**
Date Collected	**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/28/2005**	**9/28/2005**	**9/28/2005**
Species Common Name	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**
Tissue Type	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**
Length (cm)	**31.9**	**34.1**	**31.7**	**39.8**	**41.5**	**36.8**	**35.1**	**37.6**
Lab Sample Weight (g)	**195.63**	**256.77**	**222.56**	**416.5**	**495.52**	**223.46**	**250.86**	**312.14**
Total Field Weight (g)	**392**	**499**	**418**	**757**	**872**	**439**	**478**	**558**
Percent Lipids (%)	**4.3**	**6.1**	**6.1**	**8.8**	**14**	**4**	**1.6**	**8.4**
Location	**BR-3**	**BR-3**	**BR-3**	**BR-3**	**BR-3**	**BR-3b**	**BR-3b**	**BR-3b**
PAH								
2-Methylnaphthalene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Acenaphthene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Acenaphthylene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Anthracene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Benzo(a)pyrene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Benzo(b)fluoranthene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Benzo(g,h,i)perylene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Benzo(k)fluoranthene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Benzo[a]anthracene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Chrysene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Dibenz[a,h]anthracene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Fluoranthene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Fluorene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Indeno(1,2,3-cd)pyrene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Naphthalene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Phenanthrene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Pyrene	750 UJ	730 UJ	740 U	730 U	740 U	740 U	770 U	750 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name	P1-FI-25-CARC	P1-FI-26-CARC	P1-FI-27-CARC	P1-FI-28-CARC	P1-FI-29-CARC	P1-FI-30-CARC	P1-FI-31-CARC	P1-FI-32-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Lab Sample Weight (g)	434.79	371.84	236.29	239.41	212.64	446.92	236.41	415.45
Total Field Weight (g)	865	739	472	471	425	861	460	799
Percent Lipids (%)	6.9	5.6	6.1	3.4	4.6	4.1	2.1	5.4
Location	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PAH								
2-Methylnaphthalene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Acenaphthene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Acenaphthylene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Anthracene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Benzo(a)pyrene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Benzo(b)fluoranthene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Benzo(g,h,i)perylene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Benzo(k)fluoranthene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Benzo[a]anthracene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Chrysene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Dibenz[a,h]anthracene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Fluoranthene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Fluorene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Indeno(1,2,3-cd)pyrene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Naphthalene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Phenanthrene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Pyrene	750 U	770 U	750 U	740 U	760 U	740 U	750 U	730 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name	P1-FI-33-CARC	P1-FI-34-CARC	P1-FI-35-CARC	P1-FI-36-CARC	P1-FI-37-CARC	P1-FI-38-CARC	P1-FI-39-CARC	P1-FI-40-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Lab Sample Weight (g)	345.98	210.63	271.63	413.63	469.22	309.01	389.84	304.28
Total Field Weight (g)	704	467	585	747	930	664	725	627
Percent Lipids (%)	10	5.2	12	7.5	13	8.6	1.5	10
Location	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PAH								
2-Methylnaphthalene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Acenaphthene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Acenaphthylene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Anthracene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Benzo(a)pyrene	760 U	740 U	760 U	740 U	760 UJ	730 U	730 U	740 U
Benzo(b)fluoranthene	760 U	740 U	760 U	740 U	760 UJ	730 U	730 U	740 U
Benzo(g,h,i)perylene	760 U	740 U	760 U	740 U	760 UJ	730 U	730 U	740 U
Benzo(k)fluoranthene	760 U	740 U	760 U	740 U	760 UJ	730 U	730 U	740 U
Benzo[a]anthracene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Chrysene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Dibenz[a,h]anthracene	760 U	740 U	760 U	740 U	760 UJ	730 U	730 U	740 U
Fluoranthene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Fluorene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Indeno(1,2,3-cd)pyrene	760 U	740 U	760 U	740 U	760 UJ	730 U	730 U	740 U
Naphthalene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Phenanthrene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Pyrene	760 U	740 U	760 U	740 U	760 U	730 U	730 U	740 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	P2-FI-49-CARC	P2-FI-50-CARC	P2-FI-51-CARC	P2-FI-52-CARC	P2-FI-53-CARC	P2-FI-54-CARC	P2-FI-55-CARC	P2-FI-56-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Lab Sample Weight (g)	55.54	81.75	81.1	83.62	96.12	65.4	79.96	110.03
Total Field Weight (g)	104	151	159	154	154	131	166	219
Percent Lipids (%)	2	4.5	5.1	1.5	2	5.3	4.7	3.1
Location	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PAH								
2-Methylnaphthalene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Acenaphthene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Acenaphthylene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Anthracene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Benzo(a)pyrene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Benzo(b)fluoranthene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Benzo(g,h,i)perylene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Benzo(k)fluoranthene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Benzo[a]anthracene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Chrysene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Dibenz[a,h]anthracene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Fluoranthene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Fluorene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Indeno(1,2,3-cd)pyrene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Naphthalene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Phenanthrene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Pyrene	630 U	740 U	760 U	740 U	750 U	760 U	740 U	740 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name	P2-FI-57-CARC	P2-FI-58-CARC	P2-FI-59-CARC	P2-FI-60-CARC	P2-FI-61-CARC	P2-FI-62-CARC	P2-FI-63-CARC	P2-FI-64-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	39.1	34.6	40.4	34.9	37	33	35.9	34.6
Lab Sample Weight (g)	352.93	255.51	405.93	168.83	288.88	174.55	228.46	213.18
Total Field Weight (g)	693	501	755	442	595	380	532	460
Percent Lipids (%)	6.8	3.6	11	7.7	14	3.9	6.6	6.4
Location	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PAH								
2-Methylnaphthalene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Acenaphthene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Acenaphthylene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Anthracene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Benzo(a)pyrene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Benzo(b)fluoranthene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Benzo(g,h,i)perylene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Benzo(k)fluoranthene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Benzo[a]anthracene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Chrysene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Dibenz[a,h]anthracene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Fluoranthene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Fluorene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Indeno(1,2,3-cd)pyrene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Naphthalene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Phenanthrene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Pyrene	750 U	730 U	730 U	750 U	730 U	750 U	730 U	740 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-46
RESULTS FOR PAHs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103	P6-FI-104
Sample Name	P6-FI-97-CARC	P6-FI-98-CARC	P6-FI-99-CARC	P6-FI-100-CARC	P6-FI-101-CARC	P6-FI-102-CARC	P6-FI-103-CARC	P6-FI-104-CARC
Date Collected	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	34.6	36.6	31.4	38.5	29.9	31.9	31.3	39
Lab Sample Weight (g)	299.2	386.01	222.2	465.6	212.26	232.16	231.34	467.23
Total Field Weight (g)	567	731	402	814	373	442	447	907
Percent Lipids (%)	2.3	3.6	2.6	1.8	4.2	3.7	4	4.7
Location	P6	P6	P6	P6	P6	P6	P6	P6
PAH								
2-Methylnaphthalene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Acenaphthene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Acenaphthylene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Anthracene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Benzo(a)pyrene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Benzo(b)fluoranthene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Benzo(g,h,i)perylene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Benzo(k)fluoranthene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Benzo[a]anthracene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Chrysene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Dibenz[a,h]anthracene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Fluoranthene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Fluorene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Indeno(1,2,3-cd)pyrene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Naphthalene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Phenanthrene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Pyrene	380 U	370 U	360 U	380 U	380 U	380 U	380 U	380 U
Total PAHs	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117
Sample Name		BR1-FI-113-CARC	BR1-FI-114-CARC	BR1-FI-115-CARC	BR1-FI-116-CARC	BR1-FI-117-CARC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		45.6	47.4	31.9	29.5	32.5
Lab Sample Weight (g)		698.62	763.9	248.86	159.45	205.33
Total Field Weight (g)		1255	1221	437	300	405
Percent Lipids (%)		6.5	8.1	8.4	5.9	5
Location		BR-1	BR-1	BR-1	BR-1	BR-1
SVOC						
1,1'-Biphenyl	92-52-4	800 U	790 U	820 U	780 U	820 U
2,2'-oxybis(1-Chloropropane)	108-60-1	800 U	790 U	820 U	780 U	820 U
2,4,5-Trichlorophenol	95-95-4	800 U	790 U	820 U	780 U	820 U
2,4,6-Trichlorophenol	88-06-2	800 U	790 U	820 U	780 U	820 U
2,4-Dichlorophenol	120-83-2	800 U	790 U	820 U	780 U	820 U
2,4-Dimethylphenol	105-67-9	800 UJ	790 U	820 U	780 U	820 U
2,4-Dinitrophenol	51-28-5	2,000 UJ	2,000 UJ	2,000 UJ	2,000 UJ	2,100 UJ
2,4-Dinitrotoluene	121-14-2	800 U	790 U	820 U	780 U	820 U
2,6-Dinitrotoluene	606-20-2	800 U	790 U	820 U	780 U	820 U
2-Chloronaphthalene	91-58-7	800 U	790 U	820 U	780 U	820 U
2-Chlorophenol	95-57-8	800 U	790 U	820 U	780 U	820 U
2-Methylphenol	95-48-7	800 U	790 U	820 U	780 U	820 U
2-Nitroaniline	88-74-4	800 U	790 U	820 U	780 U	820 U
2-Nitrophenol	88-75-5	800 U	790 U	820 U	780 U	820 U
3,3'-Dichlorobenzidine	91-94-1	R	790 UJ	820 UJ	780 UJ	820 UJ
3-Nitroaniline	99-09-2	800 UJ	790 U	820 U	780 U	820 U
4,6-Dinitro-2-methylphenol	534-52-1	800 UJ	790 UJ	820 UJ	780 UJ	820 UJ
4-Bromophenyl-phenylether	101-55-3	800 U	790 U	820 U	780 U	820 U
4-Chloro-3-methylphenol	59-50-7	800 U	790 U	820 U	780 U	820 U
4-Chloroaniline	106-47-8	800 UJ	790 UJ	820 UJ	780 UJ	820 UJ
4-Chlorophenyl-phenylether	7005-72-3	800 U	790 U	820 U	780 U	820 U
4-Methylphenol	106-44-5	800 U	790 U	820 U	780 U	820 U
4-Nitroaniline	100-01-6	800 UJ	790 U	820 U	780 U	820 U
4-Nitrophenol	100-02-7	800 UJ	790 UJ	820 UJ	780 UJ	820 UJ
Acetophenone	98-86-2	800 U	790 U	820 U	780 U	820 U
Atrazine	1912-24-9	800 U	790 U	820 U	780 U	820 U
Benzaldehyde	100-52-7	1,000 J	600 J	820 UJ	510 J	660 J
bis(2-Chloroethoxy)methane	111-91-1	800 U	790 U	820 U	780 U	820 U
bis(2-Chloroethyl)ether	111-44-4	800 U	790 U	820 U	780 U	820 U
bis(2-Ethylhexyl)phthalate	117-81-7	800 U	790 U	820 U	780 U	820 U
Butyl benzyl phthalate	85-68-7	800 U	790 U	820 U	780 U	820 U
Caprolactam	105-60-2	800 U	790 U	820 U	780 U	820 U
Carbazole	86-74-8	800 U	790 U	820 U	780 U	820 U
Dibenzofuran	132-64-9	800 U	790 U	820 U	780 U	820 U
Diethylphthalate	84-66-2	800 U	790 U	820 U	780 U	820 U
Dimethyl phthalate	131-11-3	800 U	790 U	820 U	780 U	820 U
Di-N-Butyl phthalate	84-74-2	800 U	790 U	820 U	780 U	820 U
Di-N-Octyl phthalate	117-84-0	800 U	790 U	820 U	780 U	820 U
Hexachlorobenzene	118-74-1	800 U	790 U	820 U	780 U	820 U
Hexachlorobutadiene	87-68-3	800 U	790 U	820 U	780 U	820 U
Hexachlorocyclopentadiene	77-47-4	R	790 U	820 U	780 U	820 U
Hexachloroethane	67-72-1	800 U	790 U	820 U	780 U	820 U
Isophorone	78-59-1	800 U	790 U	820 U	780 U	820 U
Nitrobenzene	98-95-3	800 U	790 U	820 U	780 U	820 U
N-Nitroso-di-N-propylamine	621-64-7	800 U	790 U	820 U	780 U	820 U
N-Nitrosodiphenylamine	86-30-6	800 U	790 U	820 U	780 U	820 U
Pentachlorophenol	87-86-5	R	790 UJ	820 UJ	780 UJ	820 UJ
Phenol	108-95-2	800 U	790 U	820 U	780 U	820 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Lab Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	CAS Number	BR1-FI-118 BR1-FI-118-CARC 9/29/2005 White Sucker Carcass 27.8 116.92 249 4.9 BR-1	BR1-FI-119 BR1-FI-119-CARC 9/29/2005 White Sucker Carcass 44.1 549.23 1130 10 BR-1	BR1-FI-120 BR1-FI-120-CARC 9/29/2005 White Sucker Carcass 45.2 503.04 1048 1.6 BR-1	BR1-FI-121 BR1-FI-121-CARC 9/29/2005 Blue Gill Carcass 21.2 112.99 222 6.6 BR-1	BR1-FI-122 BR1-FI-122-CARC 9/29/2005 Blue Gill Carcass 19.9 106.26 191 10 BR-1
SVOC						
1,1'-Biphenyl	92-52-4	790 U	800 U	740 U	770 U	790 U
2,2'-oxybis(1-Chloropropane)	108-60-1	790 U	800 U	740 U	770 U	790 U
2,4,5-Trichlorophenol	95-95-4	790 U	800 U	740 U	770 U	790 U
2,4,6-Trichlorophenol	88-06-2	790 U	800 U	740 U	770 U	790 U
2,4-Dichlorophenol	120-83-2	790 U	800 U	740 U	770 U	790 U
2,4-Dimethylphenol	105-67-9	790 U	800 U	740 U	770 U	790 U
2,4-Dinitrophenol	51-28-5	2,000 UJ	2,000 UJ	1,800 UJ	1,900 UJ	2,000 UJ
2,4-Dinitrotoluene	121-14-2	790 U	800 U	740 U	770 U	790 U
2,6-Dinitrotoluene	606-20-2	790 U	800 U	740 U	770 U	790 U
2-Chloronaphthalene	91-58-7	790 U	800 U	740 U	770 U	790 U
2-Chlorophenol	95-57-8	790 U	800 U	740 U	770 U	790 U
2-Methylphenol	95-48-7	790 U	800 U	740 U	770 U	790 U
2-Nitroaniline	88-74-4	790 U	800 U	740 U	770 U	790 U
2-Nitrophenol	88-75-5	790 U	800 U	740 U	770 U	790 U
3,3'-Dichlorobenzidine	91-94-1	790 UJ	800 UJ	740 UJ	770 UJ	790 UJ
3-Nitroaniline	99-09-2	790 U	800 U	740 U	770 U	790 U
4,6-Dinitro-2-methylphenol	534-52-1	790 UJ	800 UJ	740 UJ	770 UJ	790 UJ
4-Bromophenyl-phenylether	101-55-3	790 U	800 U	740 U	770 U	790 U
4-Chloro-3-methylphenol	59-50-7	790 U	800 U	740 U	770 U	790 U
4-Chloroaniline	106-47-8	790 UJ	800 UJ	740 UJ	770 UJ	790 UJ
4-Chlorophenyl-phenylether	7005-72-3	790 U	800 U	740 U	770 U	790 U
4-Methylphenol	106-44-5	790 U	800 U	740 U	770 U	790 U
4-Nitroaniline	100-01-6	790 U	800 U	740 U	770 U	790 U
4-Nitrophenol	100-02-7	790 UJ	800 UJ	740 UJ	770 UJ	790 UJ
Acetophenone	98-86-2	790 U	800 U	740 U	770 U	790 U
Atrazine	1912-24-9	790 U	800 U	740 U	770 U	790 U
Benzaldehyde	100-52-7	470 J	680 J	440 J	1,900 J	2,600 J
bis(2-Chloroethoxy)methane	111-91-1	790 U	800 U	740 U	770 U	790 U
bis(2-Chloroethyl)ether	111-44-4	790 U	800 U	740 U	770 U	790 U
bis(2-Ethylhexyl)phthalate	117-81-7	790 U	800 U	740 U	770 U	790 U
Butyl benzyl phthalate	85-68-7	790 U	800 U	740 U	770 U	790 U
Caprolactam	105-60-2	790 U	800 U	740 U	770 U	790 U
Carbazole	86-74-8	790 U	800 U	740 U	770 U	790 U
Dibenzofuran	132-64-9	790 U	800 U	740 U	770 U	790 U
Diethylphthalate	84-66-2	790 U	800 U	740 U	770 U	790 U
Dimethyl phthalate	131-11-3	790 U	800 U	740 U	770 U	790 U
Di-N-Butyl phthalate	84-74-2	790 U	800 U	740 U	770 U	790 U
Di-N-Octyl phthalate	117-84-0	790 U	800 U	740 U	770 U	790 U
Hexachlorobenzene	118-74-1	790 U	800 U	740 U	770 U	790 U
Hexachlorobutadiene	87-68-3	790 U	800 U	740 U	770 U	790 U
Hexachlorocyclopentadiene	77-47-4	790 U	800 U	740 U	770 U	790 U
Hexachloroethane	67-72-1	790 U	800 U	740 U	770 U	790 U
Isophorone	78-59-1	790 U	800 U	740 U	770 U	790 U
Nitrobenzene	98-95-3	790 U	800 U	740 U	770 U	790 U
N-Nitroso-di-N-propylamine	621-64-7	790 U	800 U	740 U	770 U	790 U
N-Nitrosodiphenylamine	86-30-6	790 U	800 U	740 U	770 U	790 U
Pentachlorophenol	87-86-5	790 UJ	800 UJ	740 UJ	770 UJ	790 UJ
Phenol	108-95-2	790 U	800 U	740 U	770 U	790 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127
Sample Name		BR1-FI-123-CARC	BR1-FI-124-CARC	BR1-FI-125-CARC	BR1-FI-126-CARC	BR1-FI-127-CARC
Date Collected		9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8
Lab Sample Weight (g)		108.69	102.5	138.37	112.13	135.28
Total Field Weight (g)		192	183	274	205	258
Percent Lipids (%)		15	5.4	10	12	9.1
Location		BR-1	BR-1	BR-1	BR-1	BR-1
SVOC						
1,1'-Biphenyl	92-52-4	780 U	800 U	780 U	820 U	780 U
2,2'-oxybis(1-Chloropropane)	108-60-1	780 U	800 U	780 U	820 U	780 U
2,4,5-Trichlorophenol	95-95-4	780 U	800 U	780 U	820 U	780 U
2,4,6-Trichlorophenol	88-06-2	780 U	800 U	780 U	820 U	780 U
2,4-Dichlorophenol	120-83-2	780 U	800 U	780 U	820 U	780 U
2,4-Dimethylphenol	105-67-9	780 U	800 U	780 U	820 U	780 U
2,4-Dinitrophenol	51-28-5	1,900 UJ	2,000 UJ	1,900 UJ	2,000 UJ	2,000 UJ
2,4-Dinitrotoluene	121-14-2	780 U	800 U	780 U	820 U	780 U
2,6-Dinitrotoluene	606-20-2	780 U	800 U	780 U	820 U	780 U
2-Chloronaphthalene	91-58-7	780 U	800 U	780 U	820 U	780 U
2-Chlorophenol	95-57-8	780 U	800 U	780 U	820 U	780 U
2-Methylphenol	95-48-7	780 U	800 U	780 U	820 U	780 U
2-Nitroaniline	88-74-4	780 U	800 U	780 U	820 U	780 U
2-Nitrophenol	88-75-5	780 U	800 U	780 U	820 U	780 U
3,3'-Dichlorobenzidine	91-94-1	780 UJ	800 UJ	780 UJ	820 UJ	780 UJ
3-Nitroaniline	99-09-2	780 U	800 U	780 U	820 U	780 U
4,6-Dinitro-2-methylphenol	534-52-1	780 UJ	800 UJ	780 UJ	820 UJ	780 UJ
4-Bromophenyl-phenylether	101-55-3	780 U	800 U	780 U	820 U	780 U
4-Chloro-3-methylphenol	59-50-7	780 U	800 U	780 U	820 U	780 U
4-Chloroaniline	106-47-8	780 UJ	800 UJ	780 UJ	820 UJ	780 UJ
4-Chlorophenyl-phenylether	7005-72-3	780 U	800 U	780 U	820 U	780 U
4-Methylphenol	106-44-5	780 U	800 U	780 U	820 U	780 U
4-Nitroaniline	100-01-6	780 U	800 U	780 U	820 U	780 U
4-Nitrophenol	100-02-7	780 UJ	800 UJ	780 UJ	820 UJ	780 UJ
Acetophenone	98-86-2	780 U	800 U	780 U	820 U	780 U
Atrazine	1912-24-9	780 U	800 U	780 U	820 U	780 U
Benzaldehyde	100-52-7	1,400 J	2,000 J	850 J	1,400 J	1,400 J
bis(2-Chloroethoxy)methane	111-91-1	780 U	800 U	780 U	820 U	780 U
bis(2-Chloroethyl)ether	111-44-4	780 U	800 U	780 U	820 U	780 U
bis(2-Ethylhexyl)phthalate	117-81-7	780 U	560 J	780 U	820 U	780 U
Butyl benzyl phthalate	85-68-7	780 U	800 U	780 U	820 U	780 U
Caprolactam	105-60-2	780 U	800 U	780 U	820 U	780 U
Carbazole	86-74-8	780 U	800 U	780 U	820 U	780 U
Dibenzofuran	132-64-9	780 U	800 U	780 U	820 U	780 U
Diethylphthalate	84-66-2	780 U	800 U	780 U	820 U	780 U
Dimethyl phthalate	131-11-3	780 U	800 U	780 U	820 U	780 U
Di-N-Butyl phthalate	84-74-2	780 U	800 U	4,900	4,600	780 U
Di-N-Octyl phthalate	117-84-0	780 U	800 U	780 U	820 U	780 U
Hexachlorobenzene	118-74-1	780 U	800 U	780 U	820 U	780 U
Hexachlorobutadiene	87-68-3	780 U	800 U	780 U	820 U	780 U
Hexachlorocyclopentadiene	77-47-4	780 U	800 U	780 U	820 U	780 U
Hexachloroethane	67-72-1	780 U	800 U	780 U	820 U	780 U
Isophorone	78-59-1	780 U	800 U	780 U	820 U	780 U
Nitrobenzene	98-95-3	780 U	800 U	780 U	820 U	780 U
N-Nitroso-di-N-propylamine	621-64-7	780 U	800 U	780 U	820 U	780 U
N-Nitrosodiphenylamine	86-30-6	780 U	800 U	780 U	820 U	780 U
Pentachlorophenol	87-86-5	780 UJ	800 UJ	780 UJ	820 UJ	780 UJ
Phenol	108-95-2	780 U	800 U	780 U	820 U	780 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR1-FI-128	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76
Sample Name		BR1-FI-128-CARC	BR2-FI-73-CARC	BR2-FI-74-CARC	BR2-FI-75-CARC	BR2-FI-76-CARC
Date Collected		9/29/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Pumpkin Seed	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		15.8 - 16	30.7	30	30.4	25.2
Lab Sample Weight (g)		109.33	231.99	214.86	282.67	118.9
Total Field Weight (g)		209	471	414	543	231
Percent Lipids (%)		9.1	4.4	6.8	9.5	5.4
Location		BR-1	BR-2	BR-2	BR-2	BR-2
SVOC						
1,1'-Biphenyl	92-52-4	770 U	760 U	740 UJ	760 UJ	730 UJ
2,2'-oxybis(1-Chloropropane)	108-60-1	770 U	760 UJ	740 UJ	760 UJ	730 UJ
2,4,5-Trichlorophenol	95-95-4	770 U	760 U	740 UJ	760 UJ	730 UJ
2,4,6-Trichlorophenol	88-06-2	770 U	760 U	740 UJ	760 UJ	730 UJ
2,4-Dichlorophenol	120-83-2	770 U	760 U	740 UJ	760 UJ	730 UJ
2,4-Dimethylphenol	105-67-9	770 U	760 UJ	740 UJ	760 UJ	730 UJ
2,4-Dinitrophenol	51-28-5	1,900 UJ	1,900 UJ	1,800 UJ	1,900 UJ	1,800 UJ
2,4-Dinitrotoluene	121-14-2	770 U	760 U	740 UJ	760 UJ	730 UJ
2,6-Dinitrotoluene	606-20-2	770 U	760 U	740 UJ	760 UJ	730 UJ
2-Chloronaphthalene	91-58-7	770 U	760 U	740 UJ	760 UJ	730 UJ
2-Chlorophenol	95-57-8	770 U	760 U	740 UJ	760 UJ	730 UJ
2-Methylphenol	95-48-7	770 U	760 UJ	740 UJ	760 UJ	730 UJ
2-Nitroaniline	88-74-4	770 U	760 U	740 UJ	760 UJ	730 UJ
2-Nitrophenol	88-75-5	770 U	760 U	740 UJ	760 UJ	730 UJ
3,3'-Dichlorobenzidine	91-94-1	770 UJ	R	740 UJ	760 UJ	730 UJ
3-Nitroaniline	99-09-2	770 UJ	760 UJ	740 UJ	760 UJ	730 UJ
4,6-Dinitro-2-methylphenol	534-52-1	770 UJ	1,900 UJ	1,800 UJ	1,900 UJ	1,800 UJ
4-Bromophenyl-phenylether	101-55-3	770 U	760 U	740 UJ	760 UJ	730 UJ
4-Chloro-3-methylphenol	59-50-7	770 U	760 UJ	740 UJ	760 UJ	730 UJ
4-Chloroaniline	106-47-8	770 UJ	760 UJ	740 UJ	760 UJ	730 UJ
4-Chlorophenyl-phenylether	7005-72-3	770 U	760 U	740 UJ	760 UJ	730 UJ
4-Methylphenol	106-44-5	770 U	760 U	740 UJ	760 UJ	730 UJ
4-Nitroaniline	100-01-6	770 U	R	740 UJ	760 UJ	730 UJ
4-Nitrophenol	100-02-7	770 UJ	760 UJ	740 UJ	760 UJ	730 UJ
Acetophenone	98-86-2	770 U	760 U	740 UJ	760 UJ	730 UJ
Atrazine	1912-24-9	770 U	760 UJ	740 UJ	760 UJ	730 UJ
Benzaldehyde	100-52-7	5,500 J	2,400 J	3,700 J	5,500 J	2,700 J
bis(2-Chloroethoxy)methane	111-91-1	770 U	760 UJ	740 UJ	760 UJ	730 UJ
bis(2-Chloroethyl)ether	111-44-4	770 U	760 UJ	740 UJ	760 UJ	730 UJ
bis(2-Ethylhexyl)phthalate	117-81-7	770 U	380 J	370 J	760 UJ	730 UJ
Butyl benzyl phthalate	85-68-7	770 U	760 UJ	740 UJ	760 UJ	730 UJ
Caprolactam	105-60-2	770 U	760 U	740 UJ	760 UJ	730 UJ
Carbazole	86-74-8	770 UJ	760 U	740 UJ	760 UJ	730 UJ
Dibenzofuran	132-64-9	770 U	760 U	740 UJ	760 UJ	730 UJ
Diethylphthalate	84-66-2	770 U	760 U	740 UJ	760 UJ	730 UJ
Dimethyl phthalate	131-11-3	770 U	760 U	740 UJ	760 UJ	730 UJ
Di-N-Butyl phthalate	84-74-2	770 U	760 UJ	740 UJ	760 UJ	730 UJ
Di-N-Octyl phthalate	117-84-0	770 U	760 UJ	740 UJ	760 UJ	730 UJ
Hexachlorobenzene	118-74-1	770 U	760 U	740 UJ	760 UJ	730 UJ
Hexachlorobutadiene	87-68-3	770 U	760 U	740 UJ	760 UJ	730 UJ
Hexachlorocyclopentadiene	77-47-4	770 U	R	740 UJ	760 UJ	730 UJ
Hexachloroethane	67-72-1	770 U	760 U	740 UJ	760 UJ	730 UJ
Isophorone	78-59-1	770 U	760 U	740 UJ	760 UJ	730 UJ
Nitrobenzene	98-95-3	770 U	760 U	740 UJ	760 UJ	730 UJ
N-Nitroso-di-N-propylamine	621-64-7	770 U	760 U	740 UJ	760 UJ	730 UJ
N-Nitrosodiphenylamine	86-30-6	770 U	760 U	740 UJ	760 UJ	730 UJ
Pentachlorophenol	87-86-5	880 J	19,000 UJ	18,000 UJ	19,000 UJ	18,000 UJ
Phenol	108-95-2	770 U	7,600 U	7,400 UJ	7,600 UJ	7,300 UJ

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80	BR2-FI-81
Sample Name		BR2-FI-77-CARC	BR2-FI-78-CARC	BR2-FI-79-CARC	BR2-FI-80-CARC	BR2-FI-81-CARC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	White Sucker
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		25.8	25.4	25	24.3	44.9
Lab Sample Weight (g)		138.03	134.45	117.63	122.11	497.92
Total Field Weight (g)		264	260	229	236	968
Percent Lipids (%)		11	5.9	6.3	8.6	13
Location		BR-2	BR-2	BR-2	BR-2	BR-2
SVOC						
1,1'-Biphenyl	92-52-4	750 UJ	740 UJ	750 U	730 U	730 U
2,2'-oxybis(1-Chloropropane)	108-60-1	750 UJ	740 UJ	750 U	730 U	730 U
2,4,5-Trichlorophenol	95-95-4	750 UJ	740 UJ	750 U	730 U	730 U
2,4,6-Trichlorophenol	88-06-2	750 UJ	740 UJ	750 U	730 U	730 U
2,4-Dichlorophenol	120-83-2	750 UJ	740 UJ	750 U	730 U	730 U
2,4-Dimethylphenol	105-67-9	750 UJ	740 UJ	750 UJ	730 UJ	730 UJ
2,4-Dinitrophenol	51-28-5	1,900 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,800 UJ
2,4-Dinitrotoluene	121-14-2	750 UJ	740 UJ	750 U	730 U	730 U
2,6-Dinitrotoluene	606-20-2	750 UJ	740 UJ	750 U	730 U	730 U
2-Chloronaphthalene	91-58-7	750 UJ	740 UJ	750 U	730 U	730 U
2-Chlorophenol	95-57-8	750 UJ	740 UJ	750 U	730 U	730 U
2-Methylphenol	95-48-7	750 UJ	740 UJ	750 UJ	730 UJ	730 UJ
2-Nitroaniline	88-74-4	750 UJ	740 UJ	750 U	730 U	730 U
2-Nitrophenol	88-75-5	750 UJ	740 UJ	750 U	730 U	730 U
3,3'-Dichlorobenzidine	91-94-1	750 UJ	740 UJ	750 U	730 U	730 U
3-Nitroaniline	99-09-2	750 UJ	740 UJ	750 U	730 U	730 U
4,6-Dinitro-2-methylphenol	534-52-1	1,900 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,800 UJ
4-Bromophenyl-phenylether	101-55-3	750 UJ	740 UJ	750 U	730 U	730 U
4-Chloro-3-methylphenol	59-50-7	750 UJ	740 UJ	750 UJ	730 UJ	730 UJ
4-Chloroaniline	106-47-8	750 UJ	740 UJ	750 UJ	730 UJ	730 UJ
4-Chlorophenyl-phenylether	7005-72-3	750 UJ	740 UJ	750 U	730 U	730 U
4-Methylphenol	106-44-5	750 UJ	740 UJ	750 U	730 U	730 U
4-Nitroaniline	100-01-6	750 UJ	740 UJ	750 UJ	730 UJ	730 UJ
4-Nitrophenol	100-02-7	750 UJ	740 UJ	750 UJ	730 UJ	730 UJ
Acetophenone	98-86-2	750 UJ	740 UJ	750 U	730 U	730 U
Atrazine	1912-24-9	750 UJ	740 UJ	750 U	730 U	730 U
Benzaldehyde	100-52-7	2,100 J	3,500 J	6,400 J	6,100 J	840 J
bis(2-Chloroethoxy)methane	111-91-1	750 UJ	740 UJ	750 U	730 U	730 U
bis(2-Chloroethyl)ether	111-44-4	750 UJ	740 UJ	750 U	730 U	730 U
bis(2-Ethylhexyl)phthalate	117-81-7	410 J	1,200 J	490 J	440 J	730 U
Butyl benzyl phthalate	85-68-7	750 UJ	740 UJ	750 U	730 U	730 U
Caprolactam	105-60-2	750 UJ	740 UJ	750 U	730 U	730 U
Carbazole	86-74-8	750 UJ	740 UJ	750 U	730 U	730 U
Dibenzofuran	132-64-9	750 UJ	740 UJ	750 U	730 U	730 U
Diethylphthalate	84-66-2	750 UJ	740 UJ	750 U	730 U	730 U
Dimethyl phthalate	131-11-3	750 UJ	740 UJ	750 U	730 U	730 U
Di-N-Butyl phthalate	84-74-2	750 UJ	740 UJ	750 U	730 U	730 U
Di-N-Octyl phthalate	117-84-0	750 UJ	740 UJ	750 U	730 U	730 U
Hexachlorobenzene	118-74-1	750 UJ	740 UJ	750 U	730 U	730 U
Hexachlorobutadiene	87-68-3	750 UJ	740 UJ	750 U	730 U	730 U
Hexachlorocyclopentadiene	77-47-4	750 UJ	740 UJ	750 UJ	730 UJ	730 UJ
Hexachloroethane	67-72-1	750 UJ	740 UJ	750 U	730 U	730 U
Isophorone	78-59-1	750 UJ	740 UJ	750 U	730 U	730 U
Nitrobenzene	98-95-3	750 UJ	740 UJ	750 U	730 U	730 U
N-Nitroso-di-N-propylamine	621-64-7	750 UJ	740 UJ	750 U	730 U	730 U
N-Nitrosodiphenylamine	86-30-6	750 UJ	740 UJ	750 U	730 U	730 U
Pentachlorophenol	87-86-5	19,000 UJ	18,000 UJ	R	R	R
Phenol	108-95-2	7,500 UJ	7,400 UJ	7,500 U	7,300 U	7,300 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86
Sample Name		BR2-FI-82-CARC	BR2-FI-83-CARC	BR2-FI-84-CARC	BR2-FI-85-CARC	BR2-FI-86-CARC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		39.8	35.6	39	38.1	32.3
Lab Sample Weight (g)		384.99	248.5	349.16	316.2	212.68
Total Field Weight (g)		697	509	643	600	398
Percent Lipids (%)		7	7.9	10	4.9	4.3
Location		BR-2	BR-2	BR-2	BR-2	BR-2
SVOC						
1,1'-Biphenyl	92-52-4	730 U	740 U	760 U	740 U	730 U
2,2'-oxybis(1-Chloropropane)	108-60-1	730 U	740 U	760 U	740 U	730 U
2,4,5-Trichlorophenol	95-95-4	730 U	740 U	760 U	740 U	730 U
2,4,6-Trichlorophenol	88-06-2	730 U	740 U	760 U	740 U	730 U
2,4-Dichlorophenol	120-83-2	730 U	740 U	760 U	740 U	730 U
2,4-Dimethylphenol	105-67-9	730 UJ	740 UJ	760 UJ	740 UJ	730 UJ
2,4-Dinitrophenol	51-28-5	1,800 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,800 UJ
2,4-Dinitrotoluene	121-14-2	730 U	740 U	760 U	740 U	730 U
2,6-Dinitrotoluene	606-20-2	730 U	740 U	760 U	740 U	730 U
2-Chloronaphthalene	91-58-7	730 U	740 U	760 U	740 U	730 U
2-Chlorophenol	95-57-8	730 U	740 U	760 U	740 U	730 U
2-Methylphenol	95-48-7	730 UJ	740 UJ	760 UJ	740 UJ	730 UJ
2-Nitroaniline	88-74-4	730 U	740 U	760 U	740 U	730 U
2-Nitrophenol	88-75-5	730 U	740 U	760 U	740 U	730 U
3,3'-Dichlorobenzidine	91-94-1	730 U	740 U	760 U	740 U	730 U
3-Nitroaniline	99-09-2	730 U	740 U	760 U	740 U	730 U
4,6-Dinitro-2-methylphenol	534-52-1	1,800 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,800 UJ
4-Bromophenyl-phenylether	101-55-3	730 U	740 U	760 U	740 U	730 U
4-Chloro-3-methylphenol	59-50-7	730 UJ	740 UJ	760 UJ	740 UJ	730 UJ
4-Chloroaniline	106-47-8	730 UJ	740 UJ	760 UJ	740 UJ	730 UJ
4-Chlorophenyl-phenylether	7005-72-3	730 U	740 U	760 U	740 U	730 U
4-Methylphenol	106-44-5	730 U	740 U	760 U	740 U	730 U
4-Nitroaniline	100-01-6	730 UJ	740 UJ	760 UJ	740 UJ	730 UJ
4-Nitrophenol	100-02-7	730 UJ	740 UJ	760 UJ	740 UJ	730 UJ
Acetophenone	98-86-2	730 U	520 J	420 J	740 U	730 U
Atrazine	1912-24-9	730 U	740 U	760 U	740 U	730 U
Benzaldehyde	100-52-7	620 J	1,000 J	680 J	550 J	870 J
bis(2-Chloroethoxy)methane	111-91-1	730 U	740 U	760 U	740 U	730 U
bis(2-Chloroethyl)ether	111-44-4	730 U	740 U	760 U	740 U	730 U
bis(2-Ethylhexyl)phthalate	117-81-7	730 U	740 U	760 U	740 U	730 U
Butyl benzyl phthalate	85-68-7	730 U	740 U	760 U	740 U	730 U
Caprolactam	105-60-2	730 U	740 U	760 U	740 U	730 U
Carbazole	86-74-8	730 U	740 U	760 U	740 U	730 U
Dibenzofuran	132-64-9	730 U	740 U	760 U	740 U	730 U
Diethylphthalate	84-66-2	730 U	740 U	760 U	740 U	730 U
Dimethyl phthalate	131-11-3	730 U	740 U	760 U	740 U	730 U
Di-N-Butyl phthalate	84-74-2	730 U	740 U	760 U	740 U	730 U
Di-N-Octyl phthalate	117-84-0	730 U	740 U	760 U	740 U	730 U
Hexachlorobenzene	118-74-1	730 U	740 U	760 U	740 U	730 U
Hexachlorobutadiene	87-68-3	730 U	740 U	760 U	740 U	730 U
Hexachlorocyclopentadiene	77-47-4	730 UJ	740 UJ	760 UJ	740 UJ	730 UJ
Hexachloroethane	67-72-1	730 U	740 U	760 U	740 U	730 U
Isophorone	78-59-1	730 U	740 U	760 U	740 U	730 U
Nitrobenzene	98-95-3	730 U	740 U	760 U	740 U	730 U
N-Nitroso-di-N-propylamine	621-64-7	730 U	740 U	760 U	740 U	730 U
N-Nitrosodiphenylamine	86-30-6	730 U	740 U	760 U	740 U	730 U
Pentachlorophenol	87-86-5	R	R	R	R	R
Phenol	108-95-2	7,300 U	7,400 U	7,600 U	7,400 U	7,300 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR2-FI-87	BR2-FI-88	BR3-FI-1	BR3-FI-2	BR3-FI-3
Sample Name		BR2-FI-87-CARC	BR2-FI-88-CARC	BR3-FI-1-CARC	BR3-FI-2-CARC	BR3-FI-3-CARC
Date Collected		9/28/2005	9/28/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		39.3	37.6	33.9	31.1	28.4
Lab Sample Weight (g)		391.41	322.81	358.11	255.3	198.88
Total Field Weight (g)		714	521	729	502	383
Percent Lipids (%)		7.8	3.7	5	4.7	7.2
Location		BR-2	BR-2	BR-3	BR-3	BR-3
SVOC						
1,1'-Biphenyl	92-52-4	740 U	730 U	770 U	750 U	740 U
2,2'-oxybis(1-Chloropropane)	108-60-1	740 U	730 U	770 U	750 U	740 U
2,4,5-Trichlorophenol	95-95-4	740 U	730 U	770 U	750 U	740 U
2,4,6-Trichlorophenol	88-06-2	740 U	730 U	770 U	750 U	740 U
2,4-Dichlorophenol	120-83-2	740 U	730 U	770 U	750 U	740 U
2,4-Dimethylphenol	105-67-9	740 UJ	730 UJ	770 U	750 U	740 U
2,4-Dinitrophenol	51-28-5	1,800 UJ	1,800 UJ	1,900 UJ	R	R
2,4-Dinitrotoluene	121-14-2	740 U	730 U	770 UJ	750 U	740 U
2,6-Dinitrotoluene	606-20-2	740 U	730 U	770 UJ	750 U	740 U
2-Chloronaphthalene	91-58-7	740 U	730 U	770 U	750 U	740 U
2-Chlorophenol	95-57-8	740 U	730 U	770 U	750 U	740 U
2-Methylphenol	95-48-7	740 UJ	730 UJ	770 U	750 U	740 U
2-Nitroaniline	88-74-4	740 U	730 U	770 UJ	750 U	740 U
2-Nitrophenol	88-75-5	740 U	730 U	770 U	750 U	740 U
3,3'-Dichlorobenzidine	91-94-1	740 U	730 U	770 UJ	750 U	740 UJ
3-Nitroaniline	99-09-2	740 U	730 U	770 UJ	750 U	740 U
4,6-Dinitro-2-methylphenol	534-52-1	1,800 UJ	1,800 UJ	770 UJ	750 UJ	740 UJ
4-Bromophenyl-phenylether	101-55-3	740 U	730 U	770 U	750 U	740 U
4-Chloro-3-methylphenol	59-50-7	740 UJ	730 UJ	770 U	750 U	740 U
4-Chloroaniline	106-47-8	740 UJ	730 UJ	770 UJ	750 UJ	740 UJ
4-Chlorophenyl-phenylether	7005-72-3	740 U	730 U	770 U	750 U	740 U
4-Methylphenol	106-44-5	740 U	730 U	770 U	750 U	740 U
4-Nitroaniline	100-01-6	740 UJ	730 UJ	770 UJ	750 U	740 U
4-Nitrophenol	100-02-7	740 UJ	730 UJ	770 UJ	750 UJ	740 UJ
Acetophenone	98-86-2	740 U	730 U	770 U	750 U	740 U
Atrazine	1912-24-9	740 U	730 U	770 U	750 U	740 U
Benzaldehyde	100-52-7	590 J	550 J	4,700 J	2,400 J	2,900 J
bis(2-Chloroethoxy)methane	111-91-1	740 U	730 U	770 U	750 UJ	740 UJ
bis(2-Chloroethyl)ether	111-44-4	740 U	730 U	770 U	750 UJ	740 UJ
bis(2-Ethylhexyl)phthalate	117-81-7	740 U	730 U	770 U	750 U	740 UJ
Butyl benzyl phthalate	85-68-7	740 U	730 U	770 U	750 U	740 UJ
Caprolactam	105-60-2	740 U	730 U	770 UJ	750 U	740 U
Carbazole	86-74-8	740 U	730 U	770 U	750 UJ	740 UJ
Dibenzofuran	132-64-9	740 U	730 U	770 U	750 U	740 U
Diethylphthalate	84-66-2	740 U	730 U	770 UJ	750 U	740 U
Dimethyl phthalate	131-11-3	740 U	730 U	770 UJ	750 U	740 U
Di-N-Butyl phthalate	84-74-2	740 U	730 U	770 U	750 U	740 U
Di-N-Octyl phthalate	117-84-0	740 U	730 U	1,900 UJ	1,900 U	1,900 UJ
Hexachlorobenzene	118-74-1	740 U	730 U	770 U	750 U	740 U
Hexachlorobutadiene	87-68-3	740 U	730 U	770 U	750 U	740 U
Hexachlorocyclopentadiene	77-47-4	740 UJ	730 UJ	R	750 UJ	740 UJ
Hexachloroethane	67-72-1	740 U	730 U	770 U	750 U	740 U
Isophorone	78-59-1	740 U	730 U	770 U	750 UJ	740 UJ
Nitrobenzene	98-95-3	740 U	730 U	770 U	750 UJ	740 UJ
N-Nitroso-di-N-propylamine	621-64-7	740 U	730 U	770 U	750 UJ	740 UJ
N-Nitrosodiphenylamine	86-30-6	740 U	730 U	770 U	750 U	740 U
Pentachlorophenol	87-86-5	R	R	7,700 UJ	R	R
Phenol	108-95-2	7,400 U	7,300 U	770 U	750 U	740 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name		BR3-FI-4-CARC	BR3-FI-5-CARC	BR3-FI-6-CARC	BR3-FI-7-CARC	BR3-FI-8-CARC
Date Collected		9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		26.9	25.3	35.2	40.9	38.3
Lab Sample Weight (g)		138.68	125.92	322.16	575.22	466.46
Total Field Weight (g)		263	239	753	1092	931
Percent Lipids (%)		2.4	4.7	4.4	5.7	4.7
Location		BR-3	BR-3	BR-3b	BR-3b	BR-3b
SVOC						
1,1'-Biphenyl	92-52-4	750 U	750 U	740 U	750 U	740 UJ
2,2'-oxybis(1-Chloropropane)	108-60-1	750 U	750 U	740 U	750 U	740 UJ
2,4,5-Trichlorophenol	95-95-4	750 U	750 U	740 U	750 U	740 UJ
2,4,6-Trichlorophenol	88-06-2	750 U	750 U	740 U	750 U	740 UJ
2,4-Dichlorophenol	120-83-2	750 U	750 U	740 U	750 U	740 UJ
2,4-Dimethylphenol	105-67-9	750 U	750 U	740 U	750 U	740 UJ
2,4-Dinitrophenol	51-28-5	R	R	R	R	R
2,4-Dinitrotoluene	121-14-2	750 U	750 U	740 U	750 U	740 UJ
2,6-Dinitrotoluene	606-20-2	750 U	750 U	740 U	750 U	740 UJ
2-Chloronaphthalene	91-58-7	750 U	750 U	740 U	750 U	740 UJ
2-Chlorophenol	95-57-8	750 U	750 U	740 U	750 U	740 UJ
2-Methylphenol	95-48-7	750 U	750	740 U	750 U	740 UJ
2-Nitroaniline	88-74-4	750 U	750 U	740 U	750 U	740 UJ
2-Nitrophenol	88-75-5	750 U	750 U	740 U	750 U	740 UJ
3,3'-Dichlorobenzidine	91-94-1	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
3-Nitroaniline	99-09-2	750 U	750 U	740 U	750 U	740 UJ
4,6-Dinitro-2-methylphenol	534-52-1	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
4-Bromophenyl-phenylether	101-55-3	750 U	750 U	740 U	750 U	740 UJ
4-Chloro-3-methylphenol	59-50-7	750 U	750 U	740 U	750 U	740 UJ
4-Chloroaniline	106-47-8	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
4-Chlorophenyl-phenylether	7005-72-3	750 U	750 U	740 U	750 U	740 UJ
4-Methylphenol	106-44-5	750 U	750 U	740 U	750 U	740 UJ
4-Nitroaniline	100-01-6	750 U	750 U	740 U	750 U	740 UJ
4-Nitrophenol	100-02-7	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Acetophenone	98-86-2	750 U	750 U	740 U	750 U	740 UJ
Atrazine	1912-24-9	750 U	750 U	740 U	750 U	740 UJ
Benzaldehyde	100-52-7	3,000 J	1,600 J	2,100 J	1,600 J	2,900 J
bis(2-Chloroethoxy)methane	111-91-1	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
bis(2-Chloroethyl)ether	111-44-4	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
bis(2-Ethylhexyl)phthalate	117-81-7	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Butyl benzyl phthalate	85-68-7	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Caprolactam	105-60-2	750 U	750 U	740 U	750 U	740 UJ
Carbazole	86-74-8	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Dibenzofuran	132-64-9	750 U	750 U	740 U	750 U	740 UJ
Diethylphthalate	84-66-2	750 U	750 U	740 U	750 U	740 UJ
Dimethyl phthalate	131-11-3	750 U	750 U	740 U	750 U	740 UJ
Di-N-Butyl phthalate	84-74-2	750 U	750 U	740 U	750 U	740 UJ
Di-N-Octyl phthalate	117-84-0	1,900 UJ	1,900 UJ	1,900 UJ	1,900 UJ	1,900 UJ
Hexachlorobenzene	118-74-1	750 U	750 U	740 U	750 U	740 UJ
Hexachlorobutadiene	87-68-3	750 U	750 U	740 U	750 U	740 UJ
Hexachlorocyclopentadiene	77-47-4	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Hexachloroethane	67-72-1	750 U	750 U	740 U	750 U	740 UJ
Isophorone	78-59-1	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
Nitrobenzene	98-95-3	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
N-Nitroso-di-N-propylamine	621-64-7	750 UJ	750 UJ	740 UJ	750 UJ	740 UJ
N-Nitrosodiphenylamine	86-30-6	750 U	750 U	740 U	750 U	740 UJ
Pentachlorophenol	87-86-5	R	R	R	R	R
Phenol	108-95-2	750 U	750 U	740 U	750 U	740 UJ

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13
Sample Name		BR3-FI-9-CARC	BR3-FI-10-CARC	BR3-FI-11-CARC	BR3-FI-12-CARC	BR3-FI-13-CARC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		31.9	34.1	31.7	39.8	41.5
Lab Sample Weight (g)		195.63	256.77	222.56	416.5	495.52
Total Field Weight (g)		392	499	418	757	872
Percent Lipids (%)		4.3	6.1	6.1	8.8	14
Location		BR-3	BR-3	BR-3	BR-3	BR-3
SVOC						
1,1'-Biphenyl	92-52-4	750 UJ	730 UJ	740 U	730 U	740 U
2,2'-oxybis(1-Chloropropane)	108-60-1	750 UJ	730 UJ	740 U	730 U	740 U
2,4,5-Trichlorophenol	95-95-4	750 UJ	730 UJ	740 U	730 U	740 U
2,4,6-Trichlorophenol	88-06-2	750 UJ	730 UJ	740 U	730 U	740 U
2,4-Dichlorophenol	120-83-2	750 UJ	730 UJ	740 U	730 U	740 U
2,4-Dimethylphenol	105-67-9	750 UJ	730 UJ	740 U	730 U	740 U
2,4-Dinitrophenol	51-28-5	R	R	R	R	R
2,4-Dinitrotoluene	121-14-2	750 UJ	730 UJ	740 U	730 U	740 U
2,6-Dinitrotoluene	606-20-2	750 UJ	730 UJ	740 U	730 U	740 U
2-Chloronaphthalene	91-58-7	750 UJ	730 UJ	740 U	730 U	740 U
2-Chlorophenol	95-57-8	750 UJ	730 UJ	740 U	730 U	740 U
2-Methylphenol	95-48-7	750 UJ	730 UJ	740 U	730 U	740 U
2-Nitroaniline	88-74-4	750 UJ	730 UJ	740 U	730 U	740 U
2-Nitrophenol	88-75-5	750 UJ	730 UJ	740 U	730 U	740 U
3,3'-Dichlorobenzidine	91-94-1	750 UJ	730 UJ	740 U	730 U	740 U
3-Nitroaniline	99-09-2	750 UJ	730 UJ	740 U	730 U	740 U
4,6-Dinitro-2-methylphenol	534-52-1	750 UJ	730 UJ	740 UJ	730 UJ	740 UJ
4-Bromophenyl-phenylether	101-55-3	750 UJ	730 UJ	740 U	730 U	740 U
4-Chloro-3-methylphenol	59-50-7	750 UJ	730 UJ	740 U	730 U	740 U
4-Chloroaniline	106-47-8	750 UJ	730 UJ	740 UJ	730 UJ	740 UJ
4-Chlorophenyl-phenylether	7005-72-3	750 UJ	730 UJ	740 U	730 U	740 U
4-Methylphenol	106-44-5	750 UJ	730 UJ	740 U	730 U	740 U
4-Nitroaniline	100-01-6	750 UJ	730 UJ	740 U	730 U	740 U
4-Nitrophenol	100-02-7	750 UJ	730 UJ	740 UJ	730 UJ	740 UJ
Acetophenone	98-86-2	750 UJ	730 UJ	740 U	730 U	740 U
Atrazine	1912-24-9	750 UJ	730 UJ	740 U	730 U	740 U
Benzaldehyde	100-52-7	710 J	950 J	3,400 J	4,300 J	9,800 J
bis(2-Chloroethoxy)methane	111-91-1	750 UJ	730 UJ	740 U	730 U	740 U
bis(2-Chloroethyl)ether	111-44-4	750 UJ	730 UJ	740 U	730 U	740 U
bis(2-Ethylhexyl)phthalate	117-81-7	750 UJ	730 UJ	740 U	730 U	740 U
Butyl benzyl phthalate	85-68-7	750 UJ	730 UJ	740 U	730 U	740 U
Caprolactam	105-60-2	750 UJ	730 UJ	740 U	730 U	740 U
Carbazole	86-74-8	750 UJ	730 UJ	740 U	730 U	740 U
Dibenzofuran	132-64-9	750 UJ	730 UJ	740 U	730 U	740 U
Diethylphthalate	84-66-2	750 UJ	730 UJ	740 U	730 U	740 U
Dimethyl phthalate	131-11-3	750 UJ	730 UJ	740 U	730 U	740 U
Di-N-Butyl phthalate	84-74-2	750 UJ	730 UJ	740 U	730 U	740 U
Di-N-Octyl phthalate	117-84-0	1,900 UJ	1,800 UJ	1,900 U	1,800 U	1,900 U
Hexachlorobenzene	118-74-1	750 UJ	730 UJ	740 U	730 U	740 U
Hexachlorobutadiene	87-68-3	750 UJ	730 UJ	740 U	730 U	740 U
Hexachlorocyclopentadiene	77-47-4	750 UJ	730 UJ	740 UJ	730 UJ	740 UJ
Hexachloroethane	67-72-1	750 UJ	730 UJ	740 U	730 U	740 U
Isophorone	78-59-1	750 UJ	730 UJ	740 U	730 U	740 U
Nitrobenzene	98-95-3	750 UJ	730 UJ	740 U	730 U	740 U
N-Nitroso-di-N-propylamine	621-64-7	750 UJ	730 UJ	740 U	730 U	740 U
N-Nitrosodiphenylamine	86-30-6	750 UJ	730 UJ	740 U	730 U	740 U
Pentachlorophenol	87-86-5	R	R	R	R	R
Phenol	108-95-2	750 UJ	730 UJ	740 U	730 U	740 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	BR3-FI-14	BR3-FI-15	BR3-FI-16	P1-FI-25	P1-FI-26
Sample Name		BR3-FI-14-CARC	BR3-FI-15-CARC	BR3-FI-16-CARC	P1-FI-25-CARC	P1-FI-26-CARC
Date Collected		9/28/2005	9/28/2005	9/28/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	Largemouth Bass	Largemouth Bass
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		36.8	35.1	37.6	36.2	35.8
Lab Sample Weight (g)		223.46	250.86	312.14	434.79	371.84
Total Field Weight (g)		439	478	558	865	739
Percent Lipids (%)		4	1.6	8.4	6.9	5.6
Location		BR-3b	BR-3b	BR-3b	Pond A	Pond A
SVOC						
1,1'-Biphenyl	92-52-4	740 U	770 U	750 U	750 U	770 U
2,2'-oxybis(1-Chloropropane)	108-60-1	740 U	770 U	750 U	750 U	770 U
2,4,5-Trichlorophenol	95-95-4	740 U	770 U	750 U	750 U	770 U
2,4,6-Trichlorophenol	88-06-2	740 U	770 U	750 U	750 U	770 U
2,4-Dichlorophenol	120-83-2	740 U	770 U	750 U	750 U	770 U
2,4-Dimethylphenol	105-67-9	740 U	770 U	750 U	750 U	770 U
2,4-Dinitrophenol	51-28-5	R	R	R	R	R
2,4-Dinitrotoluene	121-14-2	740 U	770 U	750 U	750 U	770 U
2,6-Dinitrotoluene	606-20-2	740 U	770 U	750 U	750 U	770 U
2-Chloronaphthalene	91-58-7	740 U	770 U	750 U	750 U	770 U
2-Chlorophenol	95-57-8	740 U	770 U	750 U	750 U	770 U
2-Methylphenol	95-48-7	740 U	770 U	750 U	750 U	770 U
2-Nitroaniline	88-74-4	740 U	770 U	750 U	750 U	770 U
2-Nitrophenol	88-75-5	740 U	770 U	750 U	750 U	770 U
3,3'-Dichlorobenzidine	91-94-1	740 U	770 U	750 U	R	770 U
3-Nitroaniline	99-09-2	740 U	770 U	750 U	750 UJ	770 U
4,6-Dinitro-2-methylphenol	534-52-1	740 UJ	770 UJ	750 UJ	R	R
4-Bromophenyl-phenylether	101-55-3	740 U	770 U	750 U	750 U	770 U
4-Chloro-3-methylphenol	59-50-7	740 U	770 U	750 U	750 U	770 U
4-Chloroaniline	106-47-8	740 UJ	770 UJ	750 UJ	750 UJ	770 U
4-Chlorophenyl-phenylether	7005-72-3	740 U	770 U	750 U	750 U	770 U
4-Methylphenol	106-44-5	740 U	770 U	750 U	750 U	770 U
4-Nitroaniline	100-01-6	740 U	770 U	750 U	750 UJ	770 U
4-Nitrophenol	100-02-7	740 UJ	770 UJ	750 UJ	7,500 U	7,700 U
Acetophenone	98-86-2	740 U	770 U	750 U	750 U	770 U
Atrazine	1912-24-9	740 U	770 U	750 U	750 U	770 U
Benzaldehyde	100-52-7	3,800 J	4,000 J	2,800 J	24,000 J	22,000 J
bis(2-Chloroethoxy)methane	111-91-1	740 U	770 U	750 U	750 U	770 U
bis(2-Chloroethyl)ether	111-44-4	740 U	770 U	750 U	750 U	770 U
bis(2-Ethylhexyl)phthalate	117-81-7	740 U	770 U	750 U	750 U	770 U
Butyl benzyl phthalate	85-68-7	740 U	770 U	750 U	750 U	770 U
Caprolactam	105-60-2	740 U	770 U	750 U	750 U	770 U
Carbazole	86-74-8	740 U	770 U	750 U	750 U	770 U
Dibenzofuran	132-64-9	740 U	770 U	750 U	750 U	770 U
Diethylphthalate	84-66-2	740 U	770 U	750 U	750 U	770 U
Dimethyl phthalate	131-11-3	740 U	770 U	750 U	750 U	770 U
Di-N-Butyl phthalate	84-74-2	740 U	770 U	750 U	750 U	770 U
Di-N-Octyl phthalate	117-84-0	1,800 U	1,900 U	1,900 U	750 U	770 U
Hexachlorobenzene	118-74-1	740 U	770 U	750 U	750 U	770 U
Hexachlorobutadiene	87-68-3	740 U	770 U	750 U	750 U	770 U
Hexachlorocyclopentadiene	77-47-4	740 UJ	770 UJ	750 UJ	R	7,700 UJ
Hexachloroethane	67-72-1	740 U	770 U	750 U	750 U	770 U
Isophorone	78-59-1	740 U	770 U	750 U	750 U	770 U
Nitrobenzene	98-95-3	740 U	770 U	750 U	750 U	770 U
N-Nitroso-di-N-propylamine	621-64-7	740 U	770 U	750 U	750 U	770 U
N-Nitrosodiphenylamine	86-30-6	740 U	770 U	750 U	750 U	770 U
Pentachlorophenol	87-86-5	R	R	R	R	R
Phenol	108-95-2	740 U	770 U	750 U	750 U	770 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31
Sample Name		P1-FI-27-CARC	P1-FI-28-CARC	P1-FI-29-CARC	P1-FI-30-CARC	P1-FI-31-CARC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		31.5	32.1	30.7	37.9	32.4
Lab Sample Weight (g)		236.29	239.41	212.64	446.92	236.41
Total Field Weight (g)		472	471	425	861	460
Percent Lipids (%)		6.1	3.4	4.6	4.1	2.1
Location		Pond A	Pond A	Pond A	Pond A	Pond A
SVOC						
1,1'-Biphenyl	92-52-4	750 U	740 U	760 U	740 U	750 U
2,2'-oxybis(1-Chloropropane)	108-60-1	750 U	740 U	760 U	740 U	750 U
2,4,5-Trichlorophenol	95-95-4	750 U	740 U	760 U	740 U	750 U
2,4,6-Trichlorophenol	88-06-2	750 U	740 U	760 U	740 U	750 U
2,4-Dichlorophenol	120-83-2	750 U	740 U	760 U	740 U	750 U
2,4-Dimethylphenol	105-67-9	750 U	740 U	760 U	740 U	750 U
2,4-Dinitrophenol	51-28-5	R	R	R	R	R
2,4-Dinitrotoluene	121-14-2	750 U	740 U	760 U	740 U	750 U
2,6-Dinitrotoluene	606-20-2	750 U	740 U	760 U	740 U	750 U
2-Chloronaphthalene	91-58-7	750 U	740 U	760 U	740 U	750 U
2-Chlorophenol	95-57-8	750 U	740 U	760 U	740 U	750 U
2-Methylphenol	95-48-7	750 U	740 U	760 U	740 U	750 U
2-Nitroaniline	88-74-4	750 U	740 U	760 U	740 U	750 U
2-Nitrophenol	88-75-5	750 U	740 U	760 U	740 U	750 U
3,3'-Dichlorobenzidine	91-94-1	750 U	740 U	760 U	740 U	750 U
3-Nitroaniline	99-09-2	750 U	740 U	760 U	740 U	750 U
4,6-Dinitro-2-methylphenol	534-52-1	R	R	R	R	R
4-Bromophenyl-phenylether	101-55-3	750 U	740 U	760 U	740 U	750 U
4-Chloro-3-methylphenol	59-50-7	750 U	740 U	760 U	740 U	750 U
4-Chloroaniline	106-47-8	750 U	740 U	760 U	740 U	750 U
4-Chlorophenyl-phenylether	7005-72-3	750 U	740 U	760 U	740 U	750 U
4-Methylphenol	106-44-5	750 U	740 U	760 U	740 U	750 U
4-Nitroaniline	100-01-6	750 U	740 U	760 U	740 U	750 U
4-Nitrophenol	100-02-7	7,500 U	7,400 U	7,600 U	7,400 U	7,500 U
Acetophenone	98-86-2	750 U	740 U	760 U	740 U	750 U
Atrazine	1912-24-9	750 U	740 U	760 U	740 U	750 U
Benzaldehyde	100-52-7	23,000 J	20,000 J	30,000 J	17,000 J	37,000 J
bis(2-Chloroethoxy)methane	111-91-1	750 U	740 U	760 U	740 U	750 U
bis(2-Chloroethyl)ether	111-44-4	750 U	740 U	760 U	740 U	750 U
bis(2-Ethylhexyl)phthalate	117-81-7	750 U	740 U	760 U	740 U	750 U
Butyl benzyl phthalate	85-68-7	750 U	740 U	760 U	740 U	750 U
Caprolactam	105-60-2	750 U	740 U	760 U	740 U	750 U
Carbazole	86-74-8	750 U	740 U	760 U	740 U	750 U
Dibenzofuran	132-64-9	750 U	740 U	760 U	740 U	750 U
Diethylphthalate	84-66-2	750 U	740 U	760 U	740 U	750 U
Dimethyl phthalate	131-11-3	750 U	740 U	760 U	740 U	750 U
Di-N-Butyl phthalate	84-74-2	750 U	740 U	760 U	740 U	750 U
Di-N-Octyl phthalate	117-84-0	750 U	740 U	760 U	740 U	750 U
Hexachlorobenzene	118-74-1	750 U	740 U	760 U	740 U	750 U
Hexachlorobutadiene	87-68-3	750 U	740 U	760 U	740 U	750 U
Hexachlorocyclopentadiene	77-47-4	7,500 UJ	7,400 UJ	7,600 UJ	7,400 UJ	7,500 UJ
Hexachloroethane	67-72-1	750 U	740 U	760 U	740 U	750 U
Isophorone	78-59-1	750 U	740 U	760 U	740 U	750 U
Nitrobenzene	98-95-3	750 U	740 U	760 U	740 U	750 U
N-Nitroso-di-N-propylamine	621-64-7	750 U	740 U	760 U	740 U	750 U
N-Nitrosodiphenylamine	86-30-6	750 U	740 U	760 U	740 U	750 U
Pentachlorophenol	87-86-5	R	R	R	R	R
Phenol	108-95-2	750 U	740 U	760 U	740 U	750 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Lab Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	CAS Number	P1-FI-32 P1-FI-32-CARC 9/27/2005 Largemouth Bass Carcass 37.1 415.45 799 5.4 Pond A	P1-FI-33 P1-FI-33-CARC 9/27/2005 White Sucker Carcass 40.1 345.98 704 10 Pond A	P1-FI-34 P1-FI-34-CARC 9/27/2005 White Sucker Carcass 35.1 210.63 467 5.2 Pond A	P1-FI-35 P1-FI-35-CARC 9/27/2005 White Sucker Carcass 37.2 271.63 585 12 Pond A	P1-FI-36 P1-FI-36-CARC 9/27/2005 White Sucker Carcass 43.4 413.63 747 7.5 Pond A
SVOC						
1,1'-Biphenyl	92-52-4	730 U	760 U	740 U	760 U	740 U
2,2'-oxybis(1-Chloropropane)	108-60-1	730 U	760 U	740 U	760 U	740 U
2,4,5-Trichlorophenol	95-95-4	730 U	760 U	740 U	760 U	740 U
2,4,6-Trichlorophenol	88-06-2	730 U	760 U	740 U	760 U	740 U
2,4-Dichlorophenol	120-83-2	730 U	760 U	740 U	760 U	740 U
2,4-Dimethylphenol	105-67-9	730 U	760 U	740 U	760 U	740 U
2,4-Dinitrophenol	51-28-5	R	R	R	R	R
2,4-Dinitrotoluene	121-14-2	730 U	760 U	740 U	760 U	740 U
2,6-Dinitrotoluene	606-20-2	730 U	760 U	740 U	760 U	740 U
2-Chloronaphthalene	91-58-7	730 U	760 U	740 U	760 U	740 U
2-Chlorophenol	95-57-8	730 U	760 U	740 U	760 U	740 U
2-Methylphenol	95-48-7	730 U	760 U	740 U	760 U	740 U
2-Nitroaniline	88-74-4	730 U	760 U	740 U	760 U	740 U
2-Nitrophenol	88-75-5	730 U	760 U	740 U	760 U	740 U
3,3'-Dichlorobenzidine	91-94-1	730 U	760 U	740 U	760 U	740 U
3-Nitroaniline	99-09-2	730 U	760 U	740 U	760 U	740 U
4,6-Dinitro-2-methylphenol	534-52-1	R	R	R	R	R
4-Bromophenyl-phenylether	101-55-3	730 U	760 U	740 U	760 U	740 U
4-Chloro-3-methylphenol	59-50-7	730 U	760 U	740 U	760 U	740 U
4-Chloroaniline	106-47-8	730 U	760 U	740 U	760 U	740 U
4-Chlorophenyl-phenylether	7005-72-3	730 U	760 U	740 U	760 U	740 U
4-Methylphenol	106-44-5	730 U	760 U	740 U	760 U	740 U
4-Nitroaniline	100-01-6	730 U	760 U	740 U	760 U	740 U
4-Nitrophenol	100-02-7	7,300 U	7,600 U	7,400 U	7,600 U	7,400 U
Acetophenone	98-86-2	730 U	760 U	740 U	760 U	740 U
Atrazine	1912-24-9	730 U	760 U	740 U	760 U	740 U
Benzaldehyde	100-52-7	30,000 J	17,000 J	4,700 J	28,000 J	9,700 J
bis(2-Chloroethoxy)methane	111-91-1	730 U	760 U	740 U	760 U	740 U
bis(2-Chloroethyl)ether	111-44-4	730 U	760 U	740 U	760 U	740 U
bis(2-Ethylhexyl)phthalate	117-81-7	730 U	760 U	740 U	760 U	740 U
Butyl benzyl phthalate	85-68-7	730 U	760 U	740 U	760 U	740 U
Caprolactam	105-60-2	730 U	760 U	740 U	760 U	740 U
Carbazole	86-74-8	730 U	760 U	740 U	760 U	740 U
Dibenzofuran	132-64-9	730 U	760 U	740 U	760 U	740 U
Diethylphthalate	84-66-2	730 U	760 U	740 U	760 U	740 U
Dimethyl phthalate	131-11-3	730 U	760 U	740 U	760 U	740 U
Di-N-Butyl phthalate	84-74-2	730 U	760 U	740 U	760 U	740 U
Di-N-Octyl phthalate	117-84-0	730 U	760 U	740 U	760 U	740 U
Hexachlorobenzene	118-74-1	730 U	760 U	740 U	760 U	740 U
Hexachlorobutadiene	87-68-3	730 U	760 U	740 U	760 U	740 U
Hexachlorocyclopentadiene	77-47-4	7,300 UJ	7,600 UJ	7,400 UJ	7,600 UJ	7,400 UJ
Hexachloroethane	67-72-1	730 U	760 U	740 U	760 U	740 U
Isophorone	78-59-1	730 U	760 U	740 U	760 U	740 U
Nitrobenzene	98-95-3	730 U	760 U	740 U	760 U	740 U
N-Nitroso-di-N-propylamine	621-64-7	730 U	760 U	740 U	760 U	740 U
N-Nitrosodiphenylamine	86-30-6	730 U	760 U	740 U	760 U	740 U
Pentachlorophenol	87-86-5	R	R	R	R	R
Phenol	108-95-2	730 U	760 U	740 U	760 U	740 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40	P2-FI-49
Sample Name		P1-FI-37-CARC	P1-FI-38-CARC	P1-FI-39-CARC	P1-FI-40-CARC	P2-FI-49-CARC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	Blue Gill
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		43.1	36.3	40.4	36.4	17.4
Lab Sample Weight (g)		469.22	309.01	389.84	304.28	55.54
Total Field Weight (g)		930	664	725	627	104
Percent Lipids (%)		13	8.6	1.5	10	2
Location		Pond A	Pond A	Pond A	Pond A	Pond F
SVOC						
1,1'-Biphenyl	92-52-4	760 U	730 U	730 U	740 U	630 U
2,2'-oxybis(1-Chloropropane)	108-60-1	760 U	730 U	730 U	740 U	630 U
2,4,5-Trichlorophenol	95-95-4	760 U	730 U	730 U	740 U	630 U
2,4,6-Trichlorophenol	88-06-2	760 U	730 U	730 U	740 U	630 U
2,4-Dichlorophenol	120-83-2	760 U	730 U	730 U	740 U	630 U
2,4-Dimethylphenol	105-67-9	760 U	730 U	730 U	740 U	630 UJ
2,4-Dinitrophenol	51-28-5	R	R	R	R	1,600 UJ
2,4-Dinitrotoluene	121-14-2	760 U	730 U	730 U	740 U	630 U
2,6-Dinitrotoluene	606-20-2	760 U	730 U	730 U	740 U	630 U
2-Chloronaphthalene	91-58-7	760 U	730 U	730 U	740 U	630 U
2-Chlorophenol	95-57-8	760 U	730 U	730 U	740 U	630 U
2-Methylphenol	95-48-7	760 U	730 U	730 U	740 U	630 U
2-Nitroaniline	88-74-4	760 U	730 U	730 U	740 U	630 U
2-Nitrophenol	88-75-5	760 U	730 U	730 U	740 U	630 U
3,3'-Dichlorobenzidine	91-94-1	760 U	730 U	730 U	740 U	630 UJ
3-Nitroaniline	99-09-2	760 U	730 U	730 U	740 U	630 U
4,6-Dinitro-2-methylphenol	534-52-1	R	R	R	R	630 UJ
4-Bromophenyl-phenylether	101-55-3	760 U	730 U	730 U	740 U	630 U
4-Chloro-3-methylphenol	59-50-7	760 U	730 U	730 U	740 U	630 U
4-Chloroaniline	106-47-8	760 U	730 U	730 U	740 U	630 U
4-Chlorophenyl-phenylether	7005-72-3	760 U	730 U	730 U	740 U	630 U
4-Methylphenol	106-44-5	760 U	730 U	730 U	740 U	630 U
4-Nitroaniline	100-01-6	760 U	730 U	730 U	740 U	630 U
4-Nitrophenol	100-02-7	7,600 U	7,300 U	7,300 U	7,400 U	630 UJ
Acetophenone	98-86-2	760 U	730 U	730 U	740 U	630 U
Atrazine	1912-24-9	760 U	730 U	730 U	740 U	630 U
Benzaldehyde	100-52-7	13,000 J	25,000 J	730 UJ	13,000 J	22,000 J
bis(2-Chloroethoxy)methane	111-91-1	760 U	730 U	730 U	740 U	630 U
bis(2-Chloroethyl)ether	111-44-4	760 U	730 U	730 U	740 U	630 U
bis(2-Ethylhexyl)phthalate	117-81-7	760 U	730 U	730 U	740 U	630 U
Butyl benzyl phthalate	85-68-7	760 U	730 U	730 U	740 U	630 U
Caprolactam	105-60-2	760 U	730 U	730 U	740 U	630 UJ
Carbazole	86-74-8	760 U	730 U	730 U	740 U	630 U
Dibenzofuran	132-64-9	760 U	730 U	730 U	740 U	630 U
Diethylphthalate	84-66-2	760 U	730 U	730 U	740 U	630 U
Dimethyl phthalate	131-11-3	760 U	730 U	730 U	740 U	630 U
Di-N-Butyl phthalate	84-74-2	760 U	730 U	730 U	740 U	630 U
Di-N-Octyl phthalate	117-84-0	760 UJ	730 U	730 U	740 U	1,600 U
Hexachlorobenzene	118-74-1	760 U	730 U	730 U	740 U	630 U
Hexachlorobutadiene	87-68-3	760 U	730 U	730 U	740 U	630 U
Hexachlorocyclopentadiene	77-47-4	7,600 UJ	7,300 UJ	7,300 UJ	7,400 UJ	630 U
Hexachloroethane	67-72-1	760 U	730 U	730 U	740 U	630 U
Isophorone	78-59-1	760 U	730 U	730 U	740 U	630 U
Nitrobenzene	98-95-3	760 U	730 U	730 U	740 U	630 U
N-Nitroso-di-N-propylamine	621-64-7	760 U	730 U	730 U	740 U	630 U
N-Nitrosodiphenylamine	86-30-6	760 U	730 U	730 U	740 U	630 U
Pentachlorophenol	87-86-5	R	R	R	R	1,600 UJ
Phenol	108-95-2	760 U	730 U	730 U	740 U	630 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54
Sample Name		P2-FI-50-CARC	P2-FI-51-CARC	P2-FI-52-CARC	P2-FI-53-CARC	P2-FI-54-CARC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2
Lab Sample Weight (g)		81.75	81.1	83.62	96.12	65.4
Total Field Weight (g)		151	159	154	154	131
Percent Lipids (%)		4.5	5.1	1.5	2	5.3
Location		Pond F	Pond F	Pond F	Pond F	Pond F
SVOC						
1,1'-Biphenyl	92-52-4	740 U	760 U	740 U	750 U	760 U
2,2'-oxybis(1-Chloropropane)	108-60-1	740 U	760 U	740 U	750 U	760 U
2,4,5-Trichlorophenol	95-95-4	740 U	760 U	740 U	750 U	760 U
2,4,6-Trichlorophenol	88-06-2	740 U	760 U	740 U	750 U	760 U
2,4-Dichlorophenol	120-83-2	740 U	760 U	740 U	750 U	760 U
2,4-Dimethylphenol	105-67-9	740 UJ	760 UJ	740 UJ	750 UJ	760 UJ
2,4-Dinitrophenol	51-28-5	1,900 UJ	1,900 UJ	1,900 UJ	1,900 UJ	1,900 UJ
2,4-Dinitrotoluene	121-14-2	740 U	760 U	740 U	750 U	760 U
2,6-Dinitrotoluene	606-20-2	740 U	760 U	740 U	750 U	760 U
2-Chloronaphthalene	91-58-7	740 U	760 U	740 U	750 U	760 U
2-Chlorophenol	95-57-8	740 U	760 U	740 U	750 U	760 U
2-Methylphenol	95-48-7	740 U	760 U	740 U	750 U	760 U
2-Nitroaniline	88-74-4	740 U	760 U	740 U	750 U	760 U
2-Nitrophenol	88-75-5	740 U	760 U	740 U	750 U	760 U
3,3'-Dichlorobenzidine	91-94-1	740 UJ	760 UJ	740 UJ	750 UJ	760 UJ
3-Nitroaniline	99-09-2	740 U	760 U	740 UJ	750 U	760 U
4,6-Dinitro-2-methylphenol	534-52-1	740 UJ	760 UJ	740 UJ	750 UJ	760 UJ
4-Bromophenyl-phenylether	101-55-3	740 U	760 U	740 U	750 U	760 U
4-Chloro-3-methylphenol	59-50-7	740 U	760 U	740 U	750 U	760 U
4-Chloroaniline	106-47-8	740 U	760 U	740 UJ	750 U	760 U
4-Chlorophenyl-phenylether	7005-72-3	740 U	760 U	740 U	750 U	760 U
4-Methylphenol	106-44-5	740 U	760 U	740 U	750 U	760 U
4-Nitroaniline	100-01-6	740 U	760 U	740 UJ	750 U	760 U
4-Nitrophenol	100-02-7	740 UJ	760 UJ	740 UJ	750 UJ	760 UJ
Acetophenone	98-86-2	740 U	760 U	740 U	750 U	760 U
Atrazine	1912-24-9	740 U	760 U	740 U	750 U	760 U
Benzaldehyde	100-52-7	13,000 J	41,000 J	25,000 J	60,000 J	24,000 J
bis(2-Chloroethoxy)methane	111-91-1	740 U	760 U	740 U	750 U	760 U
bis(2-Chloroethyl)ether	111-44-4	740 U	760 U	740 U	750 U	760 U
bis(2-Ethylhexyl)phthalate	117-81-7	740 U	760 U	740 U	750 U	760 U
Butyl benzyl phthalate	85-68-7	740 U	760 U	740 U	750 U	760 U
Caprolactam	105-60-2	740 UJ	760 UJ	740 UJ	750 UJ	760 UJ
Carbazole	86-74-8	740 U	760 U	740 U	750 U	760 U
Dibenzofuran	132-64-9	740 U	760 U	740 U	750 U	760 U
Diethylphthalate	84-66-2	740 U	760 U	740 U	750 U	760 U
Dimethyl phthalate	131-11-3	740 U	760 U	740 U	750 U	760 U
Di-N-Butyl phthalate	84-74-2	740 U	760 U	740 U	750 U	760 U
Di-N-Octyl phthalate	117-84-0	1,900 U	1,900 U	1,900 U	1,900 U	1,900 U
Hexachlorobenzene	118-74-1	740 U	760 U	740 U	750 U	760 U
Hexachlorobutadiene	87-68-3	740 U	760 U	740 U	750 U	760 U
Hexachlorocyclopentadiene	77-47-4	740 U	760 U	R	750 U	760 U
Hexachloroethane	67-72-1	740 U	760 U	740 U	750 U	760 U
Isophorone	78-59-1	740 U	760 U	740 U	750 U	760 U
Nitrobenzene	98-95-3	740 U	760 U	740 U	750 U	760 U
N-Nitroso-di-N-propylamine	621-64-7	740 U	760 U	740 U	750 U	760 U
N-Nitrosodiphenylamine	86-30-6	740 U	760 U	740 U	750 U	760 U
Pentachlorophenol	87-86-5	1,900 UJ	1,900 UJ	1,900 UJ	1,900 UJ	1,900 UJ
Phenol	108-95-2	740 U	760 U	740 U	750 U	760 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	P2-FI-55	P2-FI-56	P2-FI-57	P2-FI-58	P2-FI-59
Sample Name		P2-FI-55-CARC	P2-FI-56-CARC	P2-FI-57-CARC	P2-FI-58-CARC	P2-FI-59-CARC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		Blue Gill	Pumpkin Seed	White Sucker	White Sucker	White Sucker
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		14.1 - 14.5	13 - 13.9	39.1	34.6	40.4
Lab Sample Weight (g)		79.96	110.03	352.93	255.51	405.93
Total Field Weight (g)		166	219	693	501	755
Percent Lipids (%)		4.7	3.1	6.8	3.6	11
Location		Pond F	Pond F	Pond F	Pond F	Pond F
SVOC						
1,1'-Biphenyl	92-52-4	740 U	740 U	750 U	730 U	730 U
2,2'-oxybis(1-Chloropropane)	108-60-1	740 U	740 U	750 U	730 U	730 U
2,4,5-Trichlorophenol	95-95-4	740 U	740 U	750 U	730 U	730 U
2,4,6-Trichlorophenol	88-06-2	740 U	740 U	750 U	730 U	730 U
2,4-Dichlorophenol	120-83-2	740 U	740 U	750 U	730 U	730 U
2,4-Dimethylphenol	105-67-9	740 UJ	740 UJ	750 UJ	730 UJ	730 UJ
2,4-Dinitrophenol	51-28-5	1,800 UJ	1,900 UJ	1,900 UJ	1,800 UJ	1,800 UJ
2,4-Dinitrotoluene	121-14-2	740 U	740 U	750 U	730 U	730 U
2,6-Dinitrotoluene	606-20-2	740 U	740 U	750 U	730 U	730 U
2-Chloronaphthalene	91-58-7	740 U	740 U	750 U	730 U	730 U
2-Chlorophenol	95-57-8	740 U	740 U	750 U	730 U	730 U
2-Methylphenol	95-48-7	740 U	740 U	750 U	730 U	730 U
2-Nitroaniline	88-74-4	740 U	740 U	750 U	730 U	730 U
2-Nitrophenol	88-75-5	740 U	740 U	750 U	730 U	730 U
3,3'-Dichlorobenzidine	91-94-1	740 UJ	740 UJ	750 UJ	730 UJ	730 UJ
3-Nitroaniline	99-09-2	740 UJ	740 UJ	750 UJ	730 UJ	730 UJ
4,6-Dinitro-2-methylphenol	534-52-1	740 UJ	740 UJ	750 UJ	730 UJ	730 UJ
4-Bromophenyl-phenylether	101-55-3	740 U	740 U	750 U	730 U	730 U
4-Chloro-3-methylphenol	59-50-7	740 U	740 U	750 U	730 U	730 U
4-Chloroaniline	106-47-8	740 U	740 U	750 U	730 U	730 U
4-Chlorophenyl-phenylether	7005-72-3	740 U	740 U	750 U	730 U	730 U
4-Methylphenol	106-44-5	740 U	740 U	750 U	730 U	730 U
4-Nitroaniline	100-01-6	740 U	740 U	750 U	730 U	730 U
4-Nitrophenol	100-02-7	740 UJ	740 UJ	750 UJ	730 UJ	730 UJ
Acetophenone	98-86-2	740 U	740 U	750 U	730 U	730 U
Atrazine	1912-24-9	740 U	740 U	750 U	730 U	730 U
Benzaldehyde	100-52-7	13,000 J	4,400 J	22,000 J	8,600 J	5,800 J
bis(2-Chloroethoxy)methane	111-91-1	740 U	740 U	750 U	730 U	730 U
bis(2-Chloroethyl)ether	111-44-4	740 U	740 U	750 U	730 U	730 U
bis(2-Ethylhexyl)phthalate	117-81-7	740 U	740 U	750 U	730 U	730 U
Butyl benzyl phthalate	85-68-7	740 U	740 U	750 U	730 U	730 U
Caprolactam	105-60-2	740 UJ	740 UJ	750 UJ	730 UJ	730 UJ
Carbazole	86-74-8	740 U	740 U	750 U	730 U	730 U
Dibenzofuran	132-64-9	740 U	740 U	750 U	730 U	730 U
Diethylphthalate	84-66-2	740 U	740 U	750 U	730 U	730 U
Dimethyl phthalate	131-11-3	740 U	740 U	750 U	730 U	730 U
Di-N-Butyl phthalate	84-74-2	740 U	740 U	750 U	730 U	730 U
Di-N-Octyl phthalate	117-84-0	1,800 U	1,900 U	1,900 U	1,800 U	1,800 U
Hexachlorobenzene	118-74-1	740 U	740 U	750 U	730 U	730 U
Hexachlorobutadiene	87-68-3	740 U	740 U	750 U	730 U	730 U
Hexachlorocyclopentadiene	77-47-4	740 U	740 U	750 U	730 U	730 U
Hexachloroethane	67-72-1	740 U	740 U	750 U	730 U	730 U
Isophorone	78-59-1	740 U	740 U	750 U	730 U	730 U
Nitrobenzene	98-95-3	740 U	740 U	750 U	730 U	730 U
N-Nitroso-di-N-propylamine	621-64-7	740 U	740 U	750 U	730 U	730 U
N-Nitrosodiphenylamine	86-30-6	740 U	740 U	750 U	730 U	730 U
Pentachlorophenol	87-86-5	1,800 UJ	1,900 UJ	1,900 UJ	1,800 UJ	1,800 UJ
Phenol	108-95-2	740 U	740 U	750 U	730 U	730 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	CAS Number	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name		P2-FI-60-CARC	P2-FI-61-CARC	P2-FI-62-CARC	P2-FI-63-CARC	P2-FI-64-CARC
Date Collected		9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name		White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type		Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)		34.9	37	33	35.9	34.6
Lab Sample Weight (g)		168.83	288.88	174.55	228.46	213.18
Total Field Weight (g)		442	595	380	532	460
Percent Lipids (%)		7.7	14	3.9	6.6	6.4
Location		Pond F	Pond F	Pond F	Pond F	Pond F
SVOC						
1,1'-Biphenyl	92-52-4	750 U	730 U	750 U	730 U	740 U
2,2'-oxybis(1-Chloropropane)	108-60-1	750 U	730 U	750 U	730 U	740 U
2,4,5-Trichlorophenol	95-95-4	750 U	730 U	750 U	730 U	740 U
2,4,6-Trichlorophenol	88-06-2	750 U	730 U	750 U	730 U	740 U
2,4-Dichlorophenol	120-83-2	750 U	730 U	750 U	730 U	740 U
2,4-Dimethylphenol	105-67-9	750 UJ	730 UJ	750 UJ	730 UJ	740 UJ
2,4-Dinitrophenol	51-28-5	1,900 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,800 UJ
2,4-Dinitrotoluene	121-14-2	750 U	730 U	750 U	730 U	740 U
2,6-Dinitrotoluene	606-20-2	750 U	730 U	750 U	730 U	740 U
2-Chloronaphthalene	91-58-7	750 U	730 U	750 U	730 U	740 U
2-Chlorophenol	95-57-8	750 U	730 U	750 U	730 U	740 U
2-Methylphenol	95-48-7	750 U	730 U	750 U	730 U	740 U
2-Nitroaniline	88-74-4	750 U	730 U	750 U	730 U	740 U
2-Nitrophenol	88-75-5	750 U	730 U	750 U	730 U	740 U
3,3'-Dichlorobenzidine	91-94-1	750 UJ	730 UJ	750 UJ	730 UJ	740 UJ
3-Nitroaniline	99-09-2	750 UJ	730 UJ	750 UJ	730 UJ	740 UJ
4,6-Dinitro-2-methylphenol	534-52-1	750 UJ	730 UJ	750 UJ	730 UJ	740 UJ
4-Bromophenyl-phenylether	101-55-3	750 U	730 U	750 U	730 U	740 U
4-Chloro-3-methylphenol	59-50-7	750 U	730 U	750 U	730 U	740 U
4-Chloroaniline	106-47-8	750 U	730 U	750 U	730 U	740 U
4-Chlorophenyl-phenylether	7005-72-3	750 U	730 U	750 U	730 U	740 U
4-Methylphenol	106-44-5	750 U	730 U	750 U	730 U	740 U
4-Nitroaniline	100-01-6	750 U	730 U	750 U	730 U	740 U
4-Nitrophenol	100-02-7	750 UJ	730 UJ	750 UJ	730 UJ	740 UJ
Acetophenone	98-86-2	750 U	730 U	750 U	730 U	740 U
Atrazine	1912-24-9	750 U	730 U	750 U	730 U	740 U
Benzaldehyde	100-52-7	10,000 J	9,900 J	5,700 J	4,900 J	5,300 J
bis(2-Chloroethoxy)methane	111-91-1	750 U	730 U	750 U	730 U	740 U
bis(2-Chloroethyl)ether	111-44-4	750 U	730 U	750 U	730 U	740 U
bis(2-Ethylhexyl)phthalate	117-81-7	750 U	730 U	750 U	730 U	740 U
Butyl benzyl phthalate	85-68-7	750 U	730 U	750 U	730 U	740 U
Caprolactam	105-60-2	750 UJ	730 UJ	750 UJ	730 UJ	740 UJ
Carbazole	86-74-8	750 U	730 U	750 U	730 U	740 U
Dibenzofuran	132-64-9	750 U	730 U	750 U	730 U	740 U
Diethylphthalate	84-66-2	750 U	730 U	750 U	730 U	740 U
Dimethyl phthalate	131-11-3	750 U	730 U	750 U	730 U	740 U
Di-N-Butyl phthalate	84-74-2	750 U	730 U	750 U	730 U	740 U
Di-N-Octyl phthalate	117-84-0	1,900 U	1,800 U	1,900 U	1,800 U	1,800 U
Hexachlorobenzene	118-74-1	750 U	730 U	750 U	730 U	740 U
Hexachlorobutadiene	87-68-3	750 U	730 U	750 U	730 U	740 U
Hexachlorocyclopentadiene	77-47-4	750 U	730 U	750 U	730 U	740 U
Hexachloroethane	67-72-1	750 U	730 U	750 U	730 U	740 U
Isophorone	78-59-1	750 U	730 U	750 U	730 U	740 U
Nitrobenzene	98-95-3	750 U	730 U	750 U	730 U	740 U
N-Nitroso-di-N-propylamine	621-64-7	750 U	730 U	750 U	730 U	740 U
N-Nitrosodiphenylamine	86-30-6	750 U	730 U	750 U	730 U	740 U
Pentachlorophenol	87-86-5	1,900 UJ	1,800 UJ	1,900 UJ	1,800 UJ	1,800 UJ
Phenol	108-95-2	750 U	730 U	750 U	730 U	740 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Lab Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	CAS Number	P6-FI-97 P6-FI-97-CARC 9/29/2005 Largemouth Bass Carcass 34.6 299.2 567 2.3 P6	P6-FI-98 P6-FI-98-CARC 9/29/2005 Largemouth Bass Carcass 36.6 386.01 731 3.6 P6	P6-FI-99 P6-FI-99-CARC 9/29/2005 Largemouth Bass Carcass 31.4 222.2 402 2.6 P6	P6-FI-100 P6-FI-100-CARC 9/29/2005 Largemouth Bass Carcass 38.5 465.6 814 1.8 P6
SVOC					
1,1'-Biphenyl	92-52-4	380 U	370 U	360 U	380 U
2,2'-oxybis(1-Chloropropane)	108-60-1	380 U	370 U	360 U	380 U
2,4,5-Trichlorophenol	95-95-4	380 U	370 U	360 U	380 U
2,4,6-Trichlorophenol	88-06-2	380 U	370 U	360 U	380 U
2,4-Dichlorophenol	120-83-2	380 U	370 U	360 U	380 U
2,4-Dimethylphenol	105-67-9	380 U	370 U	360 U	380 U
2,4-Dinitrophenol	51-28-5	R	R	R	R
2,4-Dinitrotoluene	121-14-2	380 U	370 U	360 U	380 U
2,6-Dinitrotoluene	606-20-2	380 U	370 U	360 U	380 U
2-Chloronaphthalene	91-58-7	380 U	370 U	360 U	380 U
2-Chlorophenol	95-57-8	380 U	370 U	360 U	380 U
2-Methylphenol	95-48-7	380 U	370 U	360 U	380 U
2-Nitroaniline	88-74-4	380 U	370 U	360 U	380 U
2-Nitrophenol	88-75-5	940 U	930 U	910 U	960 U
3,3'-Dichlorobenzidine	91-94-1	380 UJ	370 U	360 U	380 U
3-Nitroaniline	99-09-2	380 U	370 U	360 U	380 U
4,6-Dinitro-2-methylphenol	534-52-1	3,800 UJ	3,700 UJ	3,600 UJ	3,800 UJ
4-Bromophenyl-phenylether	101-55-3	380 U	370 U	360 U	380 U
4-Chloro-3-methylphenol	59-50-7	380 U	370 U	360 U	380 U
4-Chloroaniline	106-47-8	380 UJ	370 U	360 U	380 U
4-Chlorophenyl-phenylether	7005-72-3	380 U	370 U	360 U	380 U
4-Methylphenol	106-44-5	380 U	370 U	360 U	380 U
4-Nitroaniline	100-01-6	380 U	370 U	360 U	380 U
4-Nitrophenol	100-02-7	940 UJ	930 UJ	910 UJ	960 UJ
Acetophenone	98-86-2	380 U	370 U	360 U	380 U
Atrazine	1912-24-9	940 U	930 U	910 U	960 U
Benzaldehyde	100-52-7	3,800 J	3,400 J	11,000 J	2,900 J
bis(2-Chloroethoxy)methane	111-91-1	380 U	370 U	360 U	380 U
bis(2-Chloroethyl)ether	111-44-4	380 U	370 U	360 U	380 U
bis(2-Ethylhexyl)phthalate	117-81-7	380 U	370 U	360 U	380 U
Butyl benzyl phthalate	85-68-7	380 U	370 U	360 U	380 U
Caprolactam	105-60-2	380 U	370 U	360 U	380 U
Carbazole	86-74-8	380 UJ	370 UJ	360 UJ	380 UJ
Dibenzofuran	132-64-9	380 U	370 U	360 U	380 U
Diethylphthalate	84-66-2	380 UJ	370 UJ	360 UJ	380 UJ
Dimethyl phthalate	131-11-3	380 U	370 U	360 U	380 U
Di-N-Butyl phthalate	84-74-2	380 U	370 U	360 U	380 U
Di-N-Octyl phthalate	117-84-0	380 U	370 U	360 U	380 U
Hexachlorobenzene	118-74-1	380 U	370 U	360 U	380 U
Hexachlorobutadiene	87-68-3	380 U	370 U	360 U	380 U
Hexachlorocyclopentadiene	77-47-4	R	3,700 U	3,600 U	3,800 U
Hexachloroethane	67-72-1	380 U	370 U	360 U	380 U
Isophorone	78-59-1	380 U	370 U	360 U	380 U
Nitrobenzene	98-95-3	380 U	370 U	360 U	380 U
N-Nitroso-di-N-propylamine	621-64-7	380 U	370 U	360 U	380 U
N-Nitrosodiphenylamine	86-30-6	380 U	370 U	360 U	380 U
Pentachlorophenol	87-86-5	940 UJ	930 UJ	910 UJ	960 UJ
Phenol	108-95-2	380 U	370 U	360 U	380 U

TABLE 4-47
RESULTS FOR SVOCs IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID Sample Name Date Collected Species Common Name Tissue Type Length (cm) Lab Sample Weight (g) Total Field Weight (g) Percent Lipids (%) Location	CAS Number	P6-FI-101 P6-FI-101-CARC 9/29/2005 Largemouth Bass Carcass 29.9 212.26 373 4.2 P6	P6-FI-102 P6-FI-102-CARC 9/29/2005 Largemouth Bass Carcass 31.9 232.16 442 3.7 P6	P6-FI-103 P6-FI-103-CARC 9/29/2005 Largemouth Bass Carcass 31.3 231.34 447 4 P6	P6-FI-104 P6-FI-104-CARC 9/29/2005 Largemouth Bass Carcass 39 467.23 907 4.7 P6
SVOC					
1,1'-Biphenyl	92-52-4	380 U	380 U	380 U	380 U
2,2'-oxybis(1-Chloropropane)	108-60-1	380 U	380 U	380 U	380 U
2,4,5-Trichlorophenol	95-95-4	380 U	380 U	380 U	380 U
2,4,6-Trichlorophenol	88-06-2	380 U	380 U	380 U	380 U
2,4-Dichlorophenol	120-83-2	380 U	380 U	380 U	380 U
2,4-Dimethylphenol	105-67-9	380 U	380 U	380 U	380 U
2,4-Dinitrophenol	51-28-5	R	R	R	R
2,4-Dinitrotoluene	121-14-2	380 U	380 U	380 U	380 U
2,6-Dinitrotoluene	606-20-2	380 U	380 U	380 U	380 U
2-Chloronaphthalene	91-58-7	380 U	380 U	380 U	380 U
2-Chlorophenol	95-57-8	380 U	380 U	380 U	380 U
2-Methylphenol	95-48-7	380 U	380 U	380 U	380 U
2-Nitroaniline	88-74-4	380 U	380 U	380 U	380 U
2-Nitrophenol	88-75-5	940 U	940 U	940 U	940 U
3,3'-Dichlorobenzidine	91-94-1	380 U	380 U	380 U	380 U
3-Nitroaniline	99-09-2	380 U	380 U	380 U	380 U
4,6-Dinitro-2-methylphenol	534-52-1	3,800 UJ	3,800 UJ	3,800 UJ	3,800 UJ
4-Bromophenyl-phenylether	101-55-3	380 U	380 U	380 U	380 U
4-Chloro-3-methylphenol	59-50-7	380 U	380 U	380 U	380 U
4-Chloroaniline	106-47-8	380 U	380 U	380 U	380 U
4-Chlorophenyl-phenylether	7005-72-3	380 U	380 U	380 U	380 U
4-Methylphenol	106-44-5	380 U	380 U	380 U	380 U
4-Nitroaniline	100-01-6	380 U	380 U	380 U	380 U
4-Nitrophenol	100-02-7	940 UJ	940 UJ	940 UJ	940 UJ
Acetophenone	98-86-2	380 U	380 U	380 U	380 U
Atrazine	1912-24-9	940 U	940 U	940 U	940 U
Benzaldehyde	100-52-7	5,900 J	5,500 J	6,900 J	5,900 J
bis(2-Chloroethoxy)methane	111-91-1	380 U	380 U	380 U	380 U
bis(2-Chloroethyl)ether	111-44-4	380 U	380 U	380 U	380 U
bis(2-Ethylhexyl)phthalate	117-81-7	380 U	380 U	380 U	380 U
Butyl benzyl phthalate	85-68-7	380 U	380 U	380 U	380 U
Caprolactam	105-60-2	380 U	380 U	380 U	380 U
Carbazole	86-74-8	380 UJ	380 UJ	380 UJ	380 UJ
Dibenzofuran	132-64-9	380 U	380 U	380 U	380 U
Diethylphthalate	84-66-2	380 UJ	380 UJ	380 UJ	380 UJ
Dimethyl phthalate	131-11-3	380 U	380 U	380 U	380 U
Di-N-Butyl phthalate	84-74-2	380 U	380 U	380 U	380 U
Di-N-Octyl phthalate	117-84-0	380 U	380 U	380 U	380 U
Hexachlorobenzene	118-74-1	380 U	380 U	380 U	380 U
Hexachlorobutadiene	87-68-3	380 U	380 U	380 U	380 U
Hexachlorocyclopentadiene	77-47-4	3,800 U	3,800 U	3,800 U	3,800 U
Hexachloroethane	67-72-1	380 U	380 U	380 U	380 U
Isophorone	78-59-1	380 U	380 U	380 U	380 U
Nitrobenzene	98-95-3	380 U	380 U	380 U	380 U
N-Nitroso-di-N-propylamine	621-64-7	380 U	380 U	380 U	380 U
N-Nitrosodiphenylamine	86-30-6	380 U	380 U	380 U	380 U
Pentachlorophenol	87-86-5	940 UJ	940 UJ	940 UJ	940 UJ
Phenol	108-95-2	380 U	380 U	380 U	380 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	**BR1-FI-113**	**BR1-FI-114**	**BR1-FI-115**	**BR1-FI-116**	**BR1-FI-117**	**BR1-FI-118**	**BR1-FI-119**	**BR1-FI-120**
Sample Name	**BR1-FI-113-CARC**	**BR1-FI-114-CARC**	**BR1-FI-115-CARC**	**BR1-FI-116-CARC**	**BR1-FI-117-CARC**	**BR1-FI-118-CARC**	**BR1-FI-119-CARC**	**BR1-FI-120-CARC**
Date Collected	**9/29/2005**	**9/29/2005**	**9/29/2005**	**9/29/2005**	**9/29/2005**	**9/29/2005**	**9/29/2005**	**9/29/2005**
Species Common Name	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**
Tissue Type	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**
Length (cm)	**45.6**	**47.4**	**31.9**	**29.5**	**32.5**	**27.8**	**44.1**	**45.2**
Lab Sample Weight (g)	**698.62**	**763.9**	**248.86**	**159.45**	**205.33**	**116.92**	**549.23**	**503.04**
Total Field Weight (g)	**1255**	**1221**	**437**	**300**	**405**	**249**	**1130**	**1048**
Percent Lipids (%)	**6.5**	**8.1**	**8.4**	**5.9**	**5**	**4.9**	**10**	**1.6**
Location	**BR-1**	**BR-1**	**BR-1**	**BR-1**	**BR-1**	**BR-1**	**BR-1**	**BR-1**
PCBs								
Monochlorobiphenyls	0.32 UJ	0.33 U	0.31 U	0.34 U	0.32 U	0.33 U	0.32 U	0.33 U
Dichlorobiphenyls	0.32 U	0.33 U	0.31 U	0.34 U	0.32 U	0.33 U	0.32 U	0.33 U
Trichlorobiphenyls	30	45	35	28	0.32 U	5.1	7.4	0.33 U
Tetrachlorobiphenyls	200	240	140	100	98	77	150	28
Pentachlorobiphenyls	770 J	990	360	290	240	200	380	100
Hexachlorobiphenyls	1,000 J	1,400	330	260	240	190	430	130
Heptachlorobiphenyls	620	810	160	130	130	100	250	79
Octachlorobiphenyls	170 J	230	39	34	34	28	71	23
Nonachlorobiphenyls	28 J	45	8.1	7	4	3.1	9.8	2.5
Decachlorobiphenyl	3.6	7.2	1.5	1	0.99	0.8	2.6	0.59
Total Homologs	2,900 J	3,700	1,100	850	740	610	1,300	360
Pesticides								
4,4'-DDD	28	46	29	17	15	13	31	8.1
4,4'-DDE	84 J	160 J	49 J	22 J	31 J	22 J	79 J	21
4,4'-DDT	6.1 J	21 J	5.6 J	3.6 J	3.3 J	2.1 J	48 J	5 J
Aldrin	0.51 U	0.54 U	0.8 J	0.55 U	0.51 U	0.52 U	0.94 J	0.52 U
alpha-BHC	0.51 U	0.54 U	0.5 U	0.55 U	0.51 U	0.52 U	0.51 U	0.52 U
alpha-Chlordane	19	27	18	13	12	11	29	6
beta-BHC	0.51 U	0.54 U	0.5 U	0.55 U	0.51 U	0.52 U	0.51 U	0.52 U
Delta-BHC	0.51 U	0.54 U	0.5 U	0.55 U	0.51 U	0.52 U	0.51 U	0.52 U
Dieldrin	34 J	46 J	41	28	31	26	42	10
Endosulfan I	8.2 J	9 J	14 J	13	9.8	8.6	16 J	2.4 J
Endosulfan II	0.51 J	0.54 U	0.5 U	0.55 U	0.51 U	0.52 U	0.56 J	0.52 U
Endosulfan Sulfate	9.1 J	12 J	3.8 J	3.3 J	3.7 J	2.3 J	5.4 J	2.4 J
Endrin	0.51 U	0.54 U	0.5 U	0.55 U	0.51 U	0.52 U	0.51 U	0.52 U
Endrin Aldehyde	2.6 U	2.7 U	2.5 U	2.8 U	2.6 U	2.6 U	2.5 U	2.6 U
Endrin Ketone	0.51 U	0.54 U	0.5 U	0.55 U	0.51 U	0.52 U	0.51 U	0.52 U
Gamma-BHC	0.88	0.91 J	0.92	0.94 J	1.2 J	0.71	1.3 J	0.52 U
Gamma-Chlordane	11	14	16 J	9.8	10 J	9.7 J	18	4.4
Heptachlor	0.51 U	0.54 U	0.5 U	0.55 U	0.51 U	0.52 U	0.51 U	0.52 U
Heptachlor Epoxide	0.72 J	0.54 U	0.72 J	0.55 U	5.8 J	0.52 U	0.51 U	0.52 U
Methoxychlor	0.51 U	0.54 U	0.5 U	0.55 U	0.51 U	0.52 U	0.51 U	0.52 U
Toxaphene	51 U	54 U	50 U	55 U	51 U	52 U	51 U	52 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	BR1-FI-121-CARC	BR1-FI-122-CARC	BR1-FI-123-CARC	BR1-FI-124-CARC	BR1-FI-125-CARC	BR1-FI-126-CARC	BR1-FI-127-CARC	BR1-FI-128-CARC
Date Collected	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Lab Sample Weight (g)	112.99	106.26	108.69	102.5	138.37	112.13	135.28	109.33
Total Field Weight (g)	222	191	192	183	274	205	258	209
Percent Lipids (%)	6.6	10	15	5.4	10	12	9.1	9.1
Location	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
PCBs								
Monochlorobiphenyls	0.32 U	0.34 U	0.34 U	0.33 U	0.32 U	0.33 U	0.33 U	0.32 U
Dichlorobiphenyls	0.32 U	0.34 U	0.34 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33
Trichlorobiphenyls	6.3	13	14	6	7.7	9	12	14
Tetrachlorobiphenyls	110	180	200	95	100	120	140	110
Pentachlorobiphenyls	410	480	710	300	270	370	360	320
Hexachlorobiphenyls	440	510	920	370	290	420	400	360
Heptachlorobiphenyls	180	280	570	220	170	230	220	200
Octachlorobiphenyls	46	70	150	58	51	65	63	56
Nonachlorobiphenyls	11	8.2	16	6.6	6.7	8.5	8.4	7.3
Decachlorobiphenyl	5.1	1.8	3.4	1.2	1.7	2.4	2	1.8
Total Homologs	1,200	1,500	2,600	1,000	900	1,200	1,200	1,100
Pesticides								
4,4'-DDD	21	23	29	18	17	21	19	18
4,4'-DDE	70 J	71 J	96	53 J	37 J	68 J	46 J	42 J
4,4'-DDT	11 J	8 J	3.7 J	4.3 J	4.5 J	18 J	3.8 J	3.3 J
Aldrin	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
alpha-BHC	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
alpha-Chlordane	12	15	19	11	14 J	11 J	11	9.9
beta-BHC	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
Delta-BHC	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
Dieldrin	44	81	83	45	58	65	52	50
Endosulfan I	16	23	21 J	16	17	17	13	15
Endosulfan II	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
Endosulfan Sulfate	5.4 J	5.2 J	11 J	4.2 J	3.2 J	6.4 J	4.3 J	5.2 J
Endrin	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
Endrin Aldehyde	2.6 U	2.7 U	2.7 U	2.7 U	2.6 U	2.6 U	2.7 U	2.6 U
Endrin Ketone	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
Gamma-BHC	1.4 J	2.5 J	2.7	0.53 U	1.5 J	1.9 J	2 J	1.3 J
Gamma-Chlordane	7.4	8.4 J	7.7 J	7.1	8.2	8 J	7.4 J	6.3 J
Heptachlor	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
Heptachlor Epoxide	5.1 J	0.55 U	13 J	8.2 J	16 J	11 J	8.3 J	7.4 J
Methoxychlor	0.51 U	0.55 U	0.55 U	0.53 U	0.51 U	0.52 U	0.53 U	0.52 U
Toxaphene	51 U	55 U	55 U	53 U	51 U	52 U	53 U	52 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name	BR2-FI-73-CARC	BR2-FI-74-CARC	BR2-FI-75-CARC	BR2-FI-76-CARC	BR2-FI-77-CARC	BR2-FI-78-CARC	BR2-FI-79-CARC	BR2-FI-80-CARC
Date Collected	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	30.7	30	30.4	25.2	25.8	25.4	25	24.3
Lab Sample Weight (g)	231.99	214.86	282.67	118.9	138.03	134.45	117.63	122.11
Total Field Weight (g)	471	414	543	231	264	260	229	236
Percent Lipids (%)	4.4	6.8	9.5	5.4	11	5.9	6.3	8.6
Location	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PCBs								
Monochlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Dichlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Trichlorobiphenyls	9.3	8.6	16	11	24	9.3	11	14
Tetrachlorobiphenyls	210	180	420	200	480	220	260	270
Pentachlorobiphenyls	1,000	890	1,800	840	1,800	1,000	1,200	1,000
Hexachlorobiphenyls	1,200	1,100	1,700	880	1,700	1,200	1,300	1,100
Heptachlorobiphenyls	590	560	810	460	840	590	630	530
Octachlorobiphenyls	160	180	210	130	200	160	170	150
Nonachlorobiphenyls	37 J	44	60	36	48	36	31	42
Decachlorobiphenyl	3.2	3.1	3.4	3	3.4	3	3	2.7
Total Homologs	3,200	2,900	5,000	2,600	5,200	3,300	3,600	3,100
Pesticides								
4,4'-DDD	35	32	46	41	58	32	42	44
4,4'-DDE	110 J	100 J	150 J	95 J	160 J	110 J	120 J	100 J
4,4'-DDT	0.63 U	0.62 U	0.62 U	11 J	0.63 U	0.62 U	0.63 U	0.63 U
Aldrin	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
alpha-BHC	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
alpha-Chlordane	18	18	28	25	37	21	28	30
beta-BHC	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
Delta-BHC	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
Dieldrin	50	51	80	60	110	61	72	82
Endosulfan I	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
Endosulfan II	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
Endosulfan Sulfate	15 J	13 J	16 J	8.7 J	16 J	13 J	13 J	11 J
Endrin	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
Endrin Aldehyde	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
Endrin Ketone	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
Gamma-BHC	1	0.87	1.3	0.81	1.7	1.1	0.97	1.3
Gamma-Chlordane	11	11 J	17	14	22	12	15	17
Heptachlor	0.63 U	0.62 U	0.93	0.96	1.2	0.62 U	1.1	1.2 J
Heptachlor Epoxide	1.5 J	1.8 J	2.4 J	1.9 J	3.1 J	1.8 J	2.2 J	2.2 J
Methoxychlor	0.63 U	0.62 U	0.62 U	0.62 U	0.63 U	0.62 U	0.63 U	0.63 U
Toxaphene	63 U	62 U	62 U	62 U	63 U	62 U	63 U	63 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name	BR2-FI-81-CARC	BR2-FI-82-CARC	BR2-FI-83-CARC	BR2-FI-84-CARC	BR2-FI-85-CARC	BR2-FI-86-CARC	BR2-FI-87-CARC	BR2-FI-88-CARC
Date Collected	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Lab Sample Weight (g)	497.92	384.99	248.5	349.16	316.2	212.68	391.41	322.81
Total Field Weight (g)	968	697	509	643	600	398	714	521
Percent Lipids (%)	13	7	7.9	10	4.9	4.3	7.8	3.7
Location	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
PCBs								
Monochlorobiphenyls	1.6 U	1.6 U	1.5 U	1.6 U	1.6 UJ	1.6 U	1.6 U	1.6 U
Dichlorobiphenyls	1.6 U	1.6 U	1.5 U	1.6 U	1.6 UJ	1.6 U	1.6 U	1.6 U
Trichlorobiphenyls	20	14	77	19	10 J	7.1	14	7.3
Tetrachlorobiphenyls	370	380	800	350	460 J	190	220	160
Pentachlorobiphenyls	1,200	1,700	1,700	1,500	2,300 J	680	1,100	1,100
Hexachlorobiphenyls	1,400	2,100	1,200	1,600	2,500 J	780	1,200	1,600
Heptachlorobiphenyls	720	1,100	440	830	1,100 J	410	630	980
Octachlorobiphenyls	190	280	130	220	280 J	97	170	280
Nonachlorobiphenyls	50	60	40	45	51 J	34	43	61
Decachlorobiphenyl	3.7	5.6	2.5	3.9	4.9 J	2	3.1	4.8
Total Homologs	4,000	5,600	4,400	4,500	6,600 J	2,200	3,400	4,200
Pesticides								
4,4'-DDD	62	52	38	58	40	22	49	22
4,4'-DDE	130 J	160 J	86 J	140 J	160 J	68 J	120 J	110 J
4,4'-DDT	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Aldrin	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
alpha-BHC	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
alpha-Chlordane	37	26	23	30	15	14	32	8.9
beta-BHC	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Delta-BHC	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Dieldrin	77	53 J	61 J	64 J	45 J	25 J	57	28 J
Endosulfan I	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Endosulfan II	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Endosulfan Sulfate	13 J	18 J	13 J	14 J	25 J	8.4 J	12 J	16 J
Endrin	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Endrin Aldehyde	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Endrin Ketone	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Gamma-BHC	1.2	0.87	1.7 J	1.2	0.64 U	0.62 U	1.1	0.62 U
Gamma-Chlordane	23	17	14	20	9.4	11	23	7.2
Heptachlor	1.1	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Heptachlor Epoxide	2.6 J	0.62 U	0.62 U	0.88 J	0.64 U	0.62 U	1.7 J	0.62 U
Methoxychlor	0.62 U	0.62 U	0.62 U	0.62 U	0.64 U	0.62 U	0.63 U	0.62 U
Toxaphene	62 U	62 U	62 U	62 U	64 U	62 U	63 U	62 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name	BR3-FI-1-CARC	BR3-FI-2-CARC	BR3-FI-3-CARC	BR3-FI-4-CARC	BR3-FI-5-CARC	BR3-FI-6-CARC	BR3-FI-7-CARC	BR3-FI-8-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	33.9	31.1	28.4	26.9	25.3	35.2	40.9	38.3
Lab Sample Weight (g)	358.11	255.3	198.88	138.68	125.92	322.16	575.22	466.46
Total Field Weight (g)	729	502	383	263	239	753	1092	931
Percent Lipids (%)	5	4.7	7.2	2.4	4.7	4.4	5.7	4.7
Location	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
PCBs								
Monochlorobiphenyls	1.5 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U
Dichlorobiphenyls	1.5 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U
Trichlorobiphenyls	13	9.5	11	4.8	13	16	32	14
Tetrachlorobiphenyls	240	120	210	110	290	380	730	410
Pentachlorobiphenyls	920	570	800	510	1,100	1,300	2,200	960
Hexachlorobiphenyls	950	730	970	610	1,200	1,300	1,900	860
Heptachlorobiphenyls	460	380	470	310	530	580	780	370
Octachlorobiphenyls	140	120	130	100	160	180	210	120
Nonachlorobiphenyls	42	45	40	30	44	54	52	37
Decachlorobiphenyl	3.1	2.9	2.6	2.1	3.5	4.7	5.6	2.3
Total Homologs	2,800	2,000	2,600	1,700	3,300	3,800	6,000	2,800
Pesticides								
4,4'-DDD	40	30	36	18	37	35	51	33
4,4'-DDE	86 J	69 J	83 J	52 J	89 J	92 J	120 J	64 J
4,4'-DDT	6.4 J	38 J	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Aldrin	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
alpha-BHC	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
alpha-Chlordane	25	15	21	8.6	20	18	22	18
beta-BHC	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Delta-BHC	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Dieldrin	72	48	67	27	54	62 J	84	42
Endosulfan I	21 J	13 J	24 J	10 J	20 J	0.63 U	0.63 U	0.62 U
Endosulfan II	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Endosulfan Sulfate	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Endrin	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Endrin Aldehyde	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Endrin Ketone	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Gamma-BHC	2.1	1.8	1.6	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Gamma-Chlordane	15	9.9	12	5.2	13	9.7	10	12
Heptachlor	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Heptachlor Epoxide	2.5 J	1.2 J	2.4 J	1.3 J	1.6 J	0.63 U	0.63 U	0.62 U
Methoxychlor	11 U	0.63 U	0.62 U	5 U	0.63 U	0.63 U	0.63 U	0.62 U
Toxaphene	62 U	63 U	62 U	62 U	63 U	63 U	63 U	62 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR3-FI-9	BR3-FI-10	BR3-FI-11	BR3-FI-12	BR3-FI-13	BR3-FI-14	BR3-FI-15	BR3-FI-16
Sample Name	BR3-FI-9-CARC	BR3-FI-10-CARC	BR3-FI-11-CARC	BR3-FI-12-CARC	BR3-FI-13-CARC	BR3-FI-14-CARC	BR3-FI-15-CARC	BR3-FI-16-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	31.9	34.1	31.7	39.8	41.5	36.8	35.1	37.6
Lab Sample Weight (g)	195.63	256.77	222.56	416.5	495.52	223.46	250.86	312.14
Total Field Weight (g)	392	499	418	757	872	439	478	558
Percent Lipids (%)	4.3	6.1	6.1	8.8	14	4	1.6	8.4
Location	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
PCBs								
Monochlorobiphenyls	1.6 U	1.5 U	1.6 U	1.6 UJ	1.6 U	1.5 U	1.6 U	1.6 U
Dichlorobiphenyls	1.6 U	1.5 U	1.6 U	1.6 UJ	1.6 U	1.5 U	1.6 U	1.6 U
Trichlorobiphenyls	22	27	8.7	11 J	11	13	5.4	11
Tetrachlorobiphenyls	660	520	200	260 J	250	280	150	210
Pentachlorobiphenyls	1,800	1,600	780	820 J	620	1,000	600	700
Hexachlorobiphenyls	1,400	1,800	940	660 J	560	1,100	810	850
Heptachlorobiphenyls	480	880	480	250 J	240	440	410	410
Octachlorobiphenyls	130	240	160	84 J	74	120	140	120
Nonachlorobiphenyls	43	54	41	37 J	37	44	45	42
Decachlorobiphenyl	3.4	4.1	4.2	1.6 J	1.9	3.2	4.4	3.5
Total Homologs	4,600	5,100	2,600	2,100 J	1,800	3,000	2,200	2,400
Pesticides								
4,4'-DDD	37	90 J	38	35	29	61	22	36
4,4'-DDE	74 J	140 J	75 J	52 J	50 J	83 J	54 J	69 J
4,4'-DDT	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Aldrin	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
alpha-BHC	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
alpha-Chlordane	15	39	18	13	13	28 J	15	26
beta-BHC	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Delta-BHC	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Dieldrin	47 J	85	65	34 J	35	69	28 J	100
Endosulfan I	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Endosulfan II	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Endosulfan Sulfate	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Endrin	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Endrin Aldehyde	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Endrin Ketone	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Gamma-BHC	1.4	2.1	0.62 U	0.64 U	0.85	0.62 U	0.64 U	0.62 U
Gamma-Chlordane	13	27	12	11	11	12 J	10	15
Heptachlor	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	0.62 U
Heptachlor Epoxide	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	0.64 U	2.2 J
Methoxychlor	0.64 U	0.61 U	0.62 U	0.64 U	0.63 U	0.62 U	5 U	0.62 U
Toxaphene	64 U	61 U	62 U	64 U	63 U	62 U	64 U	62 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name	P1-FI-25-CARC	P1-FI-26-CARC	P1-FI-27-CARC	P1-FI-28-CARC	P1-FI-29-CARC	P1-FI-30-CARC	P1-FI-31-CARC	P1-FI-32-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Lab Sample Weight (g)	434.79	371.84	236.29	239.41	212.64	446.92	236.41	415.45
Total Field Weight (g)	865	739	472	471	425	861	460	799
Percent Lipids (%)	6.9	5.6	6.1	3.4	4.6	4.1	2.1	5.4
Location	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PCBs								
Monochlorobiphenyls	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Dichlorobiphenyls	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Trichlorobiphenyls	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Tetrachlorobiphenyls	200 J	110	120	96	110	130	140	150
Pentachlorobiphenyls	1,200 J	480	710	610	690	780	830	740
Hexachlorobiphenyls	950 J	530	750	720	790	940	1,100	960
Heptachlorobiphenyls	390 J	260	360	360	400	490	510	520
Octachlorobiphenyls	100 J	82	91	100	110	150	130	160
Nonachlorobiphenyls	28 J	21	22	27	26	41	32	37
Decachlorobiphenyl	2.9 J	3.5	3.6	3.8	3.7	5.4	6	5.3
Total Homologs	2,800 J	1,500	2,000	1,900	2,100	2,500	2,700	2,600
Pesticides								
4,4'-DDD	54	23	27	22	30	26	22	29
4,4'-DDE	210 J	56 J	80 J	68 J	80 J	79 J	92 J	95 J
4,4'-DDT	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Aldrin	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
alpha-BHC	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
alpha-Chlordane	12 J	8.9	12	5.7	11	9.6	6	9.6
beta-BHC	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Delta-BHC	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Dieldrin	55 J	26	33	18	28	23 J	17 J	28
Endosulfan I	1.7 J	1.8 J	3 J	1.3 J	1.5 J	0.84 J	0.63 U	1.2 J
Endosulfan II	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Endosulfan Sulfate	26 J	10 J	13 J	12 J	10 J	9.8 J	13 J	12 J
Endrin	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Endrin Aldehyde	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Endrin Ketone	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Gamma-BHC	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Gamma-Chlordane	8.6	4.6	7.6 J	4.8	6.7 J	5.2	4.4	7.4
Heptachlor	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Heptachlor Epoxide	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Methoxychlor	0.63 U	0.62 U	0.63 U	0.63 U	0.62 U	0.62 U	0.63 U	0.64 U
Toxaphene	63 U	62 U	63 U	63 U	62 U	62 U	63 U	64 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name	P1-FI-33-CARC	P1-FI-34-CARC	P1-FI-35-CARC	P1-FI-36-CARC	P1-FI-37-CARC	P1-FI-38-CARC	P1-FI-39-CARC	P1-FI-40-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Lab Sample Weight (g)	345.98	210.63	271.63	413.63	469.22	309.01	389.84	304.28
Total Field Weight (g)	704	467	585	747	930	664	725	627
Percent Lipids (%)	10	5.2	12	7.5	13	8.6	1.5	10
Location	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
PCBs								
Monochlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
Dichlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
Trichlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
Tetrachlorobiphenyls	130	71	96	150	140	85	47	98
Pentachlorobiphenyls	500	280	350	720	560	320	200	360
Hexachlorobiphenyls	500	320	350	910	590	320	220	380
Heptachlorobiphenyls	230	170	160	440	270	140	110	180
Octachlorobiphenyls	69	50	37	130	74	35	32	56
Nonachlorobiphenyls	18	13	11	36	28	10	12	17
Decachlorobiphenyl	2.5	2.1	2.4	7.6	5.5	1.7	2	3.3
Total Homologs	1,400	910	1,000	2,400	1,700	910	620	1,100
Pesticides								
4,4'-DDD	28	14	23	32	36	24	11	21
4,4'-DDE	51 J	33 J	40 J	90 J	64 J	38 J	28 J	41 J
4,4'-DDT	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Aldrin	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
alpha-BHC	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
alpha-Chlordane	16	6.4	12	14	19	12	4.5	10
beta-BHC	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Delta-BHC	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Dieldrin	28	14 J	24	27 J	40	23 J	6.7 J	23 J
Endosulfan I	1.8 J	0.67 J	2.4 J	1.3 J	2.1 J	2.2 J	0.62 U	1.6 J
Endosulfan II	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Endosulfan Sulfate	6.9 J	4.1 J	5.3 J	12 J	7.7 J	4.9 J	3.6 J	5.5 J
Endrin	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Endrin Aldehyde	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Endrin Ketone	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Gamma-BHC	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Gamma-Chlordane	8.9	4.9	8	9.4	11	8.8 J	5 J	8.2 J
Heptachlor	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Heptachlor Epoxide	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Methoxychlor	0.63 U	0.63 U	0.62 U	0.63 U	0.62 U	0.64 U	0.62 U	0.64 U
Toxaphene	63 U	64 U	62 U	63 U	62 U	64 U	62 U	64 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	P2-FI-49-CARC	P2-FI-50-CARC	P2-FI-51-CARC	P2-FI-52-CARC	P2-FI-53-CARC	P2-FI-54-CARC	P2-FI-55-CARC	P2-FI-56-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Lab Sample Weight (g)	55.54	81.75	81.1	83.62	96.12	65.4	79.96	110.03
Total Field Weight (g)	104	151	159	154	154	131	166	219
Percent Lipids (%)	2	4.5	5.1	1.5	2	5.3	4.7	3.1
Location	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PCBs								
Monochlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Dichlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Trichlorobiphenyls	1.6 U	5.3	5.2	1.6 U	1.6 U	7.5	7	4.2
Tetrachlorobiphenyls	83	82	97	35	52	110	120	89
Pentachlorobiphenyls	510	290	380	210	300	360	420	440
Hexachlorobiphenyls	660	290	380	130	350	340	410	540
Heptachlorobiphenyls	340	140	180	80	180	170	180	300
Octachlorobiphenyls	88	44	47	27	54	45	51	77
Nonachlorobiphenyls	20	12	10	3.3	16	12	13	20
Decachlorobiphenyl	2.7	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	2.7
Total Homologs	1,700	860	1,100	490	950	1,000	1,200	1,500
Pesticides								
4,4'-DDD	9.9	17	19	5.7	9.4	22	22	20
4,4'-DDE	46 J	33	39	9.2 J	29	37 J	44	46 J
4,4'-DDT	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Aldrin	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
alpha-BHC	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
alpha-Chlordane	2.8	10	8.5	2	3.7 J	9.7	8.3 J	9.5
beta-BHC	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Delta-BHC	0.63 UJ	0.64 UJ	0.62 UJ	0.62 UJ	0.63 UJ	0.63 UJ	0.63 UJ	0.63 UJ
Dieldrin	20 J	48 J	52 J	13	20 J	57 J	51 J	37 J
Endosulfan I	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Endosulfan II	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	9 J	0.63 U	0.63 U
Endosulfan Sulfate	7.1 J	6 J	5.2 J	5.1 J	4.2 J	5.5 J	8.6 J	6.7 J
Endrin	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Endrin Aldehyde	0.63 U	0.64 U	0.62 U	0.62 UJ	0.63 U	0.63 U	0.63 U	0.63 U
Endrin Ketone	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Gamma-BHC	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Gamma-Chlordane	1.1	4.6	3.6	0.62 U	0.63 U	3.7 J	5.8 J	3
Heptachlor	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Heptachlor Epoxide	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Methoxychlor	0.63 U	0.64 U	0.62 U	0.62 U	0.63 U	0.63 U	0.63 U	0.63 U
Toxaphene	63 U	64 U	62 U	62 U	63 U	63 U	63 U	63 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name	P2-FI-57-CARC	P2-FI-58-CARC	P2-FI-59-CARC	P2-FI-60-CARC	P2-FI-61-CARC	P2-FI-62-CARC	P2-FI-63-CARC	P2-FI-64-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	39.1	34.6	40.4	34.9	37	33	35.9	34.6
Lab Sample Weight (g)	352.93	255.51	405.93	168.83	288.88	174.55	228.46	213.18
Total Field Weight (g)	693	501	755	442	595	380	532	460
Percent Lipids (%)	6.8	3.6	11	7.7	14	3.9	6.6	6.4
Location	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
PCBs								
Monochlorobiphenyls	1.6 UJ	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U	1.6 UJ	1.5 U
Dichlorobiphenyls	1.6 UJ	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U	1.6 UJ	1.5 U
Trichlorobiphenyls	1.6 UJ	6.6 J	12	10	14	6.1	1.6 UJ	7.2
Tetrachlorobiphenyls	110 J	120 J	320	190	380	120	110 J	200
Pentachlorobiphenyls	410 J	370 J	980	600	970	420	380 J	530
Hexachlorobiphenyls	450 J	380 J	1,000	570	980	430	360 J	520
Heptachlorobiphenyls	220 J	180 J	460	260	430	200	180 J	240
Octachlorobiphenyls	60 J	45 J	110	66	110	53	48 J	59
Nonachlorobiphenyls	15 J	11 J	22	13	21	14	14 J	12
Decachlorobiphenyl	1.9 J	1.6 UJ	3.4	1.6	3.2	1.7	1.6 J	1.5 U
Total Homologs	1,300 J	1,100 J	2,900	1,700	2,900	1,200	1,100 J	1,600
Pesticides								
4,4'-DDD	25	21	50	33	60	26 J	21	34
4,4'-DDE	45 J	31	82 J	52	83 J	36 J	34 J	51
4,4'-DDT	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Aldrin	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
alpha-BHC	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
alpha-Chlordane	21 J	14	32	27	41	16	16	19
beta-BHC	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Delta-BHC	0.62 UJ	0.62 UJ	0.63 UJ	0.62 UJ	0.62 UJ	0.63 UJ	0.62 UJ	0.62 UJ
Dieldrin	43 J	28 J	86 J	56 J	87	39 J	41 J	48 J
Endosulfan I	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Endosulfan II	21 J	0.62 U	1.8 J	0.62 U	0.62 U	6.1 J	0.62 U	0.62 U
Endosulfan Sulfate	6.6 J	3.9 J	8.9 J	7 J	8 J	3.7 J	5.2 J	6.1 J
Endrin	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Endrin Aldehyde	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Endrin Ketone	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Gamma-BHC	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Gamma-Chlordane	11	10	20	14 J	21	11	13	16
Heptachlor	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Heptachlor Epoxide	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Methoxychlor	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U	0.63 U	0.62 U	0.62 U
Toxaphene	62 U	62 U	63 U	62 U	62 U	63 U	62 U	62 U

TABLE 4-48
RESULTS FOR PCB HOMOLOGS AND PESTICIDES IN FISH CARCASS SAMPLES (ug/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103	P6-FI-104
Sample Name	P6-FI-97-CARC	P6-FI-98-CARC	P6-FI-99-CARC	P6-FI-100-CARC	P6-FI-101-CARC	P6-FI-102-CARC	P6-FI-103-CARC	P6-FI-104-CARC
Date Collected	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	34.6	36.6	31.4	38.5	29.9	31.9	31.3	39
Lab Sample Weight (g)	299.2	386.01	222.2	465.6	212.26	232.16	231.34	467.23
Total Field Weight (g)	567	731	402	814	373	442	447	907
Percent Lipids (%)	2.3	3.6	2.6	1.8	4.2	3.7	4	4.7
Location	P6	P6	P6	P6	P6	P6	P6	P6
PCBs								
Monochlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U
Dichlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U
Trichlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U
Tetrachlorobiphenyls	8.8	15	10	10	10	12	12	22
Pentachlorobiphenyls	29	40	36	28	35	48	45	180
Hexachlorobiphenyls	99	93	95	58	84	120	110	630
Heptachlorobiphenyls	56	41	45	27	36	54	53	360
Octachlorobiphenyls	10	9.8	9.8	5.8	8	12	8.8	65
Nonachlorobiphenyls	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	9.7
Decachlorobiphenyl	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U
Total Homologs	200	200	200	130	170	240	230	1,300
Pesticides								
4,4'-DDD	3.2	4.4	3.6	2.9	4.4	5.4	4.5	7.5 J
4,4'-DDE	24	21	21	14	27	50	23	26
4,4'-DDT	1.4 J	0.63 U	0.64 U	1.4 J	2.3 J	3 J	0.63 U	0.62 U
Aldrin	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
alpha-BHC	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
alpha-Chlordane	1.1 J	1.4 J	1.2	0.91	1.4	2	1.3	1.2
beta-BHC	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Delta-BHC	0.62 UJ	0.63 UJ	0.64 UJ	0.62 UJ	0.63 UJ	0.63 UJ	0.63 UJ	0.62 UJ
Dieldrin	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Endosulfan I	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Endosulfan II	5 J	1.7 J	0.64 U	2.5	2.4 J	4.8	2.6 J	8.9
Endosulfan Sulfate	1.6 J	1.2 J	0.64 U	1	1.4 J	2.1 J	1.6 J	0.62 U
Endrin	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Endrin Aldehyde	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Endrin Ketone	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Gamma-BHC	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Gamma-Chlordane	1.2 J	0.63 U	0.64 U	0.62 U	0.63 U	1.8 J	0.63 U	0.62 U
Heptachlor	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Heptachlor Epoxide	0.62 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Methoxychlor	5.8 U	0.63 U	0.64 U	0.62 U	0.63 U	0.63 U	0.63 U	0.62 U
Toxaphene	62 U	64 U	64 U	62 U	63 U	63 U	63 U	62 U

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR1-FI-113	BR1-FI-114	BR1-FI-115	BR1-FI-116	BR1-FI-117	BR1-FI-118	BR1-FI-119	BR1-FI-120
Sample Name	BR1-FI-113-CARC	BR1-FI-114-CARC	BR1-FI-115-CARC	BR1-FI-116-CARC	BR1-FI-117-CARC	BR1-FI-118-CARC	BR1-FI-119-CARC	BR1-FI-120-CARC
Date Collected	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	45.6	47.4	31.9	29.5	32.5	27.8	44.1	45.2
Lab Sample Weight (g)	698.62	763.9	248.86	159.45	205.33	116.92	549.23	503.04
Total Field Weight (g)	1255	1221	437	300	405	249	1130	1048
Percent Lipids (%)	6.5	8.1	8.4	5.9	5	4.9	10	1.6
Location	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
Metals								
Aluminum	8.5 J	8.7 J	4.8 J	6.2 J	32 J	8.8 J	13 J	6.7 J
Antimony	0.043 U	0.041 U	0.049 U	0.048 U	0.052 U	0.054 U	0.054 U	0.043 U
Arsenic	0.13	0.13	0.14	0.22	0.14	0.24	0.13	0.12
Barium	1.5	1.1	0.58	0.68	0.87	1.4	0.84	1
Beryllium	0.017 U	0.016 U	0.02 U	0.019 U	0.021 U	0.022 U	0.022 U	0.017 U
Cadmium	0.56	0.59	0.15	0.24	0.25	0.25	0.36	0.45
Calcium	12,000	11,000	4,500	5,600	4,900	14,000	13,000	17,000
Chromium	3.6 J	2.7 J	0.69 J	2.1 J	8.3 J	4.5 J	1.9 J	3.3 J
Cobalt	0.095	0.088	0.043	0.066	0.11	0.099	0.11	0.097
Copper	1.4	1.2	0.95	1.7	1.9	1.8	1.2	1.6
Iron	170	150	77	88	140	200	190	210
Lead	0.68 J	0.44 J	0.14 J	0.12 J	0.16 J	0.15 J	0.31 J	0.32 J
Magnesium	380 J	310 J	230 J	250 J	250 J	400 J	380 J	430 J
Manganese	35	25	7.8	14	23	28	17	20
Mercury	0.091	0.1	0.024	0.021	0.024	0.02	0.066	0.07
Nickel	1.3	1.8	0.33	1.2	4.7	3	1.4	2.4
Potassium	2,200	1,900	2,600	2,600	2,700	2,600	2,000	2,000
Selenium	0.86	0.67	0.53	0.64	0.45	0.55	0.64	0.73
Silver	0.017 U	0.016 U	0.02 U	0.019 U	0.021 U	0.022 U	0.022 U	0.017 U
Sodium	1,100	1,300	800	1,000	840	1,200	1,300	1,300
Thallium	0.0087 U	0.0081 U	0.0098 U	0.0096 U	0.01 U	0.011 U	0.011 U	0.0087 U
Vanadium	0.2	0.16	0.11	0.14	0.17	0.17	0.21	0.25
Zinc	20 J	17 J	13 J	16 J	14 J	22 J	18 J	18 J

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR1-FI-121	BR1-FI-122	BR1-FI-123	BR1-FI-124	BR1-FI-125	BR1-FI-126	BR1-FI-127	BR1-FI-128
Sample Name	BR1-FI-121-CARC	BR1-FI-122-CARC	BR1-FI-123-CARC	BR1-FI-124-CARC	BR1-FI-125-CARC	BR1-FI-126-CARC	BR1-FI-127-CARC	BR1-FI-128-CARC
Date Collected	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed	Pumpkin Seed	Pumpkin Seed
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	21.2	19.9	18.7	19.4	17.2 - 18.2	15.9 - 16.2	15.7 - 17.8	15.8 - 16
Lab Sample Weight (g)	112.99	106.26	108.69	102.5	138.37	112.13	135.28	109.33
Total Field Weight (g)	222	191	192	183	274	205	258	209
Percent Lipids (%)	6.6	10	15	5.4	10	12	9.1	9.1
Location	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1	BR-1
Metals								
Aluminum	31 J	11 J	9.5 J	3 J	7.5 J	13 J	34 J	3.9 J
Antimony	0.046 U	0.048 U	0.05 U	0.054 U	0.045 U	0.062 U	0.042 U	0.053 U
Arsenic	0.12	0.13	0.16	0.11	0.19	0.26	0.14	0.23
Barium	1.9	1.3	1.4	2.1	2.4	1.4	0.62	1.2
Beryllium	0.018 U	0.019 U	0.02 U	0.022 U	0.018 U	0.025 U	0.017 U	0.021 U
Cadmium	0.095	0.21	0.33	0.093	0.25	0.19	0.15	0.15
Calcium	14,000	10,000	11,000	12,000	20,000	15,000	12,000	14,000
Chromium	12 J	4.6 J	6.1 J	3.3 J	4.2 J	8.8 J	1.8 J	2.4 J
Cobalt	0.12	0.079	0.1	0.051	0.092	0.15	0.053	0.066
Copper	1	0.94	0.99	0.86	1.1	1.2	0.66	0.86
Iron	250	190	190	170	310	620	170	200
Lead	0.4 J	0.29 J	0.33 J	0.17 J	0.42 J	0.91 J	0.27 J	0.25 J
Magnesium	380 J	310 J	350 J	370 J	530 J	410 J	270 J	380 J
Manganese	18	27	40	7.1	20	28	15	13
Mercury	0.052	0.036	0.036	0.089	0.049	0.034	0.048	0.031
Nickel	7.4	3	3.7	2.2	3.5	5.4	1.6	2
Potassium	2,000	2,100	2,100	2,000	2,300	2,200	1,600	2,400
Selenium	0.75	0.61	0.65	0.63	0.69	0.53	0.49	0.55
Silver	0.018 U	0.019 U	0.02 U	0.022 U	0.018 U	0.025 U	0.017 U	0.021 U
Sodium	1,100	1,000	1,000	1,300	1,200	1,300	920	1,200
Thallium	0.0092 U	0.0095 U	0.01 U	0.011 U	0.009 U	0.013 U	0.0084 U	0.011 U
Vanadium	0.27	0.2	0.22	0.19	0.21	0.36	0.19	0.26
Zinc	20 J	19 J	18 J	22 J	22 J	21 J	14 J	19 J

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR2-FI-73	BR2-FI-74	BR2-FI-75	BR2-FI-76	BR2-FI-77	BR2-FI-78	BR2-FI-79	BR2-FI-80
Sample Name	BR2-FI-73-CARC	BR2-FI-74-CARC	BR2-FI-75-CARC	BR2-FI-76-CARC	BR2-FI-77-CARC	BR2-FI-78-CARC	BR2-FI-79-CARC	BR2-FI-80-CARC
Date Collected	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	30.7	30	30.4	25.2	25.8	25.4	25	24.3
Lab Sample Weight (g)	231.99	214.86	282.67	118.9	138.03	134.45	117.63	122.11
Total Field Weight (g)	471	414	543	231	264	260	229	236
Percent Lipids (%)	4.4	6.8	9.5	5.4	11	5.9	6.3	8.6
Location	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
Metals								
Aluminum	1.1 U	1 U	3.4	14	2.8	1.3 U	1.7	1.1 U
Antimony	0.027 U	0.026 U	0.028 U	0.028 U	0.035 U	0.034 U	0.032 U	0.027 U
Arsenic	0.058	0.061	0.059	0.076	0.064	0.053	0.058	0.059
Barium	0.84	0.95	0.8	1.3	1.1	0.43	1	0.35
Beryllium	0.011 U	0.01 U	0.011 U	0.011 U	0.014 U	0.013 U	0.013 U	0.011 U
Cadmium	0.14	0.14	0.076	0.12	0.15	0.13	0.086	0.057
Calcium	17,000	16,000	13,000	13,000	9,000	8,300	9,500	9,700
Chromium	1.1	0.81	1.7	1.8	0.88	1	0.96	0.76
Cobalt	0.062	0.059	0.056	0.068	0.054	0.043	0.049	0.046
Copper	1	0.78	1.2	2.3	1.8	0.82	1.4	0.62
Iron	170 J	180 J	160 J	170 J	130 J	110 J	120 J	130 J
Lead	0.042	0.25	0.054	0.036	0.044	0.043	0.037	0.02
Magnesium	390 J	390 J	330 J	330 J	280 J	280 J	270 J	300 J
Manganese	2.7 J	2.2 J	3.3 J	6.6 J	3.6 J	2.1 J	4.9 J	2 J
Mercury	0.048	0.072	0.045	0.057	0.053	0.049	0.05	0.034
Nickel	0.77 J	0.77 J	1.1 J	1.5 J	0.79 J	0.69 J	0.78 J	0.74 J
Potassium	2,200	2,200	2,000	2,300	2,400	2,300	2,300	2,400
Selenium	0.67 J	0.54 J	0.57 J	0.63 J	0.71 J	0.73 J	0.55 J	0.68 J
Silver	0.011 U	0.01 U	0.011 U	0.019	0.014 U	0.013 U	0.013 U	0.011 U
Sodium	1,400	1,200	1,200	1,300	1,100	1,200	1,200	1,200
Thallium	0.0065	0.0052 U	0.0055 U	0.0056 U	0.007 U	0.0067 U	0.0065 U	0.0054 U
Vanadium	0.049	0.046	0.043	0.045	0.04	0.054	0.048	0.034
Zinc	17 J	17 J	14 J	17 J	15 J	16 J	15 J	16 J

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR2-FI-81	BR2-FI-82	BR2-FI-83	BR2-FI-84	BR2-FI-85	BR2-FI-86	BR2-FI-87	BR2-FI-88
Sample Name	BR2-FI-81-CARC	BR2-FI-82-CARC	BR2-FI-83-CARC	BR2-FI-84-CARC	BR2-FI-85-CARC	BR2-FI-86-CARC	BR2-FI-87-CARC	BR2-FI-88-CARC
Date Collected	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	44.9	39.8	35.6	39	38.1	32.3	39.3	37.6
Lab Sample Weight (g)	497.92	384.99	248.5	349.16	316.2	212.68	391.41	322.81
Total Field Weight (g)	968	697	509	643	600	398	714	521
Percent Lipids (%)	13	7	7.9	10	4.9	4.3	7.8	3.7
Location	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
Metals								
Aluminum	2.4	2.8	20	86	23	20	16	24
Antimony	0.031 U	0.027 U	0.03 U	0.027 U	0.027 U	0.027 U	0.029 U	0.027 U
Arsenic	0.078	0.1	0.12	0.082	0.14	0.12	0.081	0.071
Barium	1.2	1.2	1.5	2.2	1.5	1.8	1.2	1.3
Beryllium	0.012 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U
Cadmium	0.3	0.29	0.16	0.41	0.36	0.22	0.21	0.21
Calcium	15,000	14,000	8,800	10,000	7,400	9,000	6,400	9,700
Chromium	0.76	0.71	2.1	1.8	3.7	3.8	2.3	2.9
Cobalt	0.079	0.098	0.089	0.11	0.11	0.11	0.076	0.09
Copper	1	0.83	1.2	1.2	1.5	0.97	0.96	1.1
Iron	200 J	210 J	160 J	200 J	200 J	190 J	130 J	170 J
Lead	0.12	0.13	0.17	0.18	0.2	0.18	0.14	0.17
Magnesium	360 J	320 J	240 J	250 J	250 J	290 J	220 J	240 J
Manganese	21 J	26 J	32 J	40 J	36 J	41 J	25 J	25 J
Mercury	0.047	0.099	0.027	0.042	0.071	0.026	0.028	0.063
Nickel	0.86 J	0.88 J	1.4 J	1.2 J	2.2 J	2.4 J	1.4 J	1.9 J
Potassium	2,000	2,100	1,800	1,800	2,400	2,400	2,200	1,900
Selenium	0.57 J	0.45 J	0.42 J	0.39 J	0.51 J	0.37 J	0.42 J	0.4 J
Silver	0.012 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U
Sodium	1,100	1,000	850	760	1,100	910	770	800
Thallium	0.0061 U	0.0055 U	0.006 U	0.0055 U	0.0055 U	0.0054 U	0.0058 U	0.0053 U
Vanadium	0.095	0.14	0.18	0.2	0.18	0.18	0.12	0.14
Zinc	18 J	21 J	14 J	15 J	19 J	17 J	13 J	17 J

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	BR3-FI-1	BR3-FI-2	BR3-FI-3	BR3-FI-4	BR3-FI-5	BR3-FI-6	BR3-FI-7	BR3-FI-8
Sample Name	BR3-FI-1-CARC	BR3-FI-2-CARC	BR3-FI-3-CARC	BR3-FI-4-CARC	BR3-FI-5-CARC	BR3-FI-6-CARC	BR3-FI-7-CARC	BR3-FI-8-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/28/2005	9/28/2005	9/28/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	33.9	31.1	28.4	26.9	25.3	35.2	40.9	38.3
Lab Sample Weight (g)	358.11	255.3	198.88	138.68	125.92	322.16	575.22	466.46
Total Field Weight (g)	729	502	383	263	239	753	1092	931
Percent Lipids (%)	5	4.7	7.2	2.4	4.7	4.4	5.7	4.7
Location	BR-3	BR-3	BR-3	BR-3	BR-3	BR-3b	BR-3b	BR-3b
Metals								
Aluminum	1.4	1 U	1.2 U	1.1 U	2.2	4.6	3.5	1.4
Antimony	0.027 U	0.025 U	0.03 U	0.028 U	0.028 U	0.029 U	0.029 U	0.027 U
Arsenic	0.063	0.044	0.045	0.027	0.036	0.041	0.039	0.029
Barium	0.85	0.6	1.4	0.48	0.5	1.4	1.4	0.73
Beryllium	0.011 U	0.01 U	0.012 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U
Cadmium	0.17	0.075	0.092	0.085	0.11	0.13	0.19	0.12
Calcium	16,000	14,000	27,000	9,300	9,700	18,000	17,000	20,000
Chromium	0.75 J	0.69 J	0.73 J	1.4 J	1.4 J	1.3 J	0.92 J	0.82 J
Cobalt	0.075	0.065	0.12	0.058	0.067	0.11	0.099	0.11
Copper	1.4	0.67	0.62	0.96	0.77	1.3	1.4	0.87
Iron	210	190	360	140	150	280	260	300
Lead	0.12	0.053	0.051	0.024	0.037	0.12	0.085	0.057
Magnesium	450 J	400 J	620 J	330 J	350 J	480 J	450 J	490 J
Manganese	5.4	2.2	3.6	1.8	3.2	5.8	5.6	4.2
Mercury	0.045 J	0.037 J	0.041 J	0.053 J	0.041 J	0.058 J	0.078 J	0.059 J
Nickel	1	1	1.8	1.4	1.4	1.8	1.4	1.6
Potassium	2,400	2,400	2,400	2,600	2,700	2,200	2,300	2,300
Selenium	0.59	0.56	0.55	0.54	0.61	0.73	0.66	0.68
Silver	0.011 U	0.01 U	0.012 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U
Sodium	1,400	1,400	1,400	1,300	1,100	1,500	1,500	1,600
Thallium	0.0055 U	0.0051 U	0.006 U	0.0056 U	0.0056 U	0.0058 U	0.0057 U	0.0055 U
Vanadium	0.042	0.032	0.051	0.038	0.046	0.063	0.078	0.052
Zinc	19	16	17	16	16	17	17	18

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	**BR3-FI-9**	**BR3-FI-10**	**BR3-FI-11**	**BR3-FI-12**	**BR3-FI-13**	**BR3-FI-14**	**BR3-FI-15**	**BR3-FI-16**
Sample Name	**BR3-FI-9-CARC**	**BR3-FI-10-CARC**	**BR3-FI-11-CARC**	**BR3-FI-12-CARC**	**BR3-FI-13-CARC**	**BR3-FI-14-CARC**	**BR3-FI-15-CARC**	**BR3-FI-16-CARC**
Date Collected	**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/27/2005**	**9/28/2005**	**9/28/2005**	**9/28/2005**
Species Common Name	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**	**White Sucker**
Tissue Type	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**	**Carcass**
Length (cm)	**31.9**	**34.1**	**31.7**	**39.8**	**41.5**	**36.8**	**35.1**	**37.6**
Lab Sample Weight (g)	**195.63**	**256.77**	**222.56**	**416.5**	**495.52**	**223.46**	**250.86**	**312.14**
Total Field Weight (g)	**392**	**499**	**418**	**757**	**872**	**439**	**478**	**558**
Percent Lipids (%)	**4.3**	**6.1**	**6.1**	**8.8**	**14**	**4**	**1.6**	**8.4**
Location	**BR-3**	**BR-3**	**BR-3**	**BR-3**	**BR-3**	**BR-3b**	**BR-3b**	**BR-3b**
Metals								
Aluminum	1 U	15	25	40	27	3.5	13	2.8
Antimony	0.025 U	0.026 U	0.027 U	0.025 U	0.026 U	0.028 U	0.025 U	0.026 U
Arsenic	0.042	0.063	0.11	0.11	0.073	0.075	0.07	0.05
Barium	0.38	1	1.4	1	1.2	1.4	1.2	0.99
Beryllium	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.011 U	0.01 U	0.01 U
Cadmium	0.061	0.067	0.091	0.13	0.19	0.19	0.28	0.12
Calcium	3,300	8,500	8,800	6,300	7,800	19,000	10,000	6,400
Chromium	0.38 J	2.5 J	5.2 J	2.5 J	1.1 J	0.88 J	1.2 J	0.53 J
Cobalt	0.031	0.074	0.11	0.1	0.094	0.14	0.12	0.071
Copper	0.6	0.83	1.3	1.3	1.4	1.2	1.3	1.1
Iron	53	140	210	200	170	280	190	110
Lead	0.013	0.095	0.18	0.41	0.23	0.19	0.28	0.11
Magnesium	170 J	260 J	270 J	250 J	270 J	530 J	330 J	230 J
Manganese	6.4	15	28	26	23	15	15	11
Mercury	0.021 J	0.019 J	0.025 J	0.036 J	0.045 J	0.042 J	0.049 J	0.042 J
Nickel	0.34	2.1	3.9	1.8	1	1.6	1.2	0.53
Potassium	2,000	2,000	2,300	1,900	1,700	2,200	2,200	2,300
Selenium	0.36	0.18	0.36	0.34	0.51	0.42	0.38	0.28
Silver	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.011 U	0.01 U	0.01 U
Sodium	660	730	840	780	860	1,500	1,100	980
Thallium	0.005 U	0.0052 U	0.0055 U	0.005 U	0.0053 U	0.0057 U	0.0051 U	0.0052 U
Vanadium	0.056	0.13	0.15	0.14	0.11	0.12	0.14	0.11
Zinc	9.9	14	14	14	18	23	20	17

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P1-FI-25	P1-FI-26	P1-FI-27	P1-FI-28	P1-FI-29	P1-FI-30	P1-FI-31	P1-FI-32
Sample Name	P1-FI-25-CARC	P1-FI-26-CARC	P1-FI-27-CARC	P1-FI-28-CARC	P1-FI-29-CARC	P1-FI-30-CARC	P1-FI-31-CARC	P1-FI-32-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	36.2	35.8	31.5	32.1	30.7	37.9	32.4	37.1
Lab Sample Weight (g)	434.79	371.84	236.29	239.41	212.64	446.92	236.41	415.45
Total Field Weight (g)	865	739	472	471	425	861	460	799
Percent Lipids (%)	6.9	5.6	6.1	3.4	4.6	4.1	2.1	5.4
Location	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
Metals								
Aluminum	1.5 U	1.5 U	1.4 U	1.4 U	1.5 U	1.4 U	1.5 U	8.5
Antimony	0.038 U	0.037 U	0.036 U	0.035 U	0.038 U	0.034 U	0.036 U	0.037 U
Arsenic	0.072	0.052	0.073	0.046	0.044	0.069	0.049	0.069
Barium	0.92	0.45	0.64	0.43	0.45	0.59	0.6	0.94
Beryllium	0.015 U	0.015 U	0.014 U	0.014 U	0.015 U	0.014 U	0.015 U	0.015 U
Cadmium	0.19	0.22	0.058	0.1	0.043	0.17	0.14	0.15
Calcium	20,000	15,000	26,000	18,000	16,000	23,000	20,000	26,000
Chromium	0.51	0.54	0.81	0.8	1	0.61	0.56	2.1
Cobalt	0.11	0.084	0.14	0.092	0.092	0.13	0.12	0.15
Copper	0.53	0.55	0.39	0.52	0.44	0.48	0.46	0.76
Iron	300	220	380	270	250	360	350	420
Lead	0.13	0.12	0.055	0.039	0.049	0.12	0.073	0.087
Magnesium	500	430	630	450	430	580	520	590
Manganese	2.2	2.8	3.1	2.3	2.7	3.1	3	3.7
Mercury	0.067	0.049	0.039	0.048	0.04	0.066	0.05	0.056
Nickel	1.4	1.2	2	1.4	1.4	1.8	1.7	2.7
Potassium	2,100	2,300	2,400	2,400	2,200	2,300	2,300	2,300
Selenium	0.51	0.49	0.55	0.53	0.52	0.64	0.57	0.52
Silver	0.015 U	0.015 U	0.014 U	0.014 U	0.015 U	0.014 U	0.015 U	0.015 U
Sodium	1,500	1,400	1,500	1,400	1,300	1,600	1,600	1,500
Thallium	0.0076 U	0.0074 U	0.0072 U	0.0069 U	0.0075 U	0.0069 U	0.0073 U	0.0075 U
Vanadium	0.055	0.04	0.036 U	0.035 U	0.054	0.034 U	0.039	0.066
Zinc	18	18	21	21	16	18	20	21

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P1-FI-33	P1-FI-34	P1-FI-35	P1-FI-36	P1-FI-37	P1-FI-38	P1-FI-39	P1-FI-40
Sample Name	P1-FI-33-CARC	P1-FI-34-CARC	P1-FI-35-CARC	P1-FI-36-CARC	P1-FI-37-CARC	P1-FI-38-CARC	P1-FI-39-CARC	P1-FI-40-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	40.1	35.1	37.2	43.4	43.1	36.3	40.4	36.4
Lab Sample Weight (g)	345.98	210.63	271.63	413.63	469.22	309.01	389.84	304.28
Total Field Weight (g)	704	467	585	747	930	664	725	627
Percent Lipids (%)	10	5.2	12	7.5	13	8.6	1.5	10
Location	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A	Pond A
Metals								
Aluminum	9.5	9.1	25	29	19	40	1.5 U	15
Antimony	0.037 U	0.035 U	0.039 U	0.034 U	0.038 U	0.036 U	0.037 U	0.036 U
Arsenic	0.68	0.081	0.13	0.1	0.13	0.17	0.072	0.1
Barium	1.4	1.3	1.5	1.9	2.1	1.2	0.27	1.4
Beryllium	0.015 U	0.014 U	0.015 U	0.014 U	0.015 U	0.014 U	0.015 U	0.014 U
Cadmium	0.16	0.091	0.073	0.33	0.19	0.083	0.014	0.1
Calcium	10,000	14,000	11,000	17,000	15,000	12,000	720	10,000
Chromium	1	1.2	3.2	1.7	3.1	7.5	2.7	4.3
Cobalt	0.11	0.094	0.12	0.13	0.15	0.14	0.024	0.1
Copper	1.3	0.84	1.5	0.92	1.2	1.2	0.42	0.75
Iron	380	240	300	350	330	310	30	240
Lead	0.16	0.087	0.84	0.53	0.31	0.21	0.015	0.34
Magnesium	390	370	360	430	420	350	260	300
Manganese	25	23	31	16	34	32	1.2	22
Mercury	0.022	0.014	0.012	0.038	0.021	0.011	0.11	0.015
Nickel	1.1	1.4	2.2	1.9	2.7	4.5	1.4	3.4
Potassium	2,300	2,400	2,200	2,000	2,200	2,300	3,600	2,600
Selenium	0.51	0.46	0.45	0.33	0.47	0.38	0.37	0.39
Silver	0.015 U	0.014 U	0.018	0.014 U	0.015 U	0.014 U	0.015 U	0.014 U
Sodium	1,200	1,200	1,200	1,400	1,300	1,200	660	1,100
Thallium	0.0074 U	0.007 U	0.0077 U	0.0069 U	0.0076 U	0.0072 U	0.0074 U	0.0071 U
Vanadium	0.067	0.12	0.15	0.12	0.14	0.16	0.067	0.16
Zinc	22	18	21	23	24	17	11	14

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P2-FI-49	P2-FI-50	P2-FI-51	P2-FI-52	P2-FI-53	P2-FI-54	P2-FI-55	P2-FI-56
Sample Name	P2-FI-49-CARC	P2-FI-50-CARC	P2-FI-51-CARC	P2-FI-52-CARC	P2-FI-53-CARC	P2-FI-54-CARC	P2-FI-55-CARC	P2-FI-56-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Blue Gill	Pumpkin Seed
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	17.4	15.2 - 15.6	13.9 - 17	15.6 - 15.9	14.7 - 17.5	15 - 15.2	14.1 - 14.5	13 - 13.9
Lab Sample Weight (g)	55.54	81.75	81.1	83.62	96.12	65.4	79.96	110.03
Total Field Weight (g)	104	151	159	154	154	131	166	219
Percent Lipids (%)	2	4.5	5.1	1.5	2	5.3	4.7	3.1
Location	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
Metals								
Aluminum	5	4.1	4.8	2.1	3.5	10	5.4	18
Antimony	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.033 U	0.032 U	0.034 U
Arsenic	0.12	0.12	0.14	0.065	0.11	0.21	0.13	0.15
Barium	2.6	1.6	4.5	2.5	3.2	2.7	2.1	1.8
Beryllium	0.014 U	0.014 U	0.014 U	0.013 U	0.014 U	0.013 U	0.013 U	0.014 U
Cadmium	0.49	0.1	0.18	0.2	0.14	0.12	0.085	0.19
Calcium	25,000	15,000	18,000	18,000	20,000	20,000	16,000	22,000
Chromium	3.7	3.1	3	0.42	0.68	0.82	1.1	1.2
Cobalt	0.17	0.12	0.17	0.11	0.16	0.18	0.11	0.13
Copper	0.82	0.62	1.1	0.38	0.71	0.66	0.66	1.1
Iron	320 J	260 J	290 J	220 J	310 J	410 J	320 J	360 J
Lead	0.4	0.22	0.2	0.23	0.21	0.29	0.2	0.54
Magnesium	540 J	480 J	530 J	450 J	520 J	530 J	430 J	540 J
Manganese	77 J	46 J	120 J	70 J	87 J	82 J	32 J	17 J
Mercury	0.047	0.054	0.037	0.06	0.066	0.062	0.045	0.032
Nickel	3.2	2.4	2.5	0.96	1.3	1.3	1.3	1.5
Potassium	2,300	2,600	2,300	1,700	2,100	2,400	2,300	2,200
Selenium	0.48	0.53	0.44	0.39	0.53	0.5	0.53	0.56
Silver	0.014 U	0.014 U	0.014 U	0.013 U	0.014 U	0.013 U	0.013 U	0.014 U
Sodium	1,700	1,300	1,300	1,300	1,600	1,300	1,100	1,200
Thallium	0.0075	0.0068 U	0.0071	0.0067 U	0.0068 U	0.0066 U	0.0065 U	0.0069 U
Vanadium	0.12	0.12	0.11	0.083	0.089	0.11	0.1	0.18
Zinc	27	26	27	18	27	28	28	26

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P2-FI-57	P2-FI-58	P2-FI-59	P2-FI-60	P2-FI-61	P2-FI-62	P2-FI-63	P2-FI-64
Sample Name	P2-FI-57-CARC	P2-FI-58-CARC	P2-FI-59-CARC	P2-FI-60-CARC	P2-FI-61-CARC	P2-FI-62-CARC	P2-FI-63-CARC	P2-FI-64-CARC
Date Collected	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005	9/27/2005
Species Common Name	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker	White Sucker
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	39.1	34.6	40.4	34.9	37	33	35.9	34.6
Lab Sample Weight (g)	352.93	255.51	405.93	168.83	288.88	174.55	228.46	213.18
Total Field Weight (g)	693	501	755	442	595	380	532	460
Percent Lipids (%)	6.8	3.6	11	7.7	14	3.9	6.6	6.4
Location	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F	Pond F
Metals								
Aluminum	24	1.3 U	2.2	11	1.4 U	3.9	18	5.2
Antimony	0.035 U	0.034 U	0.032 U	0.033 U	0.035 U	0.034 U	0.033 U	0.034 U
Arsenic	0.15	0.08	0.12	0.12	0.096	0.067	0.091	0.1
Barium	1.6	0.92	1.2	1.4	0.83	0.99	1	0.82
Beryllium	0.014 U	0.013 U	0.013 U	0.013 U	0.014 U	0.014 U	0.013 U	0.014 U
Cadmium	0.13	0.066	0.14	0.063	0.13	0.092	0.056	0.08
Calcium	16,000	12,000	15,000	13,000	10,000	11,000	11,000	8,100
Chromium	1.6	0.57	0.57	0.95	0.62	0.6	0.46	0.47
Cobalt	0.12	0.071	0.088	0.086	0.078	0.084	0.076	0.069
Copper	1.2	0.58	0.94	0.88	1	0.89	0.77	0.74
Iron	320 J	200 J	240 J	240 J	200 J	220 J	210 J	180 J
Lead	0.48	0.08	0.21	0.25	0.1	0.15	0.11	0.12
Magnesium	490 J	400 J	400 J	400 J	320 J	360 J	360 J	320 J
Manganese	13 J	11 J	8.3 J	13 J	8.5 J	13 J	12 J	14 J
Mercury	0.038	0.033	0.063	0.034	0.091	0.028	0.026	0.033
Nickel	1.2	0.76	0.9	0.95	0.7	0.75	0.71	0.6
Potassium	2,400	2,800	2,400	2,500	2,400	2,400	2,200	2,700
Selenium	0.54	0.45	0.53	0.44	0.5	0.45	0.46	0.4
Silver	0.014 U	0.013 U	0.013 U	0.013 U	0.014 U	0.014 U	0.013 U	0.014 U
Sodium	1,300	1,200	1,200	1,100	1,000	1,200	1,100	1,100
Thallium	0.0069 U	0.0067 U	0.0064 U	0.0065 U	0.0069 U	0.0068 U	0.0065 U	0.0069 U
Vanadium	0.12	0.078	0.075	0.086	0.064	0.074	0.074	0.09
Zinc	25	18	24	20	19	20	17	16

TABLE 4-49
RESULTS FOR INORGANICS IN FISH CARCASS SAMPLES (mg/kg wet wt)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Fish ID	P6-FI-97	P6-FI-98	P6-FI-99	P6-FI-100	P6-FI-101	P6-FI-102	P6-FI-103	P6-FI-104
Sample Name	P6-FI-97-CARC	P6-FI-98-CARC	P6-FI-99-CARC	P6-FI-100-CARC	P6-FI-101-CARC	P6-FI-102-CARC	P6-FI-103-CARC	P6-FI-104-CARC
Date Collected	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
Species Common Name	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass	Largemouth Bass
Tissue Type	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass	Carcass
Length (cm)	34.6	36.6	31.4	38.5	29.9	31.9	31.3	39
Lab Sample Weight (g)	299.2	386.01	222.2	465.6	212.26	232.16	231.34	467.23
Total Field Weight (g)	567	731	402	814	373	442	447	907
Percent Lipids (%)	2.3	3.6	2.6	1.8	4.2	3.7	4	4.7
Location	P6	P6	P6	P6	P6	P6	P6	P6
Metals								
Aluminum	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U	1.3 U	1.3 U
Antimony	0.032 U	0.033 U	0.032 U	0.032 U	0.033 U	0.034 U	0.031 U	0.033 U
Arsenic	0.023	0.059	0.044	0.032	0.05	0.047	0.065	0.034
Barium	1.5	1	1.1	0.91	0.93	1.1	0.91	0.98
Beryllium	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.014 U	0.013 U	0.013 U
Cadmium	0.2	0.0067 U	0.0065 U	0.013	0.0067 U	0.0068 U	0.0063 U	0.0067 U
Calcium	22,000	26,000	20,000	19,000	19,000	20,000	21,000	20,000
Chromium	0.48	1.1	0.85	0.46	1.3	0.55	0.75	0.72
Cobalt	0.096	0.12	0.1	0.09	0.1	0.1	0.11	0.11
Copper	0.53	0.34	0.35	0.35	0.38	0.33	0.33	0.36
Iron	260 J	340 J	280 J	260 J	290 J	290 J	320 J	320 J
Lead	0.027	0.02	0.021	0.023	0.025	0.02	0.03	0.014
Magnesium	580 J	570 J	510 J	440 J	470 J	500 J	530 J	490 J
Manganese	2.9	4.2	4.6	2.6	3.5	3.2	3.3	3.4
Mercury	0.2	0.17	0.1	0.32	0.17	0.16	0.18	0.14
Nickel	1.4	1.8	1.6	1.4	1.6	1.5	1.7	1.6
Potassium	2,200	2,100	2,200	2,000	2,200	2,300	2,200	2,100
Selenium	0.48	0.49	0.51	0.41	0.53	0.46	0.61	0.54
Silver	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.014 U	0.013 U	0.013 U
Sodium	1,900	1,700	1,500	1,400	1,400	1,500	1,500	1,500
Thallium	0.0064 U	0.0067 U	0.0065 U	0.0064 U	0.0067 U	0.0068 U	0.0063 U	0.0067 U
Vanadium	0.037	0.058	0.055	0.046	0.046	0.052	0.053	0.037
Zinc	22 J	18 J	19 J	18 J	19 J	17 J	18 J	17 J

TABLE 4-50
AIR RESULTS FOR ALL PARAMETERS (ppmv)

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SUPERFUND SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected Sort RISP East (ft) RISP North (ft)	EPA Region 9 PRGs	Units	AR-001-LF AR-001-LF 10/7/2003 AR-001-LF 350954 304599	AR-001-LF AR-FD1 10/7/2003 AR-001-LF 350954 304599	AR-002-LF AR-002-LF 10/7/2003 AR-002-LF 351244 304410	AR-003-LF AR-003-LF 10/7/2003 AR-003-LF 351031 304539
Air Parameters - VOCs (TO-15)						
1,1,1-Trichloroethane	0.19	ppmv	0.00008 U	0.00008 U	0.001 U	0.00008 U
1,1,2,2-Tetrachloroethane	0.0000048	ppmv	0.00008 U	0.00008 U	0.001 U	0.00008 U
1,1,2-Trichloro-1,2,2-trifluoroethane	4	ppmv	0.00008 J	0.000089 J	0.001 U	0.000084 J
1,1,2-Trichloroethane	0.000022	ppmv	0.00008 U	0.00008 U	0.0012 U	0.00008 U
1,1-Dichloroethane	0.13	ppmv	0.00005 U	0.00005 U	0.0024 J	0.00005 U
1,1-Dichloroethene	0.0000096	ppmv	0.00006 U	0.00006 U	0.001 U	0.00006 U
1,2,4-Trichlorobenzene	0.028	ppmv	0.00033 U	0.00033 U	0.002 U	0.00033 U
1,2-Dibromoethane	0.0000011	ppmv	0.00006 U	0.00006 U	0.001 U	0.00006 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	- -	ppmv	0.00019 J	0.00009 U	0.025	0.00009 U
1,2-Dichlorobenzene	- -	ppmv	0.00007 U	0.00007 U	0.02	0.000094 J
1,2-Dichloroethane	0.000018	ppmv	0.00006 U	0.00006 U	0.0016 U	0.00006 U
1,2-Dichloropropane	0.000021	ppmv	0.00006 U	0.00006 U	0.0016 U	0.00006 U
1,3,5-Trimethylbenzene	0.0013	ppmv	0.00071	0.00034 J	0.0034 J	0.00025 J
1,3-Dichlorobenzene	- -	ppmv	0.00008 U	0.00008 U	0.041	0.00013 J
1,4-Dichlorobenzene	0.000052	ppmv	0.00016 J	0.000074 J	0.11	0.00083
2-Butanone	0.34	ppmv	0.002	0.0018	0.004 U	0.0021
2-Hexanone	- -	ppmv	0.0002 U	0.0002 U	0.002 U	0.0002 U
4-Ethyltoluene	- -	ppmv	0.0014	0.00077	0.021	0.00042
4-Methyl-2-pentanone	0.02	ppmv	0.00009 U	0.00009 U	0.004 U	0.00009 U
Acetone	0.16	ppmv	0.01	0.0096	0.017 J	0.013
Benzene	0.000078	ppmv	0.00049	0.00025	0.54	0.00034
Benzene, 1,2,4-trimethyl-	0.0013	ppmv	0.0017	0.00096	0.023	0.00063
Benzyl chloride	0.0000061	ppmv	0.00006 U	0.00006 U	0.0016 U	0.00006 U
Bromodichloromethane	0.000016	ppmv	0.00006 U	0.00006 U	0.0016 U	0.00006 U
Bromoform	0.00016	ppmv	0.00007 U	0.00007 U	0.001 U	0.00007 U
Bromomethane	0.0013	ppmv	0.00009 U	0.00009 U	0.002 U	0.00009 U
Carbon disulfide	0.23	ppmv	0.00014 J	0.00014 U	0.004 U	0.00014 U
Carbon tetrachloride	0.000021	ppmv	0.0001 J	0.0001 J	0.001 U	0.00011 J
Chlorobenzene	0.013	ppmv	0.00029	0.000096 J	0.88	0.00058
Chloroethane	0.00087	ppmv	0.00014 U	0.00014 U	0.011	0.00014 U
Chloroform	0.000017	ppmv	0.00006 U	0.00006 U	0.0016 U	0.00006 U
Chloromethane	0.00053	ppmv	0.00055	0.00051	0.002 U	0.00053
cis-1,2-Dichloroethene	0.0093	ppmv	0.00005 U	0.00005 U	0.0053	0.00005 U
cis-1,3-Dichloropropene	0.00011	ppmv	0.00006 U	0.00006 U	0.001 U	0.00006 U
Dibromochloromethane	0.0000094	ppmv	0.00008 U	0.00008 U	0.001 U	0.00008 U
Dichlorodifluoromethane	0.042	ppmv	0.00066	0.00059	0.0068	0.00062
Ethylbenzene	0.25	ppmv	0.00081	0.00073	0.29	0.0027
Hexachlorobutadiene	0.0000081	ppmv	0.00026 U	0.00026 U	0.002 U	0.00026 U
Methylene chloride	0.0012	ppmv	0.00011 J	0.00011 J	0.0016 U	0.0018
Styrene	0.26	ppmv	0.00034 J	0.00041	0.0012 U	0.000088 J
Tetrachloroethene	0.00049	ppmv	0.00009 U	0.00009 U	0.0012 U	0.00009 U
Toluene	0.11	ppmv	0.00088	0.00082	0.019	0.0006
trans-1,2-Dichloroethene	0.018	ppmv	0.00007 U	0.00007 U	0.0057	0.00007 U
trans-1,3-Dichloropropene	0.00011	ppmv	0.00008 U	0.00008 U	0.0016 U	0.00008 U
Trichloroethene	0.0002	ppmv	0.0044	0.0038	0.0019 J	0.00026
Trichlorofluoromethane	0.13	ppmv	0.0003 J	0.00028 J	0.001 U	0.00031 J
Vinyl Acetate	0.06	ppmv	0.00004 U	0.00004 U	0.004 U	0.00004 U
Vinyl Chloride	0.000086	ppmv	0.00017 J	0.000081 J	0.082	0.00006 U
Xylene (Total)	- -	ppmv	0.014	0.0066	0.14	0.0018
Air Parameters - Gases (D1946)						
Carbon dioxide	- -	ppmv	770	510	380,000	590
Carbon monoxide	- -	ppmv	6.8 U	5.8 U	6.1 U	8.8 U
Ethane	- -	ppmv	2.7 U	2.3 U	2.4 U	3.5 U
Ethene	- -	ppmv	2.3 U	1.9 U	2 U	2.9 U
Methane	- -	ppmv	520	170	590,000	170
Nitrogen	- -	ppmv	780,000	780,000	14,000 U	760,000
Oxygen	- -	ppmv	220,000	220,000	4,800	240,000
Air Parameters - PAHs (EPA 16)						
Hydrogen sulfide	0.00072	ppmv	0.089 U	0.12 U	0.082 U	0.088 U

TABLE 4-51
GRAB WATER RESULTS FOR VOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	LF-TT-02 GW-LE3-LF 8/21/2003 350245 304911	LF-TT-04 GW-LE4-LF 8/21/2003 350879 304190	LF-TT-07 GW-LE5-LF 8/22/2003 351779 304012	LF-TT-09 GW-LE6-LF 8/22/2003 351482 304588	UI-TT-06 GW-LE01-UI 8/19/2003 352244 303047	UI-TT-06 GW-FD01 8/19/2003 352244 303047	UI-TT-10 GW-LE02-UI 8/19/2003 352030 303220
VOC									
1,1,1-Trichloroethane	54	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5,900	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,1,2-Trichloroethane	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	81	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.46	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	19	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.047	µg/L	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
1,2-Dibromoethane	0.0076	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	37	µg/L	1.1	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	1.2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.55	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5	µg/L	7.3	0.5 U	1.3	1.1	5.8	5.7	2
2-Butanone	190	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	19 J	18 J	5 UJ
2-Hexanone	- -	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	16	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	61	µg/L	5 UJ	20 J	5 UJ	5 UJ	5 UJ	5 UJ	25 J
Benzene	3.5	µg/L	15	0.66	3.4	0.69	3.2 J	2.9	0.34 J
Bromochloromethane	- -	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	1.8	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	8.5	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	100	µg/L	0.5 U	0.5 U	0.37 J	0.79	1.2	1.1	0.5 U
Carbon tetrachloride	1.7	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	11	µg/L	26	1.2	2.5	1.6	4.6 J	4.4	5.1
Chloroethane	4.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	1.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	6.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.79	0.8 J	0.5 U
cis-1,3-Dichloropropene	4	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	3,500	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane, methyl-	520	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	1.3	µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	39	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Ethylbenzene	130	µg/L	0.38 J	0.5 U	0.5 U	9.1	0.5 U	0.5 U	0.5 U
Isopropylbenzene	- -	µg/L	6.5	0.5 U	0.5 U	1.2	2	1.9	0.5 U
Methyl acetate	610	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	2	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	4.3	µg/L	0.5 U	0.5 U	1 U	0.5 U	1.2 U	1 U	0.5 U
Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1.1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	72	µg/L	2.9	0.5 U	0.36 J	13	1.2	1.3	0.5 U
trans-1,2-Dichloroethene	12	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
trans-1,3-Dichloropropene	4	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1.6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	130	µg/L	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Vinyl Chloride	0.41	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	140	µg/L	13	0.5 U	0.5 U	21	3.9	3.7	0.42 J

TABLE 4-52
GRAB WATER RESULTS FOR VOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	LF-TT-02 GW-LE3-LF 8/21/2003 350245 304911	LF-TT-04 GW-LE4-LF 8/21/2003 350879 304190	LF-TT-07 GW-LE5-LF 8/22/2003 351779 304012	LF-TT-09 GW-LE6-LF 8/22/2003 351482 304588	UI-TT-06 GW-LE01-UI 8/19/2003 352244 303047	UI-TT-06 GW-FD01 8/19/2003 352244 303047	UI-TT-10 GW-LE02-UI 8/19/2003 352030 303220
VOC TICs									
1,1'-Biphenyl	30	µg/L				7.8 NJ			
1,3,5-Trimethylbenzene	- -	µg/L					2.9 NJ		9.6 NJ
1,4-Methanonaphthalene, 1,4-dihydro-	- -	µg/L						0.73 NJ	
2,3-Dihydro-1-methylindene	- -	µg/L	1.2 NJ						
4-Ethyltoluene	- -	µg/L				1.6 NJ			
Benzene, (2-methyl-1-propeny	- -	µg/L							0.54 NJ
Benzene, 1,2,3,4-tetramethyl-	- -	µg/L	3.6 NJ			1.1 NJ	1.6 NJ	1.7 NJ	1.1 NJ
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L	4.7 NJ			0.71 NJ		0.87 NJ	
Benzene, 1,2,3-trimethyl-	- -	µg/L	52 NJ				2.4 NJ	9 NJ	
Benzene, 1,2,4-trimethyl-	- -	µg/L	2.3 NJ			7.2 NJ	27 NJ	24 NJ	
Benzene, 1-ethyl-2,3-dimethyl-	- -	µg/L				0.96 NJ		1.1 NJ	
Benzene, 1-ethyl-2,4-dimethyl-	- -	µg/L	4.7 NJ						
Benzene, 1-ethyl-2-methyl-	- -	µg/L	2.5 NJ			3.2 NJ			1.8 NJ
Benzene, 1-ethyl-3,5-dimethyl-	- -	µg/L	3.1 NJD						
Benzene, 1-ethyl-3-methyl-	- -	µg/L	1.9 NJD					2.3 NJ	1.1 NJ
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L				1.1 NJ	1.7 NJ		
Benzene, 1-methyl-2-propyl-	- -	µg/L	0.96 NJ				1.1 NJ		
Benzene, 1-methyl-3-(1-methylethyl)-	- -	µg/L				1.1 NJ			1.5 NJ
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L	3.1 NJ			29 NJ		1.7 NJ	
Benzene, 1-methyl-4-propyl-	- -	µg/L				0.67 NJ		1 NJ	
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L					1.8 NJ		1.3 NJ
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L					1.3 NJ		
Benzene, methyl (1-methylethy	- -	µg/L							0.89 NJ
Benzene, propyl-	- -	µg/L	9.1 NJ						
Butylated hydroxytoluene	- -	µg/L	2.2 NJD				0.63 NJ		
Indane	- -	µg/L	23 NJ						
Methane, chlorodifluoro-	- -	µg/L		2.2 NJ					
Methane, Chlorofluoro-	- -	µg/L		1.3 NJ		2.8 NJ			
Methane, Dichlorofluoro-	- -	µg/L				1.6 NJ			
Naphthalene, 1,2,3,4-tetrahydro-	- -	µg/L	1.5 NJ					0.59 NJ	1.6 NJ
Naphthalene, 1-methyl-	- -	µg/L					0.61 NJ	0.71 NJ	
Unknown TICs (VOCs) - number of occurences	- -	(Count)	18	3	3	12	10	9	8

TABLE 4-53
GRAB WATER RESULTS FOR PAHs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	LF-TT-02 GW-LE3-LF 8/21/2003 350245 304911	LF-TT-04 GW-LE4-LF 8/21/2003 350879 304190	LF-TT-07 GW-LE5-LF 8/22/2003 351779 304012	LF-TT-09 GW-LE6-LF 8/22/2003 351482 304588	UI-TT-06 GW-LE01-UI 8/19/2003 352244 303047	UI-TT-06 GW-FD01 8/19/2003 352244 303047	UI-TT-10 GW-LE02-UI 8/19/2003 352030 303220
PAH									
2-Methylnaphthalene	0.2	µg/L	2.8 J	0.1 U	0.16 U	0.45 U	2.8 J	1.6 J	0.24 U
Acenaphthene	0.2	µg/L	19 J	0.1 U	0.46 U	0.84 U	10 J	18 J	0.9 U
Acenaphthylene	0.2	µg/L	3.6	0.1 U	0.11	0.49	0.63 J	1.8 J	15 J
Anthracene	0.2	µg/L	2	0.12	0.17	0.78	2.1 J	1.7 J	1.3 J
Benzo(a)pyrene	0.092	µg/L	2.6	0.35 U	0.5 U	0.42 U	0.79 J	1 J	5.6 J
Benzo(b)fluoranthene	0.2	µg/L	3.3	0.36	0.63	0.65	1 J	1.4 J	5 J
Benzo(g,h,i)perylene	0.2	µg/L	1.8	0.24	0.36	0.31	0.77 J	0.68 J	2.9 J
Benzo(k)fluoranthene	0.2	µg/L	2	0.15	0.27	0.34	0.41 J	0.76 J	3.6 J
Benzo[a]anthracene	0.2	µg/L	3.4	0.31	0.48	0.43	1.5 J	1.5 J	6.8 J
Chrysene	0.2	µg/L	3.4	0.3	0.55	0.46	1.3 J	1.6 J	7.6 J
Dibenz[a,h]anthracene	0.2	µg/L	0.46	0.1 U	0.1	0.098 J	0.14 J	0.18 J	0.75 J
Fluoranthene	0.2	µg/L	7.4	0.31	0.89	0.76	3.5 J	3.1 J	6.3 J
Fluorene	0.2	µg/L	7.3 J	0.12 U	0.27 U	0.32 U	2 J	4.9 J	0.24 U
Indeno(1,2,3-cd)pyrene	0.2	µg/L	1.4	0.19	0.28	0.28	0.4 J	0.52 J	2.3 J
Naphthalene	0.2	µg/L	22 J	0.11 U	0.8 U	3.3	27 J	26 J	1.7 U
Phenanthrene	0.2	µg/L	11 J	0.19 U	0.57 U	0.88 U	9.7 J	7.6 J	2.3 J
Pyrene	0.2	µg/L	7.8	0.41	0.81	0.78	4 J	3.4 J	9.3 J
Total PAHs	- -	µg/L	101 J	2.39	4.65	8.68 J	68 J	75.7 J	68.8 J

TABLE 4-54
GRAB WATER RESULTS FOR SVOCs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	LF-TT-02 GW-LE3-LF 8/21/2003 350245 304911	LF-TT-04 GW-LE4-LF 8/21/2003 350879 304190	LF-TT-07 GW-LE5-LF 8/22/2003 351779 304012	LF-TT-09 GW-LE6-LF 8/22/2003 351482 304588	UI-TT-06 GW-LE01-UI 8/19/2003 352244 303047	UI-TT-06 GW-FD01 8/19/2003 352244 303047	UI-TT-10 GW-LE02-UI 8/19/2003 352030 303220
SVOC									
1,1'-Biphenyl	30	µg/L	5 U	5 U	5 U	63	5 U	5 U	5 UJ
1,2,4,5-Tetrachlorobenzene	- -	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2,2'-oxybis(1-Chloropropane)	2.7	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2,4,5-Trichlorophenol	360	µg/L	20 U	20 U	20 U	20 U	1.7 J	1.4 J	20 UJ
2,4,6-Trichlorophenol	61	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2,4-Dichlorophenol	11	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2,4-Dimethylphenol	73	µg/L	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ
2,4-Dinitrophenol	73	µg/L	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ
2,4-Dinitrotoluene	73	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2,6-Dinitrotoluene	36	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2-Chloronaphthalene	49	µg/L	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ
2-Chlorophenol	3	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2-Methylphenol	180	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2-Nitroaniline	2.1	µg/L	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ
2-Nitrophenol	29	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
3,3'-Dichlorobenzidine	1.5	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
3-Nitroaniline	0.21	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4,6-Dinitro-2-methylphenol	- -	µg/L	20 U	20 U	20 U	20 U	20 U	20 UJ	20 UJ
4-Bromophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ
4-Chloro-3-methylphenol	- -	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
4-Chloroaniline	150	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
4-Chlorophenyl-phenylether	- -	µg/L	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ
4-Methylphenol	18	µg/L	5.4	5 U	1.8 J	110	4.7 J	4.1 J	5 UJ
4-Nitroaniline	0.21	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4-Nitrophenol	29	µg/L	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ
Acetophenone	0.042	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Atrazine	3	µg/L	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	8.3 J
Benzaldehyde	360	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
bis(2-Chloroethoxy)methane	- -	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
bis(2-Chloroethyl)ether	0.098	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
bis(2-Ethylhexyl)phthalate	4.8	µg/L	130	5 U	61	6.7	58	65	5 UJ
Butyl benzyl phthalate	730	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Caprolactam	1,800	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Dibenzofuran	24	µg/L	2.2 J	5 U	5 U	5 U	2.7 J	2.5 J	5 UJ
Diethylphthalate	2,900	µg/L	2.1 J	5 U	9.5	1.7 J	1.2 J	1 J	5 UJ
Dimethyl phthalate	36,000	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Di-N-Butyl phthalate	360	µg/L	2.7 J	5 U	1.1 J	5 U	5 U	5 U	5 UJ
Di-N-Octyl phthalate	73	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Hexachlorobenzene	0.42	µg/L	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ
Hexachlorobutadiene	0.86	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Hexachlorocyclopentadiene	26	µg/L	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ
Hexachloroethane	4.8	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Isophorone	71	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Nitrobenzene	3.4	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
N-Nitroso-di-N-propylamine	0.096	µg/L	5 U	5 UJ	5 U	5 U	5 U	5 U	5 UJ
N-Nitrosodiphenylamine	14	µg/L	7.6	5 U	5 U	5 U	7.5	5.9	5 UJ
Pentachlorophenol	0.56	µg/L	5 UJ	5 UJ	5 U	2.3 J	5 U	5 U	5 UJ
Phenol	2,200	µg/L	2.8 J	5 U	1.5 J	8.6	3.2 J	3 J	5 UJ

TABLE 4-55
GRAB WATER RESULTS FOR SVOC TICs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	LF-TT-02 GW-LE3-LF 8/21/2003 350245 304911	LF-TT-04 GW-LE4-LF 8/21/2003 350879 304190	LF-TT-07 GW-LE5-LF 8/22/2003 351779 304012	LF-TT-09 GW-LE6-LF 8/22/2003 351482 304588	UI-TT-06 GW-LE01-UI 8/19/2003 352244 303047	UI-TT-06 GW-FD01 8/19/2003 352244 303047	UI-TT-10 GW-LE02-UI 8/19/2003 352030 303220
SVOC TICs									
1,3,5-Trimethylbenzene	- -	µg/L	29 NJ			9.4 NJD		19 NJ	
2 (1H)-Quinolinone	- -	µg/L			2.9 NJ				
2 (3H)-Benzothiazolone	- -	µg/L	250 NJD	45 NJ		43 NJD		280 NJ	18 NJ
2,6-Dimethylphenyl Isocyanate	- -	µg/L				7.6 NJ			
Benzene, 1,2,3,5-tetramethyl-	- -	µg/L					11 NJ		
Benzene, 1,2,3-trimethyl-	- -	µg/L					21 NJ	7.7 NJ	4.4 NJ
Benzene, 1,2,4-trimethyl-	- -	µg/L	9.4 NJD		2.8 NJ				8 NJ
Benzene, 1-ethyl-3-methyl-	- -	µg/L					7.1 NJ		
Benzene, 1-methyl-2-(1-methylethyl)-	- -	µg/L				37 NJ			3.6 NJ
Benzene, 1-methyl-4-(1-methylethyl)-	- -	µg/L				45 NJD			
Benzene, 2-ethyl-1,3-dimethyl-	- -	µg/L					3.9 NJ		
Benzene, 4-ethyl-1,2-dimethyl-	- -	µg/L							2 NJ
Benzene, cyclopropyl-	- -	µg/L	16 NJD						
Benzene, methyl (1-methylethy	- -	µg/L	7.5 NJD						
Benzene, propyl-	- -	µg/L	8 NJD						
Benzeneacetic acid	- -	µg/L				8.4 NJD			
Benzenemethanol, α,α-dimethyl-	- -	µg/L		3.1 NJ					
Benzenepropanoic Acid	- -	µg/L				41 NJ		18 NJ	
Benzoic acid	- -	µg/L	9.7 NJD						
Bicyclo [2,2,1] heptan-2-one,	- -	µg/L						5.7 NJ	
Bicyclohexyl, 4-phenyl-	- -	µg/L					37 NJ	23 NJ	8.9 NJ
Cyclohexanecarboxylic acid	- -	µg/L						11 NJ	
Cyclopropanenonanoic Acid, 2	- -	µg/L							450 NJ
Decahydro-4,4,8,9,10-pentamethylnaphthalene	- -	µg/L							3.6 NJ
Decanoic Acid	- -	µg/L				600 NJ			
Diethyltoluamide	- -	µg/L		3.6 NJ					
Dodecanamide, N,N-bis(2-Hydr	- -	µg/L				12 NJD			
Dodecanoic acid	- -	µg/L				16 NJ			
Drometrizole	- -	µg/L						8.8 NJ	
Heptadecane, 9-Octyl-	- -	µg/L					280 NJ		
Heptadecanoic acid	- -	µg/L				3.6 NJ			
Hexadecanoic acid	- -	µg/L	33 NJD		13 NJ	45 NJ		18 NJ	15 NJ
Hexanoic Acid, 2-Ethyl-	- -	µg/L				28 NJ			
Indane	- -	µg/L	13 NJ						
Naphthalene, 1,3-dimethyl-	- -	µg/L	6.8 NJ						
Naphthalene, 1-methyl-	- -	µg/L	8.5 NJ				2.9 NJ		
Octadecanoic acid	- -	µg/L	14 NJ			18 NJ	81 NJ		
Octanoic Acid	- -	µg/L						20 NJ	
o-Terphenyl	- -	µg/L						7.4 NJ	
Pentanoic Acid, 2-Methyl-	- -	µg/L			2.5 NJ				
Pentanoic Acid, 4-Methyl-	- -	µg/L					2.6 NJ		
Phenanthrene, 2,4,5,7-tetramethyl-	- -	µg/L	35 NJ				79 NJ		
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-meth	- -	µg/L						9.6 NJ	
Phenol, 2,4'-isopropylidenedi-	- -	µg/L						14 NJ	
Phenol, 3-(2-Phenylethyl)-	- -	µg/L				26 NJD			
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	- -	µg/L						8.5 NJ	
Phenol, 4-(2,2,3,3-tetramethylbutyl)-	- -	µg/L							6.6 NJ
Phenol, 4,4'-(1-methylethylidene)bis-	- -	µg/L	51 NJD	5.5 NJ	40 NJ	32 NJ		140 NJ	2.3 NJ
Phenol, p-tert-butyl-	- -	µg/L				4.2 NJ			
Phthalic anhydride	- -	µg/L	28 NJD						
Tetradecanoic acid	- -	µg/L				14 NJ			
Triethyl phosphate	- -	µg/L			3.3 NJ				
Undecanoic Acid	- -	µg/L				33 NJ			
Unknown TICs (SVOCs) - number of occurences	- -	(Count)	40	9	15	20	19	36	29

TABLE 4-56
GRAB WATER RESULTS FOR PCBs AND PESTICIDES

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	LF-TT-02 GW-LE3-LF 8/21/2003 350245 304911	LF-TT-04 GW-LE4-LF 8/21/2003 350879 304190	LF-TT-07 GW-LE5-LF 8/22/2003 351779 304012	LF-TT-09 GW-LE6-LF 8/22/2003 351482 304588	UI-TT-06 GW-LE01-UI 8/19/2003 352244 303047	UI-TT-06 GW-FD01 8/19/2003 352244 303047	UI-TT-10 GW-LE02-UI 8/19/2003 352030 303220
PCBs									
Aroclor-1016	0.34	µg/L	0.5 U	0.05 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Aroclor-1221	0.34	µg/L	1 U	0.1 U	1 U	1 U	1 UJ	1 U	1 U
Aroclor-1232	0.34	µg/L	0.5 U	0.05 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Aroclor-1242	0.34	µg/L	0.5 U	0.05 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Aroclor-1248	0.34	µg/L	0.5 U	0.05 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Aroclor-1254	0.34	µg/L	2.2 J	0.05 U	0.5 U	0.5 U	0.5 UJ	0.5 U	14
Aroclor-1260	0.34	µg/L	0.5 U	0.45 J	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Total PCBs	- -	µg/L	2.2 J	0.45 J	0	0	0	0	14
PESTICIDES									
4,4'-DDD	0.28	µg/L	0.08 J	0.015 J	0.05 UJ	0.05 UJ	0.5 UJ	0.025 J	R
4,4'-DDE	0.2	µg/L	0.5 U	0.05 U	0.05 U	0.05 U	0.02 J	0.05 UJ	0.12 J
4,4'-DDT	0.2	µg/L	0.05 U	0.005 UJ	0.05 UJ	0.05 UJ	0.056 J	0.056 J	0.05 U
Aldrin	0.04	µg/L	0.025 U	0.0025 U	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U
alpha-BHC	0.011	µg/L	0.025 U	0.0025 U	0.025 U	0.025 U	0.014 J	0.025 UJ	0.025 U
alpha-Chlordane	0.19	µg/L	0.025 U	0.0092 J	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U
beta-BHC	0.037	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U
Delta-BHC	0.2	µg/L	0.025 U	0.0025 U	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U
Dieldrin	0.042	µg/L	0.05 U	0.068 J	0.05 U	0.05 U	0.01 J	0.5 UJ	R
Endosulfan I	22	µg/L	0.025 U	0.0025 U	0.25 U	0.025 U	0.025 UJ	0.025 U	0.025 U
Endosulfan II	22	µg/L	0.05 U	0.005 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U
Endosulfan Sulfate	22	µg/L	0.05 U	0.011 J	0.05 U	0.05 U	0.05 UJ	0.05 U	0.11 J
Endrin	1.1	µg/L	0.05 U	0.005 U	0.05 U	0.05 U	0.5 U	0.5 U	0.05 U
Endrin Aldehyde	1.1	µg/L	0.05 U	0.005 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.08 J
Endrin Ketone	1.1	µg/L	0.05 U	0.005 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.088
Gamma-BHC	0.052	µg/L	0.025 U	0.0025 U	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U
Gamma-Chlordane	0.19	µg/L	0.25 U	0.025 U	0.25 U	0.25 U	0.025 UJ	0.25 U	0.13 J
Heptachlor	0.015	µg/L	0.025 U	0.0025 U	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U
Heptachlor Epoxide	0.074	µg/L	0.025 U	0.0025 U	0.025 U	0.025 U	0.025 UJ	0.025 U	0.025 U
Methoxychlor	18	µg/L	0.25 U	0.025 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 U	0.33
Toxaphene	0.61	µg/L	2.5 U	0.25 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U

TABLE 4-57
GRAB WATER RESULTS FOR METALS AND CYANIDE

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station Sample Name Date Collected RISP East (ft) RISP North (ft)	PAL	Units	LF-TT-02 GW-LE3-LF 8/21/2003 350245 304911	LF-TT-04 GW-LE4-LF 8/21/2003 350879 304190	LF-TT-07 GW-LE5-LF 8/22/2003 351779 304012	LF-TT-09 GW-LE6-LF 8/22/2003 351482 304588	UI-TT-06 GW-LE01-UI 8/19/2003 352244 303047	UI-TT-06 GW-FD01 8/19/2003 352244 303047	UI-TT-10 GW-LE02-UI 8/19/2003 352030 303220
METALS AND CYANIDE									
Aluminum	50	µg/L	11,100	13,200	19,000	46,500	16,200	15,000	156,000
Antimony	1.5	µg/L	22.5 J	4.9 J	38.099998 J	27.9 J	60 UJ	60 UJ	60 UJ
Arsenic	0.45	µg/L	26.799999	74.5	37.799999	144	42.400002	42.400002	94.699997
Barium	260	µg/L	1,390	945	702	569	1,370	1,440	3,700
Beryllium	4	µg/L	0.78 J	3.2 J	1.9 J	6.6	1.7 J	1.6 J	31.6
Cadmium	1.8	µg/L	19.6	47.299999	46.099998	13.9	197	201	311
Calcium	- -	µg/L	75,300	28,900	91,800	27,700	49,400	48,900	259,000
Chromium	11	µg/L	63.400002	89.5	57.700001	137	131	116	517
Cobalt	220	µg/L	22 J	26.6 J	20.1 J	41.099998 J	36.299999 J	35.299999 J	235
Copper	140	µg/L	66.400002	560	170	25 U	939	1,190	4,230
Cyanide	6.2	µg/L	53.400002	12.8	68.699997	29.799999	97.599998	103	103
Iron	300	µg/L	110,000	22,200	83,100	162,000	68,400	65,300	286,000
Lead	15	µg/L	2,590	723	3,980	1,510	4,500	4,540	3,790
Magnesium	- -	µg/L	14,200	7,940	11,800	7,510	6,030	5,730	15,500
Manganese	50	µg/L	952	8,540	2,010	1,750	2,240	2,150	7,200
Mercury	1.1	µg/L	3.9	1.8	3.6	4	53.700001 J	7.3 J	4.4
Nickel	73	µg/L	159	94.400002	251	168	394	380	2,020
Potassium	- -	µg/L	17,900 J	17,200 J	9,800 J	5,460 J	5,000 U	5,000 U	6,100 J
Selenium	18	µg/L	R	R	R	R	R	R	R
Silver	18	µg/L	10 U	0.6 U	10 U	10 U	10 U	10 U	21.700001
Sodium	- -	µg/L	50,300 J	72,500 J	35,400 J	19,100 J	25,200 J	24,600 J	34,300 J
Thallium	2	µg/L	4 UJ	4 UJ	4 UJ	7.5 J	4 UJ	4 UJ	18.1 J
Vanadium	26	µg/L	303	47.400002 J	62.5	233	100	95.599998	310
Zinc	1,100	µg/L	4,620	854	4,800	6,640	12,600	12,600	50,900

TABLE 4-58
GRAB WATER SAMPLES FOR WATER PARAMETERS

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Station	PAL	Units	LF-TT-02	LF-TT-04	LF-TT-07	LF-TT-09	UI-TT-06	UI-TT-06	UI-TT-10
Sample Name			GW-LE3-LF	GW-LE4-LF	GW-LE5-LF	GW-LE6-LF	GW-LE01-UI	GW-FD01	GW-LE02-UI
Date Collected			8/21/2003	8/21/2003	8/22/2003	8/22/2003	8/19/2003	8/19/2003	8/19/2003
RISP East (ft)			350245	350879	351779	351482	352244	352244	352030
RISP North (ft)			304911	304190	304012	304588	303047	303047	303220
Water Parameters									
Chloride	- -	mg/L	61	89	54	39	50	48	51

TABLE 4-59
SUMMARY OF WASTE INVENTORY AT THE NUNES PARCEL - NOVEMBER 2006

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2
CUMBERLAND AND LINCOLN, RHODE ISLAND

Surface Debris Item	Approximate Location	Quantity	Comments
Liquids (oils, fuels, sludges, etc) Debris			
Drums	drums/fragments reported at scattered locations across the parcel; several inside main building; several inside trailers; soil cuttings near well 109; IDW drum storage area	exact total difficult to quantify; 43 were in RI IDW storage area along access road towards landfill	unknown drums in various states, many appeared to be empty, IDW drums labeled and intact (IDW drums removed after November 2006)
Fuel tanks on trucks	attached to or nearby trucks and carcasses	unknown	
Propane tanks	north central portion adjacent to Blackstone River adjacent to roll-offs; sw-most corner, behind trailers	12-15 of various sizes in north central area, unknown quantity of smaller tanks in sw corner	contents unknown, most filled with holes and appear to be empty in both areas
Large storage tanks	one adjacent to main building, and two adjacent to propane tanks, near access road in sw corner	3 larger volume tanks	unknown volume or contents, 1 estimated to be 1,000-2,000 gallon AST behind trailers
Non-Liquid Debris			
Tires	along sw boundary near Blackstone River	unknown quantity - two piles - likely in hundreds	the more northern pile also contains rubber, wood, and foam debris
Trucks	central portion, few along northeastern portion near the main building	2 garbage trucks, several truck carcasses adjacent to the garbage trucks, old transfer facility truck and camper near main building	unknown quantity of truck carcasses
Trailers	sw corner - west of access road (6), along rail road (2)	8 flat bed or box trailers	various conditions - 5 in the SW area labeled T-1 through T-5; box trailers contain other metal and paper debris including drums
Roll-offs	north central portion within 30 feet of Blackstone River, 1 small additional roll-off approximately 100 feet west of main building	(19) larger roll-off boxes, (1) smaller	
Storage batteries	inside building	one specifically identified	
Electrical ballasts	along concrete wall in nw area	approximately 250 (estimated)	also described as capacitors in field notes
Possible Asbestos-Containing Materials			
Pipe (3" PVC)	near river bank between tire piles	small pile - few yards - unknown quantity	
Concrete blocks	approximately 30 feet from river adjacent to piping pile - in sw corner	up to few hundred standard blocks	
Shingles	corner of Bay-01 in north central portion along concrete wall	several yards in one large pile	may contain transite
Miscellaneous			
Building	one small shed in sw corner along access road, one enclosed building adjacent to roll-off boxes in north central portion, one main building in central ne portion of parcel		wood debris in old shed, old animal pens and few drums inside enclosed building, general debris and interior walls and building materials inside main building

TABLE 5-1
CHEMICAL-SPECIFIC ARARs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Requirement	Status	Synopsis	Potential Application
Chemical-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Exceedances of AWQC are present in Blackstone River and Ponds.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	This provides guidance on assessing risk to children from carcinogens.	Guidance used to evaluate all risk to children from carcinogens.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	EPA may use Health Advisories to establish criteria in the absence of other criteria.
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to Maximum Contaminant Levels Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater is a source/potential federal drinking water source.
EPA Guidance on	TBC	Describes the recommended approach to	This guidance will be considered when establishing remediation goals for PCB contaminated media.
Remedial Actions for		evaluating and remediating	
Superfund Sites with		Sites with PCB contamination.	
PCB Contamination			

TABLE 5-1
CHEMICAL-SPECIFIC ARARs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Requirement	Status	Synopsis	Potential Application
Federal Requirements Cont.			
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater is a source/potential federal drinking water source.
State Requirements			
Rhode Island Water Quality Regulations	Applicable R & A	Classifies water use and defines water quality goals to protect public health and welfare, enhance the quality of state water. These rules set ambient water quality criteria (AWQCs) applicable to surface waters in Rhode Island. These AWQCs may include numeric limits for chronic exposures to aquatic life, acute exposures to aquatic life, human consumption of water and aquatic organisms, and human consumption of aquatic organisms only.	Exceedances of AWQC are present in River and Ponds.
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance listed in Rule 8.02.B (Method 1 Soil Objectives). Similarly, groundwater objectives established in Rule 8.03 shall be applied to contaminated sites.	Soil at the site contains contaminants subject to the Rule 8.02B soil objectives. Groundwater at the site contains contaminants subject to the Rule 8.03B GA groundwater objectives.
RIDEM Rules and Regulations for Groundwater Quality	Applicable	Establishes state MCLs, limits, and requirements for current and future public water supply systems. These rules set numerical criteria for contaminants in certain aquifers classified as potential drinking water sources (such as the aquifer at the Site.	State MCLs are applicable to the groundwater at the site.

Key:
R & A - relevant and appropriate; TBC - to be considered

TABLE 5-2
LOCATION-SPECIFIC ARARs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Requirement	Status	Synopsis	Potential Application
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency involved in actions that will result in the control or structural modification of any stream or water body to take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	On-site remediation activities may include modifications to the River or Ponds.
Clean Water Act, Section 404(b)(1) Guidelines for specification of disposal sites for dredged or fill material, 40 CFR Part 230, 231 and 33 CFR Parts 320-323 and Guidelines for Compensatory Mitigation for Losses of Aquatic Resources, 33 CFR Part 332	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	On-site remediation activities may include discharge of dredged or fill material into the wetlands/water bodies.
National Historic Preservation Act, 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Prohibits unauthorized obstruction or alteration of navigable waters of the U.S.	Remediation activities may involve obstruction or alteration of the River.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Some wetlands are located within the site boundaries. Any activities in wetland areas will need to comply with this order.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid occupancy and modification of a floodplain unless there is no practicable alternative and avoid support of floodplain development wherever there is a practicable alternative.	The site is partially located in a 100-yr floodplain. If no practicable alternative, any activity will be designed to minimize such impacts.
Endangered Species Act of 1973, 16 USC 1531 et seq. 50 CFR 402	Potentially Applicable	Establishes requirements to protect species threatened by extinction and habitats critical to their survival.	There requirements must be addressed if there are habitats for threatened or endangered species.

TABLE 5-2
LOCATION-SPECIFIC ARARs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Requirement	Status	Synopsis	Potential Application
Federal Requirements Cont.			
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, pre-historical, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities.	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, pre-historical, historical, or archaeological data, EPA will notify DOI and comply with the processes in this statute.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	Potentially Applicable	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Treatment, disposal, and/or storage of hazardous materials may take place at the site, which is partially located within the 100-yr floodplain.
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Some wetlands are located within the site boundaries.
RIDEM Rules and Regulations for Groundwater Quality	Applicable	Sets forth policy to protect future and present sources of drinking water by protection of the groundwater, aquifers, recharge areas, and watersheds.	Groundwater at and near the site is a source/potential source of drinking water.
Rhode Island Endangered and Threatened Species Act; RIGL 20-37	Potentially applicable	Regulations address any plants or animals of special concern.	To be considered if remedial alternative affects any plants or animals of special concern
Rhode Island Historic Preservation Action – Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the Register of Historic Places.	Project must take into account the effect on properties included or eligible for inclusion in the Register of Historic Places.

Key:
TBC - to be considered

TABLE 5-3
ACTION-SPECIFIC ARARs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Requirement	Status	Synopsis	Potential Application
Action-Specific ARARs			
Federal Requirements			
TSCA PCB regulations (40 CFR 761, Subparts B and C)	Applicable	Establishes requirements for addressing PCB-contaminated remediation waste.	PCBs are present at the site.
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater at the site is a source/ potential federal drinking water source. These standards would be used to evaluate the effectiveness of alternatives in reducing/preventing migration of contaminants from soil to groundwater.
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater at the site is a source/potential federal drinking water source. These standards would be used to evaluate the effectiveness of alternatives in reducing/preventing migration of contaminants from soil to groundwater.
EPA Groundwater Protection Strategy	TBC	Guidelines for consistency in groundwater protection programs focus on the highest beneficial use of the groundwater aquifer and define three classes of groundwater.	Groundwater at the Site is classified as a drinking source/potential drinking water source under the federal classification system.
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions that may be taken in the river, wetlands and/or floodplains could result in the introduction of invasive species.
RCRA (40 CFR 264, Subpart AA)	Potentially Applicable	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, system vents will comply with these requirements.
RCRA (40 CFR 264, Subpart BB)	Potentially Applicable	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment contain or come into contact with hazardous wastes containing organic concentrations of at least 10% by weight, these regulations will be followed.
Emission Guidelines (40 CFR Part 60, Subpart Cc) NSPS (40 CFR Part 60 Subpart	R & A	Air emission standards for municipal solid waste landfills.	Site remediation activities may require vents as part of landfill closure.
RCRA (40 CFR 264, Subpart CC)	Potentially Applicable	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have more than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have more than 500 ppmw of volatile organics, then these requirements will be met.

TABLE 5-3
ACTION-SPECIFIC ARARs

REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Requirement	Status	Synopsis	Potential Application
Federal Requirements Cont.			
National Emission Standards for Hazardous Air Pollutants for MSW landfills (40 CFR Part 63 Subpart AAAA)	Potentially Applicable or R & A	Air emission standards for hazardous air pollutants from municipal solid waste landfills.	Site remediation activities may require vents as part of landfill closure.
RCRA Land Disposal Restrictions (40 CFR 268)	Potentially Applicable or R & A	Treatment standards are identified for hazardous wastes and specify requirements that generators, transporters, and owners/operators of treatment, storage, and disposal facilities that manage wastes destined for land disposal must meet.	Material subject to these regulations must be treated to meet these requirements.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management, Sections 1-5	*Potentially Applicable or R & A*	Outlines requirement for general waste analyses, security procedures, inspections, safety, etc.. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	If remediation at the site includes any of these activities, substantive requirements must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Potentially Applicable or R & A	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities.	If remediation at the site includes any of these activities, substantive requirements must be met.
Rhode Island Rules and Regulations for Solid Waste Management, Regulations Nos. 1, 2 and 4	Potentially Applicable or R & A	Outlines requirements for operation of solid waste facilities including construction of final covers and leachate collection systems; monitoring plans and waste incineration.	Some solid waste has been disposed of at the site.
Rhode Island Rules and Regulations for Hazardous Waste Management, Section 9	Potentially Applicable or R & A	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities.	If remediation at the site includes any of these activities, substantive requirements must be met.
Rhode Island Rules and Regulations for Hazardous Waste Management, Section 10	Potentially Applicable or R & A	Outlines design, operational, and closure requirements for new hazardous waste landfills.	If remediation at the site includes any of these activities, substantive requirements must be met.
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	These rules establish criteria for cleanup of contamination caused by a release of hazardous material. This section regulates impacted media (soil and groundwater only) at contaminated sites and sets risk standards under state law. (1×10^{-5}).	This section would be used to develop cleanup goals for the site.
RIDEM Closure Policy for Inactive or Abandoned Solid Waste Landfills, 3/1/2007	Applicable	Provides alternative closure options for solid waste landfills which ceased operation prior to April 1992 and have not received a Certificate of Closure.	Presents alternate standards for closure of qualifying landfills

TABLE 5-3
ACTION-SPECIFIC ARARs

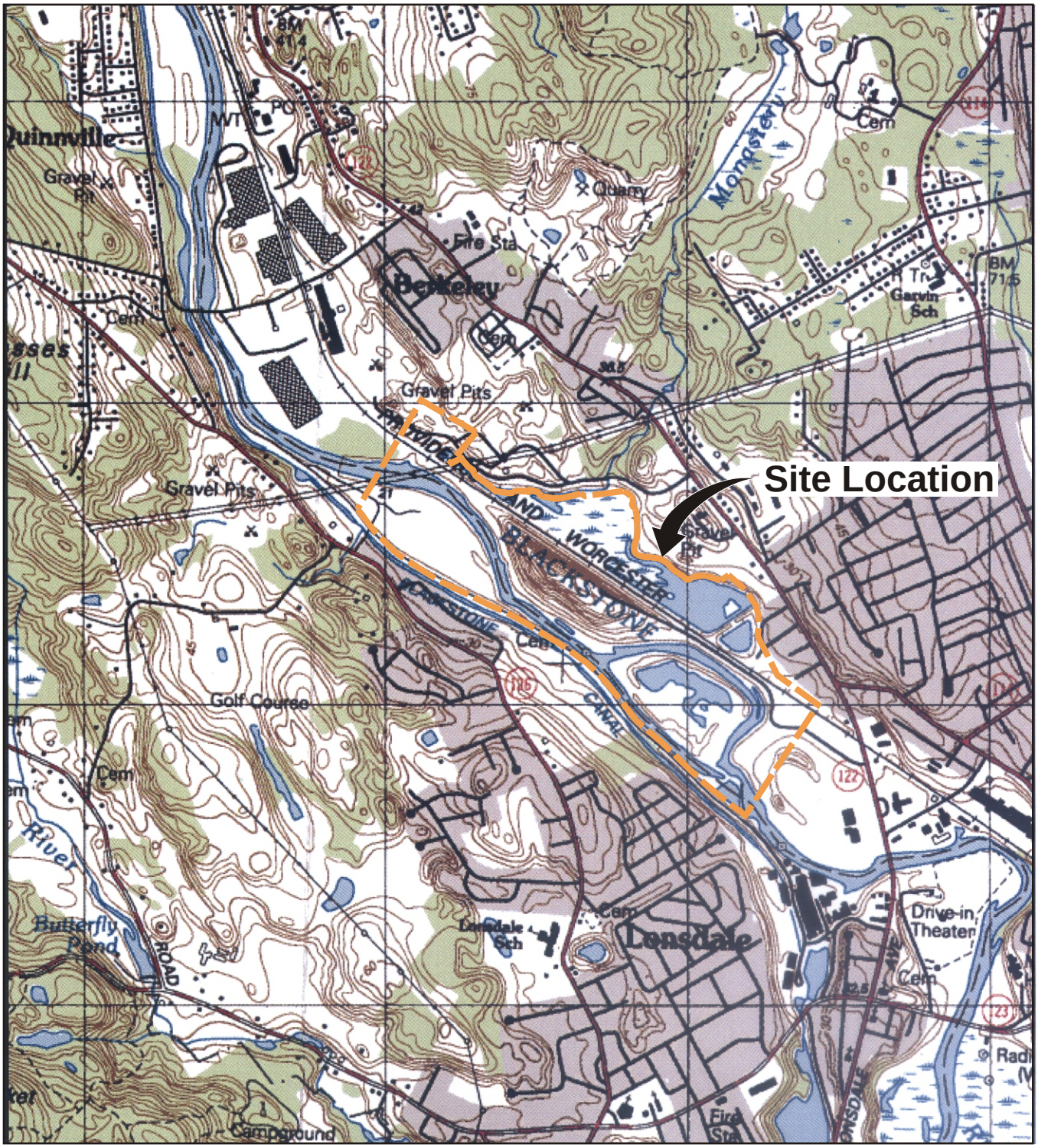
REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SITE - OPERABLE UNIT 2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Requirement	Status	Synopsis	Potential Application
State Requirements Cont.			
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Remediation activities may affect water quality.
RIDEM Regulations for the Rhode Island Pollutant Discharge Elimination System (RIPDES)	Potentially Applicable	Sets requirements for discharges to surface waters and to protect waters from discharges of pollutants.	Remediation activities may require discharge of water to the River.
RIDEM Rules and Regulations for Groundwater Quality	Applicable	Establishes construction standards for permanent monitoring wells and abandonment procedures (Appendix 1).	The site contains monitoring wells.
Protection of Public Drinking Water	Potentially Applicable	Applicable to remedial alternatives that affect public drinking water supplies.	Remedial activities could impact public water supply.
RIDEM Pretreatment Regulations	Potentially Applicable	Applicable for any remedial action where treated or untreated liquids are discharged to a Publically Owned Treatment Works (POTW) facility.	Remedial activities could include discharge to a POTW.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation activities could potentially result in visible emissions. If these standards are exceeded, emissions would need to be managed through engineering controls.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable measures be taken to prevent particulate matter from becoming airborne.	Remediation activities could potentially result in fugitive dust. Appropriate measures would need to be taken to prevent particulate matter from becoming airborne.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants that may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Remediation activities may result in emissions.
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions,	Potentially Applicable	Limits the amount of organic solvents emitted to the atmosphere.	Remediation activities could result in emission of organic solvents to the atmosphere.
RI Air Pollution Control Regulation #22: Air Toxics Air Toxics Guideline, and Air Modeling Guidelines	Potentially Applicable	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation activities could result in emission of toxics to the atmosphere.

Key:
R & A - relevant and appropriate; TBC - to be considered

ARCADIS

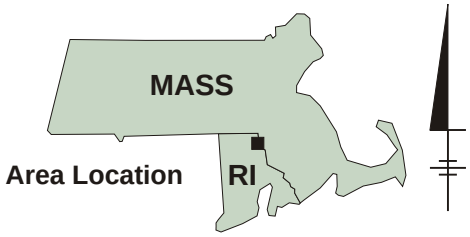
Figures



REFERENCE: BASE MAP USGS 7.5 MIN. QUAD., ATTLEBORO, MASS.

0 0.25 0.5

Approximate Scale in Miles



PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

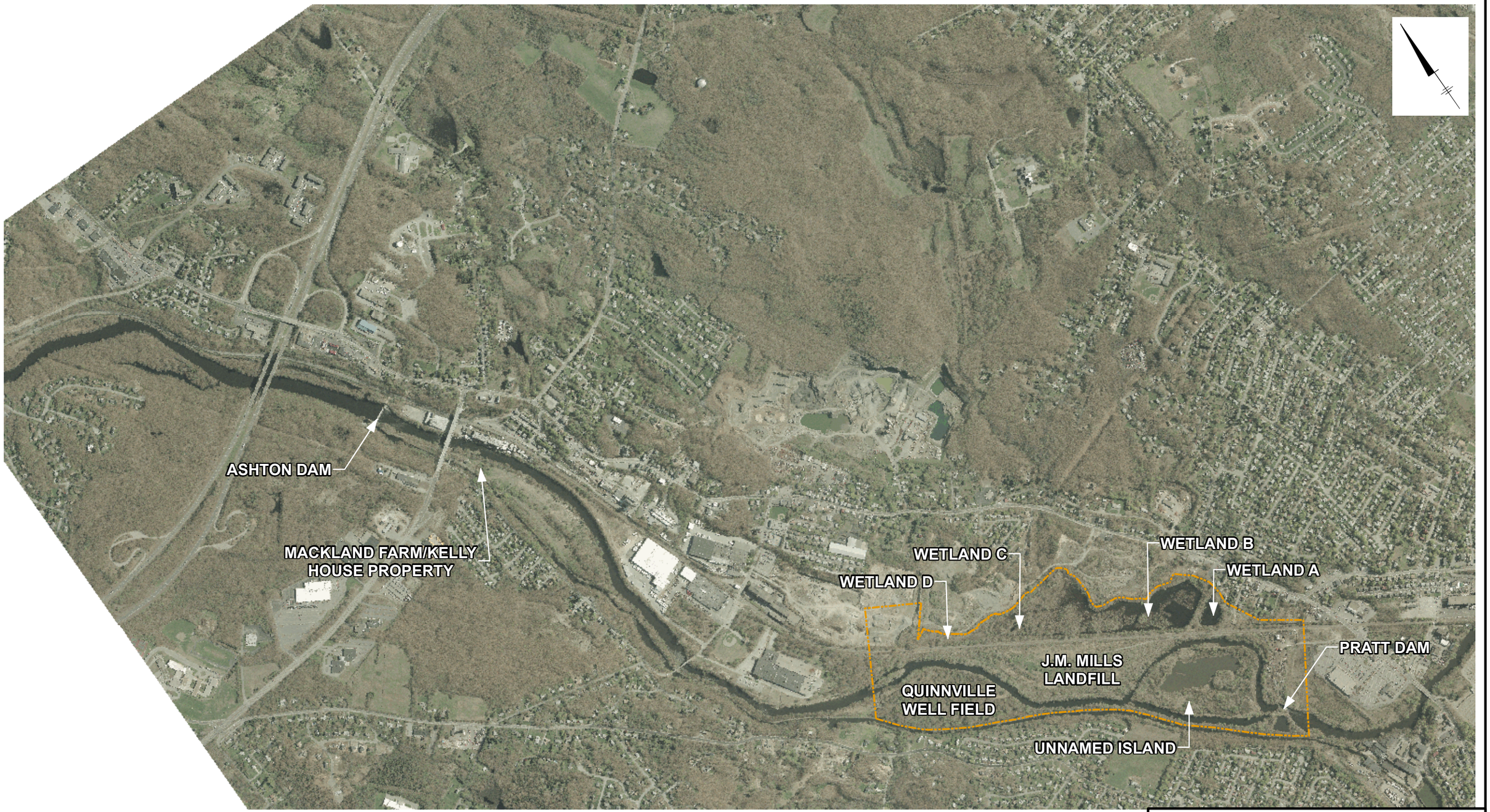
REMEDIAL INVESTIGATION REPORT

SITE LOCATION MAP

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
1-1

06/14/07 SYR-D85-DJH
37902006/37902n02.cdr



NOTE:

1. 2002 AERIAL PHOTO OBTAINED FROM RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM: HTTP://WWW.EDC.URI.EDU/RIGIS/

LEGEND:

OU2 BOUNDARY

0 1,200 2,400 Feet

GRAPHIC SCALE

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SITE LAYOUT

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 1-2

7/7/06 SYR-85 EAB
Peterson/Puritan (37902 012)
QQ:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\SiteLayout.mxd

DEBRIS FIELDS 1-3

LENOX STREET MUNICIPAL WELL

WETLAND C

WETLAND B

WETLAND A

WETLAND D

POND N

DEBRIS FIELD 4

POND I

POND A

POND E

POND C

POND D

POND B

BLACKSTONE RIVER

POND P

PRATT DAM

BLACKSTONE CANAL

(BACKWATER)

POND F

LEGEND:

- RAILROAD EASEMENT
- DEBRIS FIELDS
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOUTHERN BANK AREA
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTE:

1. NFO - NOW OR FORMERLY OWNED BY

0 500 1,000 Feet

GRAPHIC SCALE

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

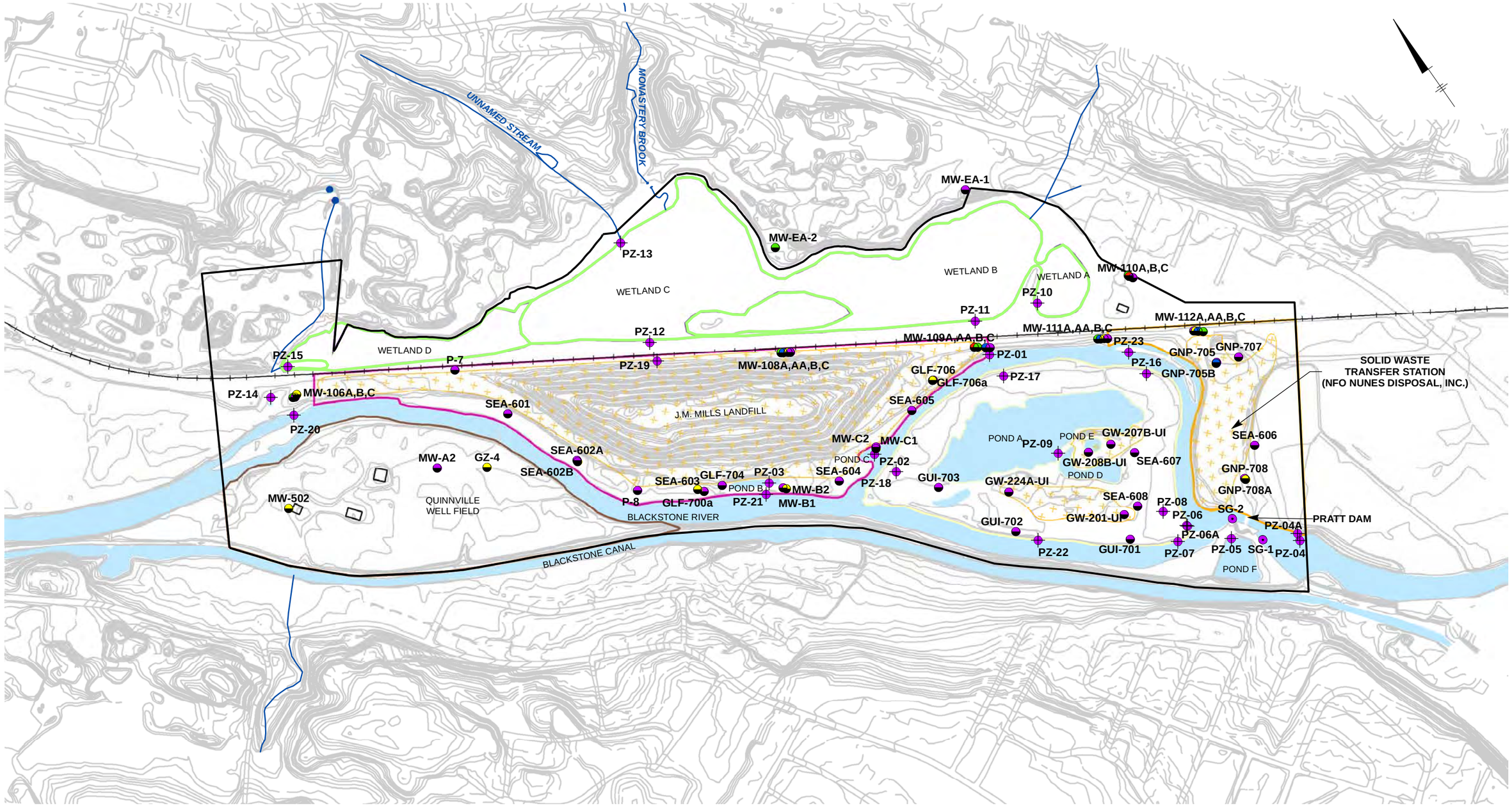
REMEDIAL INVESTIGATION REPORT

SUB AREA DEFINITION

ARCADIS

FIGURE
1-3

CITY: (CLE) DIV/GROUP:(ENV/GIS) DB:(LGREENE) LD:() PIC:() PM:() TM:(J.ROBERTS)
PROJECT: PETERSON PURITAN PATH: G:\envirol\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_UpdatestSubAreaDefinition.mxd



LEGEND:

- MONITORING WELL
- PIEZOMETER/STAFF GAUGE
- STAFF GAUGE

FORMATION

- SHALLOW UNCONSOLIDATED UNIT
- INTERMEDIATE UNCONSOLIDATED UNIT
- TILL
- DEEPER UNCONSOLIDATED UNIT
- BEDROCK

- OU2 BOUNDARY
- WETLAND (INTERMITTENTLY WET)
- BURIED WASTE
- SURFACE WATER
- UNNAMED ISLAND
- J.M. MILLS LANDFILL
- SOLID WASTE TRANSFER STATION (NOW OR FORMELY OWNED BY NUNES DISPOSAL, INC.)
- QUINNVILLE WELL FIELD
- WETLAND

0 500 1,000 Feet

GRAPHIC SCALE

NOTES:
1) ONLY WELLS SAMPLED AS PART OF THE OU2 RI ARE SHOWN ON THIS FIGURE.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

MONITORING WELLS, PIEZOMETER AND STAFF GAUGES

ARCADIS

FIGURE 2-1

CITY: (CLE) DIV/GROUP:(ENV/GIS) DB:(LGREENE) LD:0 PIC:0 PM:0 TM:(J.ROBERTS)
PROJECT: PETERSON PURITAN PATH: G:\enviro\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\20120201_UpdatesWells.mxd

DEBRIS FIELDS 1-3

DEBRIS FIELD 4

LENOX STREET MUNICIPAL WELL

WETLAND A

WETLAND B

WETLAND C

WETLAND D

POND N

POND C

POND B

POND A

POND E

POND D

POND P

POND F

LF LINE 1

LF LINE 2

LF LINE 3

UI LINE 1

UI LINE 2

BLACKSTONE CANAL

BLACKSTONE RIVER

(BACKWATER)

PRATT DAM

LF-TP-01 LF-TP-02 LF-TP-03 LF-TP-04

LF-TT-01 LF-TT-02 LF-TT-03A LF-TT-03B LF-TT-04 LF-TT-05 LF-TT-06 LF-TT-07 LF-TT-08 LF-TT-09 LF-TT-10 LF-TT-11

MIP-1 MIP-2 MIP-3 MIP-4 MIP-5 MIP-6 MIP-7 MIP-8 MIP-9 MIP-10 MIP-11 MIP-12 MIP-13 MIP-14 MIP-15 MIP-16 MIP-17 MIP-18 MIP-19 MIP-20 MIP-21 MIP-22 MIP-23 MIP-24 MIP-25 MIP-26 MIP-27 MIP-28 MIP-29 MIP-30 MIP-31 MIP-32 MIP-33 MIP-34 MIP-35 MIP-36 MIP-37 MIP-38 MIP-39 MIP-40 MIP-41 MIP-42 MIP-43 MIP-44 MIP-45

L1 2800 L1 2600 L1 2400 L1 2200 L1 2000 L1 1800 L1 1600 L1 1400 L1 1200 L1 1000 L1 0800 L1 0600 L1 0400 L1 0200 L1 0000 L1 2100 L1 2400 L1 2700 L1 1500 L1 1200 L1 0900 L1 0600 L1 0300 L1 0000

L2 1400 L2 1200 L2 1000 L2 0800 L2 0600 L2 0400 L2 0200 L2 0000 L2 0200 L2 0000

L3 0950 L3 0800 L3 0600 L3 0400 L3 0200 L3 0000

UI-TT-01 UI-TT-02 UI-TT-03 UI-TT-04 UI-TT-05 UI-TT-06 UI-TT-07 UI-TT-08 UI-TT-09 UI-TT-10 UI-TT-11 UI-TT-12 UI-TT-13 UI-TT-14 UI-TT-15 UI-TT-16 UI-TT-17 UI-TT-17A UI-TT-18 UI-TT-19 UI-TT-20 UI-TT-21 UI-TT-22 UI-TT-23 UI-TT-24 UI-TT-25 UI-TT-26 UI-TT-27 UI-TT-28 UI-TT-29 UI-TT-30 UI-TT-31 UI-TT-32

TP-01 TP-02 TP-03 TP-04 TP-05 TP-06 TP-07 TP-08 TP-09 TP-10 TP-11 TP-12 TP-13 TP-14 TP-15 TP-16 TP-17 TP-18 TP-19 TP-20 TP-21 TP-22 TP-23

SO-104-NP SO-105-NP

LEGEND:

- EMI STATIONS
- MIP BORINGS
- TEST PIT LOCATION - SAMPLE(S) COLLECTED
- TEST PIT LOCATION - NO SAMPLES COLLECTED
- SOIL BORING LOCATION - HAND AUGERED (UNABLE TO EXCAVATE TEST PIT)
- EMI SURVEY LINES
- RAILROAD EASEMENT
- DEBRIS FIELDS
- HISTORICAL ACCESS ROAD
- RAILROAD
- OU2 BOUNDARY
- BURIED WASTE
- PHASE 1A TEST TRENCHES (SHIELD)
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOUTHERN BANK AREA
- SOLID WASTE TRANSFER STATION (NOW OR FORMERLY OWNED BY NUNES DISPOSAL, INC.)
- WATER
- DIRECTION OF SURFACE WATER FLOW

0 500 1,000 Feet

GRAPHIC SCALE

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

FILL DELINEATION

ARCADIS

FIGURE
2-1a

CITY: (CLE) DIV/GROUP:(ENV/GIS) DB:(LGREENE) LD:() PIC:() PM:() TM:(J.ROBERTS)
PROJECT: PETERSON PURITAN PATH: G:\env\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_Updates\2xb_FillDelineation.mxd

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PROJECT: PETERSON PURITAN PATH: G:\env\ro\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_Updates\SoilSampPhase1aandt1b-topobasemap_update.mxd

WETLAND A
WETLAND B
WETLAND C
WETLAND D
POND A
POND B
POND C
POND D
POND E
POND F
POND I
POND N
POND P
BLACKSTONE RIVER
BLACKSTONE CANAL
(BACKWATER)
PRATT DAM
SO-W07x-DF
SO-W09-DF
SO-W08-DF
SO-W07-DF
SO-047-DF
SO-049-DF
SO-048-DF
SO-046-DF
SO-075-QW
SO-076-QW
SO-044-QW
SO-005-BG
SO-004-BG
SO-001-BG
SO-003-BG
SO-002-BG
LQW-017
LQW-014
LQW-018
LQW-016
LQW-013
LQW-015
LQW-012
LQW-011
LQW-010
LQW-009
SO-023-LF
LOU-001
SO-048-DF
SO-026-LF
SO-025-LF
SEA-601
SO-027-LF
SO-045-QW
SEA-602B
SO-028-LF
SO-029-LF
SO-032-LF
SO-030-LF
SO-041-LF
SEA-603
SO-042-LF
SO-024-LF
SO-022-LF
SEA-604
LLF-002
SO-020-LF
LLF-003
SO-021-LF
LLF-004
SO-019-LF
SO-W06-DF
SEA-605
SO-W05-DF
LUI-006
SO-043-LF
SO-081-UI
SO-082-UI
SO-014-UI
LUI-005
SO-220-UI
SO-080-UI
SO-064-BR
SO-065-BR
SO-215-UI
SO-216-UI
SO-066-BR
SO-067-BR
SO-060-WT
SO-059-WT
SO-063-WT
SO-062-WT
SO-061-WT
SO-018-LF
SO-218-UI
SO-217-UI
SO-084-UI
SO-013-UI
SO-012-UI
SO-085-UI
SO-219-UI
SO-083-UI
SO-015-UI
SO-078-UI
SO-079-UI
SO-016-UI
SO-222-UI
SO-223F-UI
SO-006-UI
SO-228-UI
SO-007-UI
SO-205-UI
SO-088-UI
SO-068-BR
SO-069-BR
SO-214-UI
SO-070-BR
SO-213-UI
SO-071-BR
SO-054-NP
SO-058-WT
SO-053-NP
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SO-011-UI
SO-050-NP
SO-009-NP
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LNP-008
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SEA-606
SO-105-NP
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SO-106-NP
SO-108-NP
SO-207A-UI
SO-207B-UI
SO-208B-UI
SO-077-UI
SO-227B-UI
SO-226A-UI
SO-224A-UI
SO-225A-UI
SO-203-UI
SO-209-UI
UI-TT-01,02
UI-TT-03
SEA-607
SO-204-UI
UI-TT-06
SEA-608
SO-201-UI
UI-TT-10
SO-212-UI
SO-210B-UI
SO-087-UI
SO-078-UI
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SO-500-NP

0 400 800
Feet
GRAPHIC SCALE

LEGEND:

- SO-029-LF ● PHASE 1A SURFACE SOIL SAMPLE LOCATION
- SEA-602B ● PHASE 1A SUBSURFACE SOIL SAMPLE LOCATION
- SO-033-NP ● PHASE 1A SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- LQW-009 ■ PHASE 1B SURFACE SOIL SAMPLE LOCATION
- SO-105-NP ■ PHASE 1B SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- SO-101-NP ■ PHASE 1B SUBSURFACE SOIL SAMPLE LOCATION
- SO-209-UI ▲ SUPPLEMENTAL INVESTIGATION SURFACE SOIL SAMPLE LOCATION
- SO-227B-UI ▲ SUPPLEMENTAL INVESTIGATION SUBSURFACE SOIL SAMPLE LOCATION
- SO-200-UI ▲ SUPPLEMENTAL INVESTIGATION SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION

- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)
- RAILROAD
- OU2 BOUNDARY
- HISTORICAL ACCESS ROAD
- WATER

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. LOCATIONS WITH MULTIPLE LABELS (E.G., SO-023-LF AND LOU-001) REPRESENT STATIONS WHERE SAMPLING RETURNED TO THE SAME LOCATION IN 2005 DURING THE PHASE IB INVESTIGATION AND COLLECTED AN ADDITIONAL SURFACE SOIL SAMPLE TO BE ANALYZED FOR DIOXIN/FURANS.
3. SUBSURFACE SOIL LOCATIONS CAN HAVE MULTIPLE DEPTH INTERVALS COLLECTED. SAMPLE IDs FOR SOIL SAMPLES COLLECTED AT DEPTH DIFFER FROM THEIR SAMPLE STATION ID.
4. NFO - NOW OR FORMERLY OWNED BY

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SOIL SAMPLE LOCATIONS

ARCADIS

FIGURE
2-2

CITY: (CLE) DIV/GROUP:(ENV/GIS) DB:(LGREENE) LD:() PIC:() PM:() TM:(J.ROBERTS)
PROJECT: PETERSON PURITAN PATH: G:\enviro\Common\GIS\Peterson_PuritanCumberland_RI\RemedialInvestigationReport\mxd\201201_Updates\2-x_testtrenches.mxd

LF-TP-04 LF-TP-03 LF-TP-02 LF-TP-01 LF-TT-11 LF-TT-10 LF-TT-09 LF-TT-08 LF-TT-01 LF-TT-02 LF-TT-03B LF-TT-03A LF-TT-04 LF-TT-05 LF-TT-06 LF-TT-07

GW-LE06-LF GW-LE05-LF GW-LE03-LF GW-LE04-LF GW-LE02-LF GW-LE01-LF

SO-W03-UI SO-W04-UI SO-W02-UI SO-W01-UI

UI-TT-01 UI-TT-02 UI-TT-03 UI-TT-04 UI-TT-05 UI-TT-06 UI-TT-07 UI-TT-08 UI-TT-09 UI-TT-10 UI-TT-11 UI-TT-12 UI-TT-13 UI-TT-14 UI-TT-15 UI-TT-16 UI-TT-17 UI-TT-17A UI-TT-18 UI-TT-19 UI-TT-20 UI-TT-21 UI-TT-22 UI-TT-23 UI-TT-24 UI-TT-25 UI-TT-26 UI-TT-27 UI-TT-28 UI-TT-29 UI-TT-30 UI-TT-31 UI-TT-32

TP-01 TP-02 TP-03 TP-04 TP-05 TP-06 TP-07 TP-08 TP-09 TP-10 TP-11 TP-12 TP-13 TP-14 TP-15 TP-16 TP-17 TP-18 TP-19 TP-20 TP-21 TP-22 TP-23

SO-104-NP SO-105-NP

LEGEND:

- PHASE 1A (TEST TRENCH ONLY) SOIL SAMPLE LOCATION (SHIELD)
- PHASE 1A COMPOSITE (TEST TRENCH ONLY) SOIL SAMPLE LOCATION (SHIELD)
- PHASE 1A GRAB WATER SAMPLE LOCATION (SHIELD)
- 2007 NUNES AREA TEST PIT LOCATION - SAMPLE(S) COLLECTED
- 2007 NUNES AREA TEST PIT LOCATION - NO SAMPLES COLLECTED
- 2007 NUNES AREA SOIL BORING LOCATION - HAND AUGERED (UNABLE TO EXCAVATE TEST PIT)
- PHASE 1A TEST TRENCHES (SHIELD)
- AREA OF EXCAVATION COMPLETED BY RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM)
- PHASE 1A PROJECTED BOUNDARY OF BURIED SOLID WASTE IN NUNES PARCEL
- REVISED PHASE 1B PROJECTED BOUNDARY OF BURIED SOLID WASTE IN NUNES PARCEL
- LIMITES OF BURIED WASTE

NOTE:

1. SAMPLE SO-W03-UI IS A COMPOSITE SAMPLE TAKEN FROM TEST TRENCHES UI-TT-01 AND UI-TT-02
2. GRAB WATER SAMPLES WERE COLLECTED FROM OPEN TEST TRENCHES
3. PHASE 1A TRENCH LOCATIONS WERE EXCERPTED FROM SHIELD PLATE 3, FEBRUARY 2006.

0 400 800 Feet

GRAPHIC SCALE

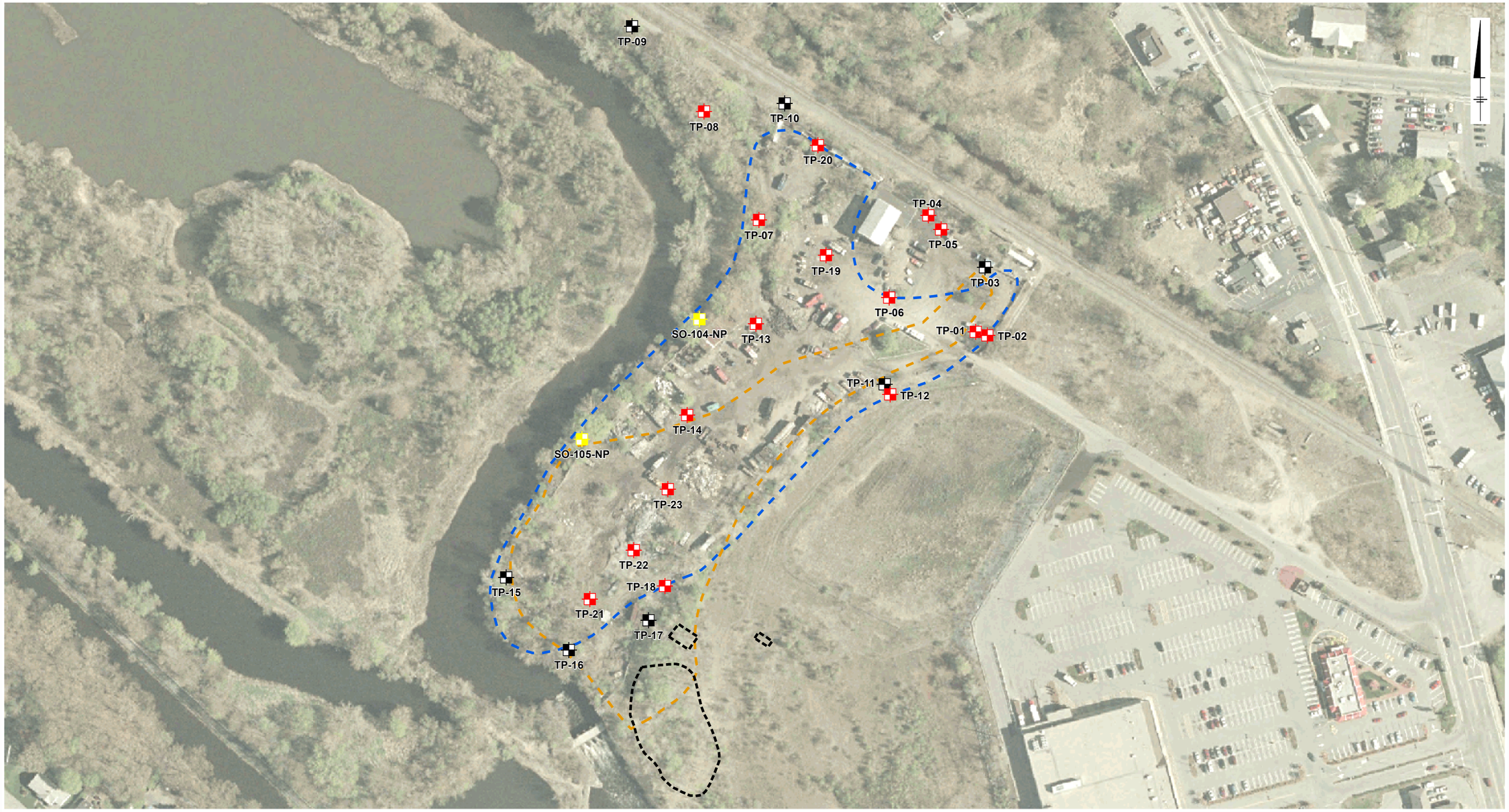
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

REMEDIAL INVESTIGATION REPORT

TEST TRENCH AND ASSOCIATED SOIL AND GRAB WATER SAMPLE LOCATIONS

ARCADIS

FIGURE 2-2a



LEGEND:

- TEST PIT LOCATION - SAMPLE(S) COLLECTED
- TEST PIT LOCATION - NO SAMPLES COLLECTED
- SOIL BORING LOCATION - HAND AUGERED (UNABLE TO EXCAVATE TEST PIT)
- PHASE 1A PROJECTED BOUNDARY OF BURIED SOLID WASTE
- REVISED PHASE 1B PROJECTED BOUNDARY OF BURIED SOLID WASTE
- AREA OF EXCAVATION PERFORMED BY RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM)

NOTE:

1. 2002 AERIAL PHOTO OBTAINED FROM RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM: http://www.edc.uri.edu/rigis/

0 150 300 Feet

GRAPHIC SCALE

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

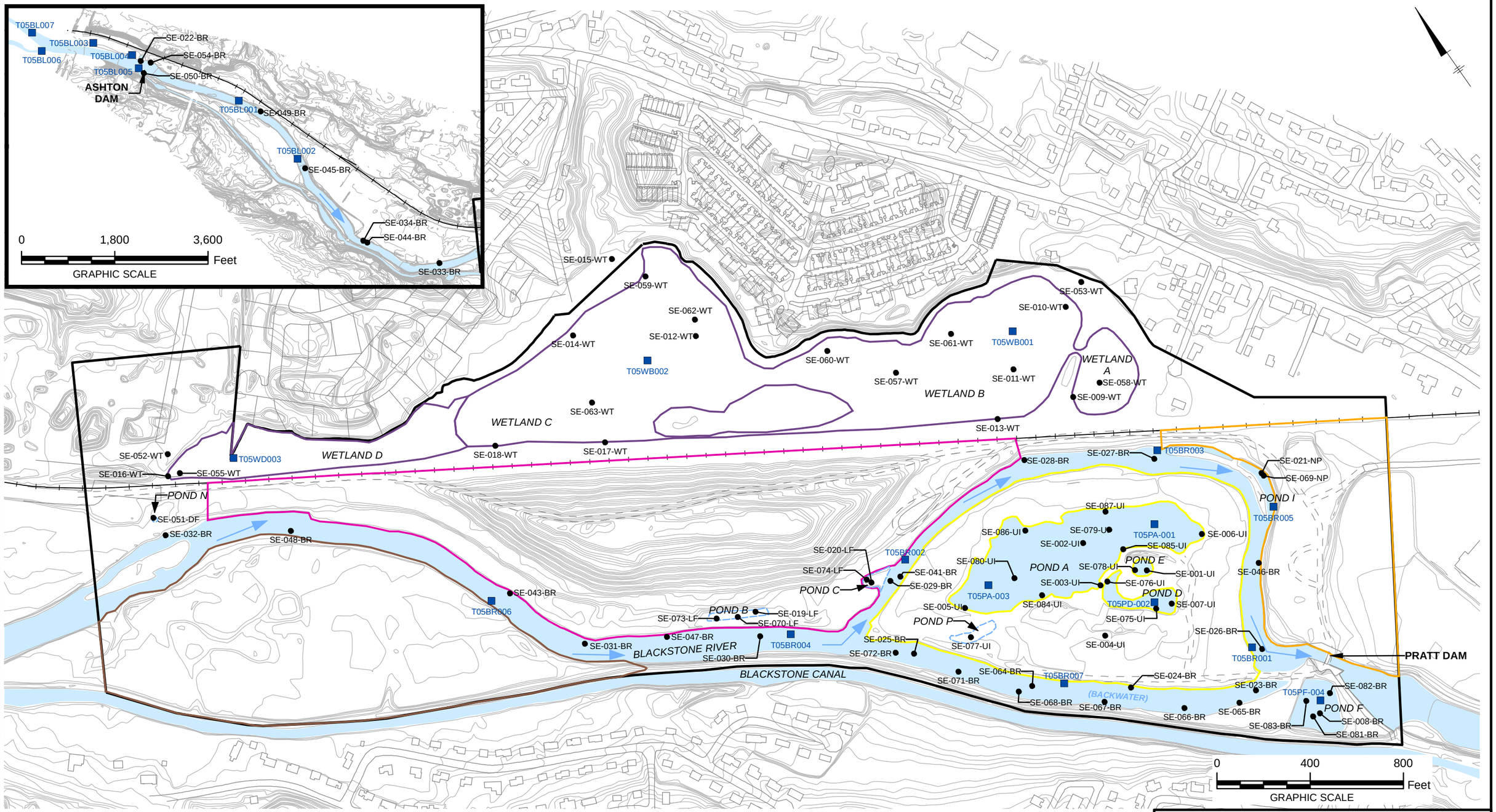
REMEDIAL INVESTIGATION REPORT

NUNES PARCEL SOIL SAMPLING - NOVEMBER 2006

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 2-3

6/14/07 ROCH-85 EAB
PETERSON PURITAN [ROCH-85 EAB]
E:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\LIMITSOFEXCAVATION.MXD



LEGEND:

- SE-001-UI ● PHASE 1A SEDIMENT SAMPLE LOCATION
- T05BR004 ■ PHASE 1B SEDIMENT SAMPLE LOCATION
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

REMEDIAL INVESTIGATION REPORT

SEDIMENT SAMPLE LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 2-4

6/14/07 SYR-85 EAB
Peterson Puritan
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\SedSampPhase1aand1b-topobasemap.mxd

WETLANDS A, B, C

WETLAND D

POND N

PBR-01 PBR-02 PBR-03 PBR-04 PBR-05 PBR-06 PBR-07 PBR-08 PBR-09 PBR-10 PBR-11 PBR-12 PBR-13 PBR-14 PBR-15 PBR-16 PBR-17 PBR-18 PBR-19 PBR-20 PBR-21 PBR-22 PBR-23 PBR-24 PBR-25 PBR-26 PBR-27 PBR-28 PBR-29 PBR-30 PBR-31 PBR-32 PBR-34 PBR-35 PBR-36 PBR-37 PBR-38 PBR-39 PBR-40 PBR-41 PBR-42

J.M. MILLS LANDFILL

QUINNVILLE WELL FIELD

POND B

POND C

POND A

POND E

POND D

POND P

POND I

POND F

UNNAMED ISLAND

SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

BLACKSTONE RIVER

BLACKSTONE CANAL

(BACKWATER)

PRATT DAM

NOTES:

1. NFO - NOW OR FORMERLY OWNED BY.

LEGEND:

- UNNAMED ISLAND
- LANDFILL
- SOLID WASTE TRANSFER STATION
- WATER
- SEDIMENT PROBING TRANSECT
- OTHER
- WELL FIELD
- WETLAND
- OU2 BOUNDARY
- DIRECTION OF SURFACE WATER FLOW

0 400 800 Feet

GRAPHIC SCALE

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

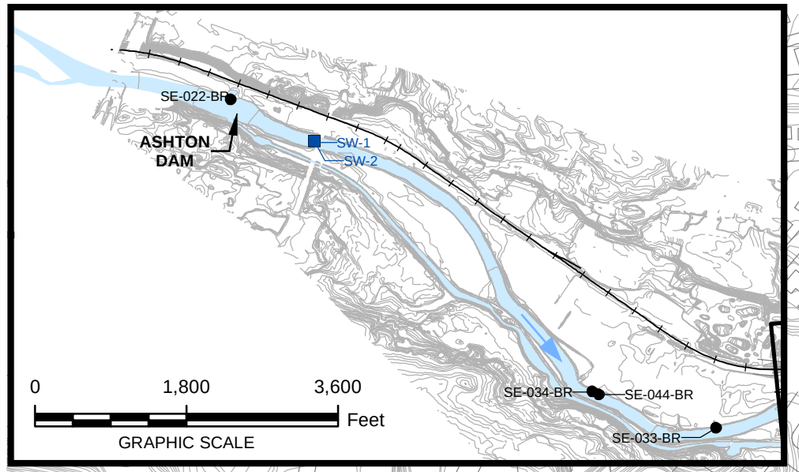
REMEDIAL INVESTIGATION REPORT

SEDIMENT PROBING TRANSECTS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
2-5

6/13/07 SYR-85 EAB
Peterson Puritan
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\probingtransects.mxd



SE-015-WT
SE-059-WT
SE-062-WT
SE-014-WT
SE-012-WT
SE-060-WT
SE-061-WT
SE-053-WT
SE-010-WT
SE-057-WT
SE-011-WT
WETLAND A
SE-058-WT
WETLAND B
SE-009-WT
WETLAND C
SE-013-WT
SE-017-WT
SE-052-WT
WETLAND D
SE-016-WT
POND N
SE-051-DF
SE-032-BR
SE-048-BR
SE-043-BR
SE-031-BR
SE-047-BR
SE-030-BR
POND B
BLACKSTONE RIVER
BLACKSTONE CANAL
SE-074-LF
POND C
SE-020-LF
SE-029-BR
SE-041-BR
SE-072-BR
SE-025-BR
SE-071-BR
SE-064-BR
SE-068-BR
SE-028-BR
SE-027-BR
SE-021-NP
SE-069-NP
POND I
SE-087-UI
SE-086-UI
SE-002-UI
SE-079-UI
SE-006-UI
SE-085-UI
POND E
SE-001-UI
SE-046-BR
POND A
SE-080-UI
SE-078-UI
SE-003-UI
SE-084-UI
POND D
SE-007-UI
SE-005-UI
SE-075-UI
POND P
SE-077-UI
SE-024-BR
(BACKWATER)
SE-067-BR
SE-066-BR
SE-023-BR
SE-065-BR
SE-083-BR
SW-4
SW-3
PRATT DAM
SE-026-BR
SE-082-BR
POND F
SE-008-BR
SE-081-BR
0
400
800
Feet
GRAPHIC SCALE

LEGEND:

- SE-032-BR ● PHASE 1A SURFACE-WATER SAMPLE LOCATION
- SW-4 ■ PHASE 1B SURFACE-WATER SAMPLE LOCATION
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY

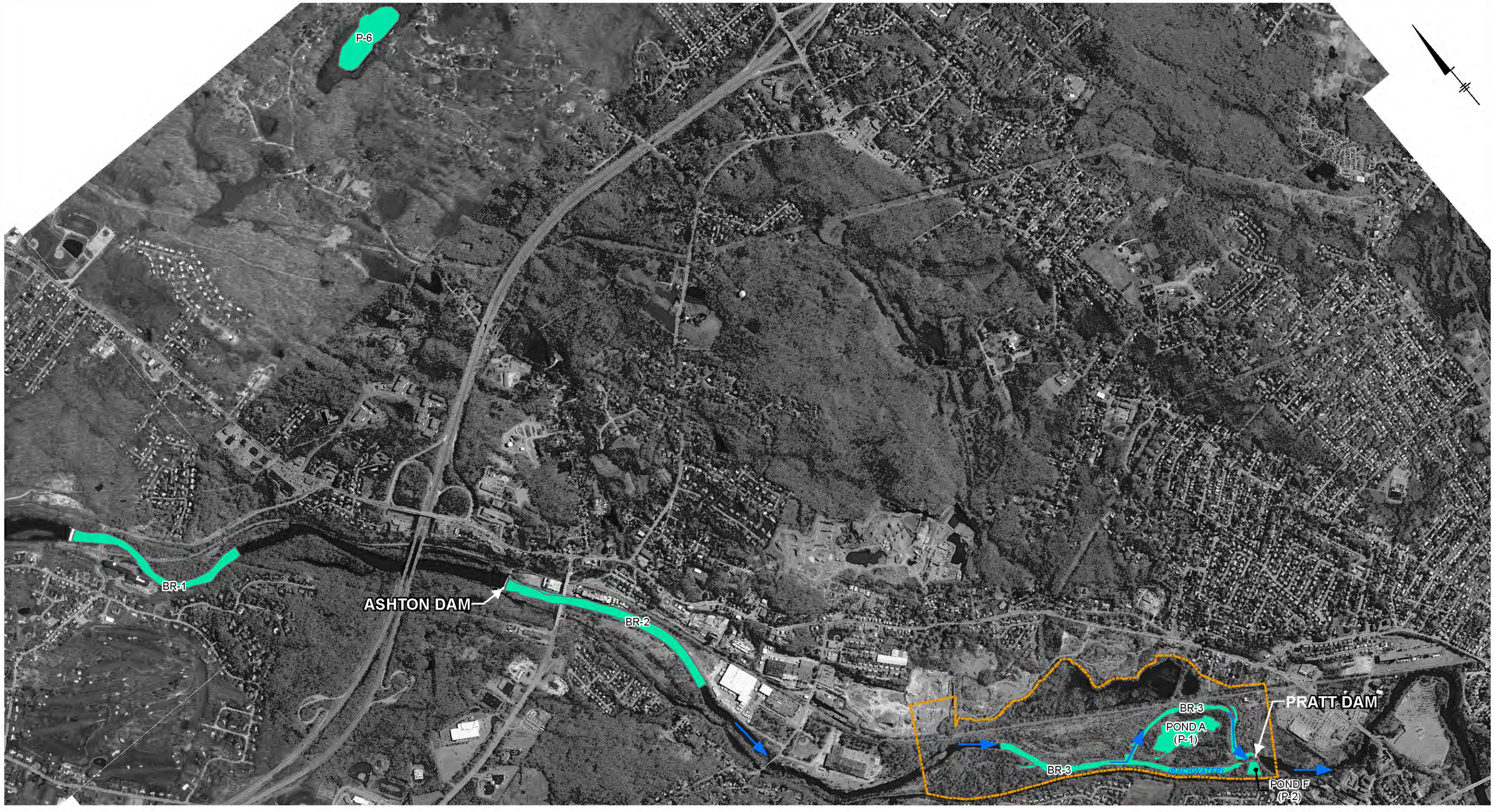
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SURFACE-WATER SAMPLE LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 2-6

6/14/07 SYR-85 EAB
Peterson Puritan
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\SWSampPhase1aand1b.mxd



NOTES:

1. 1997 AERIAL PHOTOGRAPH OBTAINED FROM THE UNIVERSITY OF RHODE ISLAND'S DIGITAL IMAGERY SERVER (HTTP://ORTHO.EDC.URI.EDU/). 2002 AERIAL PHOTO OBTAINED FROM RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM: HTTP://WWW.EDC.URI.EDU/RIGIS/

2. SAMPLE LOCATIONS NAMED USING THE FOLLOWING DESIGNATION:
   <WATER BODY>-<SAMPLE NUMBER>
   EX. BR-1 FISH SAMPLE LOCATION ONE (1) COLLECTION FROM THE BLACKSTONE RIVER (BR)

3. SAMPLE LOCATIONS RECORDED IN THE FIELD USING GPS.

LEGEND:

- FISH COMMUNITY SURVEY AND FISH TISSUE SAMPLE LOCATIONS
- OU2 BOUNDARY
- DIRECTION OF SURFACE WATER FLOW

0 1,500 3,000 Feet
GRAPHIC SCALE

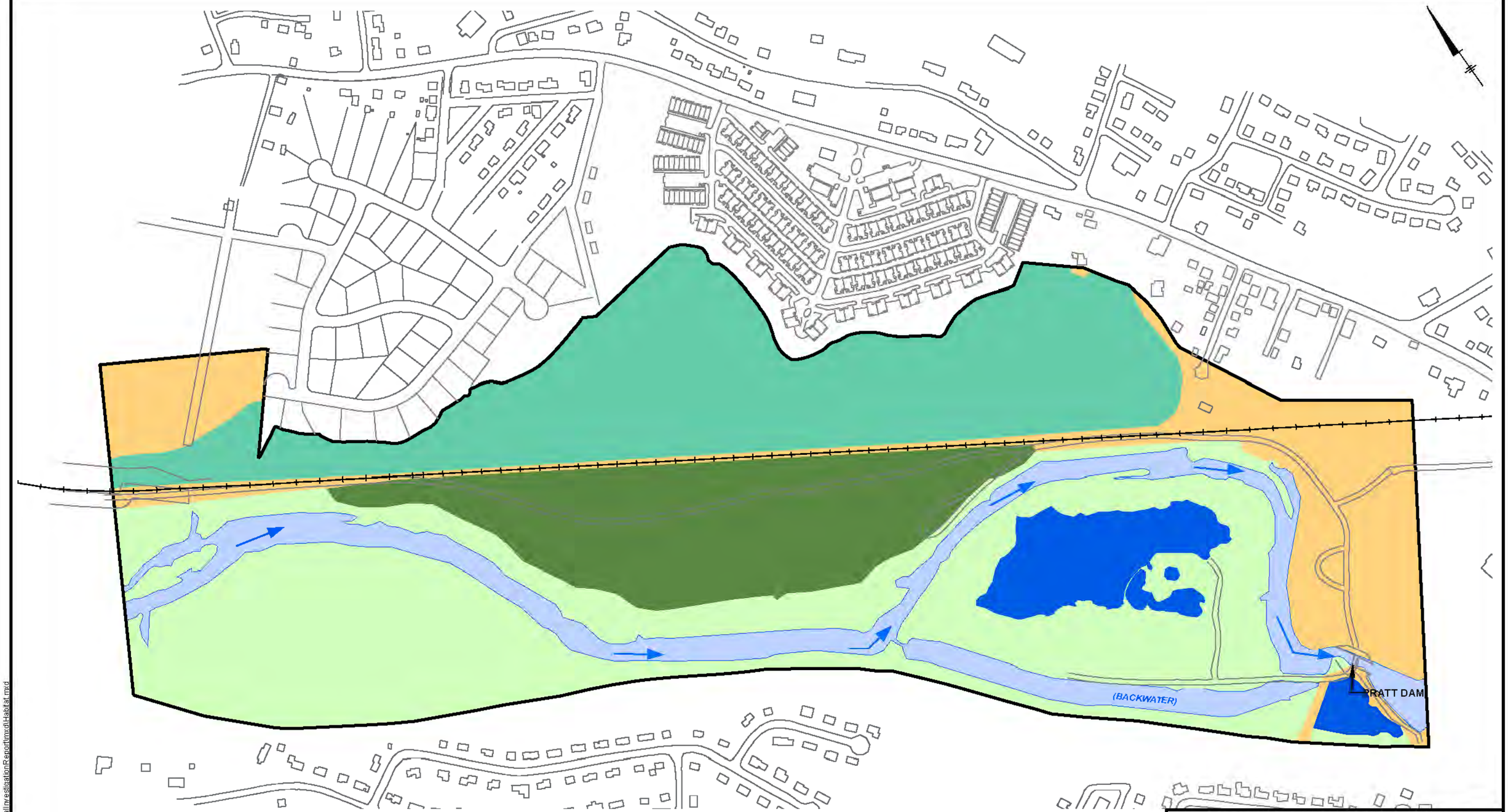
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

FISH COMMUNITY SURVEY AND FISH TISSUE SAMPLE LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
2-7

6/14/07 SYR-85 EAB
Peterson/Puritan
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\FishTissueCommSampLocs.mxd



NOTES:

1. NFO - NOW OR FORMERLY OWNED BY.
2. HABITAT DELINEATION PERFORMED AS PART OF THE HABITAT ASSESSMENT ACTIVITES BETWEEN JULY 11 AND 13, 2005.

LEGEND:

- BLACKSTONE RIVER
- DISTURBED/DEVELOPED AREA
- LANDFILL
- POND
- RIPARIAN
- WETLAND
- OU2 BOUNDARY
- DIRECTION OF SURFACE WATER FLOW

0 400 800 Feet

GRAPHIC SCALE

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

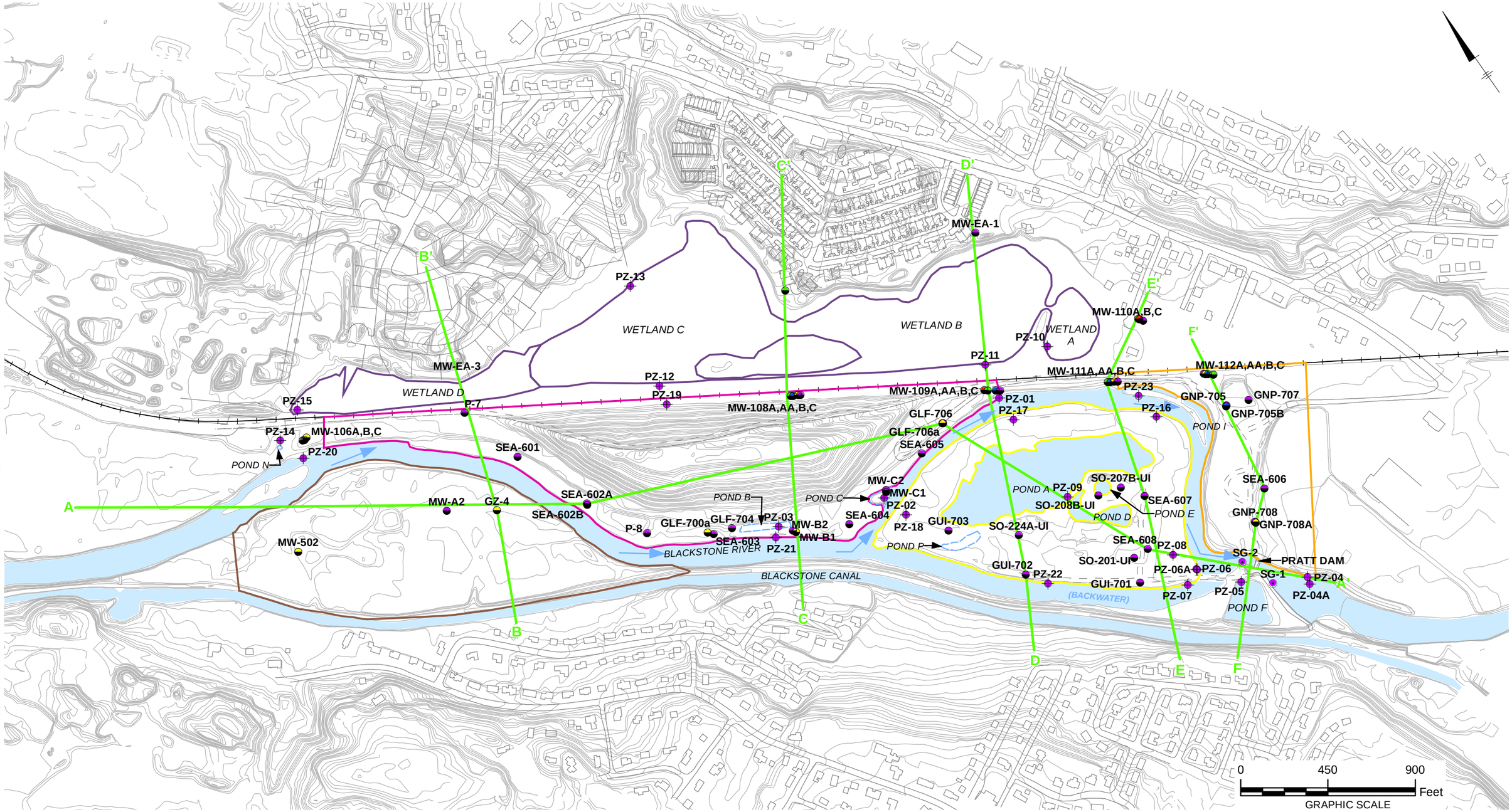
REMEDIAL INVESTIGATION REPORT

HABITAT CHARACTERIZATION AREAS

ARCADIS BBL

FIGURE 2-8

6/13/07 SYR-85 EAB
Peterson Puritan
G:\Peterson_Puritan\Cumberland_RI\Remedial\Investigation\Report\mxd\Habitat.mxd



LEGEND:

- MONITORING WELL
- PIEZOMETER/STAFF GAUGE
- STAFF GAUGE

FORMATION

- SHALLOW UNCONSOLIDATED UNIT
- INTERMEDIATE UNCONSOLIDATED UNIT
- TILL
- DEEPER UNCONSOLIDATED UNIT
- BEDROCK

- GEOLOGIC CROSS SECTION
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- WATER

DIRECTION OF SURFACE WATER FLOW

- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND

SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

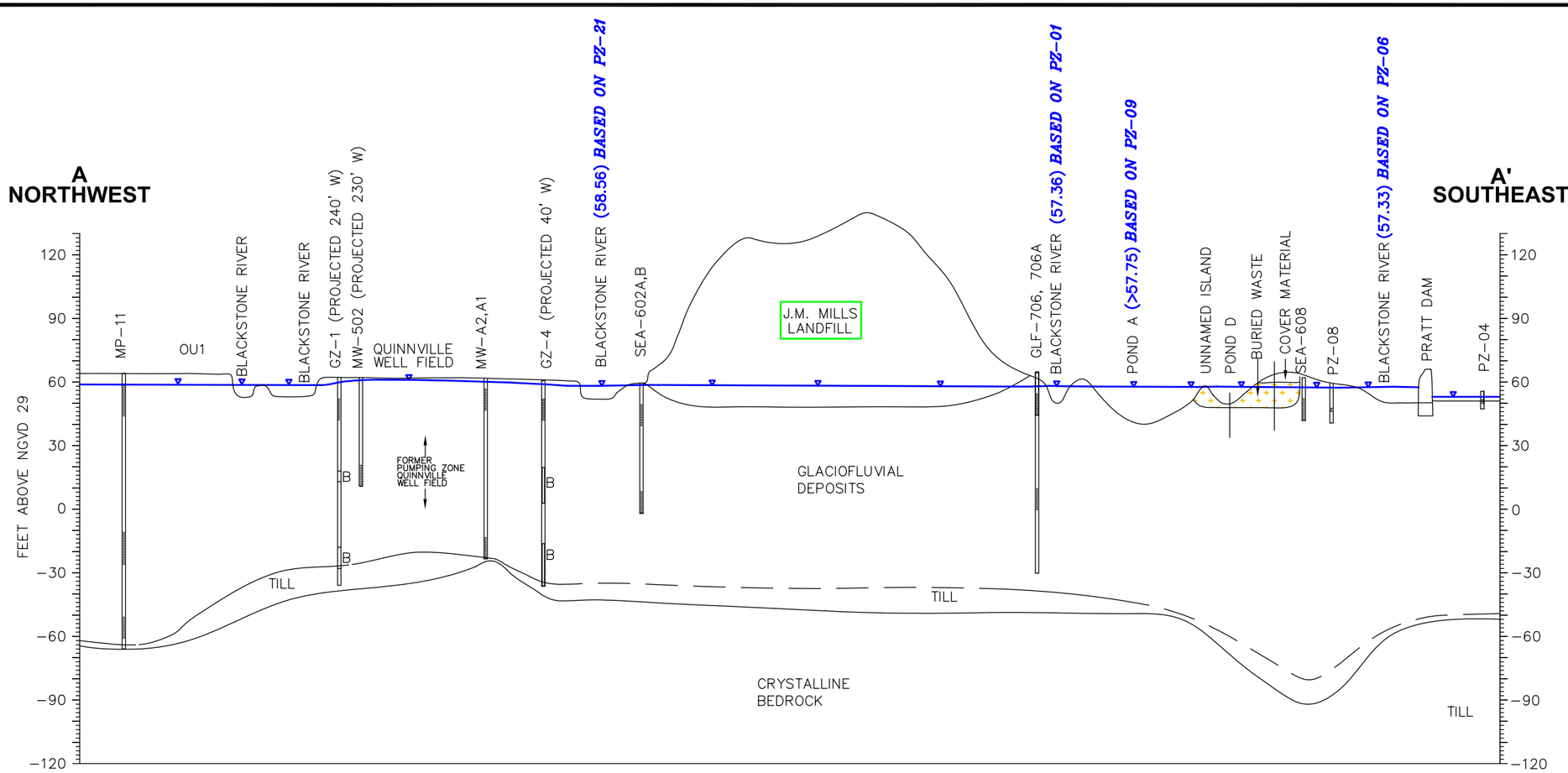
REMEDIAL INVESTIGATION REPORT

GEOLOGIC CROSS SECTION LOCATOR MAP

ARCADIS

FIGURE
3-1

CITY:(CLE) DIV/GROUP:(ENV/GIS) DB:(LGREENE) LD:() PIC:() PM:() TM:(JROBERTS)
PROJECT: PETERSON PURITAN PATH:G:\enviro\Common\GIS\Peterson_Puritan\Cumberland_RI\Remedialinvestigation\Report\mxd\201201_Updates\Geologic Cross Section Lines.mxd



LEGEND

APPROXIMATE WATER TABLE

WASTE/REFUSE

MONITORING WELL (SINGLE) OR MULTIPLE WELL CLUSTER

RISER

SCREENED INTERVAL

B — BARCAD INTERVAL (GZA WELLS ONLY)

NOTES:

1. GEOLOGIC CONTACTS DASHED WHERE INFERRED.
2. CROSS SECTION MODIFIED FROM THE CROSS SECTION PREPARED BY SHIELD ENVIRONMENTAL ASSOCIATES INC., INITIAL SITE CHARACTERIZATION REPORT FEBRUARY 2004.

0 60' 120'
VERTICAL SCALE

0 600' 1200'
HORIZONTAL SCALE

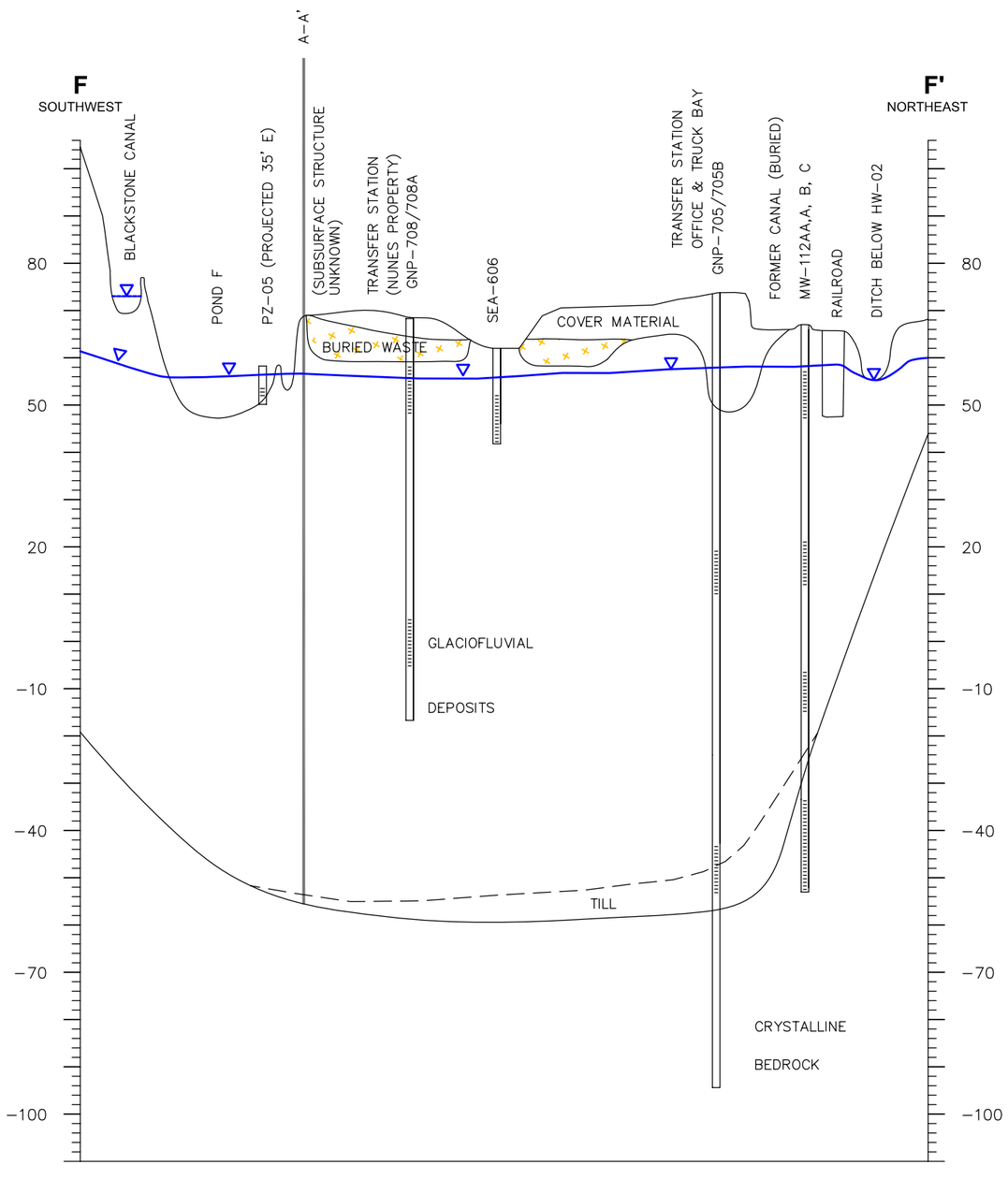
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

CROSS SECTION A-A'

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
3-2

[CITY-DIV-LEAD] CITY-DIV-ORIGINATOR CITY-DIV-2ND_TO_LAST CITY-DIV-LAST_MODIFIER LAYER: ON=*; OFF=*REF*
J:\2007\Syracuse Files\37902\37902V01.dwg SAVED:6/13/2007 3:20 PM LAYOUT:Layout1 PAGESETUP:---- PENTABLE:PLTFULL.CTB PRINTED:6/13/2007 3:20 PM BY:AFOX
PROJECTNAME:----
XREFS: IMAGES:

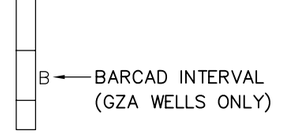


LEGEND

APPROXIMATE WATER TABLE NOVEMBER 8, 2005

WASTE/REFUSE

MONITORING WELL (SINGLE) OR MULTIPLE WELL CLUSTER



NOTES:

1. GEOLOGIC CONTACTS DASHED WHERE INFERRED.
2. CROSS SECTION MODIFIED FROM THE CROSS SECTION PREPARED BY SHIELD ENVIRONMENTAL ASSOCIATES INC., INITIAL SITE CHARACTERIZATION REPORT FEBRUARY 2004.

0 30' 60'
VERTICAL SCALE

0 300' 600'
HORIZONTAL SCALE

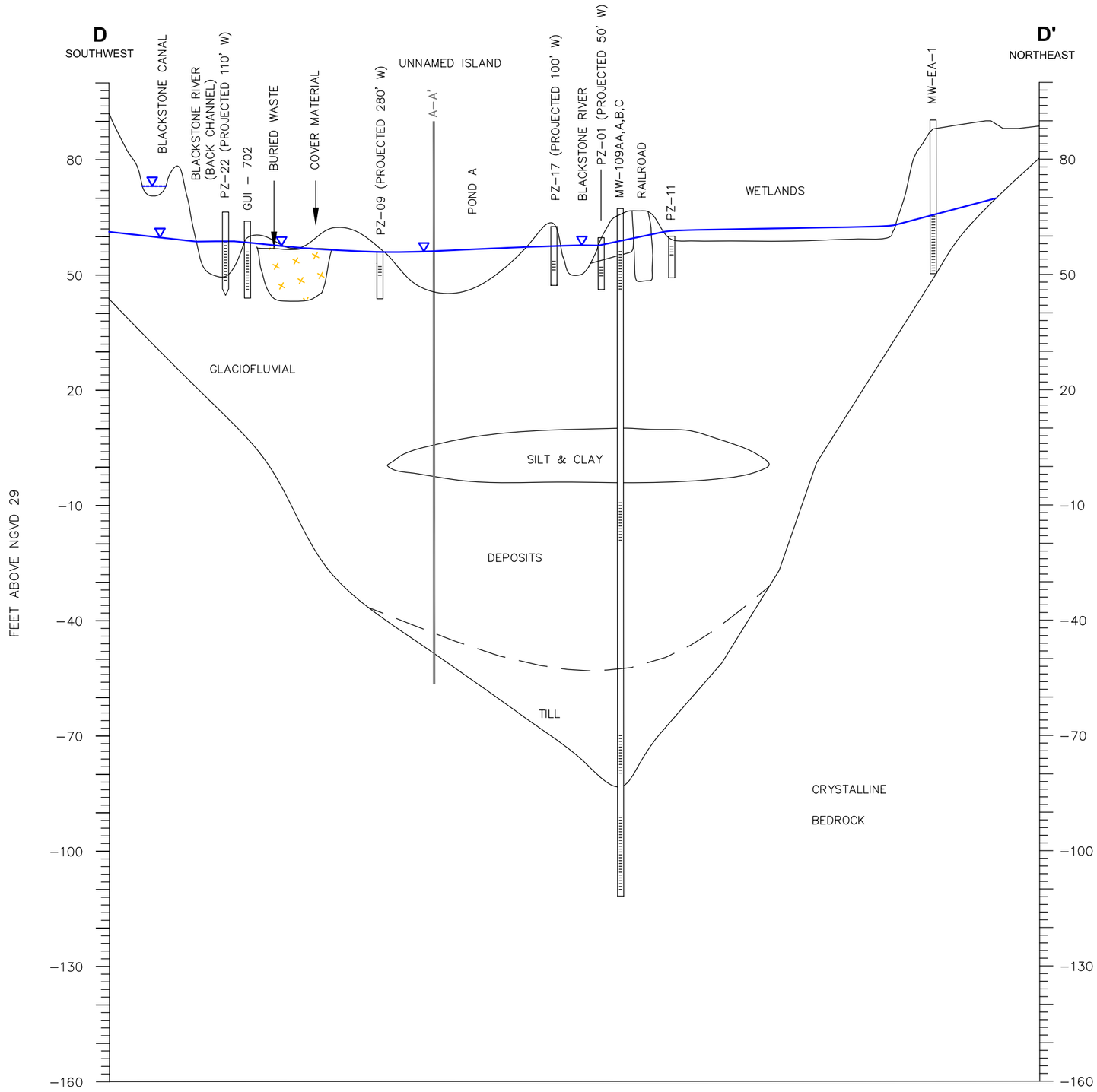
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

CROSS SECTION F - F'

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
3-3

[CITY-DIV-LEAD] SYR-85-AMS LAYER: ON=* OFF=*REF*
J:\2007\Syracuse Files\37902\37902V03.dwg SAVED:6/13/2007 2:42 PM LAYOUT:Layout1 PAGESETUP:---- PENTABLE:PLTFULL.CTB PRINTED:6/13/2007 2:42 PM BY:AFOX
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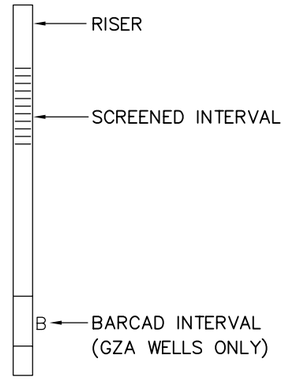


LEGEND

APPROXIMATE WATER TABLE NOVEMBER 8, 2005

WASTE/REFUSE

MONITORING WELL (SINGLE) OR MULTIPLE WELL CLUSTER



NOTES:

1. GEOLOGIC CONTACTS DASHED WHERE INFERRED.
2. CROSS SECTION MODIFIED FROM THE CROSS SECTION PREPARED BY SHIELD ENVIRONMENTAL ASSOCIATES INC., INITIAL SITE CHARACTERIZATION REPORT FEBRUARY 2004.

0 30' 60'
VERTICAL SCALE

0 300' 600'
HORIZONTAL SCALE

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

CROSS SECTION D -D'

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
3-4

[CITY-DIV-LEAD] SYR-85-AMS LAYER: ON=*; OFF=*REF*
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PROJECTNAME:----
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PROJECT: PETERSON PURITAN PATH: G:\envro\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_Updates\3-5_Bedrock Elevation Contours.mxd Date Saved: 7/25/2012 4:48:15 PM

MW-EA-1
MW-EA-2 72
MW-EA-3 62
MW-EA-4 63
PZ-13
PZ-15
PZ-14 27
PZ-20
MW-106A,B,C
MW-501A,B,C -34
P-6
GZ-1
MW-502
L-2
MW-A1
MW-A2 -22
GZ-4 -35
P-7 29
PZ-12
PZ-19
MW-108B
MW-108AA
MW-108C -43
MW-108A
SEA-601
SEA-602A
SEA-602B
GLF-704
SEA-603
GLF-700a
P-8
PZ-03
PZ-21
MW-B1
MW-B2
MW-C2 -7
MW-C1
PZ-02
SEA-604
PZ-18
GUI-703
GLF-706a
GLF-706
SEA-605
MW-109A
PZ-11
P-9
PZ-10
MW-109B
MW-109C -85
MW-109AA
PZ-01
PZ-17
MW-111C -70
MW-111B
PZ-16
MW-111A
MW-111AA
PZ-23
MW-112A
MW-112AA
MW-112C -25
MW-112B
GNP-705
GNP-705B -53.6
GNP-707
MW-110C -9
MW-110B
MW-110A
GW-207B-UI
SEA-606
SEA-607
GW-208B-UI
GNP-708
GNP-708A
GW-224A-UI
SEA-608
PZ-08
GUI-702
GW-201-UI
GUI-701
PZ-06A
PZ-22
PZ-07
PZ-06
PZ-09
SG-2
PZ-05
PZ-04
PZ-04A
SG-1
PRATT DAM
MW-107 A,B,C 35

WETLAND C
WETLAND D
WETLAND B
WETLAND A
POND N
POND C
POND B
POND P
POND A
POND E
POND D
POND F
POND I
BLACKSTONE RIVER
BLACKSTONE CANAL
(BACKWATER)

0 400 800 Feet
GRAPHIC SCALE

LEGEND:

Type
- MONITORING WELL
- PIEZOMETER/STAFF GAUGE
- STAFF GAUGE

FORMATION
- SHALLOW UNCONSOLIDATED UNIT
- INTERMEDIATE UNCONSOLIDATED UNIT
- TILL
- DEEPER UNCONSOLIDATED UNIT
- BEDROCK

- BEDROCK ELEVATION CONTOUR
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- WATER
- HISTORICAL POND
- DIRECTION OF SURFACE WATER FLOW

- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)
- 25 BEDROCK ELEVATION - FEET ABOVE MEAN SEA LEVEL
- -30 BEDROCK ELEVATION - FEET BELOW MEAN SEA LEVEL

NOTES:

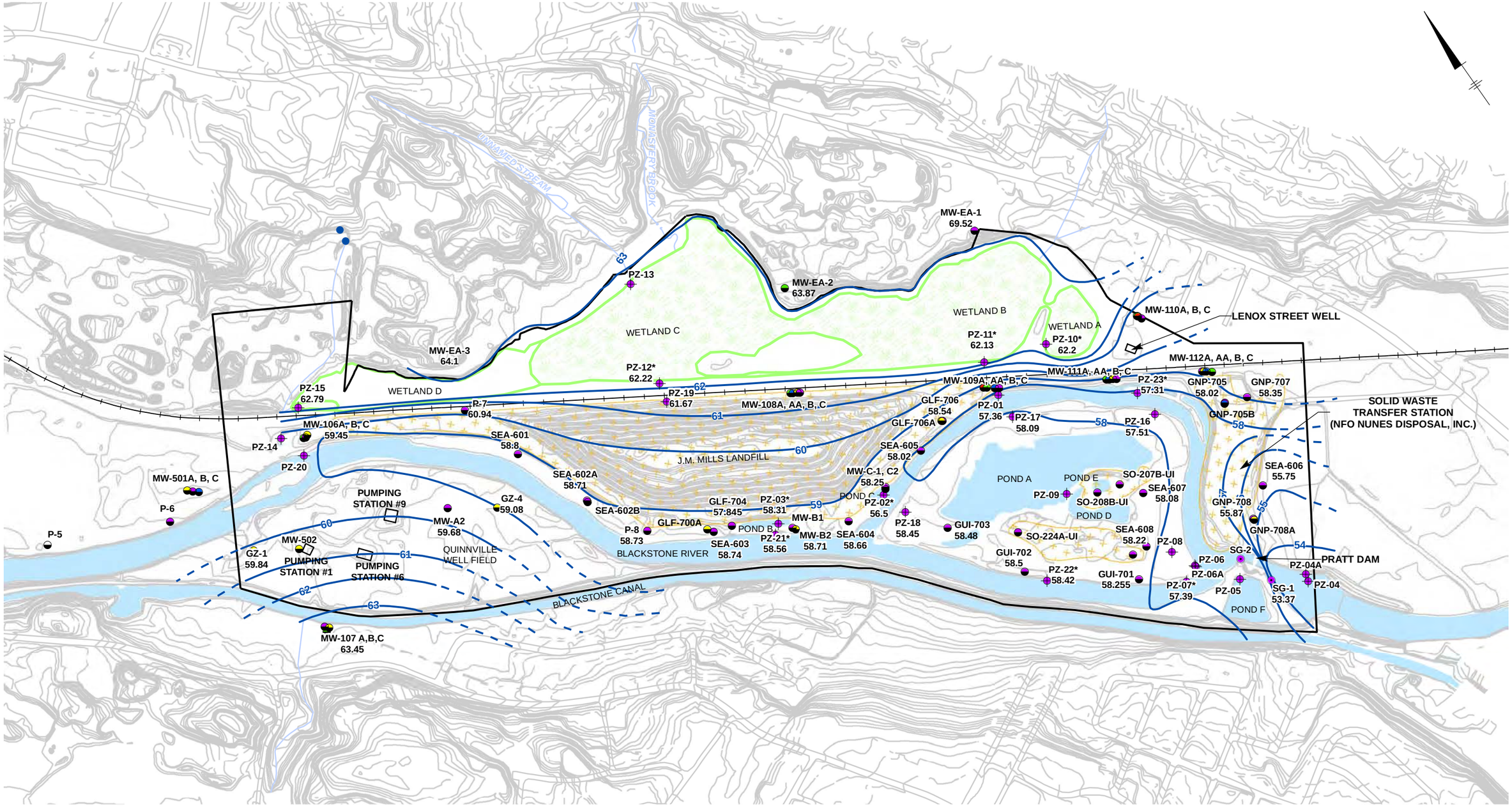
1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

BEDROCK ELEVATION CONTOUR MAP

ARCADIS

FIGURE
3-5



NOTES:

1. NFO - NOW OR FORMERLY OWNED BY
2. GROUNDWATER ELEVATIONS OBTAINED ON 11/28/05.
3. * WATER ELEVATION REPRESENTS THE SURFACE WATER ELEVATION. THE MEASURMENTS WERE TAKEN FROM OUTSIDE THE PIEZOMETER CASING.
4. PZ-2 WAS NOT USED IN CONTOURING DUE TO AN ANOMALOUS READING.
5. STANDING WATER AT PZ-15 IS INTERPRETED TO BE PERCHED (67.17'). VALUE SHOWN IS LEVEL INSIDE PIEZOMETER.

LEGEND:

- MONITORING WELL
- PIEZOMETER/STAFF GAUGE
- STAFF GAUGE

FORMATION

- SHALLOW UNCONSOLIDATED UNIT
- INTERMEDIATE UNCONSOLIDATED UNIT
- TILL
- DEEPER UNCONSOLIDATED UNIT
- BEDROCK

MW-107 A,B,C 63.45 GROUNDWATER ELEVATION - FEET ABOVE MEAN SEA LEVEL

- GROUNDWATER CONTOUR
- INFERRED GROUNDWATER CONTOUR
- OU2 BOUNDARY
- BURIED WASTE
- WETLAND (INTERMITTENTLY WET)
- SURFACE WATER

0 500 1,000 Feet
GRAPHIC SCALE

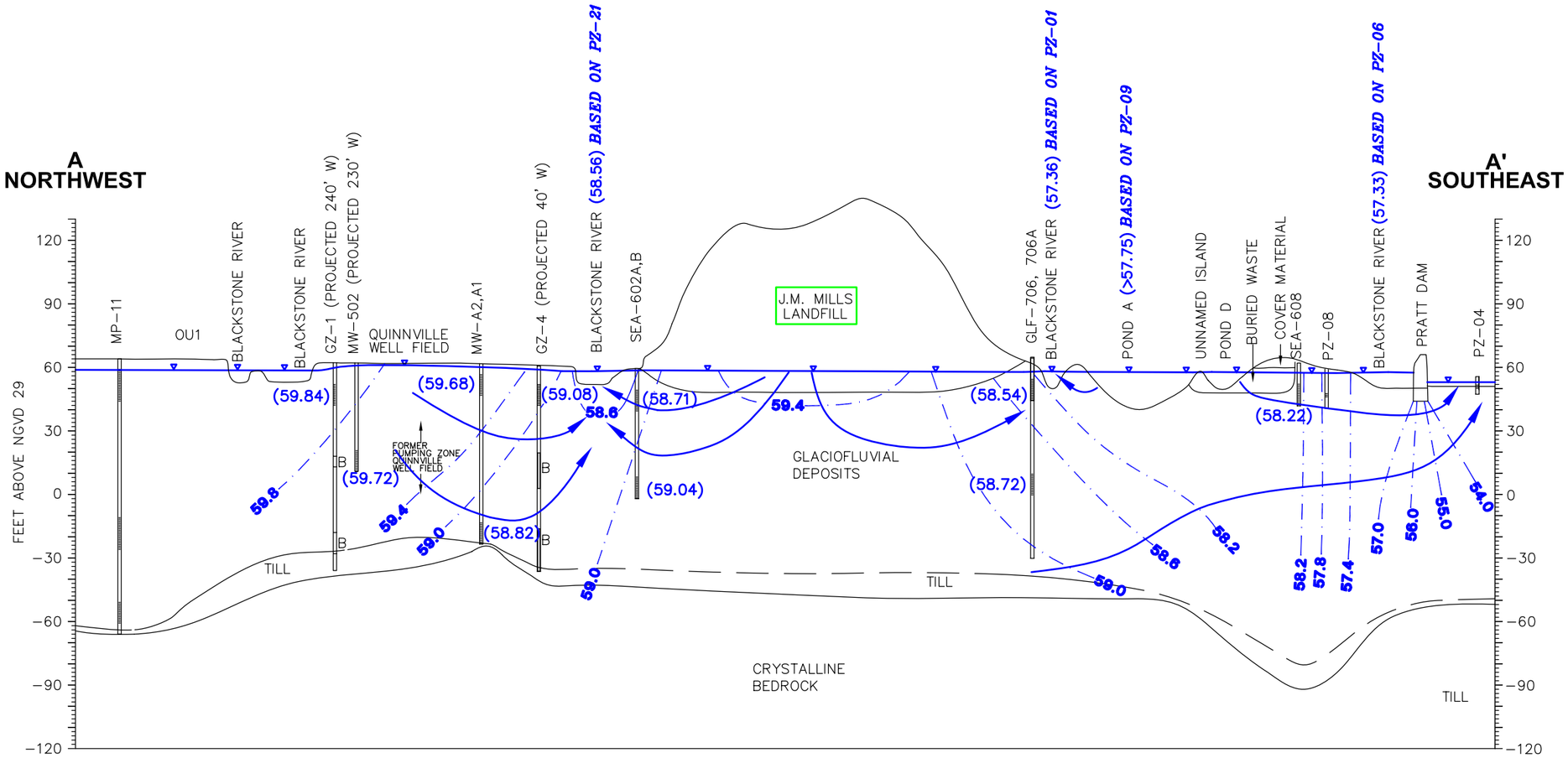
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

GROUNDWATER CONTOUR MAP

ARCADIS

FIGURE
3-6

CITY: (CLE) DIV/GROUP:(ENV/GIS) DB:(LGREENE) LD:() PIC:() PM:() TM:(J.ROBERTS)
PROJECT: PETERSON PURITAN PATH: G:\envirol\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_Updates\GWElevations-11-05.mxd



LEGEND

- APPROXIMATE WATER TABLE
- 59.0 GROUNDWATER ELEVATION CONTOUR LINE
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- (59.72) GROUNDWATER/SURFACE WATER ELEVATION
- MONITORING WELL (SINGLE) OR MULTIPLE WELL CLUSTER
  - RISER
  - SCREENED INTERVAL
  - B — BARCAD INTERVAL (GZA WELLS ONLY)

NOTES:

1. GEOLOGIC CONTACTS DASHED WHERE INFERRED.
2. CROSS SECTION MODIFIED FROM THE CROSS SECTION PREPARED BY SHIELD ENVIRONMENTAL ASSOCIATES INC., INITIAL SITE CHARACTERIZATION REPORT FEBRUARY 2004.
3. WATER ELEVATIONS CALCULATED FROM WATER LEVELS COLLECTED ON NOVEMBER 27 & 28, 2005.

0 60' 120'
VERTICAL SCALE

0 600' 1200'
HORIZONTAL SCALE

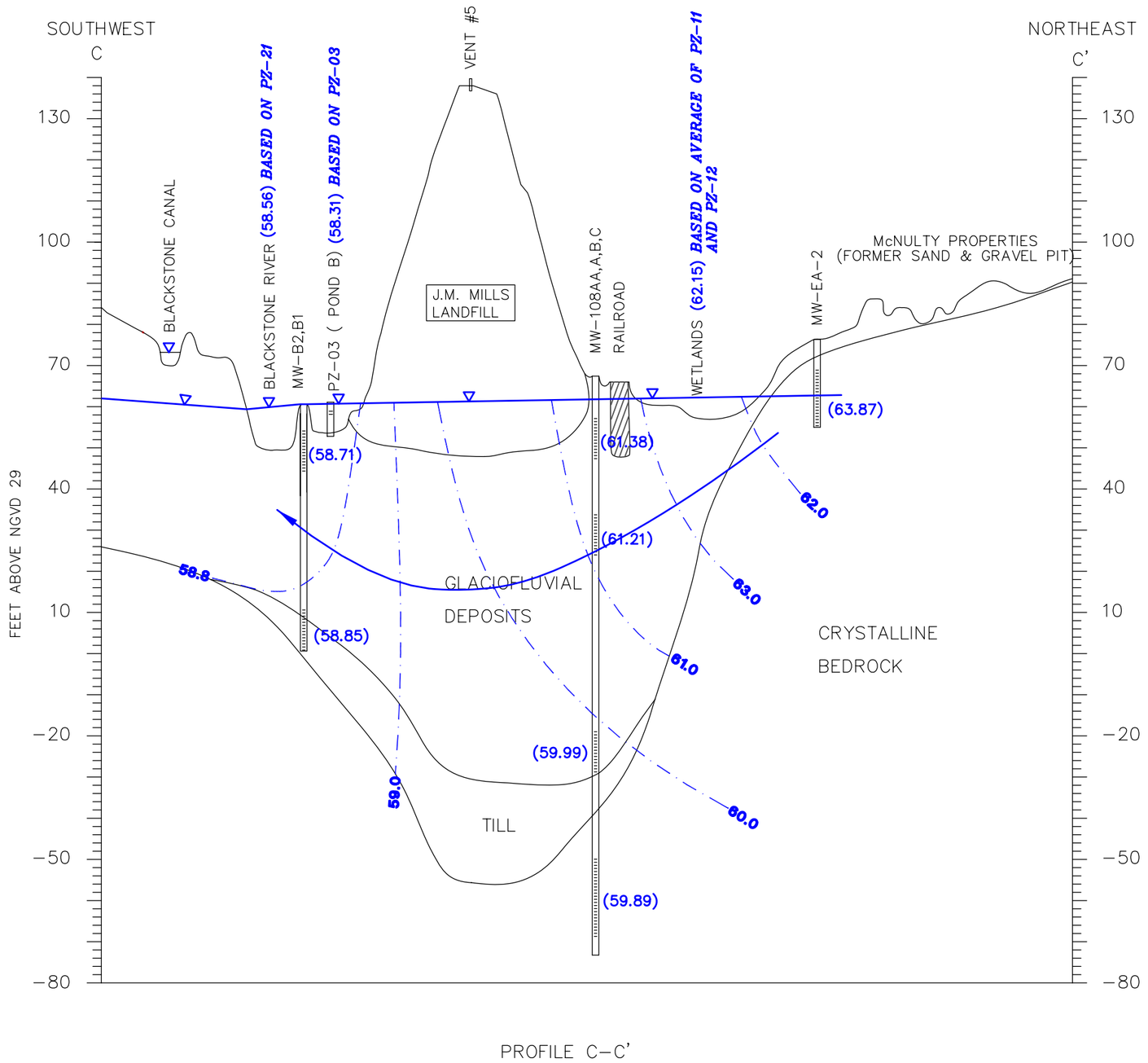
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

FLOW NET - PROFILE A-A'

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
3-7

[CITY-DIV-LEAD] CITY-DIV-ORIGINATOR CITY-DIV-2ND_TO_LAST CITY-DIV-LAST_MODIFIER LAYER: ON=*; OFF=*REF*
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PROJECTNAME:----
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PROFILE C–C'

LEGEND

- APPROXIMATE WATER TABLE
- 59.0 GROUNDWATER ELEVATION CONTOUR LINE
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- (59.72) GROUNDWATER/SURFACE WATER ELEVATION
- MONITORING WELL (SINGLE) OR MULTIPLE WELL CLUSTER
  - RISER
  - SCREENED INTERVAL
  - B BARCAD INTERVAL (GZA WELLS ONLY)

0 30' 60'
VERTICAL SCALE

0 300' 600'
HORIZONTAL SCALE

NOTES:

1. GEOLOGIC CONTACTS DASHED WHERE INFERRED.
2. CROSS SECTION MODIFIED FROM THE CROSS SECTION PREPARED BY SHIELD ENVIRONMENTAL ASSOCIATES INC., INITIAL SITE CHARACTERIZATION REPORT FEBRUARY 2004.
3. WATER ELEVATIONS CALCULATED FROM WATER LEVELS COLLECTED ON NOVEMBER 27 & 28, 2005.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHOSE ISLAND
REMEDIAL INVESTIGATION REPORT

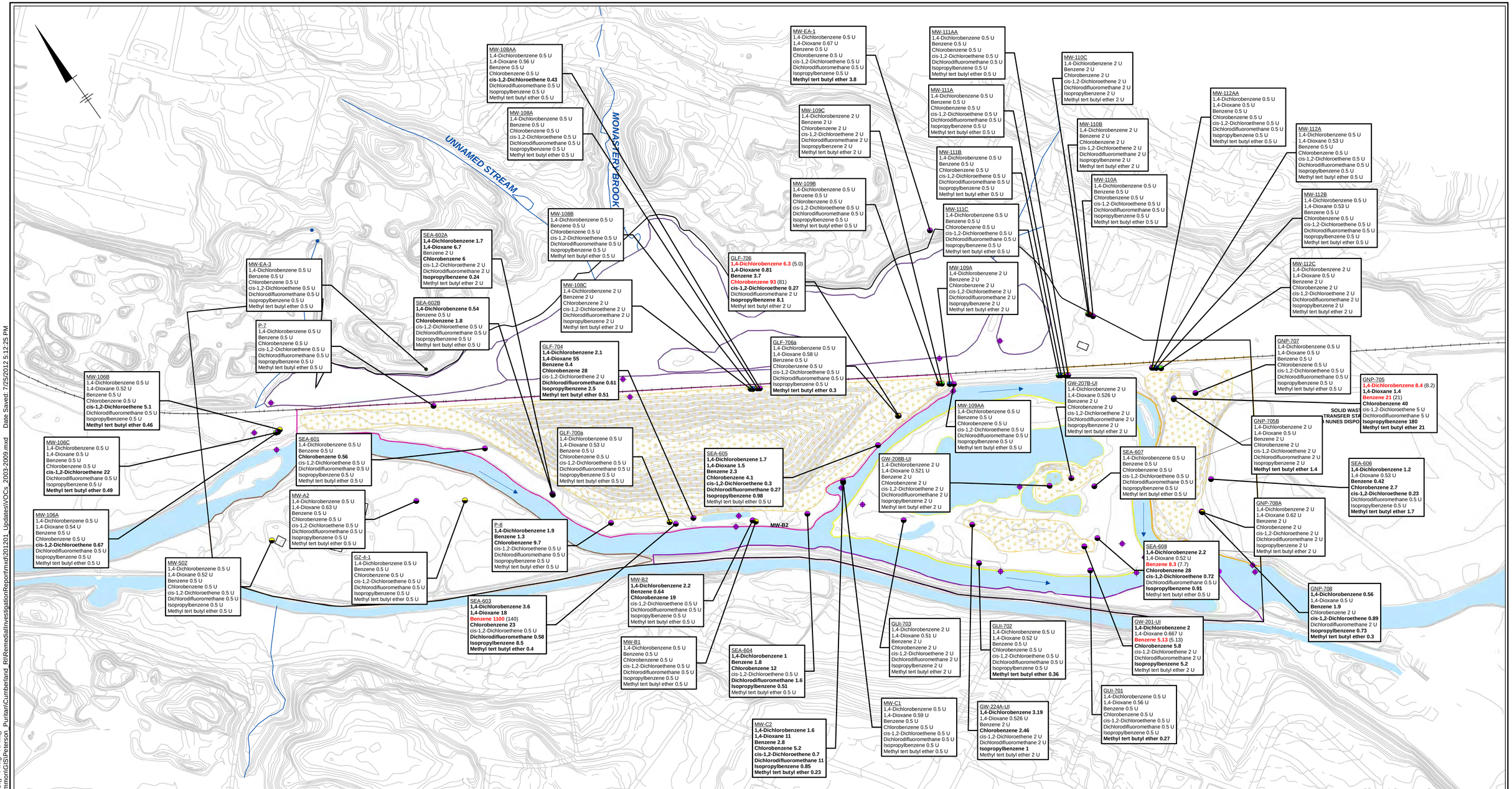
FLOW NET - PROFILE C-C'

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
3-8

BRI-85-ADF LAYER: ON=*; OFF=*REF*
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PROJECT: PETERSON PURITAN PATH: G:\enviro\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_UpdatesVOCs_2003-2009.mxd Date Saved: 7/25/2012 5:12:25 PM



Legend

- MONITORING WELL
- PIEZOMETER/STAFF GAUGE
- STAFF GAUGE

WELL SCREEN FORMATION

- SHALLOW UNCONSOLIDATED UNIT
- INTERMEDIATE UNCONSOLIDATED UNIT
- TILL
- DEEPER UNCONSOLIDATED UNIT
- BEDROCK

- GW FLOW
- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOUTHERN BANK AREA
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

SEA-603
Dichlorodifluoromethane 0.58
Methyl tert butyl ether 0.4
Isopropylbenzene 8.5
Chlorobenzene 23
1,4-Dichlorobenzene 3.6
Benzene 1100 (140) — EXCEEDANCE-BOLD/RED (MOST RECENT RESULT IN PARENTHESES)
1,4-Dioxane 18 — DETECT-BOLD
cis-1,2-Dichloroethene 0.5 U — NON-DETECT

ANALYTE	PALs
1,4-Dichlorobenzene	4.3
1,4-Dioxane	61
Benzene	4.1
Chlorobenzene	91
cis-1,2-Dichloroethene	70
Dichlorodifluoromethane	390
Isopropylbenzene	680
Methyl tert butyl ether	120

0 250 500
SCALE IN FEET

NOTES:
1) SAMPLE LOCATIONS ARE IN THE COORDINATE SYSTEM STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2) RESULTS SHOWN REPRESENT THE MAXIMUM DETECTED OR, IF NOT DETECTED, THE MAXIMUM NON-DETECTED METHOD DETECTION LIMIT OVER THES SAMPLING EVENTS DURING THE RI FROM 2003 UNTIL 2009.
3) ONLY WELLS SAMPLED OR GAUGED AS PART OF THE RI ARE SHOWN.
4) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
5) ALL RESULTS ARE IN (µg/L).

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

MAXIMUM GROUNDWATER VOC RESULTS (µg/L) 2003-2009

ARCADIS

FIGURE
4-1

CITY:(CLE) DIV/GROUP:(ENV) DB:(LGREENE) PIC:() PM:() APM:()
PROJECT: PETERSON PURITAN PATH: G:\env\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_UpdatesSVOCs_2003-2009.mxd Date Saved: 7/25/2012 4:16:40 PM

UNNAMED STREAM

MONASTERY BROOK

MW-111AA
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-111A
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-111B
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-111C
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-110C
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-110B
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-110A
Benzo[a]anthracene 0.36 (<1.0)
bis(2-Ethylhexyl)phthalate 5 U

MW-112AA
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-112A
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-112B
Benzo[a]anthracene 0.019
bis(2-Ethylhexyl)phthalate 5 U

MW-112C
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 50 (50)

MW-EA-1
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 1.3

MW-109C
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-109B
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-109A
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-109AA
Benzo[a]anthracene 0.24 (<1.0)
bis(2-Ethylhexyl)phthalate 5 U

MW-EA-3
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-108B
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-108A
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-108C
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5

MW-108AA
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 0.37

P-7
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

GNP-705
Benzo[a]anthracene 0.024
bis(2-Ethylhexyl)phthalate 6.2 (6.2)

GNP-705B
Benzo[a]anthracene 0.01 U
bis(2-Ethylhexyl)phthalate 0.71 U

GNP-707
Benzo[a]anthracene 0.01 U
bis(2-Ethylhexyl)phthalate 0.5 U

MW-106B
Benzo[a]anthracene 0.042
bis(2-Ethylhexyl)phthalate 5

MW-106A
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-106C
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

SEA-601
Benzo[a]anthracene 0.11
bis(2-Ethylhexyl)phthalate 5 U

GZ-4-1
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-A2
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 0.52

SEA-605
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 1.5

MW-C2
Benzo[a]anthracene 0.017
bis(2-Ethylhexyl)phthalate 0.7

MW-C1
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 0.51

GW-207B-UI
Benzo[a]anthracene 0.0057
bis(2-Ethylhexyl)phthalate 0.538 U

GLF-706
Benzo[a]anthracene 0.01 U
bis(2-Ethylhexyl)phthalate 1.1 U

GLF-706a
Benzo[a]anthracene 0.011 U
bis(2-Ethylhexyl)phthalate 0.74 U

SEA-607
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

GW-224A-UI
Benzo[a]anthracene 0.0107
bis(2-Ethylhexyl)phthalate 2.93

SEA-608
Benzo[a]anthracene 0.11
bis(2-Ethylhexyl)phthalate 5 U

SOLID WASTE
TRANSFER STATION
(NFO NUNES DISPOSAL, INC.)

SEA-606
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 0.4

GNP-708
Benzo[a]anthracene 0.01 U
bis(2-Ethylhexyl)phthalate 0.5 U

GNP-708A
Benzo[a]anthracene 0.011 U
bis(2-Ethylhexyl)phthalate 0.62 U

PRATT DAM

SEA-602B
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

GUI-703
Benzo[a]anthracene 0.013
bis(2-Ethylhexyl)phthalate 0.79 U

SEA-604
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

GW-208B-UI
Benzo[a]anthracene 0.00749
bis(2-Ethylhexyl)phthalate 2.34

MW-502
Benzo[a]anthracene 0.011 U
bis(2-Ethylhexyl)phthalate 0.56 U

SEA-602A
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 0.42

MW-B1
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

GUI-702
Benzo[a]anthracene 0.01 U
bis(2-Ethylhexyl)phthalate 0.71 U

GLF-704
Benzo[a]anthracene 0.011 U
bis(2-Ethylhexyl)phthalate 0.78

P-8
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

MW-B2
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 5 U

GUI-701
Benzo[a]anthracene 0.011 U
bis(2-Ethylhexyl)phthalate 0.87

SEA-603
Benzo[a]anthracene 0.1 U
bis(2-Ethylhexyl)phthalate 1

GW-201-UI
Benzo[a]anthracene 0.0409
bis(2-Ethylhexyl)phthalate 5.17

GLF-708a
Benzo[a]anthracene 0.011 U
bis(2-Ethylhexyl)phthalate 0.29

Legend

- MONITORING WELL
- PIEZOMETER/STAFF GAUGE
- STAFF GAUGE

WELL SCREEN FORMATION

- SHALLOW UNCONSOLIDATED UNIT
- INTERMEDIATE UNCONSOLIDATED UNIT
- TILL
- DEEPER UNCONSOLIDATED UNIT
- BEDROCK

GW FLOW

- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOUTHERN BANK AREA
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

MW-110A
Benzo[a]anthracene 0.36
bis(2-Ethylhexyl)phthalate 5 U

EXCEEDANCE-BOLD/RED (MOST RECENT RESULT IN PARENTHESES)
NON-DETECT (DETECTS ARE BOLD)

ANALYTE	PALs
Benzo[a]anthracene	0.2
bis(2-Ethylhexyl)phthalate	6

0 250 500
SCALE IN FEET

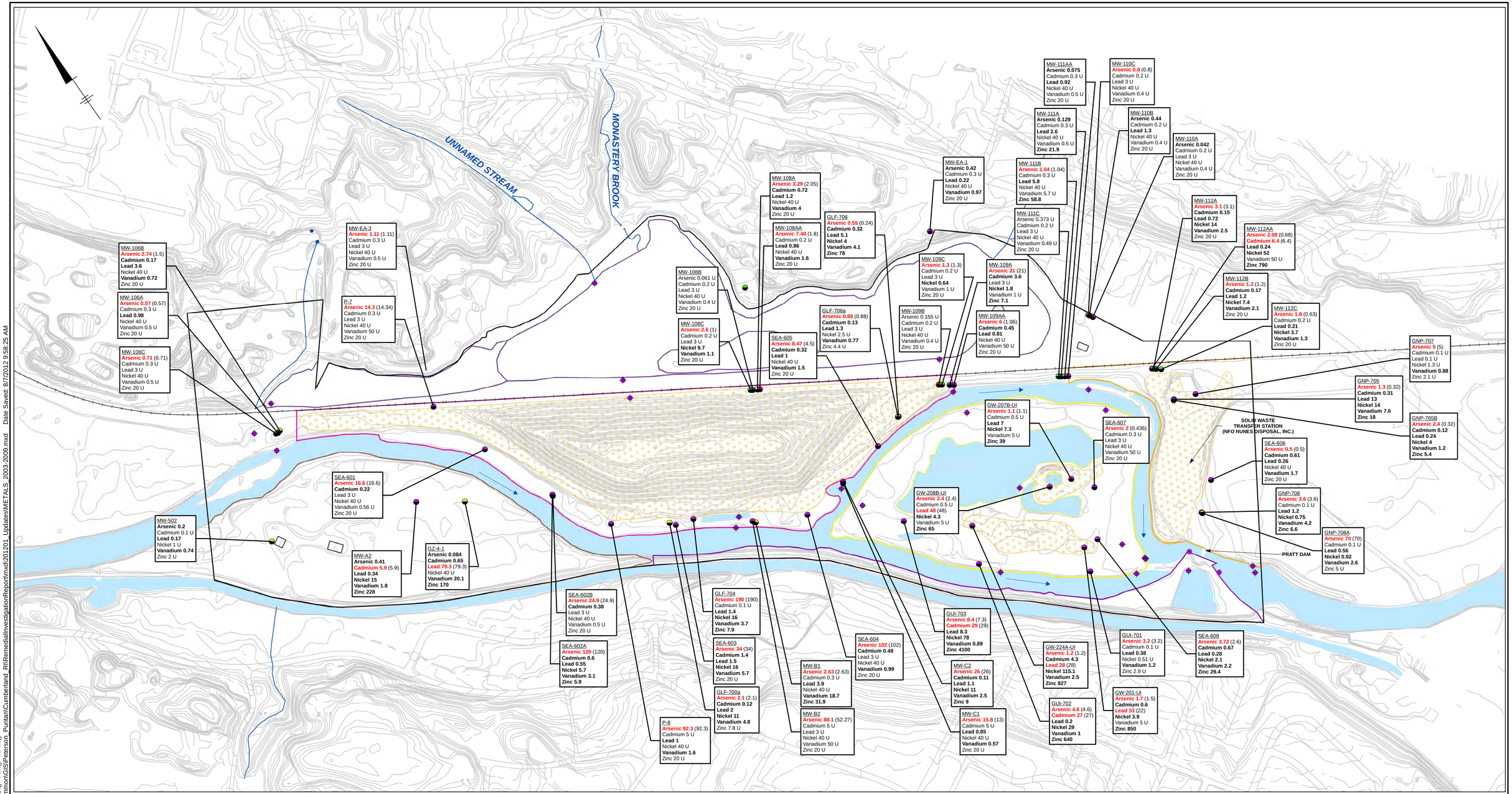
NOTES:
1) SAMPLE LOCATIONS ARE IN THE COORDINATE SYSTEM STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2) RESULTS SHOWN REPRESENT THE MAXIMUM DETECTED OR, IF NOT DETECTED, THE MAXIMUM NON-DETECTED METHOD DETECTION LIMIT OVER THE5 SAMPLING EVENTS DURING THE RI FROM 2003 UNTIL 2009.
3) ONLY WELLS SAMPLED OR GAUGED AS PART OF THE RI ARE SHOWN.
4) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
5) ALL RESULTS ARE IN (µg/L).

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

MAXIMUM GROUNDWATER SVOC RESULTS (µg/L) 2003-2009

ARCADIS

FIGURE
4-2



Legend

- MONITORING WELL
- PIEZOMETER/STAFF GAUGE
- STAFF GAUGE

WELL SCREEN FORMATION

- SHALLOW UNCONSOLIDATED UNIT
- INTERMEDIATE UNCONSOLIDATED UNIT
- TILL
- DEEPER UNCONSOLIDATED UNIT
- BEDROCK

GW FLOW

- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOUTHERN BANK AREA
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

MW-109A
Arsenic 21 (21) — EXCEEDANCE-BOLD/RED (MOST RECENT RESULT IN PARENTHESES)
Cadmium 3.6 — DETECT (BOLD)
Lead 3 U — NON-DETECT
Nickel 1.8
Vanadium 1 U
Zinc 7.1

ANALYTE	PALs
Arsenic	0.45
Cadmium	5
Lead	15
Nickel	730
Vanadium	260
Zinc	5,000

0 250 500
SCALE IN FEET

NOTES:
1) SAMPLE LOCATIONS ARE IN THE COORDINATE SYSTEM STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2) RESULTS SHOWN REPRESENT THE MAXIMUM DETECTED OR, IF NOT DETECTED, THE MAXIMUM NON-DETECTED METHOD DETECTION LIMIT OVER THE5 SAMPLING EVENTS DURING THE RI FROM 2003 UNTIL 2009.
3) ONLY WELLS SAMPLED OR GAUGED AS PART OF THE RI ARE SHOWN.
4) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
5) ALL RESULTS ARE IN (µg/L).

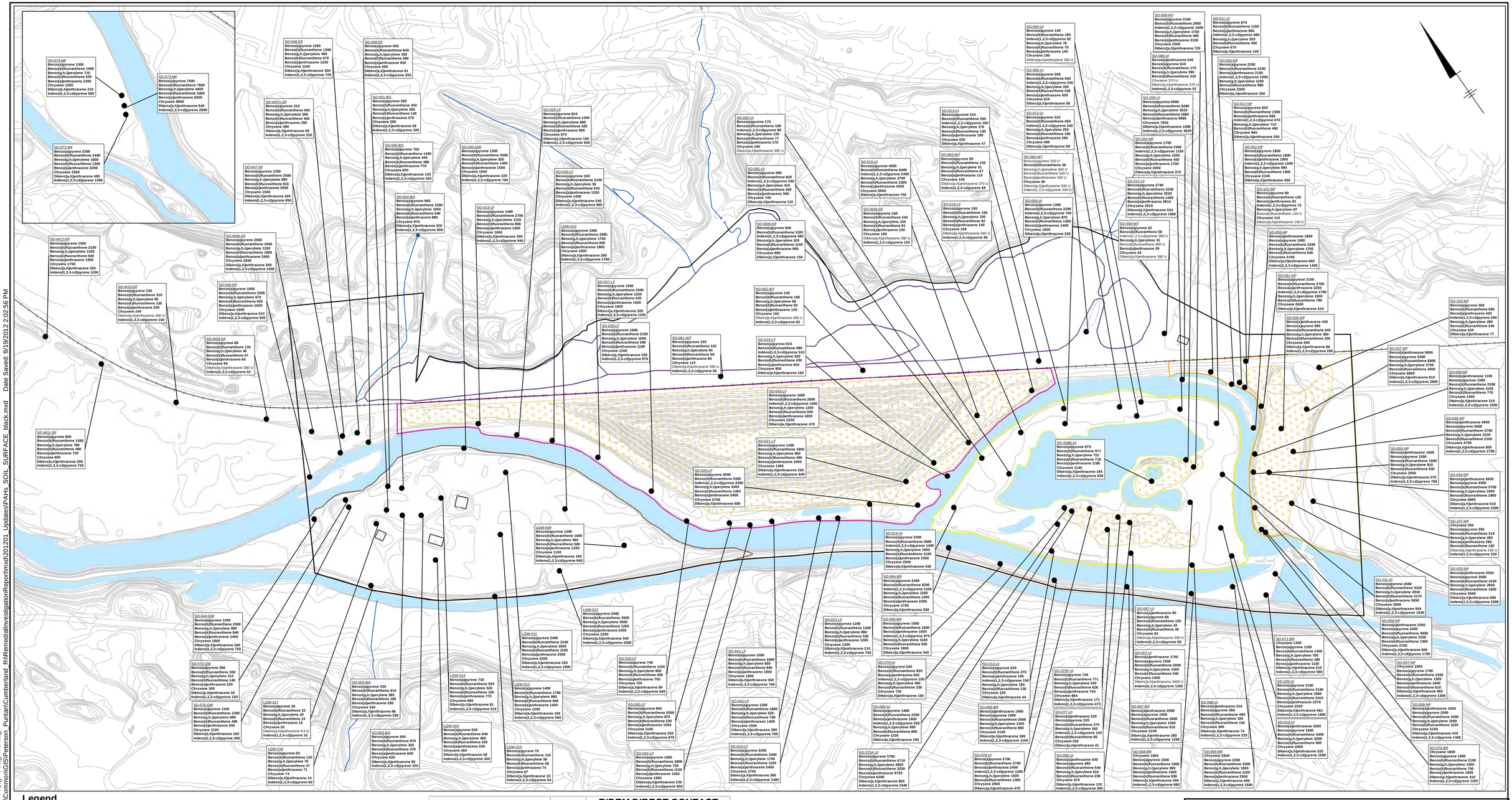
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

MAXIMUM GROUNDWATER METALS RESULTS (µg/L) 2003-2009

ARCADIS

FIGURE
4-3

CITY:(CLE) DIV/GROUP:(ENV) DB:(LGREENE) PIC:() PM:() APM:()
PROJECT: PETERSON PURITAN PATH: G:\enviro\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_UpdatesMETALS_2003-2009.mxd Date Saved: 8/7/2012 9:58:25 AM



Legend

- SOIL SAMPLE LOCATIONS
- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NOW OR FORMERLY OWNED BY NUNES DISPOSAL, INC.)

SO-W10-DF
Benzo(a)pyrene 230
Benzo(b)fluoranthene 310
Benzo(g,h,i)perylene 95
Benzo(k)fluoranthene 150
Benzo[a]anthracene 200
Chrysene 240 — DETECT-BOLD
Dibenz[a,h]anthracene 390 U — NON-DETECT
Indeno(1,2,3-cd)pyrene 100

ANALYTE	PALs	RIDEM DIRECT CONTACT	
		RESIDENTIAL	COMMERCIAL
Benzo(a)pyrene	15	400	800
Benzo(b)fluoranthene	150	900	7,800
Benzo(g,h,i)perylene	800	800	10,000,000
Benzo(k)fluoranthene	1,500	900	78,000
Benzo[a]anthracene	150	900	7,800
Chrysene	400	400	780,000
Dibenz[a,h]anthracene	15	400	800
Indeno(1,2,3-cd)pyrene	150	900	7,800

0 250 500
SCALE IN FEET

NOTES:
1) SAMPLE LOCATIONS ARE IN THE COORDINATE SYSTEM STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2) RESULTS REPRESENT THE CUMULATIVE SURFACE SOIL (0-1' INTERVALS DEPTHS ONLY) SAMPLES COLLECTED FROM THE BEGINNING OF PHASE 1A IN 2003 THROUGH THE SUPPLEMENTAL UNNAMED ISLAND INVESTIGATION IN 2009. THE PAHs SELECTED REPRESENT THOSE MOST FREQUENTLY DETECTED AND EXCEEDING THEIR RESPECTIVE PALs.
3) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
4) ALL RESULTS ARE IN (µg/kg).

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SURFACE SOIL NATURE AND EXTENT OF CONTAMINATION SELECT PAHs (µg/kg)

ARCADIS

FIGURE
4-4

CITY:(CLE) DIV/GROUP:(ENV) DB:(LGREENE) PIC:() PM:() APM:()
PROJECT: PETERSON PURITAN PATH: G:\env\roCommonGIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\201201_UpdatesIPAHs_SOIL_SURFACE_black.mxd Date Saved: 9/

CITY:(CLE) DIV/GROUP:(ENV) DB:(LGREENE) PIC:() PM:() APM:()
PROJECT: PETERSON PURITAN PATH: G:\environ\Common\GIS\Peterson_PuritanCumberland_RI\RemedialInvestigationReport\mxd\201201_Updatesaroclor_SOIL_SURFACE_black.mxd Date Saved: 2/22/2012 3:29:13 PM

SO-074-ME
Aroclor-1254 37 U
Aroclor-1260 37 U
bis(2-Ethylhexyl)phthalate 370 U
Dieldrin 7.3

SO-073-ME
Aroclor-1254 39 U
Aroclor-1260 39 U
bis(2-Ethylhexyl)phthalate 390 U
Dieldrin 12

SO-072-ME
Aroclor-1254 49 U
Aroclor-1260 49 U
bis(2-Ethylhexyl)phthalate 480 U
Dieldrin 33

SO-045-OW
Aroclor-1254 47 U
Aroclor-1260 260
bis(2-Ethylhexyl)phthalate 4100
Dieldrin 9.2

SO-023-LF
Aroclor-1254 39 U
Aroclor-1260 230
bis(2-Ethylhexyl)phthalate 2300
Dieldrin 12

LQW-013
Aroclor-1254 22 U
Aroclor-1260 770
bis(2-Ethylhexyl)phthalate 310
Dieldrin 640

LQW-011
Aroclor-1254 21 U
Aroclor-1260 710
bis(2-Ethylhexyl)phthalate 200 U
Dieldrin 570

LQW-014
Aroclor-1254 16 U
Aroclor-1260 350
bis(2-Ethylhexyl)phthalate 220
Dieldrin 280

SO-025-LF
Aroclor-1254 38 U
Aroclor-1260 140
bis(2-Ethylhexyl)phthalate 5600
Dieldrin 16

SO-026-LF
Aroclor-1254 44 U
Aroclor-1260 250
bis(2-Ethylhexyl)phthalate 1000
Dieldrin 12

SO-004-BG
Aroclor-1254 38 U
Aroclor-1260 240
bis(2-Ethylhexyl)phthalate 460 U
Dieldrin 230

LQW-010
Aroclor-1254 26 U
Aroclor-1260 1600
bis(2-Ethylhexyl)phthalate 590
Dieldrin 700

SO-027-LF
Aroclor-1254 36 U
Aroclor-1260 130
bis(2-Ethylhexyl)phthalate 410 U
Dieldrin 5.7

SO-049-DF
Aroclor-1254 40 U
Aroclor-1260 160
bis(2-Ethylhexyl)phthalate 1400
Dieldrin 20

SO-048-DF
Aroclor-1254 40 U
Aroclor-1260 180
bis(2-Ethylhexyl)phthalate 500
Dieldrin 44

SO-W07x-DF
Aroclor-1254 150
Aroclor-1260 40 U
bis(2-Ethylhexyl)phthalate 410 U
Dieldrin 55

SO-W10-DF
Aroclor-1254 39 U
Aroclor-1260 39 U
bis(2-Ethylhexyl)phthalate 390 U
Dieldrin 3.9 U

SO-W12-DF
Aroclor-1254 43 U
Aroclor-1260 43 U
bis(2-Ethylhexyl)phthalate 12000
Dieldrin 7.9

SO-047-DF
Aroclor-1254 240
Aroclor-1260 39 U
bis(2-Ethylhexyl)phthalate 4800
Dieldrin 120

SO-W11-DF
Aroclor-1254 200 U
Aroclor-1260 200 U
bis(2-Ethylhexyl)phthalate 410 U
Dieldrin 200 U

SO-W08-DF
Aroclor-1254 38 U
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 1500 U
Dieldrin 32

SO-046-DF
Aroclor-1254 43 U
Aroclor-1260 320
bis(2-Ethylhexyl)phthalate 1900
Dieldrin 39

SO-W09-DF
Aroclor-1254 38 U
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 380 U
Dieldrin 12

SO-044-OW
Aroclor-1254 42 U
Aroclor-1260 170
bis(2-Ethylhexyl)phthalate 560 U
Dieldrin 15

SO-075-OW
Aroclor-1254 39 U
Aroclor-1260 99
bis(2-Ethylhexyl)phthalate 390 U
Dieldrin 14

SO-076-OW
Aroclor-1254 37 U
Aroclor-1260 170
bis(2-Ethylhexyl)phthalate 380 U
Dieldrin 100

SO-005-BG
Aroclor-1254 42 U
Aroclor-1260 230
bis(2-Ethylhexyl)phthalate 520 U
Dieldrin 230

LQW-017
Aroclor-1254 17 U
Aroclor-1260 17 U
bis(2-Ethylhexyl)phthalate 170 U
Dieldrin 0.85 U

LQW-018
Aroclor-1254 16 U
Aroclor-1260 16 U
bis(2-Ethylhexyl)phthalate 160 U
Dieldrin 0.8 U

SO-001-BG
Aroclor-1254 42 U
Aroclor-1260 210
bis(2-Ethylhexyl)phthalate 410 U
Dieldrin 77

SO-002-BG
Aroclor-1254 41 U
Aroclor-1260 180
bis(2-Ethylhexyl)phthalate 410 U
Dieldrin 260

SO-003-BG
Aroclor-1254 38 U
Aroclor-1260 290
bis(2-Ethylhexyl)phthalate 370 U
Dieldrin 480

LQW-016
Aroclor-1254 18 U
Aroclor-1260 120
bis(2-Ethylhexyl)phthalate 180 U
Dieldrin 36

LQW-015
Aroclor-1254 16 U
Aroclor-1260 16 U
bis(2-Ethylhexyl)phthalate 170 U
Dieldrin 0.8 U

LQW-012
Aroclor-1254 32 U
Aroclor-1260 580
bis(2-Ethylhexyl)phthalate 310 U
Dieldrin 400

LQW-009
Aroclor-1254 21 U
Aroclor-1260 340
bis(2-Ethylhexyl)phthalate 210 U
Dieldrin 72

SO-028-LF
Aroclor-1254 58 U
Aroclor-1260 270
bis(2-Ethylhexyl)phthalate 590 U
Dieldrin 14

SO-029-LF
Aroclor-1254 50 U
Aroclor-1260 300
bis(2-Ethylhexyl)phthalate 500 U
Dieldrin 29

SO-030-LF
Aroclor-1254 45 U
Aroclor-1260 200
bis(2-Ethylhexyl)phthalate 620 U
Dieldrin 12

SO-032-LF
Aroclor-1254 41 U
Aroclor-1260 41 U
bis(2-Ethylhexyl)phthalate 1600 U
Dieldrin 36

SO-041-LF
Aroclor-1254 47 U
Aroclor-1260 270
bis(2-Ethylhexyl)phthalate 2300
Dieldrin 29

SO-061-WT
Aroclor-1254 39 U
Aroclor-1260 39 U
bis(2-Ethylhexyl)phthalate 950
Dieldrin 3.9 U

SO-062-WT
Aroclor-1254 38 U
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 84
Dieldrin 3.8 U

SO-042-LF
Aroclor-1254 480
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 370
Dieldrin 10

SO-024-LF
Aroclor-1254 37 U
Aroclor-1260 140
bis(2-Ethylhexyl)phthalate 740 U
Dieldrin 9.4

SO-022-LF
Aroclor-1254 790
Aroclor-1260 43 U
bis(2-Ethylhexyl)phthalate 2400
Dieldrin 25

SO-021-LF
Aroclor-1254 38 U
Aroclor-1260 130
bis(2-Ethylhexyl)phthalate 4000
Dieldrin 38

SO-020-LF
Aroclor-1254 41 U
Aroclor-1260 190
bis(2-Ethylhexyl)phthalate 410 U
Dieldrin 16

SO-014-LF
Aroclor-1254 38 U
Aroclor-1260 230
bis(2-Ethylhexyl)phthalate 18000
Dieldrin 28

SO-064-BR
Aroclor-1254 46 U
Aroclor-1260 270
bis(2-Ethylhexyl)phthalate 2300
Dieldrin 19

SO-W06-DF
Aroclor-1254 240
Aroclor-1260 34 U
bis(2-Ethylhexyl)phthalate 1500
Dieldrin 3.4 U

SO-081-UI
Aroclor-1254 180
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 380 U
Dieldrin 39

SO-W05-DF
Aroclor-1254 34 U
Aroclor-1260 34 U
bis(2-Ethylhexyl)phthalate 2000
Dieldrin 17 U

SO-043-LF
Aroclor-1254 51 U
Aroclor-1260 190
bis(2-Ethylhexyl)phthalate 2300
Dieldrin 11

SO-019-LF
Aroclor-1254 36 U
Aroclor-1260 69
bis(2-Ethylhexyl)phthalate 5100
Dieldrin 4.8

SO-065-BR
Aroclor-1254 43 U
Aroclor-1260 260
bis(2-Ethylhexyl)phthalate 970
Dieldrin 100

SO-079-UI
Aroclor-1254 35 U
Aroclor-1260 35 U
bis(2-Ethylhexyl)phthalate 350 U
Dieldrin 3.5 U

SO-080-UI
Aroclor-1254 1200
Aroclor-1260 36 U
bis(2-Ethylhexyl)phthalate 8600
Dieldrin 88

SO-016-UI
Aroclor-1254 34 U
Aroclor-1260 120
bis(2-Ethylhexyl)phthalate 340 U
Dieldrin 29

SO-225A-UI
Aroclor-1254 259
Aroclor-1260 150
bis(2-Ethylhexyl)phthalate 5660
Dieldrin 88.9

SO-066-BR
Aroclor-1254 38 U
Aroclor-1260 360
bis(2-Ethylhexyl)phthalate 640
Dieldrin 140

SO-208B-UI
Aroclor-1254 257
Aroclor-1260 146
bis(2-Ethylhexyl)phthalate 352
Dieldrin 16.3

SO-084-UI
Aroclor-1254 36 U
Aroclor-1260 48
bis(2-Ethylhexyl)phthalate 630
Dieldrin 16

SO-085-UI
Aroclor-1254 36 U
Aroclor-1260 130
bis(2-Ethylhexyl)phthalate 210
Dieldrin 200

SO-012-UI
Aroclor-1254 39 U
Aroclor-1260 87
bis(2-Ethylhexyl)phthalate 390 U
Dieldrin 22

SO-060-WT
Aroclor-1254 34 U
Aroclor-1260 34 U
bis(2-Ethylhexyl)phthalate 120
Dieldrin 3.4 U

SO-083-UI
Aroclor-1254 38 U
Aroclor-1260 140
bis(2-Ethylhexyl)phthalate 370 U
Dieldrin 43

SO-013-UI
Aroclor-1254 38 U
Aroclor-1260 82
bis(2-Ethylhexyl)phthalate 380 U
Dieldrin 71

SO-063-WT
Aroclor-1254 37 U
Aroclor-1260 37 U
bis(2-Ethylhexyl)phthalate 97
Dieldrin 3.7 U

SO-018-LF
Aroclor-1254 130
Aroclor-1260 34 U
bis(2-Ethylhexyl)phthalate 430 U
Dieldrin 9

SO-015-UI
Aroclor-1254 43 U
Aroclor-1260 45
bis(2-Ethylhexyl)phthalate 430 U
Dieldrin 42

SO-082-UI
Aroclor-1254 35 U
Aroclor-1260 210
bis(2-Ethylhexyl)phthalate 350 U
Dieldrin 230

SO-069-WT
Aroclor-1254 38 U
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 70
Dieldrin 3.8 U

SO-217-UI
Aroclor-1254 1330
Aroclor-1260 1470
bis(2-Ethylhexyl)phthalate 557
Dieldrin 292

SO-054-NP
Aroclor-1254 38 U
Aroclor-1260 140
bis(2-Ethylhexyl)phthalate 560
Dieldrin 11

SO-058-WT
Aroclor-1254 47 U
Aroclor-1260 390
bis(2-Ethylhexyl)phthalate 1000
Dieldrin 26

SO-111-UI
Aroclor-1254 38 U
Aroclor-1260 150
bis(2-Ethylhexyl)phthalate 610 U
Dieldrin 58

SO-053-NP
Aroclor-1254 45 U
Aroclor-1260 410
bis(2-Ethylhexyl)phthalate 1100
Dieldrin 50

SO-017-NP
Aroclor-1254 41 U
Aroclor-1260 300
bis(2-Ethylhexyl)phthalate 800
Dieldrin 92

SO-052-NP
Aroclor-1254 40 U
Aroclor-1260 370
bis(2-Ethylhexyl)phthalate 1500
Dieldrin 310

SO-101-NP
Aroclor-1254 14 U
Aroclor-1260 14 U
bis(2-Ethylhexyl)phthalate 81

SO-051-NP
Aroclor-1254 54 U
Aroclor-1260 460
bis(2-Ethylhexyl)phthalate 1100
Dieldrin 20

SO-102-NP
Aroclor-1254 15 U
Aroclor-1260 15 U
bis(2-Ethylhexyl)phthalate 150 U

SO-209-UI
Aroclor-1254 67.3 U
Aroclor-1260 334
bis(2-Ethylhexyl)phthalate 60700
Dieldrin 6.85

SO-050-NP
Aroclor-1254 41 U
Aroclor-1260 470
bis(2-Ethylhexyl)phthalate 1300
Dieldrin 60

SO-037-NP
Aroclor-1254 100
Aroclor-1260 37 U
bis(2-Ethylhexyl)phthalate 470
Dieldrin 3.1

SO-036-NP
Aroclor-1254 65
Aroclor-1260 35 U
bis(2-Ethylhexyl)phthalate 350 U
Dieldrin 3.5 U

SO-009-NP
Aroclor-1254 43 U
Aroclor-1260 370
bis(2-Ethylhexyl)phthalate 820
Dieldrin 56

SO-035-NP
Aroclor-1254 100
Aroclor-1260 39 U
bis(2-Ethylhexyl)phthalate 870
Dieldrin 3.2

SO-055-NP
Aroclor-1254 38 U
Aroclor-1260 550
bis(2-Ethylhexyl)phthalate 1200
Dieldrin 160

SO-034-NP
Aroclor-1254 37 U
Aroclor-1260 37 U
bis(2-Ethylhexyl)phthalate 250
Dieldrin 13

SO-107-NP
Aroclor-1254 14 U
Aroclor-1260 150
bis(2-Ethylhexyl)phthalate 130

SO-033-NP
Aroclor-1254 38 U
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 6300
Dieldrin 6.2

SO-056-NP
Aroclor-1254 38 U
Aroclor-1260 460
bis(2-Ethylhexyl)phthalate 1000
Dieldrin 29

SO-008-NP
Aroclor-1254 46 U
Aroclor-1260 290
bis(2-Ethylhexyl)phthalate 2200
Dieldrin 16

SO-057-NP
Aroclor-1254 40 U
Aroclor-1260 240
bis(2-Ethylhexyl)phthalate 2400
Dieldrin 21

SO-070-BR
Aroclor-1254 34 U
Aroclor-1260 170
bis(2-Ethylhexyl)phthalate 340
Dieldrin 23

SO-078-UI
Aroclor-1254 36 U
Aroclor-1260 320
bis(2-Ethylhexyl)phthalate 1300
Dieldrin 270

SO-223E-UI
Aroclor-1254 363
Aroclor-1260 213
bis(2-Ethylhexyl)phthalate 2110
Dieldrin 40.2

SO-077-UI
Aroclor-1254 77
Aroclor-1260 36 U
bis(2-Ethylhexyl)phthalate 370 U
Dieldrin 31

SO-067-BR
Aroclor-1254 39 U
Aroclor-1260 290
bis(2-Ethylhexyl)phthalate 620
Dieldrin 100

SO-006-UI
Aroclor-1254 37 U
Aroclor-1260 200
bis(2-Ethylhexyl)phthalate 1700
Dieldrin 58

SO-007-UI
Aroclor-1254 44 U
Aroclor-1260 130
bis(2-Ethylhexyl)phthalate 13000
Dieldrin 35

SO-088-UI
Aroclor-1254 38 U
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 430 U
Dieldrin 3.8 U

SO-087-UI
Aroclor-1254 35 U
Aroclor-1260 49
bis(2-Ethylhexyl)phthalate 130
Dieldrin 13

SO-086-UI
Aroclor-1254 1000
Aroclor-1260 38 U
bis(2-Ethylhexyl)phthalate 260000
Dieldrin 3.8 U

SO-910-UI
Aroclor-1254 52 U
Aroclor-1260 720
bis(2-Ethylhexyl)phthalate 640 U
Dieldrin 810

SO-211-UI
Aroclor-1254 1340
Aroclor-1260 1200
bis(2-Ethylhexyl)phthalate 398
Dieldrin 221

SO-069-BR
Aroclor-1254 50 U
Aroclor-1260 280
bis(2-Ethylhexyl)phthalate 800
Dieldrin 21

SO-071-BR
Aroclor-1254 180 U
Aroclor-1260 950
bis(2-Ethylhexyl)phthalate 9000
Dieldrin 500

SO-200-UI
Aroclor-1254 416
Aroclor-1260 457
bis(2-Ethylhexyl)phthalate 679
Dieldrin 23

Legend

- SOIL SAMPLE LOCATIONS
- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NOW OR FORMERLY OWNED BY NUNES DISPOSAL, INC.)

ANALYTE	PALs	RIDEM DIRECT CONTACT	
		RESIDENTIAL	COMMERCIAL
Aroclor-1254	110	10,000	10,000
Aroclor-1260	220	10,000	10,000
bis(2-Ethylhexyl)phthalate	35,000	46,000	410,000
Dieldrin	0.032	40	400

SO-001-BG
Aroclor-1254 42 U
Aroclor-1260 210 — DETECT-BOLD
bis(2-Ethylhexyl)phthalate 410 U — NON-DETECT
Dieldrin 77

0 250 500
SCALE IN FEET

NOTES:
1) SAMPLE LOCATIONS ARE IN THE COORDINATE SYSTEM STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2) RESULTS REPRESENT THE CUMULATIVE SURFACE SOIL (0-1' INTERVALS DEPTHS ONLY) SAMPLES COLLECTED FROM THE BEGINNING OF PHASE 1A IN 2003 THROUGH THE SUPPLEMENTAL UNNAMED ISLAND INVESTIGATION IN 2009. THE PAHs SELECTED REPRESENT THOSE MOST FREQUENTLY DETECTED AND EXCEEDING THEIR RESPECTIVE PALs.
3) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
4) ALL RESULTS ARE IN (µg/kg).

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SURFACE SOIL NATURE AND EXTENT OF CONTAMINATION SELECT SVOCs, PESTICIDES, AND PCBs (µg/kg)

ARCADIS

FIGURE
4-5

CITY:(CLE) DIV/GROUP:(ENV) DB:(LGREENE) PIC:() PM:() APM:()
PROJECT: PETERSON PURITAN PATH: G:\enviro\Common\GIS\Peterson_Puritan\Cumberland_RI\Remedial\InvestigationReport\mxd\201201_Updates\metals_SOIL_SURFACE_black.mxd Date Saved: 2/22/2012 3:25:33 PM

SO-074-ME
Arsenic 3.9
Cadmium 1.1 U
Chromium 31.1
Copper 34
Lead 60
Nickel 8.6 U
Vanadium 9.8
Zinc 29.3

SO-073-ME
Arsenic 4.9
Cadmium 1.4
Chromium 44.2
Copper 40.7
Lead 82.6
Nickel 9.4 U
Vanadium 12.7
Zinc 43.5

SO-072-ME
Arsenic 8.5
Cadmium 1.9
Chromium 89.6
Copper 75.1
Lead 161
Nickel 8.2 U
Vanadium 21.2
Zinc 51.7

SO-049-DF
Arsenic 5
Cadmium 1.5
Chromium 51
Copper 70.5
Lead 89.9
Nickel 10.3
Vanadium 12.2
Zinc 86.7

SO-048-DF
Arsenic 8.7
Cadmium 5.3
Chromium 107
Copper 154
Lead 177
Nickel 23.2
Vanadium 21.2
Zinc 200

SO-001-BG
Arsenic 3.3
Cadmium 1.5
Chromium 36.4
Copper 41.1
Lead 50.7
Nickel 10.4
Vanadium 11.6
Zinc 72.7

SO-007-DE
Arsenic 10
Cadmium 2.3
Chromium 79.1
Copper 75.6
Lead 141
Nickel 16
Vanadium 31.2
Zinc 149

SO-005-BG
Arsenic 5.2
Cadmium 1.7
Chromium 59.6
Copper 77.3
Lead 100
Nickel 10.8
Vanadium 13.3
Zinc 80.8

SO-047-DF
Arsenic 6
Cadmium 1.6
Chromium 91.9
Copper 114
Lead 175
Nickel 15.4
Vanadium 15.4
Zinc 86.8

SO-004-BG
Arsenic 7.4
Cadmium 1
Chromium 95.6
Copper 103
Lead 125
Nickel 8.4
Vanadium 17
Zinc 54.2

SO-008-DE
Arsenic 9
Cadmium 1.8
Chromium 74
Copper 57.3
Lead 104
Nickel 13
Vanadium 20.3
Zinc 96.4

SO-012-DF
Arsenic 7.9
Cadmium 0.58
Chromium 76.4
Copper 49.6
Lead 92.8
Nickel 7.4
Vanadium 14
Zinc 74.5

SO-010-DF
Arsenic 4.4
Cadmium 0.56
Chromium 17.1
Copper 17.5
Lead 33.7
Nickel 8.6
Vanadium 21.3
Zinc 67

SO-046-DF
Arsenic 15.5
Cadmium 8.9
Chromium 149
Copper 228
Lead 228
Nickel 31.4
Vanadium 27.5
Zinc 265

SO-009-DF
Arsenic 5.1
Cadmium 0.56
Chromium 16.6
Copper 11.8
Lead 26.9
Nickel 9
Vanadium 12.1
Zinc 39.6

SO-011-DF
Arsenic 7.9
Cadmium 0.49
Chromium 17.2
Copper 27.5
Lead 56.9
Nickel 8.6
Vanadium 19.3
Zinc 56

SO-045-QW
Arsenic 8.5
Cadmium 11.1
Chromium 88.2
Copper 146
Lead 151
Nickel 28.2
Vanadium 20.3
Zinc 289

SO-025-LF
Arsenic 5.5
Cadmium 3.1
Chromium 56.5
Copper 97.4
Lead 98.2
Nickel 14
Vanadium 11
Zinc 183

SO-026-LF
Arsenic 19.8
Cadmium 16.3
Chromium 168
Copper 280
Lead 263
Nickel 58.9
Vanadium 26.6
Zinc 513

SO-022-LF
Arsenic 11.7
Cadmium 8.7
Chromium 96.8
Copper 167
Lead 178
Nickel 28.7
Vanadium 19.3
Zinc 272

LOW-010
Arsenic 26
Cadmium 1.9
Chromium 440
Copper 280
Lead 460
Nickel 19
Vanadium 39
Zinc 120

SO-027-LF
Arsenic 8.3
Cadmium 4.6
Chromium 48.4
Copper 90.3
Lead 97
Nickel 18.6
Vanadium 11.8
Zinc 175

SO-028-LF
Arsenic 22.9
Cadmium 23.5
Chromium 236
Copper 377
Lead 344
Nickel 55.1
Vanadium 33.6
Zinc 516

SO-061-WT
Arsenic 4.4
Cadmium 0.85 U
Chromium 18.9
Copper 15.2
Lead 23.9
Nickel 8.2
Vanadium 16.3
Zinc 40.9

SO-062-WT
Arsenic 7.2
Cadmium 1.1 U
Chromium 16.9
Copper 17.4
Lead 20
Nickel 8.6 U
Vanadium 14.2
Zinc 37.5

SO-019-LF
Arsenic 7.1
Cadmium 4
Chromium 30.4
Copper 89
Lead 161
Nickel 13.5
Vanadium 15.9
Zinc 212

SO-043-LF
Arsenic 17.5
Cadmium 8.6
Chromium 110
Copper 182
Lead 193
Nickel 32
Vanadium 24.7
Zinc 338

SO-082-UI
Arsenic 2.7
Cadmium 1.5
Chromium 24.5
Copper 15.7
Lead 40.9
Nickel 7 U
Vanadium 8
Zinc 33.3

SO-081-UI
Arsenic 3.3
Cadmium 4.5
Chromium 47.9
Copper 69.9
Lead 77.3
Nickel 11.9
Vanadium 14.6
Zinc 99.6

SO-005-DE
Arsenic 6
Cadmium 10.6
Chromium 29.4
Copper 97
Lead 76.6
Nickel 21.1
Vanadium 11.3
Zinc 177

SO-013-UI
Arsenic 4.3
Cadmium 3.5
Chromium 34.2
Copper 38.2
Lead 39
Nickel 9
Vanadium 10.2
Zinc 67.3

SO-063-WT
Arsenic 3.6
Cadmium 1.1 U
Chromium 13.9
Copper 11.9
Lead 17.3
Nickel 8.6 U
Vanadium 10.9
Zinc 34.8

SO-018-LF
Arsenic 4.3
Cadmium 1.4
Chromium 18.5
Copper 19.6
Lead 43.9
Nickel 9.5
Vanadium 14
Zinc 97

SO-015-UI
Arsenic 2.9
Cadmium 0.31
Chromium 21.4
Copper 15.8
Lead 19.1
Nickel 4.6
Vanadium 8.7
Zinc 34.2

SO-006-DE
Arsenic 24.9
Cadmium 8.7
Chromium 34.5
Copper 340
Lead 123
Nickel 31.4
Vanadium 82.9
Zinc 2560

SO-084-UI
Arsenic 2.7
Cadmium 1.1 U
Chromium 40
Copper 29.5
Lead 30.6
Nickel 9.9
Vanadium 14.6
Zinc 25.9

SO-085-UI
Arsenic 7.5
Cadmium 0.97 U
Chromium 99.6
Copper 87.8
Lead 106
Nickel 8.6
Vanadium 19.5
Zinc 48.2

SO-012-UI
Arsenic 4.3
Cadmium 2.7
Chromium 40.1
Copper 53.8
Lead 51.1
Nickel 10.1
Vanadium 11.5
Zinc 78.2

SO-060-WT
Arsenic 2.1
Cadmium 0.91 U
Chromium 5.6
Copper 6.9
Lead 7.2
Nickel 7.3 U
Vanadium 6.8
Zinc 24

SO-083-UI
Arsenic 7.6
Cadmium 2
Chromium 130
Copper 68.8
Lead 109
Nickel 9 U
Vanadium 13.8
Zinc 50.9

SO-011-UI
Arsenic 8.6
Cadmium 2.3
Chromium 87.5
Copper 92.2
Lead 108
Nickel 11
Vanadium 14.1
Zinc 69.9

SO-058-WT
Arsenic 27.7
Cadmium 18.7
Chromium 303
Copper 417
Lead 399
Nickel 56.4
Vanadium 42.1
Zinc 501

SO-209-UI
Arsenic 10.6
Cadmium 6.24
Chromium 69.5
Copper 632
Lead 1860
Nickel 29.6
Vanadium 19.9
Zinc 1350

SO-054-NP
Arsenic 12.4
Cadmium 4.1
Chromium 75
Copper 127
Lead 132
Nickel 20.4
Vanadium 19.1
Zinc 191

SO-217-UI
Arsenic 15.6
Cadmium 2.64
Chromium 196
Copper 257
Lead 331
Nickel 25
Vanadium 26.8
Zinc 202

SO-059-WT
Arsenic 2.8
Cadmium 0.89 U
Chromium 7.8
Copper 7.9
Lead 13.8
Nickel 7.1 U
Vanadium 10.1
Zinc 30.5

SO-053-NP
Arsenic 20.4
Cadmium 16.4
Chromium 294
Copper 369
Lead 374
Nickel 46.8
Vanadium 37.6
Zinc 331

SO-017-NP
Arsenic 12.9
Cadmium 6
Chromium 173
Copper 185
Lead 240
Nickel 22.4
Vanadium 22.6
Zinc 169

SO-052-NP
Arsenic 14.1
Cadmium 13.6
Chromium 306
Copper 389
Lead 424
Nickel 45.8
Vanadium 36.8
Zinc 325

SO-101-NP
Arsenic 3.3
Cadmium 0.22
Chromium 28
Copper 22
Lead 35
Nickel 7.1
Vanadium 9.8
Zinc 40

SO-050-NP
Arsenic 25.2
Cadmium 15
Chromium 349
Copper 382
Lead 447
Nickel 50.6
Vanadium 43.4
Zinc 417

SO-051-NP
Arsenic 18.4
Cadmium 11.6
Chromium 144
Copper 251
Lead 233
Nickel 37.9
Vanadium 28
Zinc 395

SO-036-NP
Arsenic 3.9
Cadmium 1.6
Chromium 13.8
Copper 23.6
Lead 61.9
Nickel 9 U
Vanadium 11 U
Zinc 101

SO-102-NP
Arsenic 15
Cadmium 5.13
Chromium 11
Copper 22
Lead 28
Nickel 11
Vanadium 12
Zinc 37

SO-037-NP
Arsenic 6.5
Cadmium 1
Chromium 21.8
Copper 105
Lead 110
Nickel 43
Vanadium 12.9
Zinc 123

SO-009-NP
Arsenic 18.6
Cadmium 9.3
Chromium 208
Copper 232
Lead 267
Nickel 32.9
Vanadium 28.4
Zinc 243

SO-035-NP
Arsenic 4.7
Cadmium 0.88
Chromium 18.5
Copper 39.7
Lead 180
Nickel 9 U
Vanadium 11 U
Zinc 160

SO-034-NP
Arsenic 6
Cadmium 0.96
Chromium 40.4
Copper 95.3
Lead 223
Nickel 9 U
Vanadium 12.6
Zinc 159

SO-055-NP
Arsenic 16.6
Cadmium 9.3
Chromium 229
Copper 246
Lead 303
Nickel 33.1
Vanadium 31.4
Zinc 256

SO-033-NP
Arsenic 8.1
Cadmium 1.5
Chromium 36.7
Copper 831
Lead 2380
Nickel 10.9
Vanadium 15.6
Zinc 970

SO-107-NP
Arsenic 5.6
Cadmium 0.84
Chromium 14
Copper 37
Lead 1200
Nickel 11
Vanadium 13
Zinc 280

SO-211-UI
Arsenic 18
Cadmium 2.34
Chromium 174
Copper 266
Lead 291
Nickel 16.2
Vanadium 22.5
Zinc 215

SO-056-NP
Arsenic 10.5
Cadmium 11.9
Chromium 232
Copper 283
Lead 297
Nickel 40.4
Vanadium 30.8
Zinc 338

SO-057-NP
Arsenic 15.7
Cadmium 6.8
Chromium 235
Copper 235
Lead 289
Nickel 28.7
Vanadium 29.6
Zinc 211

SO-098-NP
Arsenic 20.5
Cadmium 10
Chromium 170
Copper 246
Lead 255
Nickel 35
Vanadium 27.3
Zinc 300

SO-070-BR
Arsenic 8.8
Cadmium 1
Chromium 27.7
Copper 41.8
Lead 43.5
Nickel 11.1
Vanadium 9.7
Zinc 85.9

SO-069-BR
Arsenic 13
Cadmium 9.2
Chromium 94.5
Copper 164
Lead 156
Nickel 27.5
Vanadium 20.5
Zinc 277

SO-068-BR
Arsenic 12.7
Cadmium 4
Chromium 156
Copper 193
Lead 216
Nickel 23.1
Vanadium 24.4
Zinc 193

SO-067-BR
Arsenic 9.2
Cadmium 5.9
Chromium 107
Copper 160
Lead 164
Nickel 23.3
Vanadium 20.9
Zinc 174

SO-088-UI
Arsenic 4.2
Cadmium 2.7
Chromium 88.6
Copper 79.5
Lead 113
Nickel 10.5
Vanadium 16.7
Zinc 68.3

SO-087-UI
Arsenic 3.4
Cadmium 0.87 U
Chromium 22
Copper 27.6
Lead 45.6
Nickel 9.4
Vanadium 11.1
Zinc 53.8

SO-007-UI
Arsenic 22.5
Cadmium 1.8
Chromium 370
Copper 184
Lead 281
Nickel 11.8
Vanadium 21.9
Zinc 89.3

SO-086-UI
Arsenic 7.1
Cadmium 1.8
Chromium 65.1
Copper 1310
Lead 1570
Nickel 21.8
Vanadium 12.4
Zinc 699

SO-223F-UI
Arsenic 6.61
Cadmium 2.23
Chromium 70.4
Copper 80.7
Lead 102
Nickel 12.5
Vanadium 14.6
Zinc 110

SO-077-UI
Arsenic 2
Cadmium 1.7
Chromium 34.7
Copper 33.4
Lead 42
Nickel 7.1
Vanadium 10.9
Zinc 50.4

SO-016-UI
Arsenic 7.1
Cadmium 0.43
Chromium 69.1
Copper 47.7
Lead 56.6
Nickel 6.4
Vanadium 12.5
Zinc 39.9

SO-066-BR
Arsenic 10.2
Cadmium 8.4
Chromium 149
Copper 198
Lead 221
Nickel 26.8
Vanadium 24.3
Zinc 184

SO-078-UI
Arsenic 6.1
Cadmium 3.3
Chromium 109
Copper 110
Lead 151
Nickel 11.8
Vanadium 18.3
Zinc 85.7

SO-006-UI
Arsenic 5.3
Cadmium 0.92
Chromium 60.8
Copper 59.9
Lead 99.4
Nickel 7.8
Vanadium 12.9
Zinc 59.9

SO-014-UI
Arsenic 8.4
Cadmium 3.6
Chromium 42.2
Copper 75.3
Lead 95.7
Nickel 13
Vanadium 11.1
Zinc 121

SO-208B-UI
Arsenic 8.56
Cadmium 9.13
Chromium 84.2
Copper 154
Lead 1250
Nickel 25.4
Vanadium 18.2
Zinc 900

SO-064-BR
Arsenic 12.3
Cadmium 6.3
Chromium 125
Copper 180
Lead 197
Nickel 25.3
Vanadium 22.9
Zinc 203

SO-065-BR
Arsenic 8.6
Cadmium 1.8
Chromium 119
Copper 122
Lead 194
Nickel 13.2
Vanadium 19.4
Zinc 96.8

SO-079-UI
Arsenic 4.3
Cadmium 2.8
Chromium 49.1
Copper 45
Lead 53.9
Nickel 10.2
Vanadium 11
Zinc 66.6

SO-080-UI
Arsenic 4.1
Cadmium 1.9
Chromium 55.7
Copper 60.3
Lead 87.3
Nickel 7.8
Vanadium 10
Zinc 58.5

SO-225A-UI
Arsenic 6.45
Cadmium 1.05
Chromium 66.5
Copper 49.1
Lead 62.5
Vanadium 10.8
Nickel 7.96
Zinc 54

SO-022-LF
Arsenic 11.2
Cadmium 3.6
Chromium 120
Copper 127
Lead 151
Nickel 20.3
Vanadium 22.9
Zinc 134

SO-041-LF
Arsenic 15.8
Cadmium 8
Chromium 152
Copper 227
Lead 226
Nickel 28.9
Vanadium 23.8
Zinc 227

SO-042-LF
Arsenic 11.6
Cadmium 5
Chromium 53.2
Copper 97.9
Lead 102
Nickel 18.1
Vanadium 14.2
Zinc 181

SO-024-LF
Arsenic 11.5
Cadmium 5.4
Chromium 56.2
Copper 98.4
Lead 103
Nickel 17.8
Vanadium 12.1
Zinc 167

SO-021-LF
Arsenic 9.4
Cadmium 3.7
Chromium 105
Copper 107
Lead 176
Nickel 19.6
Vanadium 19.3
Zinc 203

SO-020-LF
Arsenic 16.2
Cadmium 12.4
Chromium 129
Copper 192
Lead 206
Nickel 35.8
Vanadium 21.3
Zinc 314

SO-030-LF
Arsenic 17
Cadmium 10.6
Chromium 160
Copper 235
Lead 233
Nickel 36.3
Vanadium 24.7
Zinc 291

SO-032-LF
Arsenic 15.7
Cadmium 8.3
Chromium 157
Copper 206
Lead 233
Nickel 28.8
Vanadium 23
Zinc 219

LOW-009
Arsenic 10
Cadmium 2.3
Chromium 160
Copper 120
Lead 200
Nickel 12
Vanadium 23
Zinc 74

LOW-012
Arsenic 26
Cadmium 1.6
Chromium 560
Copper 230
Lead 410
Nickel 16
Vanadium 41
Zinc 89

LOW-011
Arsenic 20
Cadmium 1.3
Chromium 260
Copper 170
Lead 320
Nickel 14
Vanadium 30
Zinc 89

LOW-013
Arsenic 11
Cadmium 1.6
Chromium 140
Copper 120
Lead 190
Nickel 11
Vanadium 22
Zinc 72

LOW-014
Arsenic 5.4
Cadmium 1.4
Chromium 60
Copper 73
Lead 100
Nickel 8.6
Vanadium 12
Zinc 59

LOW-016
Arsenic 5.6
Cadmium 2.3
Chromium 48
Copper 46
Lead 68
Nickel 10
Vanadium 16
Zinc 62

LOW-015
Arsenic 4.7
Cadmium 0.15
Chromium 14
Copper 17
Lead 16
Nickel 8.4
Vanadium 48
Zinc 27

LOW-017
Arsenic 4.5
Cadmium 0.56
Chromium 23
Copper 22
Lead 11
Nickel 22
Vanadium 18
Zinc 49

LOW-018
Arsenic 7.6
Cadmium 0.13
Chromium 16
Copper 21
Lead 27
Nickel 5
Vanadium 9.4
Zinc 19

SO-002-BG
Arsenic 5.3
Cadmium 4
Chromium 49.3
Copper 71.4
Lead 69.8
Nickel 12.3
Vanadium 14.3
Zinc 87

SO-003-BG
Arsenic 7.4
Cadmium 1.7
Chromium 94.9
Copper 91.1
Lead 119
Nickel 13.3
Vanadium 21.2
Zinc 82

SO-044-QW
Arsenic 4.4
Cadmium 6.9
Chromium 56.2
Copper 101
Lead 111
Nickel 17.8
Vanadium 14.5
Zinc 179

SO-075-QW
Arsenic 3.5
Cadmium 3.6
Chromium 42.9
Copper 46.7
Lead 65.2
Nickel 13.4
Vanadium 11
Zinc 88.3

SO-076-QW
Arsenic 3.7
Cadmium 3.8
Chromium 82
Copper 98.1
Lead 122
Nickel 12.3
Vanadium 14.4
Zinc 80.4

UI-TT-06
>1'
Arsenic 12
Cadmium 4
Chromium 76.7
Copper 155
Nickel 21
Lead 149 — DETECT-BOLD
Vanadium 12 U — NON-DETECT
Zinc 935

Legend

- SOIL SAMPLE LOCATIONS
- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NOW OR FORMERLY OWNED BY NUNES DISPOSAL, INC.)

ANALYTE	PALs	RIDEM DIRECT CONTACT	
		RESIDENTIAL	COMMERCIAL
Arsenic	0.27	7	7
Cadmium	0.36	39	1,000
Chromium	0.4	390	10,000
Copper	50	3,100	10,000
Lead	11	150	500
Nickel	30	1,000	10,000
Vanadium	2	550	10,000
Zinc	8.5	6,000	10,000

0 250 500
SCALE IN FEET

NOTES:
1) SAMPLE LOCATIONS ARE IN THE COORDINATE SYSTEM STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2) RESULTS REPRESENT THE CUMULATIVE SURFACE SOIL (0-1' INTERVALS DEPTHS ONLY) SAMPLES COLLECTED FROM THE BEGINNING OF PHASE 1A IN 2003 THROUGH THE SUPPLEMENTAL UNNAMED ISLAND INVESTIGATION IN 2009. THE PAHs SELECTED REPRESENT THOSE MOST FREQUENTLY DETECTED AND EXCEEDING THEIR RESPECTIVE PALs.
3) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
4) ALL RESULTS ARE IN (mg/kg).

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SURFACE SOIL NATURE AND EXTENT OF CONTAMINATION SELECT METALS (mg/kg)

ARCADIS

FIGURE
4-6

CITY:(CLE) DIV/GROUP:(ENV) DB:(L.GREENE) PIC:() PM:() APM:()
PROJECT: PETERSON PURITAN PATH: G:\enviro\Common\GIS\Peterson Puritan\Cumberland Rl\RemedialInvestigationReportmxd\20120 1_Updates\PAHs_SOIL_SUB-SURFACE_black.mxd Date Saved: 9/19/2012 2:06:48 PM

SO-212-UI
1-4.5'
Benzo(a)pyrene 2830
Benzo(b)fluoranthene 2910
Benzo(g,h,i)perylene 2130
Benzo(k)fluoranthene 1980
Benzo(a)anthracene 3400
Chrysene 2260
Dibenz[a,h]anthracene 473
Indeno(1,2,3-cd)pyrene 1600

SO-100-NP
2-7'
Benzo(a)pyrene 170 U
Benzo(b)fluoranthene 120
Benzo(g,h,i)perylene 170 U
Benzo(k)fluoranthene 170 U
Benzo[a]anthracene 170 U
Chrysene 170 U
Dibenz[a,h]anthracene 170 U
Indeno(1,2,3-cd)pyrene 170 U

SO-101-NP
2-9'
Benzo(a)pyrene 140 U
Benzo(b)fluoranthene 140 U
Benzo(g,h,i)perylene 140 U
Benzo(k)fluoranthene 140 U
Benzo[a]anthracene 140 U
Chrysene 140 U
Dibenz[a,h]anthracene 140 U
Indeno(1,2,3-cd)pyrene 140 U

SO-207B-UI
1-2'
Benzo(a)pyrene 1470
Benzo(b)fluoranthene 1720
Benzo(g,h,i)perylene 1090
Benzo(k)fluoranthene 1230
Benzo[a]anthracene 1770
Chrysene 1330
Dibenz[a,h]anthracene 324
Indeno(1,2,3-cd)pyrene 973

SO-210B-UI
1.25-4'
Benzo(a)pyrene 18
Benzo(b)fluoranthene 18.2
Benzo(g,h,i)perylene 13.9
Benzo(k)fluoranthene 12.9
Benzo[a]anthracene 19.2
Chrysene 17.4
Dibenz[a,h]anthracene 3.2
Indeno(1,2,3-cd)pyrene 11

SO-104-NP
2-3.4
Benzo(a)pyrene 120
Benzo(b)fluoranthene 180
Benzo(g,h,i)perylene 120
Benzo(k)fluoranthene 150 U
Benzo[a]anthracene 100
Chrysene 120
Dibenz[a,h]anthracene 150 U
Indeno(1,2,3-cd)pyrene 88

SO-036-NP
1-5'
Benzo(a)pyrene 360
Benzo(b)fluoranthene 640
Benzo(g,h,i)perylene 380
Benzo(k)fluoranthene 190
Benzo[a]anthracene 440
Chrysene 370
Dibenz[a,h]anthracene 51
Indeno(1,2,3-cd)pyrene 190

SO-207B-UI
2-3'
Benzo(a)pyrene 1580
Benzo(b)fluoranthene 1870
Benzo(g,h,i)perylene 1270
Benzo(k)fluoranthene 971
Benzo[a]anthracene 2150
Chrysene 1420
Dibenz[a,h]anthracene 324
Indeno(1,2,3-cd)pyrene 982

UI-TT-03
>1'
Benzo(a)pyrene 1000
Benzo(b)fluoranthene 1200
Benzo(g,h,i)perylene 520
Benzo(k)fluoranthene 380
Benzo[a]anthracene 770
Chrysene 690
Dibenz[a,h]anthracene 150
Indeno(1,2,3-cd)pyrene 140

SO-206-UI
2-2'
Benzo(a)pyrene 239
Benzo(b)fluoranthene 277
Benzo(g,h,i)perylene 234
Benzo(k)fluoranthene 174
Benzo[a]anthracene 349
Chrysene 348
Dibenz[a,h]anthracene 37.8
Indeno(1,2,3-cd)pyrene 136

SO-037-NP
5-9'
Benzo(a)pyrene 1100
Benzo(b)fluoranthene 1600
Benzo(g,h,i)perylene 1100
Benzo(k)fluoranthene 630
Benzo[a]anthracene 650
Chrysene 860
Dibenz[a,h]anthracene 280
Indeno(1,2,3-cd)pyrene 900

SO-102-NP
2-8.5'
Benzo(a)pyrene 180
Benzo(b)fluoranthene 290
Benzo(g,h,i)perylene 170
Benzo(k)fluoranthene 93
Benzo[a]anthracene 210
Chrysene 240
Dibenz[a,h]anthracene 160 U
Indeno(1,2,3-cd)pyrene 130

SO-218-UI
1-5'
Benzo(a)pyrene 1690
Benzo(b)fluoranthene 1730
Benzo(g,h,i)perylene 1120
Benzo(k)fluoranthene 1160
Benzo[a]anthracene 1960
Chrysene 1600
Dibenz[a,h]anthracene 369
Indeno(1,2,3-cd)pyrene 984

SO-208B-UI
1-5'
Benzo(a)pyrene 333
Benzo(b)fluoranthene 428
Benzo(g,h,i)perylene 265
Benzo(k)fluoranthene 298
Benzo[a]anthracene 462
Chrysene 405
Dibenz[a,h]anthracene 81.2
Indeno(1,2,3-cd)pyrene 215

UI-TT-01.02
>1'
Benzo(a)pyrene 440
Benzo(b)fluoranthene 580
Benzo(g,h,i)perylene 380
Benzo(k)fluoranthene 260
Benzo[a]anthracene 380
Chrysene 450
Dibenz[a,h]anthracene 91
Indeno(1,2,3-cd)pyrene 290

SO-103-NP
2-7'
Benzo(a)pyrene 140 U
Benzo(b)fluoranthene 140 U
Benzo(g,h,i)perylene 140 U
Benzo(k)fluoranthene 140 U
Benzo[a]anthracene 140 U
Chrysene 140 U
Dibenz[a,h]anthracene 140 U
Indeno(1,2,3-cd)pyrene 140 U

SO-227B-UI
2-4'
Benzo(a)pyrene 1630
Benzo(b)fluoranthene 1860
Benzo(g,h,i)perylene 1450
Benzo(k)fluoranthene 747
Benzo[a]anthracene 1700
Chrysene 1550
Dibenz[a,h]anthracene 182
Indeno(1,2,3-cd)pyrene 681

SO-035-NP
5-9'
Benzo(a)pyrene 4600
Benzo(b)fluoranthene 5700
Benzo(g,h,i)perylene 3100
Benzo(k)fluoranthene 2100
Benzo[a]anthracene 4000
Chrysene 4700
Dibenz[a,h]anthracene 800
Indeno(1,2,3-cd)pyrene 2700

SO-219-UI
1-5'
Benzo(a)pyrene 1710
Benzo(b)fluoranthene 1590
Benzo(g,h,i)perylene 1080
Benzo(k)fluoranthene 1320
Benzo[a]anthracene 1930
Chrysene 1590
Dibenz[a,h]anthracene 375
Indeno(1,2,3-cd)pyrene 979

SO-226A-UI
6-8'
Benzo(a)pyrene 17200
Benzo(b)fluoranthene 9630
Benzo(g,h,i)perylene 8440
Benzo(k)fluoranthene 6180
Benzo[a]anthracene 14400
Chrysene 14400
Dibenz[a,h]anthracene 1730
Indeno(1,2,3-cd)pyrene 6210

SO-034-NP
6-10'
Benzo(a)pyrene 450
Benzo(b)fluoranthene 540
Benzo(g,h,i)perylene 4200 U
Benzo(k)fluoranthene 4200 U
Benzo[a]anthracene 770
Chrysene 550
Dibenz[a,h]anthracene 4200 U
Indeno(1,2,3-cd)pyrene 4200 U

SO-107-NP
2-10'
Benzo(a)pyrene 150 U
Benzo(b)fluoranthene 150 U
Benzo(g,h,i)perylene 150 U
Benzo(k)fluoranthene 150 U
Benzo[a]anthracene 150 U
Chrysene 150 U
Dibenz[a,h]anthracene 150 U
Indeno(1,2,3-cd)pyrene 150 U

SO-220-UI
1-4.5'
Benzo(a)pyrene 1680
Benzo(b)fluoranthene 1730
Benzo(g,h,i)perylene 1030
Benzo(k)fluoranthene 1320
Benzo[a]anthracene 2000
Chrysene 1680
Dibenz[a,h]anthracene 360
Indeno(1,2,3-cd)pyrene 958

SO-033-NP
1-5'
Benzo(a)pyrene 910
Benzo(b)fluoranthene 1300
Benzo(g,h,i)perylene 690
Benzo(k)fluoranthene 520
Benzo[a]anthracene 830
Chrysene 1000
Dibenz[a,h]anthracene 160
Indeno(1,2,3-cd)pyrene 520

SO-225A-UI
1.5-5'
Benzo(a)pyrene 5760
Benzo(b)fluoranthene 6710
Benzo(g,h,i)perylene 1910
Benzo(k)fluoranthene 2630
Benzo[a]anthracene 8720
Chrysene 6290
Dibenz[a,h]anthracene 719
Indeno(1,2,3-cd)pyrene 1930

SO-224A-UI
1-5'
Benzo(a)pyrene 214
Benzo(b)fluoranthene 227
Benzo(g,h,i)perylene 196
Benzo(k)fluoranthene 145
Benzo[a]anthracene 525
Chrysene 779
Dibenz[a,h]anthracene 66.7 U
Indeno(1,2,3-cd)pyrene 79.2

SO-108-NP
3-9'
Benzo(a)pyrene 3600
Benzo(b)fluoranthene 3000
Benzo(g,h,i)perylene 2500
Benzo(k)fluoranthene 1800
Benzo[a]anthracene 4200
Chrysene 3800
Dibenz[a,h]anthracene 710
Indeno(1,2,3-cd)pyrene 2300

SO-222-UI
1-3'
Benzo(a)pyrene 8.64 U
Benzo(b)fluoranthene 8.64 U
Benzo(g,h,i)perylene 8.64 U
Benzo(k)fluoranthene 8.64 U
Benzo[a]anthracene 8.64 U
Chrysene 8.64 U
Dibenz[a,h]anthracene 8.64 U
Indeno(1,2,3-cd)pyrene 8.64 U

UI-TT-10
>1'
Benzo(a)pyrene 1000
Benzo(b)fluoranthene 1400
Benzo(g,h,i)perylene 665
Benzo(k)fluoranthene 390
Benzo[a]anthracene 1300
Chrysene 1400
Dibenz[a,h]anthracene 190
Indeno(1,2,3-cd)pyrene 570

SO-105-NP
2-3.4'
Benzo(a)pyrene 21000
Benzo(b)fluoranthene 400
Benzo(g,h,i)perylene 13000
Benzo(k)fluoranthene 4900
Benzo[a]anthracene 22000
Chrysene 18000
Dibenz[a,h]anthracene 4400
Indeno(1,2,3-cd)pyrene 12000

SO-203-UI
5-7'
Benzo(a)pyrene 140
Benzo(b)fluoranthene 138
Benzo(g,h,i)perylene 81.3
Benzo(k)fluoranthene 102
Benzo[a]anthracene 168
Chrysene 154
Dibenz[a,h]anthracene 23.7
Indeno(1,2,3-cd)pyrene 72.6

SO-106-NP
2-5'
Benzo(a)pyrene 89
Benzo(b)fluoranthene 140
Benzo(g,h,i)perylene 83
Benzo(k)fluoranthene 150 U
Benzo[a]anthracene 83
Chrysene 92
Dibenz[a,h]anthracene 150 U
Indeno(1,2,3-cd)pyrene 150 U

SO-223F-UI
11-12'
Benzo(a)pyrene 7.88 U
Benzo(b)fluoranthene 7.88 U
Benzo(g,h,i)perylene 7.88 U
Benzo(k)fluoranthene 7.88 U
Benzo[a]anthracene 7.88 U
Chrysene 7.88 U
Dibenz[a,h]anthracene 7.88 U
Indeno(1,2,3-cd)pyrene 7.88 U

UI-TT-06
>1'
Benzo(a)pyrene 790
Benzo(b)fluoranthene 1200
Benzo(g,h,i)perylene 830
Benzo(k)fluoranthene 220
Benzo[a]anthracene 1600
Chrysene 980
Dibenz[a,h]anthracene 180
Indeno(1,2,3-cd)pyrene 610

SO-201-UI
4-6'
Benzo(a)pyrene 685
Benzo(b)fluoranthene 870
Benzo(g,h,i)perylene 425
Benzo(k)fluoranthene 582
Benzo[a]anthracene 1280
Chrysene 1200
Dibenz[a,h]anthracene 125
Indeno(1,2,3-cd)pyrene 389

SO-204-UI
2-4'
Benzo(a)pyrene 6500
Benzo(b)fluoranthene 6540
Benzo(g,h,i)perylene 2800
Benzo(k)fluoranthene 5950
Benzo[a]anthracene 6670
Chrysene 5400
Dibenz[a,h]anthracene 1030
Indeno(1,2,3-cd)pyrene 2660

SO-200-UI
5-6'
Benzo(a)pyrene 6.35
Benzo(b)fluoranthene 10
Benzo(g,h,i)perylene 6.08
Benzo(k)fluoranthene 5.06
Benzo[a]anthracene 8.07
Chrysene 8.92
Dibenz[a,h]anthracene 4.28 U
Indeno(1,2,3-cd)pyrene 4.54

SO-228-UI
12-14'
Benzo(a)pyrene 48
Benzo(b)fluoranthene 57.7
Benzo(g,h,i)perylene 37.9
Benzo(k)fluoranthene 31.9
Benzo[a]anthracene 72.4
Chrysene 64.8
Dibenz[a,h]anthracene 8.96
Indeno(1,2,3-cd)pyrene 28

SO-205-UI
2-4'
Benzo(a)pyrene 5320
Benzo(b)fluoranthene 6120
Benzo(g,h,i)perylene 3290
Benzo(k)fluoranthene 3600
Benzo[a]anthracene 6170
Chrysene 4470
Dibenz[a,h]anthracene 851
Indeno(1,2,3-cd)pyrene 2700

Legend

- SOIL SAMPLE LOCATIONS
- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NOW OR FORMERLY OWNED BY NUNES DISPOSAL, INC.)

SO-W10-DF
Benzo(a)pyrene 230
Benzo(b)fluoranthene 310
Benzo(g,h,i)perylene 95
Benzo(k)fluoranthene 150
Benzo[a]anthracene 200
Chrysene 240 — DETECT-BOLD
Dibenz[a,h]anthracene 390 U — NON-DETECT
Indeno(1,2,3-cd)pyrene 100

ANALYTE	PALs	RIDEM DIRECT CONTACT	
		RESIDENTIAL	COMMERCIAL
Benzo(a)pyrene	15	400	800
Benzo(b)fluoranthene	150	900	7,800
Benzo(g,h,i)perylene	800	800	10,000,000
Benzo(k)fluoranthene	1,500	900	78,000
Benzo[a]anthracene	150	900	7,800
Chrysene	400	400	780,000
Dibenz[a,h]anthracene	15	400	800
Indeno(1,2,3-cd)pyrene	150	900	7,800

0 250 500
SCALE IN FEET

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3) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
4) ALL RESULTS ARE IN (µg/kg).

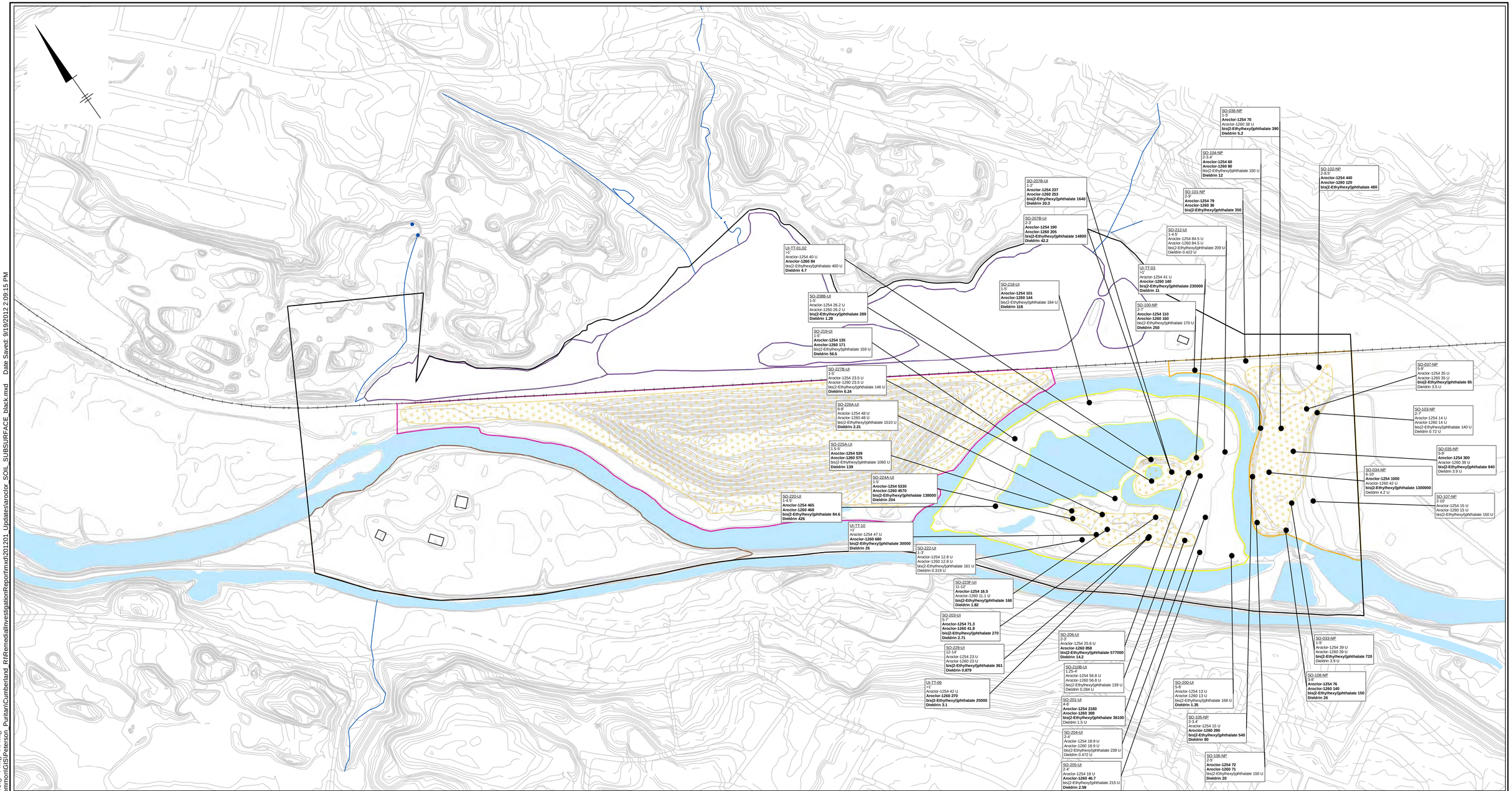
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SUBSURFACE SOIL NATURE AND EXTENT OF CONTAMINATION SELECT PAHs (µg/kg)

ARCADIS

FIGURE
4-7

CITY:(CLE) DIV/GROUP:(ENV) DB:(L.GREENE) PIC:() PM:() APM:()
PROJECT: PETERSON PURITAN PATH: G:\enviro\Common\GIS\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\20120201_UpdatesSoil_SUBSURFACE_black.mxd Date Saved: 9/19/2012 2:09:15 PM



Legend

- SOIL SAMPLE LOCATIONS
- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NOW OR FORMERLY OWNED BY NUNES DISPOSAL, INC.)

ANALYTE	PALs	RIDEM DIRECT CONTACT	
		RESIDENTIAL	COMMERCIAL
Aroclor-1254	110	10,000	10,000
Aroclor-1260	220	10,000	10,000
bis(2-Ethylhexyl)phthalate	35,000	46,000	410,000
Dieldrin	0.032	40	400

SO-001-BG
Aroclor-1254 42 U
Aroclor-1260 210 — DETECT-BOLD
bis(2-Ethylhexyl)phthalate 410 U — NON-DETECT
Dieldrin 77

0 250 500
SCALE IN FEET

NOTES:
1) SAMPLE LOCATIONS ARE IN THE COORDINATE SYSTEM STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2) RESULTS REPRESENT THE CUMULATIVE SUBSURFACE SOIL (>1' INTERVALS DEPTHS ONLY) SAMPLES COLLECTED FROM THE BEGINNING OF PHASE 1A IN 2003 THROUGH THE SUPPLEMENTAL UNNAMED ISLAND INVESTIGATION IN 2009. THE CONSTITUENTS SELECTED REPRESENT THOSE MOST FREQUENTLY DETECTED AND EXCEEDING THEIR RESPECTIVE PALs.
3) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
4) ALL RESULTS ARE IN (µg/kg).

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SUBSURFACE SOIL NATURE AND EXTENT OF CONTAMINATION SELECT SVOCs, PESTICIDES, AND PCBs (µg/kg)

ARCADIS

FIGURE
4-8

CITY:(CLE) DIV/GROUP:(ENV) DB:(L.GREENE) PIC:() PM:() APM:()
PROJECT: PETERSON PURITAN PATH: G:\enviro\Common\GIS\Peterson_Puritan\Cumberland_RI\Remedial\Investigation\Report\mxd\20120l_Updates\metals_SOIL_SUBSURFACE\v2_black.mxd Date Saved: 9/19/2012 2:09:34 PM

SO-207B-UI
1-2'
Arsenic 9.62
Cadmium 12
Chromium 82
Copper 1650
Lead 2380
Nickel 123
Vanadium 49.9
Zinc 2580

SO-207B-UI
2-3'
Arsenic 8.98
Cadmium 2.75
Chromium 88.3
Copper 159
Lead 360
Nickel 29.1
Vanadium 14
Zinc 429

SO-208B-UI
1-5'
Arsenic 12.3
Cadmium 2.45
Chromium 21.7
Copper 310
Lead 9640
Nickel 19.6
Vanadium 27.8
Zinc 1730

UI-TT-01.02
>1'
Arsenic 15.8
Cadmium 21.8
Chromium 68.4
Copper 579
Nickel 57.2
Lead 2230
Vanadium 20.8
Zinc 1570

SO-100-NP
2-3'
Arsenic 8.3
Cadmium 0.79
Chromium 41
Copper 89
Lead 51
Nickel 8.6
Vanadium 15
Zinc 49

SO-206-UI
2-3'
Arsenic 6.19
Cadmium 2.69
Chromium 59.2
Copper 1050
Lead 375
Nickel 11.2
Vanadium 10.1
Zinc 630

UI-TT-03
>1'
Arsenic 25.5
Cadmium 9.3
Chromium 229
Copper 474
Nickel 51.7
Lead 1170
Vanadium 22.6
Zinc 1370

SO-101-NP
2-9'
Arsenic 2.9
Cadmium 0.3
Chromium 23
Copper 28
Lead 24
Nickel 7.4
Vanadium 9.5
Zinc 46

SO-102-NP
2-8.5'
Arsenic 5.8
Cadmium 1.8
Chromium 27
Copper 85
Nickel 11
Lead 410
Vanadium 14
Zinc 600

SO-104-NP
2-3.4'
Arsenic 4.5
Cadmium 1.6
Chromium 30
Copper 37
Nickel 9.8
Lead 34
Vanadium 10
Zinc 59

SO-037-NP
5-9'
Arsenic 4.4
Cadmium 0.057
Chromium 6.1
Copper 15
Nickel 10.4
Lead 19.8
Vanadium 11 U
Zinc 194

SO-103-NP
2-7'
Arsenic 2.8
Cadmium 0.12
Chromium 5.3
Copper 24
Nickel 4.6
Lead 10
Vanadium 6.5
Zinc 110

SO-036-NP
1-5'
Arsenic 6.1
Cadmium 1.1
Chromium 46.8
Copper 36.1
Nickel 9 U
Lead 48.4
Vanadium 13.5
Zinc 143

SO-035-NP
5-9'
Arsenic 10.9
Cadmium 4.8
Chromium 41.5
Copper 506
Nickel 38.3
Lead 2270
Vanadium 101
Zinc 1540

SO-034-NP
6-10'
Arsenic 9
Cadmium 6
Chromium 209
Copper 644
Nickel 122
Lead 433
Vanadium 28.8
Zinc 2470

SO-107-NP
2-10'
Arsenic 6.1
Cadmium 0.036 U
Chromium 8.4
Copper 5.7
Nickel 6.1
Lead 10
Vanadium 9.4
Zinc 20

SO-033-NP
1-5'
Arsenic 5.7
Cadmium 1.5
Chromium 13.5
Copper 58.4
Nickel 9 U
Lead 5460
Vanadium 18
Zinc 1060

SO-108-NP
3-8'
Arsenic 7.3
Cadmium 1.6
Chromium 47
Copper 52
Nickel 15
Lead 1200
Vanadium 15
Zinc 660

SO-105-NP
2.5-3.4'
Arsenic 5.4
Cadmium 4.2
Chromium 45
Copper 63
Nickel 24
Lead 200
Vanadium 19
Zinc 680

SO-106-NP
2-5'
Arsenic 6.6
Cadmium 1.2
Chromium 25
Copper 30
Nickel 9.6
Lead 24
Vanadium 12
Zinc 70

SO-200-UI
5-6'
Arsenic 1.44
Cadmium 0.107
Chromium 6.11
Copper 2.9
Lead 2.49
Nickel 4.44
Vanadium 5.82
Zinc 85.7

SO-219-UI
1-5'
Arsenic 7.64
Cadmium 0.29
Chromium 127
Copper 59.5
Lead 92.3
Nickel 5.22
Vanadium 11
Zinc 40.1

SO-218-UI
1-5'
Arsenic 15.5
Cadmium 0.638
Chromium 202
Copper 107
Lead 168
Nickel 7.32
Vanadium 17
Zinc 50

SO-227B-UI
1-5'
Arsenic 4.15
Cadmium 0.798
Chromium 44.3
Copper 30
Lead 49.2
Nickel 8.51
Vanadium 10
Zinc 187

SO-226A-UI
6-9'
Arsenic 22.7
Cadmium 1.69
Chromium 477
Copper 306
Lead 1130
Nickel 13.5
Vanadium 18.2
Zinc 435

SO-225A-UI
1.5-5'
Arsenic 33.9
Cadmium 5.11
Chromium 423
Copper 240
Lead 278
Nickel 24.3
Vanadium 23.5
Zinc 842

SO-220-UI
1-4.5'
Arsenic 10
Cadmium 0.767
Chromium 166
Copper 131
Lead 144
Nickel 11.8
Vanadium 19.4
Zinc 61.1

SO-224A-UI
1-5'
Arsenic 11.8
Cadmium 5.1
Chromium 460
Copper 1030
Lead 182
Nickel 248
Vanadium 18.7
Zinc 2050

SO-222-UI
1-3'
Arsenic 2.33
Cadmium 1.15
Chromium 10.7
Copper 16.3
Lead 3.94
Nickel 7.18
Vanadium 9.02
Zinc 61.6

UI-TT-10
>1'
Arsenic 14.6
Cadmium 5.5
Chromium 471
Copper 492
Nickel 158
Lead 473
Vanadium 15.9
Zinc 586

SO-223F-UI
11-12'
Arsenic 5.3
Cadmium 0.117
Chromium 13
Copper 61.5
Lead 6.15
Nickel 26.9
Vanadium 10.2
Zinc 70

UI-TT-06
>1'
Arsenic 12
Cadmium 4
Chromium 76.7
Copper 155
Nickel 21
Lead 149
Vanadium 12 U
Zinc 935

SO-228-UI
12-14'
Arsenic 1.6
Cadmium 0.084
Chromium 6.68
Copper 9.78
Lead 4.4
Nickel 7.78
Vanadium 9.24
Zinc 28.5

SO-203-UI
5-7'
Arsenic 5.95
Cadmium 0.946
Chromium 30.1
Copper 65.5
Lead 30
Nickel 7.44
Vanadium 9.12
Zinc 94.1

SO-201-UI
4-6'
Arsenic 6.49
Cadmium 5.18
Chromium 20
Copper 71.4
Lead 1230
Nickel 17.1
Vanadium 9.15
Zinc 248

SO-205-UI
2-4'
Arsenic 57.4
Cadmium 3.32
Chromium 746
Copper 318
Lead 278
Nickel 10.5
Vanadium 25.9
Zinc 120

SO-210B-UI
1.25-4'
Arsenic 4.03
Cadmium 0.13
Chromium 56.5
Copper 25.3
Lead 8.47
Nickel 12.3
Vanadium 10.3
Zinc 49.7

SO-212-UI
1-4.5'
Arsenic 26.3
Cadmium 0.463
Chromium 276
Copper 202
Lead 245
Nickel 8.46
Vanadium 15.9
Zinc 74.9

SO-204-UI
2-4'
Arsenic 50.4
Cadmium 6.57
Chromium 776
Copper 292
Lead 340
Nickel 51.4
Vanadium 23.4
Zinc 2210

Legend

- SOIL SAMPLE LOCATIONS
- OU2 BOUNDARY
- RAILROAD
- BURIED WASTE
- SURFACE WATER
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NOW OR FORMERLY OWNED BY NUNES DISPOSAL, INC.)

UI-TT-06
>1'
Arsenic 12
Cadmium 4
Chromium 76.7
Copper 155
Nickel 21
Lead 149 — DETECT-BOLD
Vanadium 12 U — NON-DETECT
Zinc 935

ANALYTE	PALs	RIDEM DIRECT CONTACT	
		RESIDENTIAL	COMMERCIAL
Arsenic	0.27	7	7
Cadmium	0.36	39	1,000
Chromium	0.4	390	10,000
Copper	50	3,100	10,000
Lead	11	150	500
Nickel	30	1,000	10,000
Vanadium	2	550	10,000
Zinc	8.5	6,000	10,000

0 250 500
SCALE IN FEET

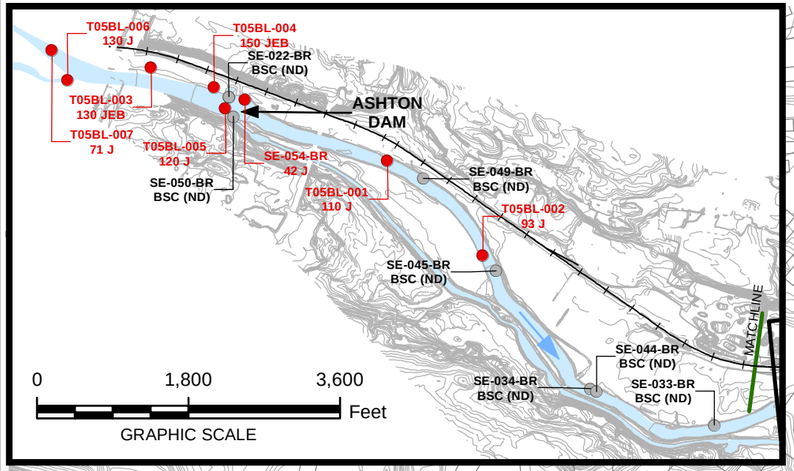
NOTES:
1) SAMPLE LOCATIONS ARE IN THE COORDINATE SYSTEM STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2) RESULTS REPRESENT THE CUMULATIVE SUBSURFACE SOIL (>1' INTERVALS DEPTHS ONLY) SAMPLES COLLECTED FROM THE BEGINNING OF PHASE 1A IN 2003 THROUGH THE SUPPLEMENTAL UNNAMED ISLAND INVESTIGATION IN 2009. THE CONSTITUENTS SELECTED REPRESENT THOSE MOST FREQUENTLY DETECTED AND EXCEEDING THEIR RESPECTIVE PALs.
3) PALs ARE TAKEN DIRECTLY FROM THE 2009 QAPP REVISION COMPLETED AND APPROVED PRIOR TO THE 2009 UNNAMED ISLAND SUPPLEMENTAL SAMPLING EVENT.
4) ALL RESULTS ARE IN (mg/kg).

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SUBSURFACE SOIL NATURE AND EXTENT OF CONTAMINATION SELECT METALS (mg/kg)

ARCADIS

FIGURE
4-9



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW

- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR ACETONE IS 8.7 µg/kg.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

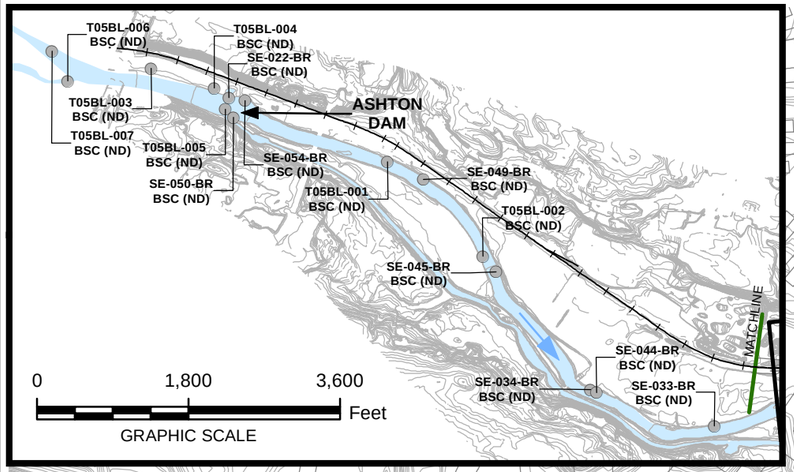
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - ACETONE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-10

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Acetone.mxd



SE-015-WT BSC (ND)
SE-059-WT BSC (ND)
SE-062-WT BSC (ND)
SE-014-WT BSC (ND)
SE-012-WT BSC (ND)
T05WB-002 BSC (ND)
SE-060-WT BSC (ND)
SE-057-WT BSC (ND)
SE-053-WT BSC (ND)
SE-010-WT BSC (ND)
SE-061-WT BSC (ND)
T05WB-001 BSC (ND)
SE-011-WT BSC (ND)
WETLAND B
WETLAND A
SE-058-WT BSC (ND)
SE-009-WT BSC (ND)
SE-013-WT BSC (ND)
WETLAND C
SE-063-WT BSC (ND)
SE-018-WT BSC (ND)
SE-017-WT BSC (ND)
T05BR-003 BSC (ND)
SE-021-NP BSC (ND)
SE-052-WT BSC (ND)
T05WD-003 BSC (ND)
WETLAND D
SE-028-BR BSC (ND)
SE-027-BR BSC (ND)
SE-069-NP 67 J
SE-016-WT BSC (ND)
SE-087-UI BSC (ND)
SE-079-UI 74.5 J
POND I
T05PA-001 BSC (ND)
T05BR-005 BSC (ND)
SE-051-DF BSC (ND)
SE-055-WT BSC (ND)
POND N
SE-048-BR BSC (ND)
SE-032-BR BSC (ND)
SE-020-LF BSC (ND)
SE-086-UI BSC (ND)
SE-002-UI BSC (ND)
T05PA-003 BSC (ND)
SE-006-UI BSC (ND)
SE-080-UI BSC (ND)
SE-085-UI BSC (ND)
SE-078-UI 44 J
POND C
POND E
T05BR-002 BSC (ND)
SE-001-UI BSC (ND)
SE-046-BR BSC (ND)
POND A
SE-041-BR BSC (ND)
SE-003-UI BSC (ND)
T05PD-002 BSC (ND)
SE-070-LF BSC (ND)
POND B
SE-074-LF BSC (ND)
SE-043-BR BSC (ND)
SE-073-LF BSC (ND)
SE-019-LF BSC (ND)
SE-029-BR BSC (ND)
POND D
SE-007-UI BSC (ND)
T05BR-006 BSC (ND)
SE-047-BR BSC (ND)
T05BR-004 BSC (ND)
SE-005-UI BSC (ND)
SE-084-UI BSC (ND)
SE-076-UI BSC (ND)
SE-026-BR BSC (ND)
SE-031-BR BSC (ND)
SE-077-UI BSC (ND)
SE-075-UI BSC (ND)
T05BR-001 BSC (ND)
T05PF-004 BSC (ND)
POND P
SE-004-UI BSC (ND)
SE-064-BR BSC (ND)
SE-042-BR BSC (ND)
PRATT DAM
SE-024-BR BSC (ND)
SE-083-BR BSC (ND)
SE-030-BR BSC (ND)
BLACKSTONE RIVER
BLACKSTONE CANAL
SE-023-BR BSC (ND)
SE-082-BR BSC (ND)
SE-072-BR BSC (ND)
SE-065-BR BSC (ND)
(BACKWATER)
POND F
SE-025-BR BSC (ND)
SE-081-BR BSC (ND)
SE-008-BR BSC (ND)
SE-071-BR BSC (ND)
SE-068-BR BSC (ND)
T05BR-007 BSC (ND)
SE-067-BR BSC (ND)
SE-066-BR BSC (ND)
MATCHLINE
0
400
800
Feet
GRAPHIC SCALE

LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR ACETOPHENONE IS 3.3 µg/kg.

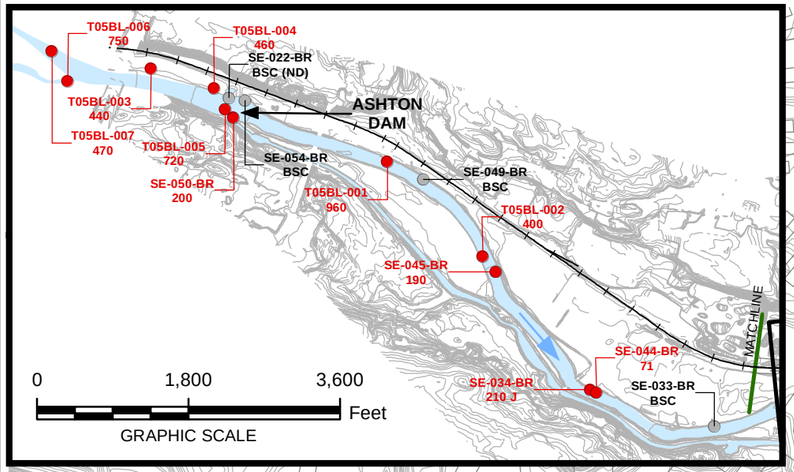
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - ACETOPHENONE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-11



SE-015-WT 180 J
SE-059-WT BSC
SE-062-WT 390 J
SE-012-WT 250 J
SE-014-WT 62
T05WB-002 360
SE-060-WT 260 J
SE-057-WT 87 J
SE-061-WT BSC
T05WB-001 BSC
SE-053-WT 300 J
SE-010-WT 130 J
SE-011-WT BSC
WETLAND B
WETLAND A
SE-058-WT BSC
SE-009-WT BSC
SE-013-WT BSC (ND)
WETLAND C
SE-063-WT 140 J
SE-018-WT BSC
SE-017-WT BSC
T05BR-003 720
SE-021-NP 500 J
SE-052-WT BSC (ND)
T05WD-003 BSC
WETLAND D
SE-028-BR BSC
SE-027-BR 1300
SE-016-WT BSC
SE-055-WT BSC
SE-051-DF 400
SE-087-UI 1200
SE-079-UI 555
SE-069-NP 405
POND I
T05BR-005 880
T05PA-001 420
SE-086-UI BSC (ND)
SE-002-UI 240 J
SE-048-BR BSC
POND N
SE-032-BR 180 J
SE-020-LF 400 J
POND C
T05PA-003 680
SE-080-UI 630 J
SE-078-UI 480
SE-006-UI 99
POND E
SE-046-BR BSC
T05BR-002 BSC
SE-041-BR 310 J
POND A
SE-085-UI 210
SE-001-UI 310 J
SE-070-LF 290 J
POND B
SE-074-LF 670
SE-003-UI 64 J
T05PD-002 480 J
SE-043-BR BSC
T05BR-006 610 J
SE-073-LF 440 J
SE-019-LF 200 J
SE-029-BR BSC
SE-005-UI 180 J
SE-084-UI 210 J
SE-076-UI 340 J
POND D
SE-007-UI 540
SE-047-BR 1100
T05BR-004 340 J
SE-031-BR 890
SE-077-UI 120 J
SE-004-UI 140 J
SE-075-UI 270 J
SE-026-BR 591 J
T05PF-004 320
POND P
BLACKSTONE RIVER
SE-030-BR 180 J
SE-064-BR 88
T05BR-001 790 J
PRATT DAM
SE-042-BR BSC
SE-024-BR 250 J
SE-083-BR 450 J
BLACKSTONE CANAL
SE-023-BR 1500
SE-072-BR 310
SE-025-BR 1200 J
SE-071-BR 440
SE-068-BR 150 J
(BACKWATER)
SE-065-BR BSC
SE-082-BR 170 J
POND F
SE-081-BR 470 J
SE-008-BR 220 J
T05BR-007 BSC (ND)
SE-067-BR BSC (ND)
SE-066-BR BSC
0
400
800
Feet
GRAPHIC SCALE

LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR ANTHRACENE IS 57 µg/kg.

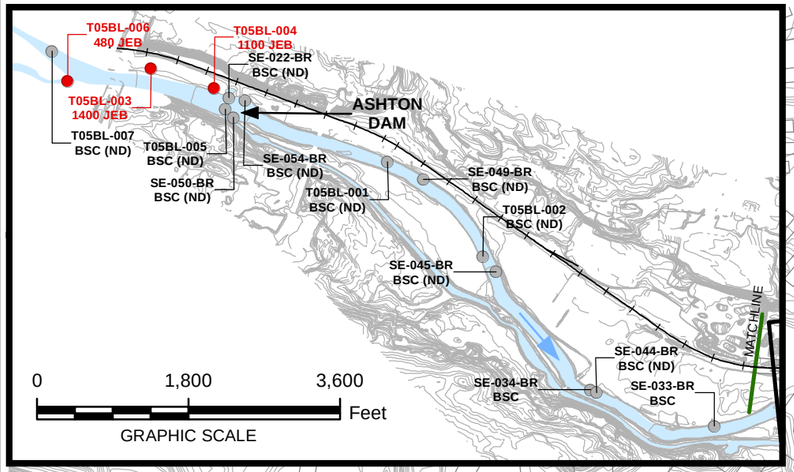
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - ANTHRACENE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-12

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Anthracene.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR AROCLOR-1254 IS 110 µg/kg.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

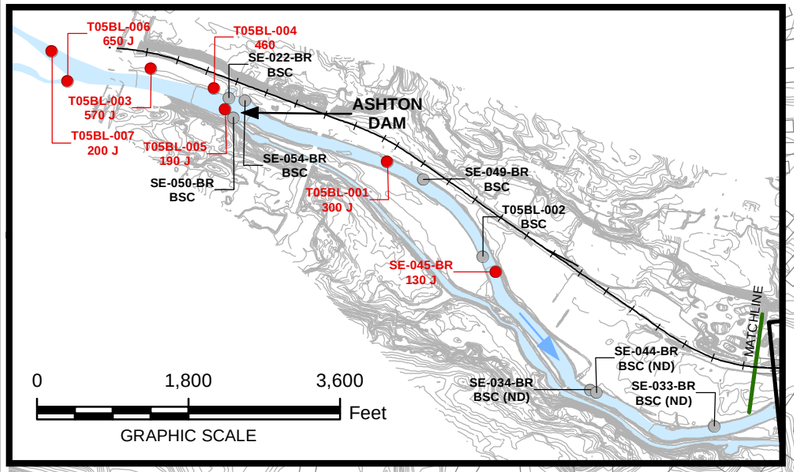
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - AROCLOR-1254 (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-13

6/15/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Aroclor1254.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR AROCLOR-1260 IS 110 µg/kg.

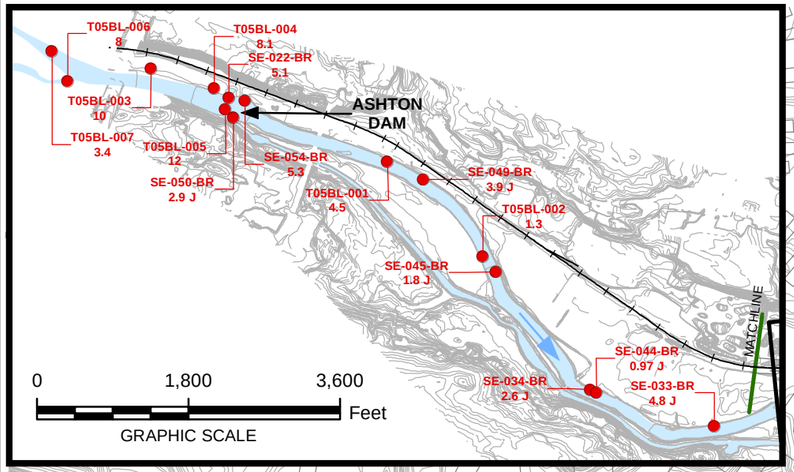
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - AROCLOR-1260 (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-14

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.50 0)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Aroclor1260.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR ARSENIC IS 0.39 mg/kg.

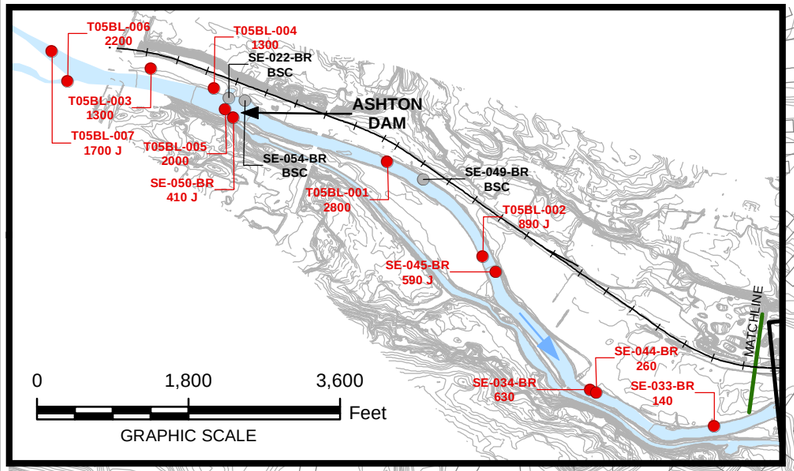
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - ARSENIC (mg/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 4-15

6/14/07/ SYR-85 MTK EAb
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Arsenic.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION

RESULTS:

- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR BENZO (A) ANTHRACENE IS 108 µg/kg.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

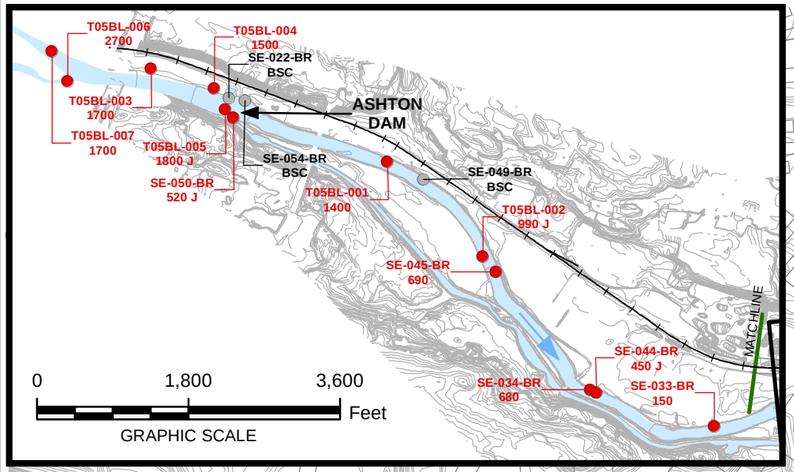
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES BENZO (A) ANTHRACENE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-16

11/7/06 SYR-85 MTK
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Benzo-A-Anthracene.mxd



SE-015-WT 570 J
SE-059-WT 160
SE-062-WT 1600 J
SE-014-WT 290
SE-012-WT 1200
T05WB-002 990
SE-060-WT 1300 J
SE-057-WT 410 J
SE-061-WT 100
T05WB-001 BSC
SE-010-WT 1200
SE-053-WT 3100
WETLAND B
WETLAND A
SE-011-WT 96
SE-058-WT 97
SE-009-WT BSC
SE-013-WT 90 J
WETLAND C
SE-063-WT 680 J
SE-018-WT 110
SE-017-WT 100
T05BR-003 2100
SE-021-NP 2000
SE-027-BR 4500
SE-028-BR BSC
SE-052-WT BSC
T05WD-003 65 J
WETLAND D
SE-016-WT 100
SE-051-DF 980
SE-055-WT 140
SE-087-UI 3000
SE-079-UI 2450
SE-069-NP 1300
POND I
T05BR-005 3600
T05PA-001 1200
SE-086-UI BSC (ND)
SE-002-UI 1100
SE-006-UI 420
T05PA-003 2300
SE-080-UI 2600
SE-078-UI 2200
POND E
SE-046-BR BSC
POND A
SE-085-UI 1100 J
SE-001-UI 1500 J
SE-048-BR 150
SE-032-BR 730
POND N
SE-020-LF 1400
POND C
T05BR-002 150 J
SE-041-BR 370 J
SE-003-UI 315
T05PD-002 1200 J
SE-070-LF 1100
SE-074-LF 1700
POND B
SE-073-LF 1800
SE-019-LF 880 J
SE-043-BR 150
T05BR-006 1900 J
SE-047-BR 1700
SE-029-BR 175 J
SE-005-UI 610
SE-084-UI 540
SE-076-UI 1400
POND D
SE-007-UI 1800 J
SE-026-BR 955 J
SE-031-BR 1700
T05BR-004 1000 J
SE-077-UI 400 J
SE-004-UI 420
SE-075-UI 1000
T05BR-001 1900 J
T05PF-004 890
POND P
SE-064-BR 310 J
SE-024-BR 790
SE-042-BR BSC
SE-083-BR 1100
PRATT DAM
BLACKSTONE RIVER
SE-030-BR 380
BLACKSTONE CANAL
SE-023-BR 710
SE-082-BR 760
SE-072-BR 310
SE-065-BR 72 J
(BACKWATER)
POND F
SE-025-BR 1900 J
SE-071-BR 1100
SE-068-BR 610
SE-008-BR 440 J
SE-081-BR 1800
T05BR-007 BSC (ND)
SE-067-BR BSC
SE-066-BR 150 J
0
400
800
Feet
GRAPHIC SCALE

LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR BENZO (A) PYRENE IS 62 µg/kg.

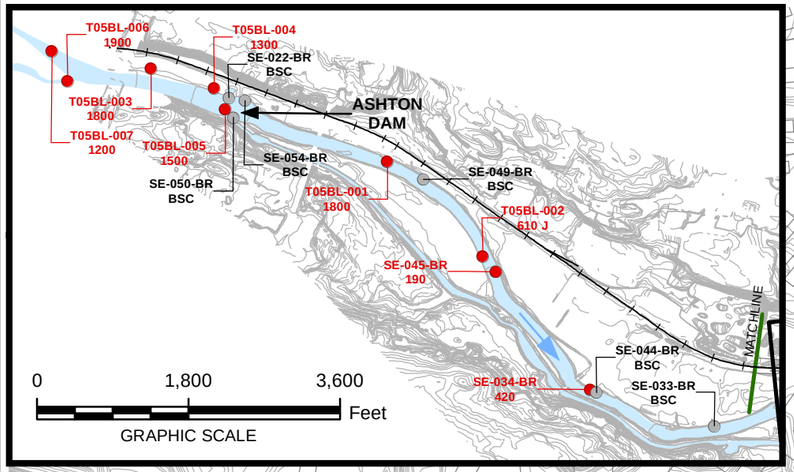
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - BENZO (A) PYRENE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 4-17

6/15/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxdSediment - Benzo-A-Pyrene.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR BENZO (G,H,I) PERYLENE IS 170 µg/kg.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

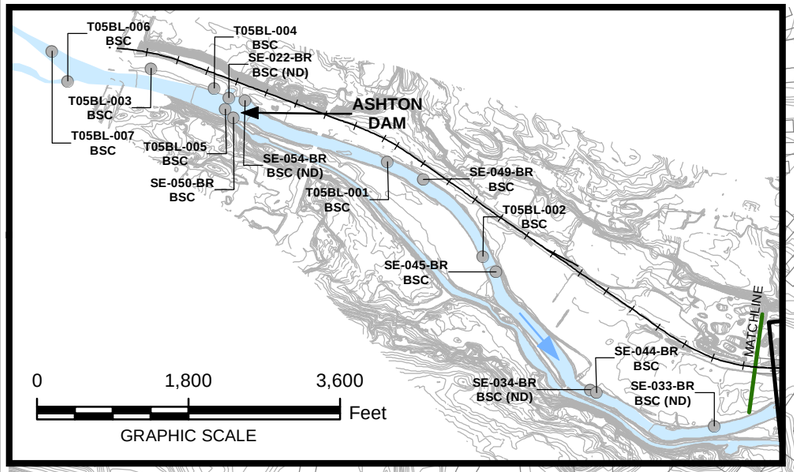
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES BENZO (G,H,I) PERYLENE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-18

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Benzo-ghi-Perylene.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR BIS(2-ETHYLHEXYL)PHTHALATE IS 35,000 µg/kg.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

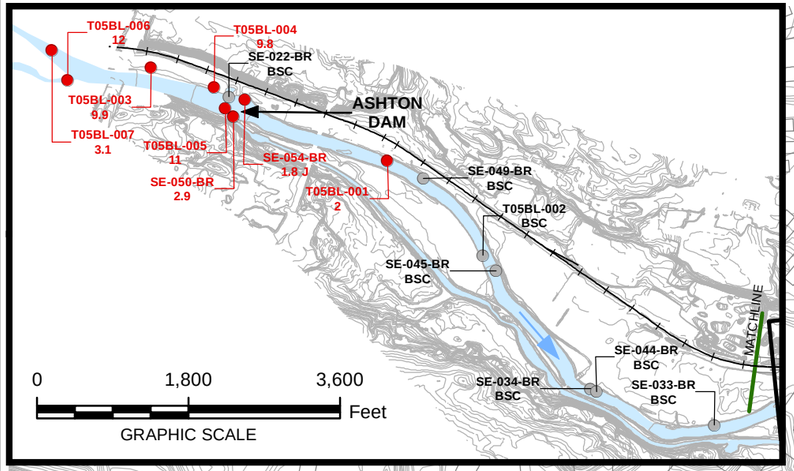
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES BIS(2-ETHYLHEXYL)PHTHALATE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 4-19

11/9/06 SYR-85 MTK
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Bis-2-ethylhexyl-phthalate.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW

- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR CADMIUM IS 0.99 mg/kg.

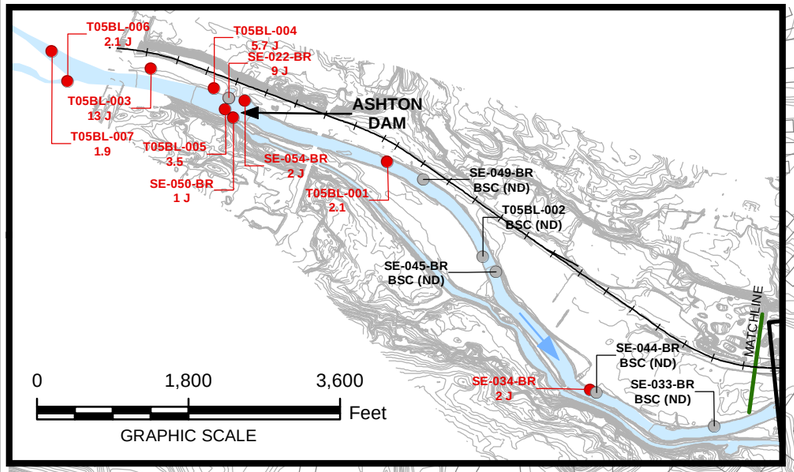
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - CADMIUM (mg/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 4-20

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Cadmium.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW

- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR CARBON DISULFIDE IS 0.85 µg/kg.

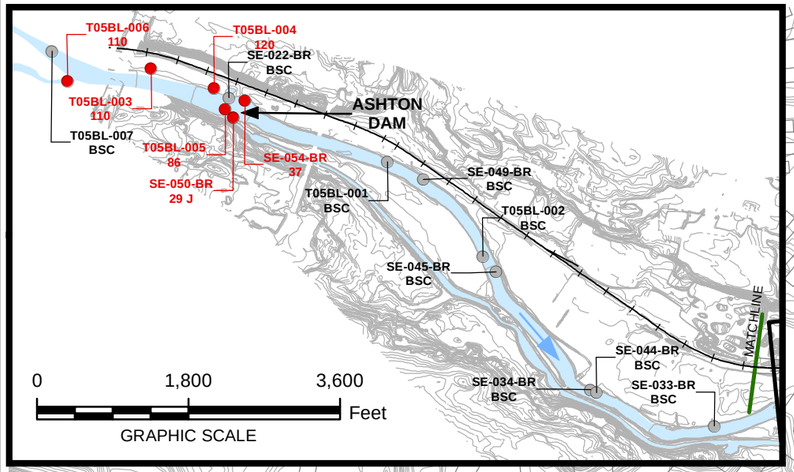
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - CARBON DISULFIDE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-21

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Carbon Disulfide.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR CHROMIUM IS 22 mg/kg.

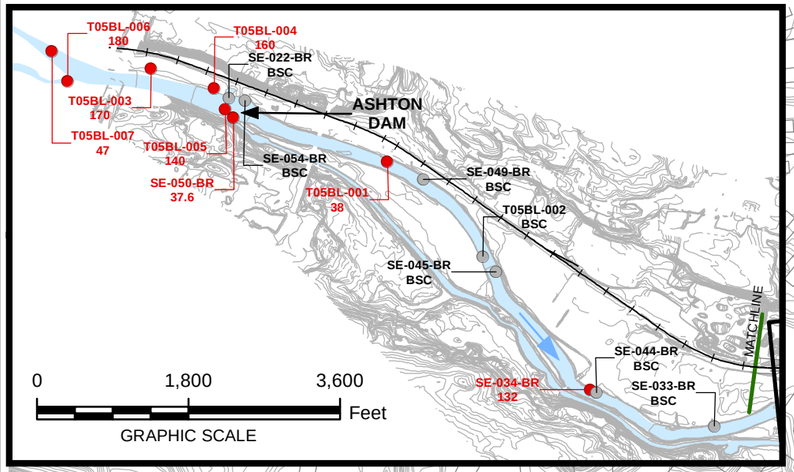
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - CHROMIUM (mg/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-22

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Chromium.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR COPPER IS 28 mg/kg.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

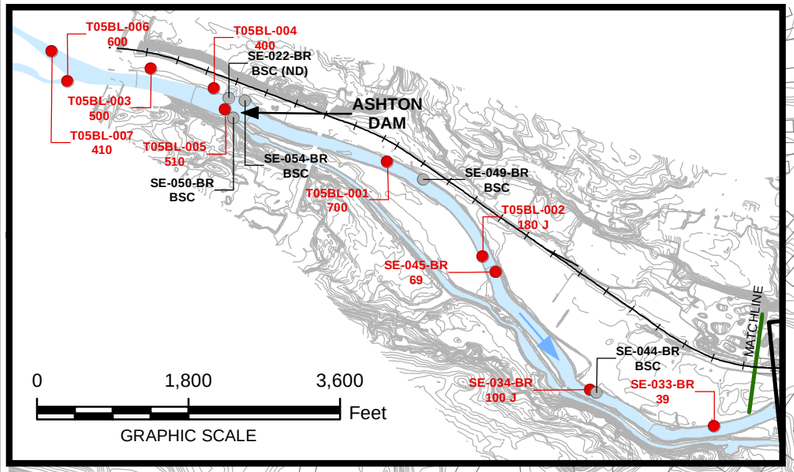
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - COPPER (mg/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-23

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Copper.mxd



SE-015-WT BSC (ND)
SE-059-WT BSC
SE-062-WT 63 J
SE-012-WT BSC (ND)
SE-014-WT 62
T05WB-002 270
SE-060-WT 52 J
SE-057-WT BSC
SE-053-WT 630
SE-010-WT BSC (ND)
SE-061-WT BSC
T05WB-001 BSC
SE-011-WT BSC
WETLAND B
WETLAND A
SE-058-WT BSC
SE-009-WT BSC (ND)
SE-013-WT BSC (ND)
WETLAND C
SE-063-WT 33 J
SE-018-WT BSC
SE-017-WT BSC
T05BR-003 470
SE-021-NP BSC (ND)
SE-052-WT BSC (ND)
T05WD-003 BSC
WETLAND D
SE-016-WT BSC
SE-051-DF 94 J
SE-055-WT BSC
SE-028-BR BSC
SE-027-BR 390 J
SE-069-NP 155 J
SE-087-UI 490
SE-079-UI 415 J
T05PA-001 250
POND I
T05BR-005 870
POND N
SE-032-BR 110 J
SE-048-BR BSC
SE-020-LF BSC (ND)
SE-086-UI BSC (ND)
SE-002-UI BSC (ND)
T05PA-003 490
SE-080-UI 460 J
SE-078-UI 360
SE-006-UI 91
POND C
T05BR-002 40 J
SE-041-BR 51 J
SE-085-UI 44 J
POND E
SE-001-UI BSC (ND)
SE-046-BR BSC
POND A
SE-003-UI 59.5 J
T05PD-002 240 J
SE-029-BR 39 J
SE-005-UI 120 J
SE-084-UI 79 J
SE-076-UI 220 J
POND D
SE-007-UI BSC (ND)
SE-026-BR 209 J
SE-043-BR BSC
T05BR-006 340 J
SE-070-LF 190 J
SE-073-LF 290 J
POND B
SE-074-LF 220 J
SE-019-LF BSC (ND)
SE-047-BR 250 J
SE-031-BR 210 J
T05BR-004 190 J
SE-077-UI 42 J
SE-004-UI BSC (ND)
SE-075-UI 120 J
T05BR-001 320 J
T05PF-004 210
POND P
BLACKSTONE RIVER
SE-030-BR 45 J
SE-064-BR BSC
SE-024-BR BSC (ND)
SE-042-BR BSC
PRATT DAM
SE-083-BR 160 J
SE-023-BR 150
BLACKSTONE CANAL
SE-072-BR BSC
SE-025-BR BSC (ND)
(BACKWATER)
SE-082-BR 120 J
SE-065-BR BSC
POND F
SE-071-BR 200 J
SE-068-BR 110 J
SE-081-BR 350 J
SE-008-BR BSC (ND)
T05BR-007 BSC (ND)
SE-067-BR BSC (ND)
SE-066-BR BSC
MATCHLINE
0
400
800
Feet
GRAPHIC SCALE

LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR DIBENZ (A,H) ANTHRACENE IS 33 µg/kg.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

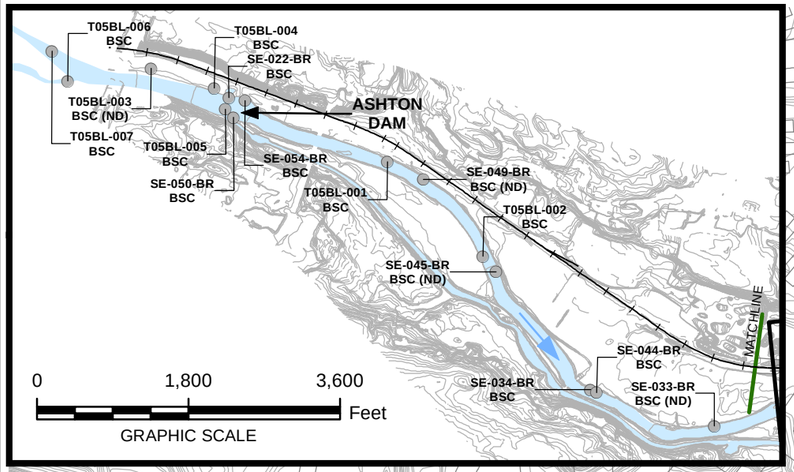
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES DIBENZ (A,H) ANTHRACENE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-24

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Dibenz-A-H-Anthracene.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA

OU2 BOUNDARY
RAILROAD
HISTORICAL ACCESS ROAD
DIRECTION OF SURFACE WATER FLOW

WATER
HISTORICAL POND
J.M. MILLS LANDFILL
UNNAMED ISLAND
QUINNVILLE WELL FIELD
WETLAND
SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR DIELDRIN IS 33 µg/kg.

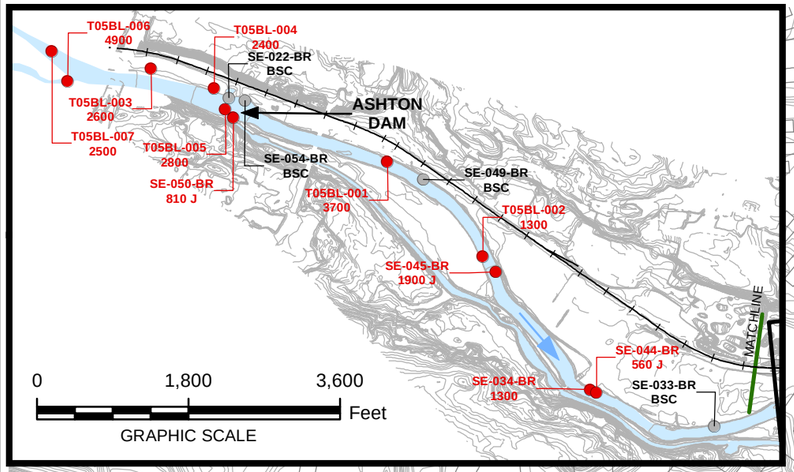
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - DIELDRIN (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-25

11/9/06 SYR-85 MTK
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Dieldrin.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR FLUORANTHENE IS 423 µg/kg.

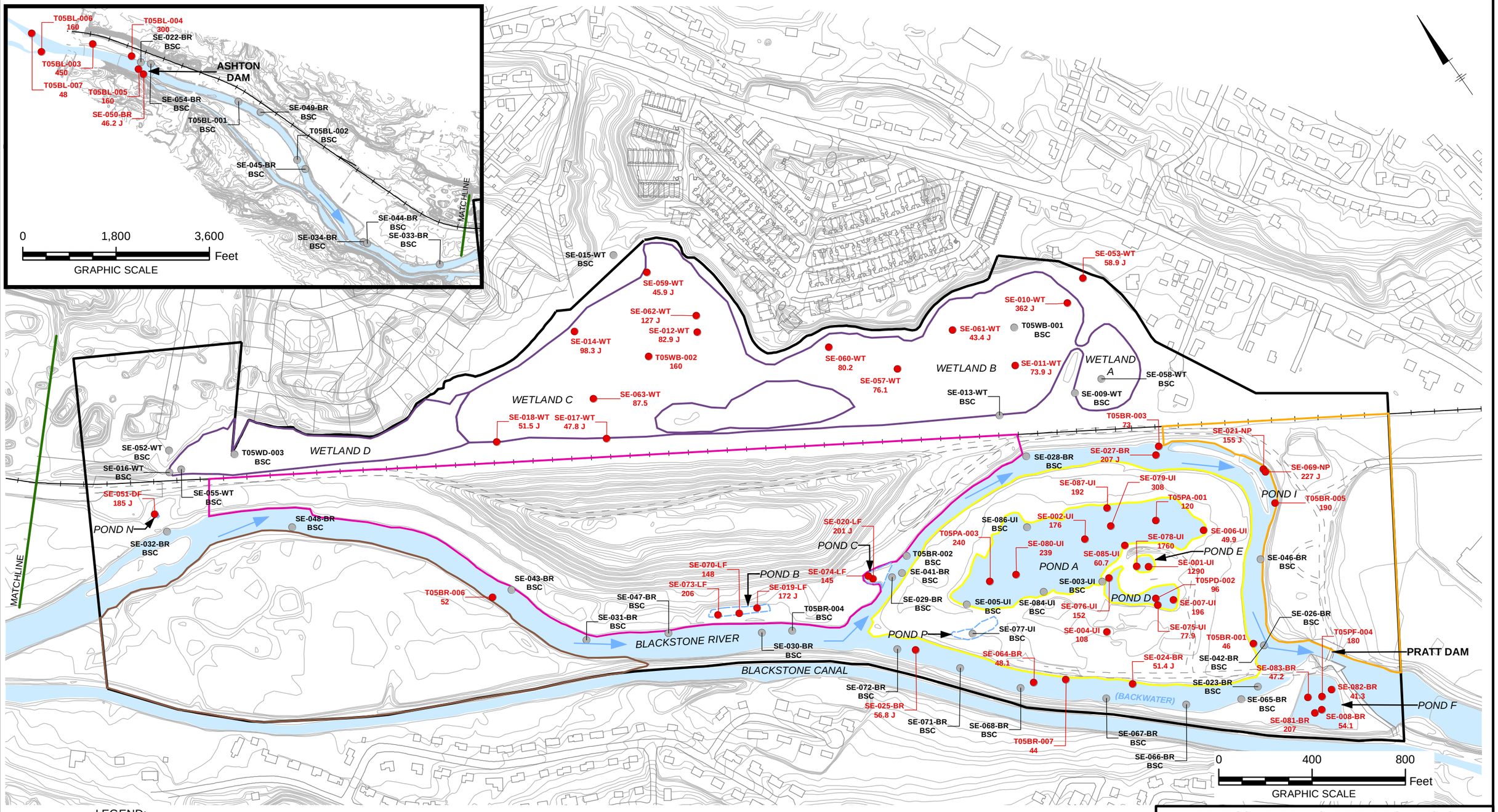
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - FLUORANTHENE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 4-26

6/15/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Fluoranthene.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA

OU2 BOUNDARY
RAILROAD
HISTORICAL ACCESS ROAD
DIRECTION OF SURFACE WATER FLOW

WATER
HISTORICAL POND
J.M. MILLS LANDFILL
UNNAMED ISLAND
QUINNVILLE WELL FIELD
WETLAND
SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

1. SAMPLE LOCATIONS AND BASEMAPPING ARE IN THE COORDINATE SYSTEM: STATE PLANE RHODE ISLAND NAD 83 FEET. LOCATIONS RECORDED IN THE FIELD USING GPS.
2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR LEAD IS 35.8 mg/kg.

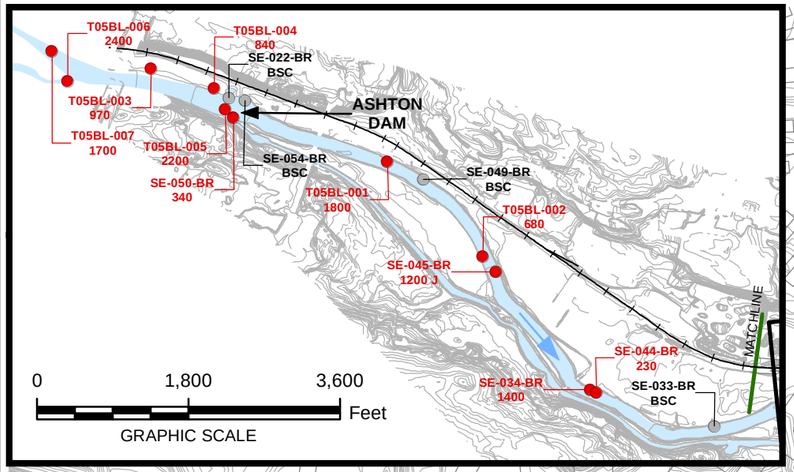
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - LEAD (mg/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-27

6/14/07 SYR-85 MTK EAB
Peterson Puritan (3792.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Lead.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

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2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR PHENANTHRENE IS 204 µg/kg.

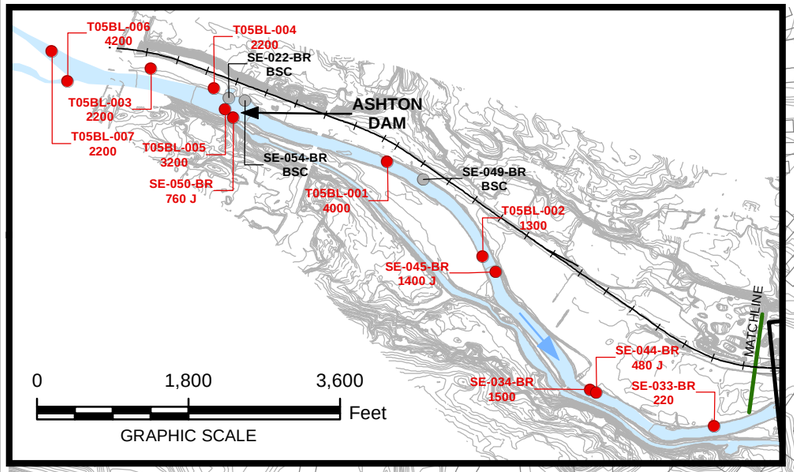
PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - PHENANTHRENE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-28

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Phenanthrene.mxd



LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

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2. NFO - NOW OR FORMERLY OWNED BY
3. THE SCREENING CRITERIA (PAL) FOR PYRENE IS 195 µg/kg.

PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND

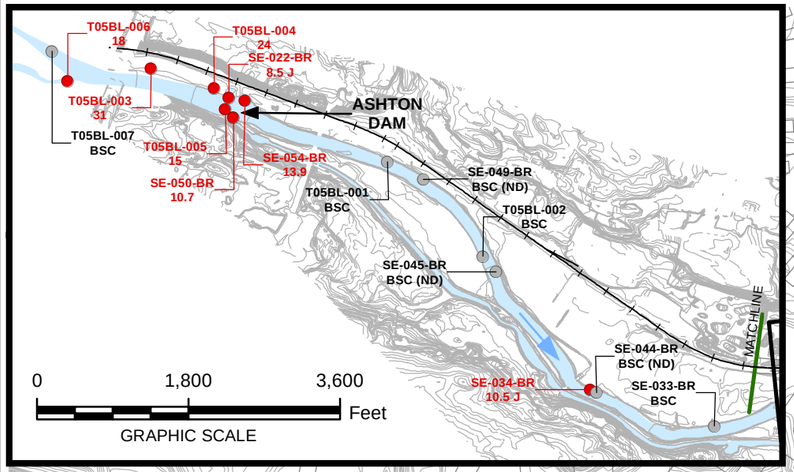
REMEDIAL INVESTIGATION REPORT

SEDIMENT SCREENING CRITERIA EXCEEDANCES - PYRENE (ug/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 4-29

6/14/07 SYR-95 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Pyrene.mxd



SE-015-WT BSC
SE-059-WT 16.1
SE-062-WT 28.8
SE-012-WT 19.8 J
SE-014-WT 33.4 J
T05WB-002 46
SE-060-WT 24.3
SE-057-WT 33.3
SE-061-WT 16.2
T05WB-001 13
SE-010-WT 51.1 J
SE-053-WT 16.3
WETLAND B
WETLAND A
SE-011-WT 20.9 J
SE-058-WT BSC (ND)
SE-009-WT 14.7 J
SE-013-WT 13.5 J
WETLAND C
SE-063-WT 37.9
SE-018-WT 53.7 J
SE-017-WT 59.5 J
T05BR-003 11
SE-021-NP 19.3 J
SE-028-BR BSC
SE-027-BR 10.9 J
SE-069-NP 27.95
SE-087-UI 19
SE-079-UI 41.6
T05PA-001 21
POND I
T05BR-005 23
SE-052-WT 18.1
T05WD-003 60
WETLAND D
SE-016-WT 52.8 J
SE-051-DF 23.9
SE-055-WT 86.6
SE-048-BR 11.6
POND N
SE-032-BR BSC (ND)
MATCHLINE
SE-086-UI BSC (ND)
SE-002-UI 27 J
T05PA-003 27
SE-080-UI 30.3
SE-085-UI BSC (ND)
SE-078-UI 31.1
SE-006-UI 9.6 J
POND E
POND A
SE-001-UI 34.3 J
SE-046-BR BSC (ND)
SE-020-LF 27 J
POND C
T05BR-002 BSC
SE-041-BR BSC (ND)
SE-003-UI BSC
T05PD-002 12
SE-070-LF 26
SE-074-LF 20.2
POND B
SE-073-LF 28.8
SE-019-LF 48.9 J
SE-043-BR 13.9
T05BR-006 BSC
SE-047-BR BSC (ND)
SE-029-BR BSC (ND)
SE-005-UI BSC
SE-084-UI BSC (ND)
SE-076-UI 19.4
SE-007-UI 21.2 J
POND D
SE-031-BR BSC (ND)
T05BR-004 BSC
SE-077-UI BSC (ND)
SE-004-UI 14 J
SE-075-UI BSC (ND)
SE-026-BR BSC
T05PF-004 18
PRATT DAM
POND P
BLACKSTONE RIVER
SE-030-BR 17.8 J
SE-064-BR BSC (ND)
T05BR-001 BSC
SE-042-BR BSC (ND)
SE-024-BR 9.1 J
SE-083-BR BSC (ND)
BLACKSTONE CANAL
SE-072-BR BSC (ND)
SE-023-BR BSC
SE-082-BR BSC (ND)
SE-025-BR BSC
(BACKWATER)
SE-065-BR 15.4
POND F
SE-071-BR BSC (ND)
SE-068-BR BSC (ND)
SE-008-BR 12.9 J
SE-081-BR 27.1
T05BR-007 BSC
SE-067-BR BSC (ND)
SE-066-BR BSC (ND)
0
400
800
Feet
GRAPHIC SCALE

LEGEND:

SEDIMENT SAMPLE LOCATION RESULTS:
- BELOW SCREENING CRITERIA
- ABOVE SCREENING CRITERIA
- OU2 BOUNDARY
- RAILROAD
- HISTORICAL ACCESS ROAD
- DIRECTION OF SURFACE WATER FLOW
- WATER
- HISTORICAL POND
- J.M. MILLS LANDFILL
- UNNAMED ISLAND
- QUINNVILLE WELL FIELD
- WETLAND
- SOLID WASTE TRANSFER STATION (NFO NUNES DISPOSAL, INC.)

NOTES:

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PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

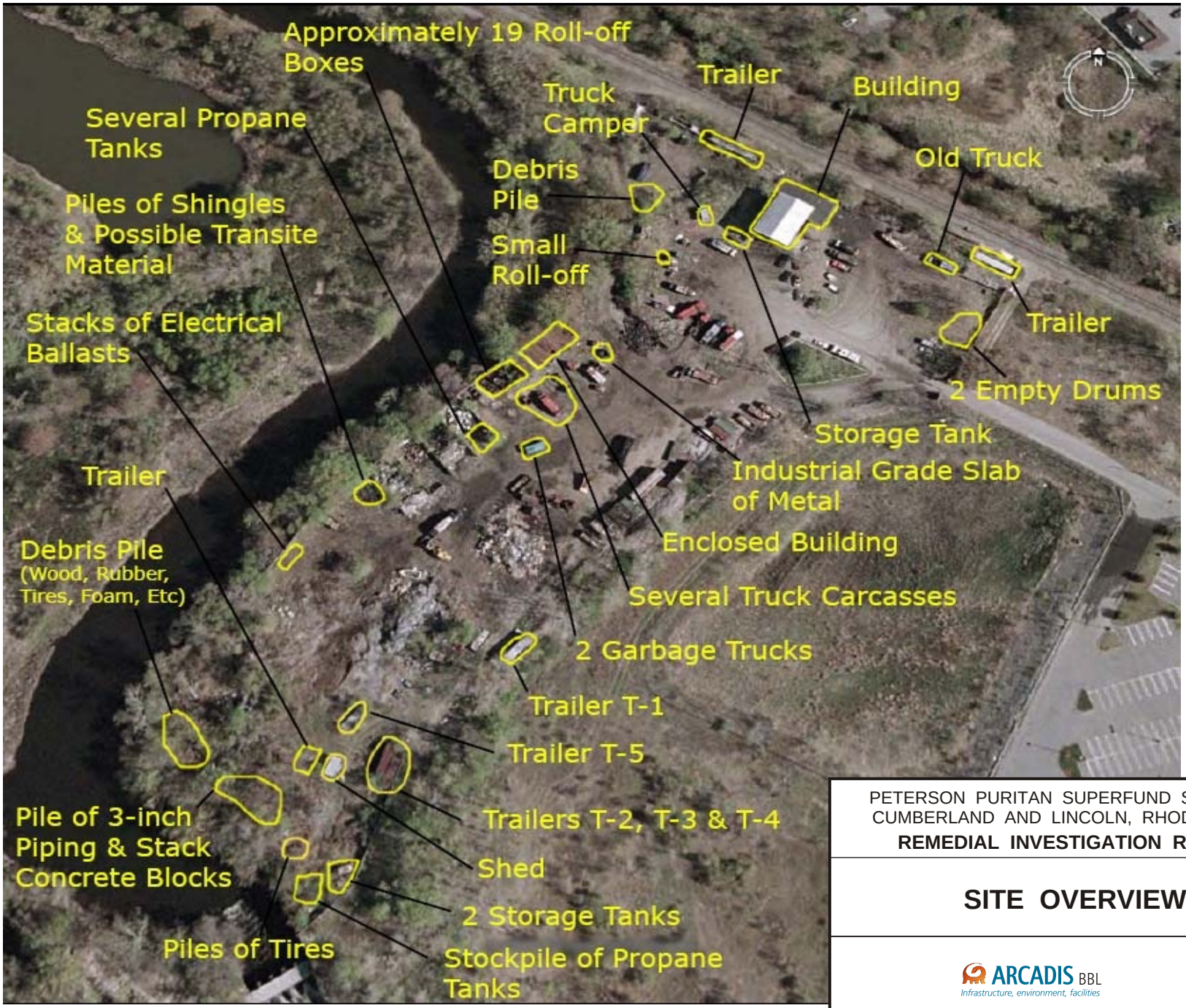
SEDIMENT SCREENING CRITERIA EXCEEDANCES - VANADIUM (mg/kg)

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 4-30

6/14/07 SYR-85 MTK EAB
Peterson Puritan (37902.500)
Q:\Peterson_Puritan\Cumberland_RI\RemedialInvestigationReport\mxd\Sediment - Vanadium.mxd

06/14/07 SYR-D85-DJH
37902500/37902N01.CDR



PETERSON PURITAN SUPERFUND SITE - OU2
CUMBERLAND AND LINCOLN, RHODE ISLAND
REMEDIAL INVESTIGATION REPORT

SITE OVERVIEW

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4-61

Appendix A

Plates (originally prepared by Shield)

No.	Revision/Issue	Date
1	ORIGINAL SUBMITTAL	1/2005
2	EPA REQUESTED REVISIONS	2/2006

General Notes

DO NOT SCALE DRAWINGS

Use given dimensions only. If not shown, verify, and document correct dimensions with the engineer. Contractor shall check and verify all dimensions and conditions at the job site.

All distances and elevations are to be field checked.

All pipings and fittings shall conform to and be installed as per ANSI/AWWA standards.

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Designed	
Drawn	D.L. HOWARD
Checked	M. MORRIS
Approved	A.L. DUNN
Date	JANUARY 2006

SHIELD
ENVIRONMENTAL ASSOCIATES, INC.
2456 FORTUNE DRIVE, SUITE 100
LEXINGTON, KENTUCKY 40509

TELEPHONE: 859/294-5155
FAX: 859/294-5255

BASE MAP FOR
REMEDIAL INVESTIGATION WITH OU2
MONITORING WELL AND
PIEZOMETER LOCATIONS
PETERSON/PURITAN OU2
CUMBERLAND, RHODE ISLAND

Project Number 300-1821	PLATE 1
Publication Date FEBRUARY 2006	
Scale 1"=300'	

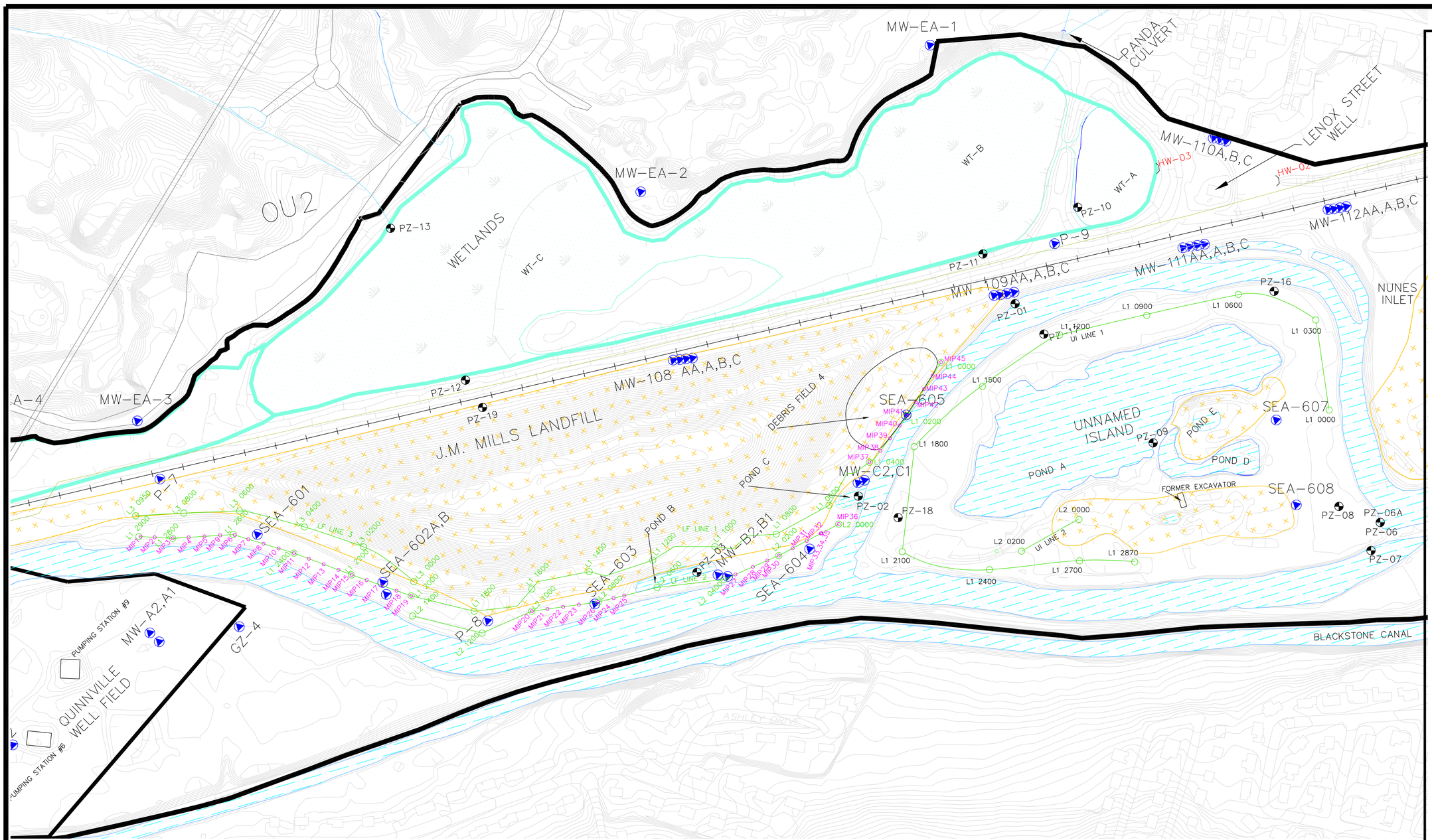
LEGEND

- WETLANDS
- WATER BODY
- PAVED ROAD
- CREEK
- INTERCEPTOR SEWER
- DEBRIS FIELDS
- BURIED WASTE (CONFIRMED)
- MONITORING WELL
- PIEZOMETER

SCALE IN FEET
0 300 600

NORTH

FILE NAME P:\300-1821\CAD\NOV-CA\BASE MAP-2004
REVISION DATE FEBRUARY 2006
USER



LEGEND

- WETLANDS
- WATER BODY
- PAVED ROAD
- CREEK
- INTERCEPTOR SEWER
- DEBRIS FIELDS
- BURIED WASTE (CONFIRMED)
- MONITORING WELL
- PIEZOMETER
- EMI SURVEY LINE AND STATIONS
- MIP BORING

SCALE IN FEET
0 150 300

NORTH

No.	Revision/Issue	Date
1	ORIGINAL SUBMITTAL	1/2005
2	EPA REQUESTED REVISIONS	2/2006

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Date	JANUARY 2005

SHIELD
ENVIRONMENTAL ASSOCIATES, INC.
2456 FORTUNE DRIVE, SUITE 100
LEXINGTON, KENTUCKY 40509
TELEPHONE: 859/294-5155
FAX: 859/294-5255

GEOPHYSICAL AND MIP SURVEY LOCATIONS, LANDFILL AND UNNAMED ISLAND

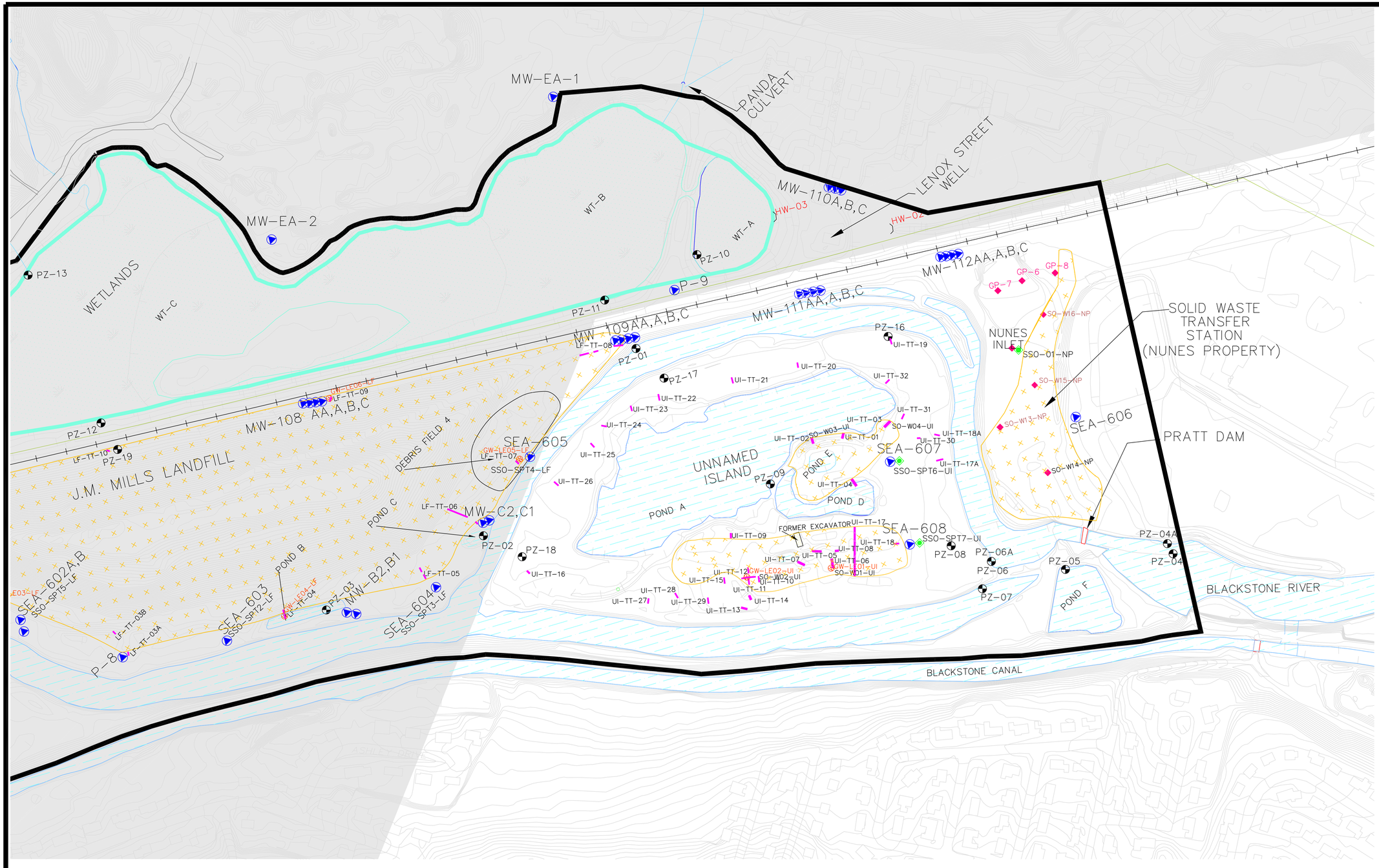
PETERSON/PURITAN OU2

CUMBERLAND, RHODE ISLAND

Project Number	300-1821
Publication Date	FEBRUARY 2006
Scale	1"=150'

PLATE 2

FILE NAME P:\300-1821\CAD\NOVCHA\BASE MAP 2004
REVISION DATE FEBRUARY 2006
USER



LEGEND

- WETLANDS
- WATER BODY
- PAVED ROAD
- CREEK
- INTERCEPTOR SEWER
- DEBRIS FIELDS
- BURIED WASTE (CONFIRMED)
- MONITORING WELL
- PIEZOMETER
- TEST TRENCH
- GEOPROBE BORING
- GRAB WATER SAMPLE
- SUBSURFACE SOIL SAMPLE

SCALE IN FEET
0 150 300

NORTH

No.	Revision/Issue	Date
1	ORIGINAL SUBMITTAL	1/2005
2	EPA REQUESTED REVISIONS	2/2006

General Notes

DO NOT SCALE DRAWINGS

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2456 FORTUNE DRIVE, SUITE 100
LEXINGTON, KENTUCKY 40509

TELEPHONE: 859/294-5155
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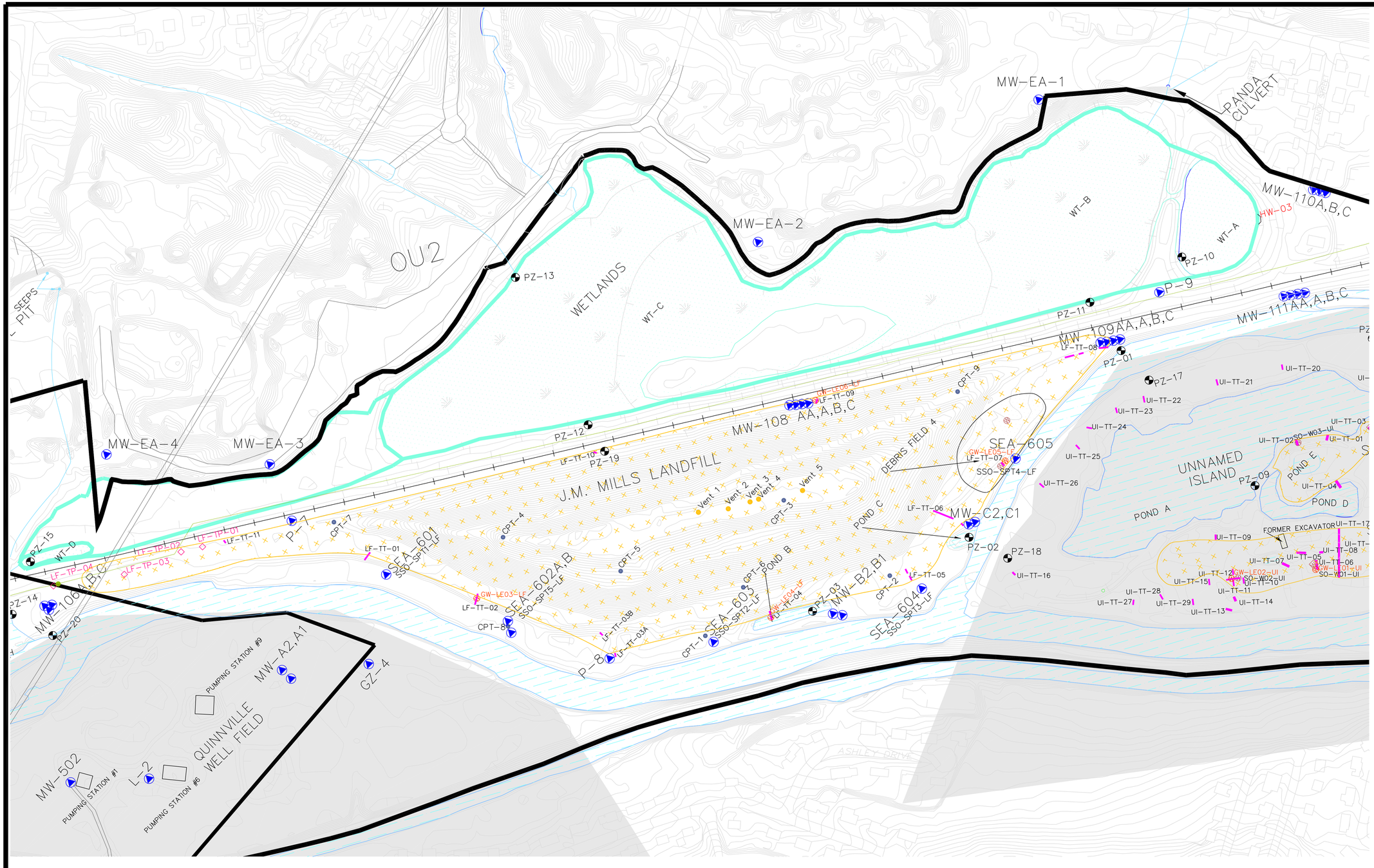
TEST TRENCH, SUBSURFACE SOIL/WASTE AND GRAB WATER SAMPLING LOCATIONS UNNAMED ISLAND AND TRANSFER STATION

PETERSON/PURITAN OU2

CUMBERLAND, RHODE ISLAND

Project Number	300-1821
Publication Date	FEBRUARY 2006
Scale	1"=150'
PLATE	3

FILE NAME P:\300-1821\CAD\NOVCHA\BASE MAP 2004
REVISION DATE FEBRUARY 2006
USER



LEGEND

- WETLANDS
- WATER BODY
- PAVED ROAD
- CREEK
- INTERCEPTOR SEWER
- DEBRIS FIELDS
- BURIED WASTE (CONFIRMED)
- MONITORING WELL
- PIEZOMETER
- TEST TRENCH
- TEST PIT
- GRAB WATER SAMPLE
- SURFACE WASTE SOIL COMPOSITE SAMPLE
- SUBSURFACE WASTE SOIL
- CONE PENETRATION TEST LOCATION

SCALE IN FEET
0 150 300

NORTH

No.	Revision/Issue	Date
1	ORIGINAL SUBMITTAL	1/2005
2	EPA REQUESTED REVISIONS	2/2006

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ENVIRONMENTAL ASSOCIATES, INC.
2456 FORTUNE DRIVE, SUITE 100
LEXINGTON, KENTUCKY 40509

TELEPHONE: 859/294-5155
FAX: 859/294-5255

TEST TRENCH, TEST PIT, CPT, SUBSURFACE SOIL AND GRAB WATER SAMPLING LOCATIONS, LANDFILL, DEBRIS FIELD 4 AND WETLANDS

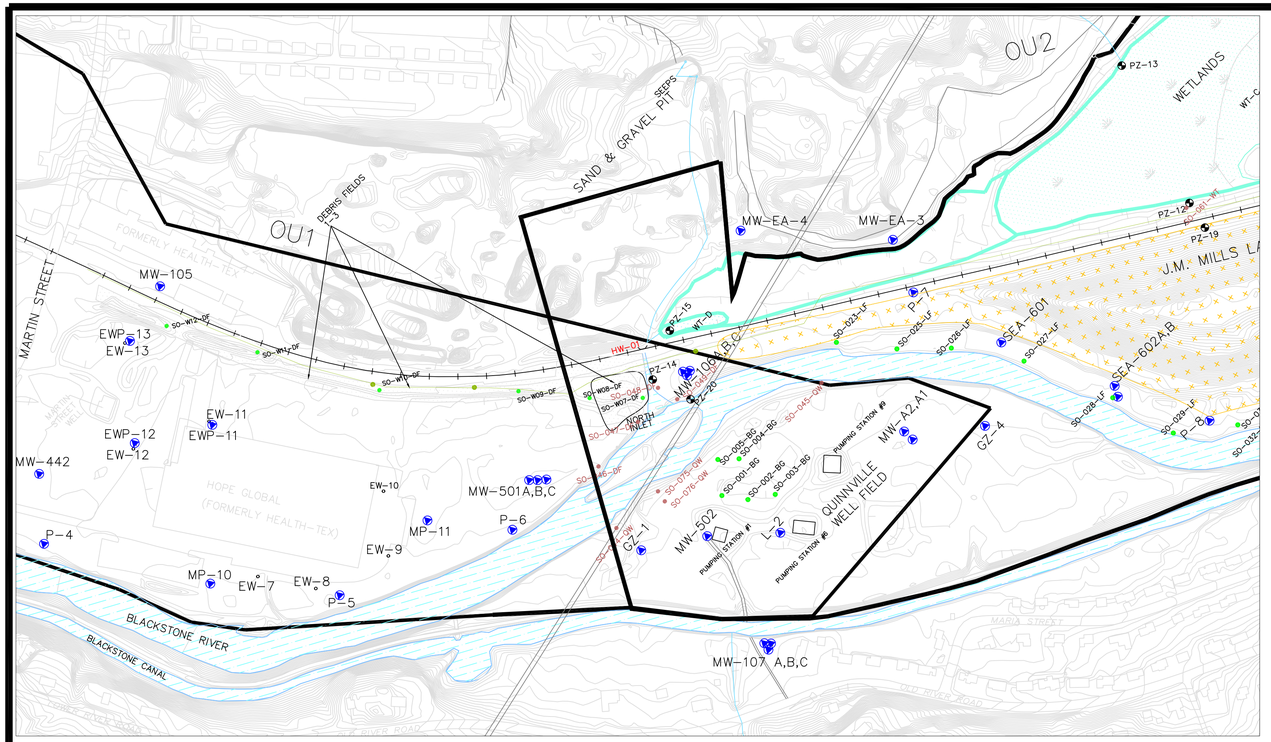
PETERSON/PURITAN OU2

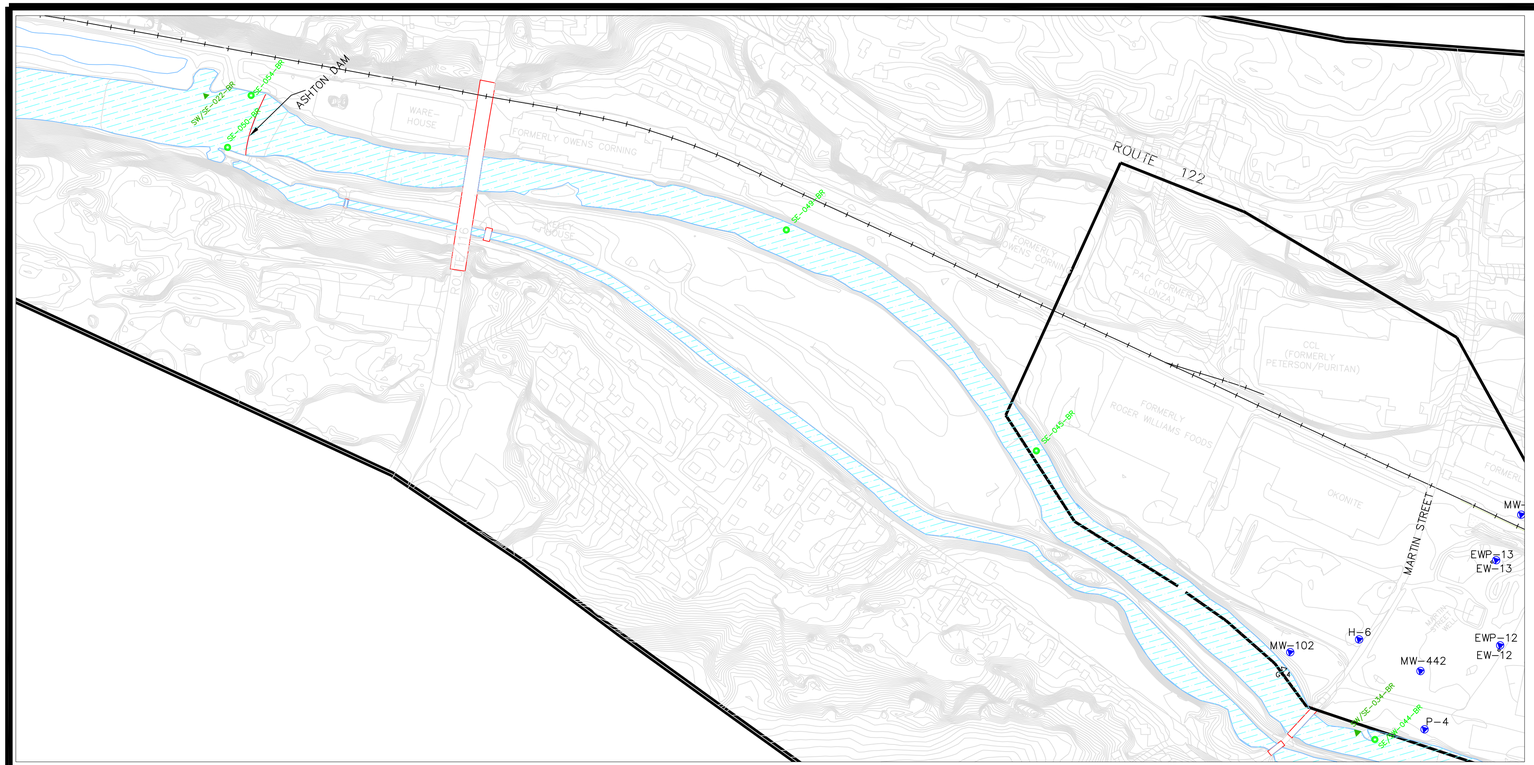
CUMBERLAND, RHODE ISLAND

Project Number	300-1821
Publication Date	FEBRUARY 2006
Scale	1"=150'

PLATE 4

FILE NAME P:\300-1821\CAD\NOV-04\SWAMP-2004
REVISION DATE FEBRUARY 2006
USER


OU1
OU2
MARTIN STREET
DEBRIS FIELDS
SAND & GRAVEL PIT
SEEPS
WETLANDS
WT-C
MW-105
MW-EA-4
MW-EA-3
J.M. MILLS LA
PZ-13
PZ-12
PZ-19
PZ-15
WT-D
PZ-14
PZ-20
MW-108AA,A,B,C
HW-01
EWP-13
EW-13
EWP-12
EW-12
EW-11
EWP-11
MW-442
EW-10
MW-501A,B,C
MP-11
P-6
P-4
EW-9
MP-10
EW-7
EW-8
P-5
BLACKSTONE RIVER
BLACKSTONE CANAL
MW-107 A,B,C
NORTH INLET
SO-W08-DF
SO-W07-DF
SO-W06-DF
SO-W05-DF
SO-W04-DF
SO-W03-DF
SO-W02-DF
SO-W01-DF
SO-045-GW
SO-046-DF
SO-075-GW
SO-076-GW
SO-077-GW
GZ-1
MW-502
L-2
PUMPING STATION #1
PUMPING STATION #2
QUINNVILLE WELL FIELD
MW-A2,A1
GZ-4
SO-005-BG
SO-004-BG
SO-001-BG
SO-002-BG
SO-003-BG
SEA-601
SEA-602A,B
P-7
P-8
SO-023-LF
SO-025-LF
SO-026-LF
SO-027-LF
SO-028-LF
SO-029-LF
SO-032-LF
MARIA STREET
MW-EA-1
PANDA CULVERT
LENOX STREET WELL
MW-110A,B,C
HW-03
HW-02
MW-112AA,A,B,C
MW-111AA,A,B,C
MW-109AA,A,B,C
MW-108 AA,A,B,C
MW-EA-2
WT-B
WT-A
P-9
PZ-11
PZ-10
PZ-16
PZ-17
PZ-01
SO-059-WT
SO-060-WT
SO-061-WT
SO-062-WT
SO-063-WT
SO-064-WT
SO-053-NP
SO-054-NP
SO-052-NP
SO-051-NP
SO-017-NP
SO-011-UI
SO-009-NP
SO-036-NP
SO-050-NP
GP-4
GP-5
GP-3
GP-2
GP-1
SO-037-NP
SO-035-NP
SO-034-NP
SO-033-NP
SOLID WASTE TRANSFER STATION (NUNES PROPERTY)
NUNES INLET
SEA-606
SEA-607
SEA-608
PRATT DAM
UNNAMED ISLAND
POND A
POND C
POND D
POND F
FORMER EXCAVATOR
SEA-605
SEA-604
SEA-603
DEBRIS FIELD 4
Vent 1
Vent 2
Vent 3
Vent 4
Vent 5
POND B
MW-C2,C1
MW-B2,B1
PZ-02
PZ-03
PZ-18
SO-043-LF
SO-021-LF
SO-022-LF
SO-024-LF
SO-041-LF
SO-042-LF
SO-030-LF
SO-031-LF
SO-018-UI
SO-013-UI
SO-015-UI
SO-081-UI
SO-082-UI
SO-083-UI
SO-084-UI
SO-085-UI
SO-086-UI
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SO-114-UI
SO-115-UI
SO-116-UI
SO-117-UI
SO-118-UI
SO-119-UI
SO-120-UI



LEGEND

- WETLANDS
- WATER BODY
- PAVED ROAD
- CREEK
- INTERCEPTOR SEWER
- DEBRIS FIELDS
- BURIED WASTE (CONFIRMED)
- MONITORING WELL
- PIEZOMETER
- 2003 SURFACE WATER/SEDIMENT SAMPLE (GRAB)
- 2003 SURFACE WATER/SEDIMENT SAMPLE (COMPOSITE)
- 2004 SURFACE WATER/SEDIMENT SAMPLE

SCALE IN FEET
0 250 500

NORTH

No.	Revision/Issue	Date
1	ORIGINAL SUBMITTAL	1/2005
2	EPA REQUESTED REVISIONS	2/2006

General Notes

DO NOT SCALE DRAWINGS

Use given dimensions only. If not shown, verify, and document correct dimensions with the engineer. Contractor shall check and verify all dimensions and conditions at the job site.

All distances and elevations are to be field checked.

All pipings and fittings shall conform to and be installed as per ANSI/AWWA standards.

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Designed	
Drawn	D.L. HOWARD
Checked	M. MORRIS
Approved	A.L. DUNN
Date	JANUARY 2006

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SURFACE WATER AND SEDIMENT
SAMPLING LOCATIONS
OU2 SITEWIDE

PETERSON/PURITAN OU2
CUMBERLAND, RHODE ISLAND

Project Number 300-1821	PLATE 6
Publication Date FEBRUARY 2006	
Scale 1"=300'	

FILE NAME P:\300-1821\CAD\NOVOA\BASE.MAP
REVISION DATE FEBRUARY 2006
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Appendix B

Sample Lists

Boring Location/Sample ID	Date Collected	Easting	Northing	Sample Matrix	Comments
AR-001-LF	10/7/2003	350954	304599	Air	Landfill Vent #1
AR-FD1	10/7/2003	350954	304599	Air	Landfill Vent #1, same as AR-001
AR-003-LF	10/7/2003	351031	304539	Air	Landfill Vent #2
AR-002-LF	10/7/2003	351244	304410	Air	Landfill Vent #5
GW-001-LF	9/29/2003	352306	304040	Groundwater	MW-109A
GW-002-LF	9/29/2003	351036	304048	Groundwater	MW-B2
GW-FD02	9/30/2003	353123	303917	Groundwater	MW-110B, same as GW-005-WT
GW-003-LF	9/30/2003	352324	304027	Groundwater	MW-109AA
GW-006-LF	9/30/2003	351549	303945	Groundwater	MW-C2
GW-004-WT	9/30/2003	353134	303899	Groundwater	MW-110A
GW-005-WT	9/30/2003	353123	303917	Groundwater	MW-110B
GW-007-LF	9/30/2003	351544	303937	Groundwater	MW-C1
GW-009-DF	10/1/2003	349243	305874	Groundwater	MW-106A
GW-012-QW	10/1/2003	349634	305154	Groundwater	MW-A2
GW-013-QW	10/1/2003	349846	305008	Groundwater	GZ-4-1
GW-010-LF	10/1/2003	351457	304605	Groundwater	MW-108A
GW-008-LF	10/1/2003	351046	304033	Groundwater	MW-B1
GW-011-LF	10/1/2003	351468	304598	Groundwater	MW-108AA
GW-015-WT	10/2/2003	352847	303718	Groundwater	MW-111AA
GW-018-LF	10/2/2003	350413	304467	Groundwater	P-8
GW-016-WT	10/2/2003	352832	303728	Groundwater	MW-111A
GW-014-LF	10/2/2003	349998	305515	Groundwater	P-7
GW-019-NP	10/2/2003	353241	303491	Groundwater	MW-112A
GW-017-LF	10/2/2003	350092	305174	Groundwater	SEA-601
GW-FD03	10/3/2003	352479	302922	Groundwater	SEA-608, same as GW-026-UI
GW-020-NP	10/3/2003	353234	303496	Groundwater	MW-112AA
GW-021-LF	10/3/2003	350691	304266	Groundwater	SEA-603
GW-025-UI	10/3/2003	352623	303156	Groundwater	SEA-607
GW-022-LF	10/3/2003	350247	304772	Groundwater	SEA-602A
GW-026-UI	10/3/2003	352479	302922	Groundwater	SEA-608
GW-023-LF	10/3/2003	350245	304765	Groundwater	SEA-602B
GW-028-LF	10/4/2003	351808	303993	Groundwater	SEA-605
GW-027-LF	10/4/2003	351293	303909	Groundwater	SEA-604
GW-024-NP	10/4/2003	353152	302833	Groundwater	SEA-606
GW-057-WT	9/20/2004	352805	303746	Groundwater	MW-111C
GW-043-LF	9/21/2004	351436	304617	Groundwater	MW-108B
GW-042-LF	9/21/2004	352259	304075	Groundwater	MW-109B
GW-DUP-01	9/21/2004	352259	304075	Groundwater	MW-109B
GW-041-LF	9/21/2004	352273	304065	Groundwater	MW-109C
GW-058-LF	9/22/2004	351426	304624	Groundwater	MW-108C
GW-046-LF	9/22/2004	351457	304605	Groundwater	MW-108A
GW-044-WT	9/22/2004	353123	303917	Groundwater	MW-110B
GW-045-WT	9/22/2004	353134	303899	Groundwater	MW-110A
GW-049-NP	9/22/2004	353272	303465	Groundwater	MW-112C
GW-047-LF	9/23/2004	352306	304040	Groundwater	MW-109A
GW-048-LF	9/23/2004	352324	304027	Groundwater	MW-109AA
GW-FD-11	9/23/2004	352324	304027	Groundwater	MW-109AA, same as GW-048-LF
GW-053-WT	9/23/2004	353121	303923	Groundwater	MW-110C
GW-065-LF	9/24/2004	351046	304033	Groundwater	MW-B1
GW-050-WT	9/24/2004	352816	303738	Groundwater	MW-111B
GW-051-WT	9/24/2004	352832	303728	Groundwater	MW-111A
GW-052-WT	9/24/2004	352847	303718	Groundwater	MW-111AA
GW-066-LF	9/27/2004	351036	304048	Groundwater	MW-B2
GW-071-LF	9/27/2004	351549	303945	Groundwater	MW-C2
GW-056-NP	9/27/2004	353234	303496	Groundwater	MW-C1
GW-055-NP	9/27/2004	353241	303491	Groundwater	MW-112A
GW-054-NP	9/27/2004	353251	303482	Groundwater	MW-112B
GW-077-DF	9/28/2004	349233	305877	Groundwater	MW-106C
GW-078-DF	9/28/2004	349258	305879	Groundwater	MW-106B
GW-FD-12	9/28/2004	349258	305879	Groundwater	MW-106B, same as GW-078-DF
GW-059-LF	9/28/2004	349998	305515	Groundwater	P-7
GW-060-LF	9/28/2004	350092	305174	Groundwater	SEA-601
GW-062-LF	9/28/2004	350247	304772	Groundwater	SEA-602A
GW-070-LF	9/28/2004	351544	303937	Groundwater	MW-C1
GW-074-DF	9/30/2004	349243	305874	Groundwater	MW-106A
GW-080-QW	9/30/2004	349634	305154	Groundwater	MW-A2
GW-079-QW	9/30/2004	349846	305008	Groundwater	GZ-4-1
GW-063-LF	9/30/2004	350413	304467	Groundwater	P-8
GW-067-LF	9/30/2004	351293	303909	Groundwater	SEA-604
GW-068-LF	9/30/2004	351808	303993	Groundwater	SEA-605
GW-069-NP	9/30/2004	353152	302833	Groundwater	SEA-606
GW-076-WT	10/1/2004	350077	305696	Groundwater	MW-EA-3
GW-061-LF	10/1/2004	350245	304765	Groundwater	SEA-602B

Boring Location/Sample ID	Date Collected	Easting	Northing	Sample Matrix	Comments
GW-064-LF	10/1/2004	350691	304266	Groundwater	SEA-603
GW-FD-13	10/1/2004	350691	304266	Groundwater	SEA-603, same as GW-064-LF
GW-073-UI	10/1/2004	352479	302922	Groundwater	SEA-608
GW-072-UI	10/1/2004	352623	303156	Groundwater	SEA-607
GW-075-WT	10/1/2004	352687	304767	Groundwater	MW-EA-1
GW-FD01	8/19/2003	352244	303047	GW Other	Test Trench UI-TT-06, same as GW-LE01-UI
GW-LE01-UI	8/19/2003	352244	303047	GW Other	Test Trench UI-TT-06
GW-LE02-UI	8/19/2003	352030	303220	GW Other	Test Trench UI-TT-10
GW-LE3-LF	8/21/2003	350245	304911	GW Other	Test Trench LF-TT-02
GW-LE4-LF	8/21/2003	350879	304190	GW Other	Test Trench LF-TT-04
GW-LE5-LF	8/22/2003	351779	304012	GW Other	Test Trench LF-TT-07
GW-LE6-LF	8/22/2003	351482	304588	GW Other	Test Trench LF-TT-09
SE-001-UI	8/28/2003	352478	303295	Sediment	Pond E, south shore
SE-002-UI	8/28/2003	352322	303548	Sediment	Middle of Pond A
SE-FD01	8/29/2003	352279	303356	Sediment	Shore of Pond A near PZ-09, same as SE-003-UI
SE-003-UI	8/29/2003	352279	303356	Sediment	Shore of Pond A near PZ-09
SE-004-UI	8/29/2003	352172	303168	Sediment	Excavator Pond - small pond on top of buried waste on UI
SE-005-UI	8/29/2003	351747	303610	Sediment	Northwest shore of Pond A
SE-006-UI	8/29/2003	352761	303287	Sediment	Southeast shore of Pond A
SE-007-UI	9/2/2003	352484	303117	Sediment	Pond D, southeast shore
SE-008-BR	9/2/2003	352735	302367	Sediment	Pond F, composite of 4 subsamples from near-shore points
SE-009-WT	9/3/2003	352646	304086	Sediment	WT-A, shore near PZ-10
SE-010-WT	9/3/2003	352842	304421	Sediment	WT-B, northeast shore, downstream of Panda culvert
SE-011-WT	9/3/2003	352504	304330	Sediment	WT-B, off-shore, southeast end
SE-012-WT	9/3/2003	351470	305229	Sediment	WT-C, off-shore, northeast area, west of MW-EA-2
SE-013-WT	9/4/2003	352327	304194	Sediment	WT-B, southwest shore along RR, near PZ-11
SE-014-WT	9/4/2003	351040	305533	Sediment	WT-C, north shore near PZ-13
SE-015-WT	9/4/2003	351365	305705	Sediment	WT-C, Monastery Brook just downstream of road
SE-016-WT	9/4/2003	349270	306035	Sediment	WT-D, north end near PZ-15
SE-017-WT	9/5/2003	350890	305078	Sediment	WT-C, southwest shore along RR, near PZ-12
SE-018-WT	9/5/2003	350496	305336	Sediment	WT-C, southwest shore along RR, northwest of PZ-12
SE-019-LF	9/5/2003	351002	304113	Sediment	Pond B near PZ-03
SE-020-LF	9/5/2003	351481	303930	Sediment	Pond C, close to PZ-02
SE-021-NP	9/5/2003	353121	303354	Sediment	Inlet off Blackstone River adjacent to Nunes Property
SE-022-BR	9/5/2003	345490	312537	Sediment	Blackstone River 250 ft upstream of Ashton Dam
SE-023-BR	9/6/2003	352567	302605	Sediment	Back channel, downstream end, composite of 4 subsamples across channel
SE-024-BR	9/6/2003	352135	302922	Sediment	Back channel, off of UI bank
SE-025-BR	9/6/2003	351456	303575	Sediment	Back channel, middle, upstream end
SE-022A-BR	9/8/2003	345490	312537	Sediment	Blackstone River 250 ft upstream of Ashton Dam
SE-026-BR	9/8/2003	352690	302735	Sediment	Composite of 4 subsamples, main channel upstream of Pratt Dam
SE-FD-02	9/8/2003	352690	302735	Sediment	Composite, main channel upstream of Pratt Dam, same as SE-026-BR
SE-027-BR	9/8/2003	352779	303669	Sediment	Main channel near MW-111
SE-028-BR	9/8/2003	352320	303984	Sediment	Main channel off landfill bank, near PZ-01
SE-029-BR	9/9/2003	351551	303889	Sediment	Main channel off landfill bank, near Pond C
SE-FD03	9/9/2003	351551	303889	Sediment	Main channel near Pond C, same as SE-029-BR
SE-030-BR	9/9/2003	350958	304015	Sediment	Main channel off landfill bank, near Pond B
SE-031-BR	9/9/2003	350323	304420	Sediment	Main channel off landfill bank, near P-8
SE-032-BR	9/10/2003	349117	305833	Sediment	Main channel just downstream of North Inlet
SE-033-BR	9/10/2003	347976	306035	Sediment	Main channel near P-5
SE-034-BR	9/10/2003	347020	307232	Sediment	Main channel downstream of Martin Street
SE-049-BR	8/30/2004	346826	310413	Sediment	North bank between OC plant and Roger Williams
SE-045-BR	8/30/2004	346903	309018	Sediment	North bank downstream of Owens Corning plant
SE-044-BR	8/30/2004	347061	307158	Sediment	Near AD+05550 (SE-034-BR), end of peninsula
SE-043-BR	8/30/2004	350184	304781	Sediment	Main Channel off landfill bank, near SEA-602A/B
SE-047-BR	8/30/2004	350628	304243	Sediment	Main Channel off landfill bank, near SEA-603
SE-041-BR	8/30/2004	351597	303879	Sediment	Near Pond C, off of opposite (UI) bank
SE-046-BR	8/30/2004	352890	303046	Sediment	Between Nunes Inlet and Pratt Dam, off of NP bank
SE-FD-11	8/30/2004	352890	303046	Sediment	Main channel off of NP bank, FD of SE-046-BR
SE-050-BR	8/31/2004	345403	312315	Sediment	Immediately upstream of Ashton Dam, south bank off dam
SE-051-DF	8/31/2004	349116	305924	Sediment	Inlet off of Blackstone River north of LF, near DF1-3
SE-055-WT	8/31/2004	349320	306016	Sediment	WT-D, southeast of PZ-15
SE-048-BR	8/31/2004	349568	305540	Sediment	Downstream of North Inlet, off of QW bank
SE-042-BR	8/31/2004	352690	302735	Sediment	Middle of main channel, grab, same location as SE-026-BR
SE-053-WT	8/31/2004	352957	304470	Sediment	WT-B, on northeast shore below Panda Culvert
SE-054-BR	9/1/2004	345628	312400	Sediment	Immediately upstream of Ashton Dam, north bank
SE-052-WT	9/1/2004	349324	306113	Sediment	Ditch draining sand and gravel pit, north of WT-D
SE-059-WT	9/1/2004	351440	305562	Sediment	Mouth of Monastery Brook downstream of road
SE-062-WT	9/1/2004	351508	305289	Sediment	WT-C, off-shore, northeast area, north of MW-EA-2
SE-061-WT	9/1/2004	352372	304608	Sediment	WT-B, off-shore, west of MW-EA-1
SE-058-WT	9/1/2004	352774	304071	Sediment	WT-A, middle, deepest part
SE-070-LF	9/2/2004	350926	304138	Sediment	Pond B, middle, northwest of PZ-03
SE-064-BR	9/2/2004	351791	303170	Sediment	Middle of back channel off of UI bank
SE-060-WT	9/2/2004	351895	304852	Sediment	WT-B, northeast shore

Boring Location/Sample ID	Date Collected	Easting	Northing	Sample Matrix	Comments
SE-057-WT	9/2/2004	352084	304607	Sediment	WT-B, off-shore, middle
SE-065-BR	9/2/2004	352478	302602	Sediment	Back channel off of canal bank, southeast end
SE-069-NP	9/2/2004	353122	303341	Sediment	Inlet off BR main channel next to NP, close to SE-021-NP
SE-FD-12	9/2/2004	353122	303341	Sediment	PDI-02-NP, same as SE-069-NP
SE-073-LF	9/3/2004	350848	304184	Sediment	Pond B, northwest end
SE-074-LF	9/3/2004	351471	303952	Sediment	Pond C, northwest of PZ-02
SE-067-BR	9/3/2004	352007	302937	Sediment	Back channel off of canal bank
SE-066-BR	9/3/2004	352272	302718	Sediment	Back channel off of canal bank
SE-076-UI	9/3/2004	352313	303353	Sediment	Pond D, north shore
SE-075-UI	9/3/2004	352417	303137	Sediment	Pond D, middle off south shore
SE-063-WT	9/6/2004	350942	305250	Sediment	WT-C, off-shore, north of PZ-12
SE-072-BR	9/6/2004	351393	303624	Sediment	Back channel off of canal bank, northwest end
SE-071-BR	9/6/2004	351567	303403	Sediment	Back channel off of canal bank
SE-077-UI	9/6/2004	351696	303493	Sediment	Small pool northwest of Pond A on UI
SE-068-BR	9/6/2004	351730	303184	Sediment	Back channel off of canal bank
SE-078-UI	9/6/2004	352438	303325	Sediment	Pond E, north shore
SE-083-BR	9/6/2004	352717	302444	Sediment	Pond F, northwest area, near-shore
SE-082-BR	9/6/2004	352820	302413	Sediment	Pond F, northeast area, near-shore
SE-080-UI	9/7/2004	351994	303594	Sediment	Pond A, middle (west end)
SE-084-UI	9/7/2004	352049	303465	Sediment	Pond A, west shore
SE-086-UI	9/7/2004	352149	303734	Sediment	Pond A, northeast shore
SE-085-UI	9/7/2004	352447	303427	Sediment	Pond A, southwest shore
SE-079-UI	9/7/2004	352447	303531	Sediment	Pond A, middle (deepest part)
SE-FD-13	9/7/2004	352447	303531	Sediment	Pond A, middle, same as SE-079-UI
SE-087-UI	9/7/2004	352478	303603	Sediment	Pond A, east shore
SE-081-BR	9/7/2004	352703	302372	Sediment	Pond F, southwest area (deepest part)
SO-001-BG	8/18/2003	349023	305486	Soil	QW, north of pumping stations
SO-002-BG	8/18/2003	349076	305415	Soil	QW, north of pumping stations
SO-003-BG	8/18/2003	349158	305357	Soil	QW, north of pumping stations
SO-004-BG	8/18/2003	349156	305535	Soil	QW, north of pumping stations
SO-FD01	8/18/2003	349156	305535	Soil	QW, same as SO-004-BG
SO-005-BG	8/18/2003	349102	305585	Soil	QW, north of pumping stations
SO-W01-UI	8/19/2003	352244	303047	Soil	Test Trench UI-TT-06
SO-006-UI	8/19/2003	352212	303172	Soil	UI, area of former excavator
SO-007-UI	8/19/2003	352124	303035	Soil	UI, river bank along back channel
SO-008-NP	8/19/2003	352764	302741	Soil	River bank at curve upstream of Pratt Dam
SO-W02-UI	8/19/2003	352030	303220	Soil	Test Trench UI-TT-10
SO-009-NP	8/19/2003	352964	303089	Soil	River bank at Nunes property, downstream of Nunes Inlet
SO-FD02	8/20/2003	352699	303249	Soil	Test Trench UI-TT-03, same as SO-W04-UI
SO-W03-UI	8/20/2003	352496	303380	Soil	Composite from test trenches UI-TT-01 and 02
SO-011-UI	8/20/2003	352891	303338	Soil	UI, east corner near PZ-16
SO-W04-UI	8/20/2003	352699	303249	Soil	Test Trench UI-TT-03
SO-012-UI	8/20/2003	352520	303705	Soil	UI, northeast shore
SO-013-UI	8/20/2003	352273	303867	Soil	UI, top of river bank near PZ-17
SO-014-UI	8/20/2003	351495	303772	Soil	UI, north shore
SO-015-UI	8/20/2003	352014	303894	Soil	UI, west corner near PZ-18
SO-016-UI	8/20/2003	351787	303285	Soil	UI, river bank along back channel
SO-010-UI	8/20/2003	352592	302871	Soil	UI, south corner near PZ-08
SO-017-NP	8/21/2003	353115	303446	Soil	Nunes Inlet, river bank near curve, west of MW-112
SO-018-LF	8/21/2003	352188	304043	Soil	River bank near MW-109
SO-019-LF	8/21/2003	351543	304027	Soil	River bank near MW-C1
SO-020-LF	8/21/2003	351345	303892	Soil	River bank near SEA-604
SO-021-LF	8/21/2003	351366	304030	Soil	LF toe near stone wall corner
SO-022-LF	8/21/2003	351139	304042	Soil	River bank near MW-B2
SO-FD-03	8/21/2003	351139	304042	Soil	River bank near MW-B2, same as SO-022-LF
SO-023-LF	8/22/2003	349684	305582	Soil	River bank between MW-106 and SEA-601
SO-024-LF	8/22/2003	350958	304078	Soil	River bank near Pond B
SO-025-LF	8/22/2003	349818	305416	Soil	River bank near P-7
SO-026-LF	8/22/2003	349954	305284	Soil	River bank upstream of SEA-601
SO-027-LF	8/22/2003	350102	305072	Soil	River bank downstream of SEA-601
SO-028-LF	8/22/2003	350231	304763	Soil	River bank near SEA-602A/B
SO-029-LF	8/22/2003	350293	304526	Soil	River bank downstream of SEA-602A/B
SO-030-LF	8/22/2003	350473	304387	Soil	River bank downstream of P-8
SO-W05-DF	8/26/2003	351756	304009	Soil	Debris Field 4, composite 1 (4 subsamples)
SO-W06-DF	8/26/2003	351875	304101	Soil	Debris Field 4, composite 2 (4 subsamples)
SO-W07-DF	8/26/2003	349069	305923	Soil	Debris Field 3, southeast end, composite (4 subsamples)
SO-W08-DF	8/26/2003	348937	306054	Soil	Debris Field 3, composite (4 subsamples)
SO-W09-DF	8/26/2003	348778	306246	Soil	Debris Field 2, NW of SO-W08-DF, composite (4 subsamples)
SO-W10-DF	8/27/2003	348437	306592	Soil	Debris Field 2, NW of SO-W09-DF, composite (4 subsamples)
SO-W11-DF	8/27/2003	348229	306987	Soil	Debris Field 1, NW of SO-W10-DF, composite (4 subsamples)
SO-W12-DF	8/27/2003	348069	307276	Soil	Debris Field 1, NW of SO-W11-DF, composite (4 subsamples)
SO-FD04	8/27/2003	351875	304101	Soil	Debris Field 4, Composite 2, same as SO-W06-DF
SO-032-LF	8/28/2003	350556	304316	Soil	River bank next to SEA-603

Boring Location/Sample ID	Date Collected	Easting	Northing	Sample Matrix	Comments
SO-033-NP	9/5/2003	352975	302763	Soil	GP-1, NP southeast area, 0-1'
SO-W14-NP	9/5/2003	352976	302763	Soil	GP-1, NP southeast area, 1-5'
SO-034-NP	9/5/2003	352970	302966	Soil	GP-2, NP mid-property, 0-1'
SO-W13-NP	9/5/2003	352970	302966	Soil	GP-2, NP mid-property, 6-10'
SSO-FD01	9/6/2003	353156	303119	Soil	same as SSO-O1-NP
SO-035-NP	9/6/2003	353139	302983	Soil	GP-3, NP mid-property east side, 0-1'
SO-W15-NP	9/6/2003	353139	302983	Soil	GP-3, NP mid-property east side, 5-9'
SO-036-NP	9/6/2003	353156	303119	Soil	GP-4, NP mid-property north side, 0-1'
SSO-01-NP	9/6/2003	353156	303119	Soil	GP4, NP mid-property north side, 1-5'
SO-037-NP	9/6/2003	353326	303126	Soil	GP-5, NP northeast area, 0-1'
SO-W16-NP	9/6/2003	353326	303126	Soil	GP-5, NP northeast area, 5-9'
SSO-SPT5-5-LF	9/15/2003	350245	304765	Soil	SEA-602B 2-4 ft
SSO-SPT5-35-LF	9/15/2003	350245	304765	Soil	SEA-602B 32-34 ft
SSO-SPT1-5-LF	9/15/2003	350092	305174	Soil	SEA-601 4-6 ft
SSO-SPT1-10-LF	9/15/2003	350092	305174	Soil	SEA-601 8-10 ft
SSO-SPT1-15-LF	9/15/2003	350092	305174	Soil	SEA-601 15-20 ft
SSO-SPT5-10-LF	9/15/2003	350245	304765	Soil	SEA-602B 10-12 ft
SSO-SPT5-15-LF	9/15/2003	350245	304765	Soil	SEA-602B 14-16 ft
SSO-SPT5-20-LF	9/15/2003	350245	304765	Soil	SEA-602B 18-20 ft
SSO-SPT5-25-LF	9/15/2003	350245	304765	Soil	SEA-602B 24-26 ft
SSO-SPT5-30-LF	9/15/2003	350245	304765	Soil	SEA-602B 30-32 ft
SSO-SPT4-5-LF	9/18/2003	351808	303993	Soil	SEA-605 5-7 ft
SSO-SPT4-10-LF	9/18/2003	351808	303993	Soil	SEA-605 9-11 ft
SSO-SPT4-15-LF	9/18/2003	351808	303993	Soil	SEA-605 15-20 ft
SSO-SPT3-5-LF	9/18/2003	351293	303909	Soil	SEA-604 4-6 ft
SSO-SPT3-10-LF	9/18/2003	351293	303909	Soil	SEA-604 8-10 ft
SSO-SPT3-15-LF	9/18/2003	351293	303909	Soil	SEA-604 15-20 ft
SSO-SPT6-5-UI	9/19/2003	352623	303156	Soil	SEA-607 4-6 ft
SSO-SPT6-10-UI	9/19/2003	352623	303156	Soil	SEA-607 10-12 ft
SSO-SPT6-15-UI	9/19/2003	352623	303156	Soil	SEA-607 15-20 ft
SSO-SPT7-5-UI	9/19/2003	352479	302922	Soil	SEA-608 4-6 ft
SSO-SPT7-10-UI	9/19/2003	352479	302922	Soil	SEA-608 8-10 ft
SSO-SPT7-15-UI	9/19/2003	352479	302922	Soil	SEA-608 15-20 ft
SO-W07-DF	9/20/2003	349057	305941	Soil	Debris Field 3, southeast end, composite (4 subsamples)
SO-W08-DF	9/20/2003	348937	306054	Soil	Debris Field 3, composite (4 subsamples)
SO-W10-DF	9/20/2003	348437	306592	Soil	Debris Field 2, NW of SO-W09-DF, composite (4 subsamples)
SO-W11-DF	9/20/2003	348229	306987	Soil	Debris Field 1, NW of SO-W10-DF, composite (4 subsamples)
SO-W12-DF	9/20/2003	348069	307276	Soil	Debris Field 1, NW of SO-W11-DF, composite (4 subsamples)
SO-W09-DF	9/20/2003	348778	306246	Soil	Debris Field 2, NW of SO-W08-DF, composite (4 subsamples)
SO-W05-DF	9/20/2003	351756	304009	Soil	Debris Field 4, composite 1 (4 subsamples)
SO-W06-DF	9/20/2003	351875	304101	Soil	Debris Field 4, composite 2 (4 subsamples)
SSO-SPT8-5-NP	9/21/2003	353152	302833	Soil	SEA-606 4-6 ft
SSO-SPT8-10-NP	9/21/2003	353152	302833	Soil	SEA-606 8-10 ft
SSO-SPT8-15-NP	9/21/2003	353152	302833	Soil	SEA-606 15-20 ft
SSO-SPT2-5-LF	9/21/2003	350691	304266	Soil	SEA-603 4-6 ft
SSO-SPT2-10-LF	9/21/2003	350691	304266	Soil	SEA-603 8-10 ft
SSO-SPT2-15-LF	9/21/2003	350691	304266	Soil	SEA-603 15-20 ft
SO-064-BR	9/8/2004	351350	303613	Soil	River bank between canal and back channel
SO-065-BR	9/8/2004	351524	303387	Soil	River bank between canal and back channel
SO-066-BR	9/8/2004	351710	303150	Soil	River bank between canal and back channel
SO-067-BR	9/8/2004	352005	302902	Soil	River bank between canal and back channel
SO-068-BR	9/8/2004	352264	302676	Soil	River bank between canal and back channel
SO-069-BR	9/8/2004	352464	302580	Soil	River bank between canal and back channel
SO-071-BR	9/8/2004	352584	302442	Soil	Between Pond F and back channel
SO-060-WT	9/8/2004	352604	304133	Soil	On strip of land between WT-A and WT-B
SO-070-BR	9/8/2004	352689	302506	Soil	Between Pond F and back channel
SO-056-NP	9/8/2004	352801	302855	Soil	River bank at Nunes property
SO-FD-11	9/8/2004	352801	302855	Soil	River bank at Nunes property, same as SO-W56-NP
SO-054-NP	9/8/2004	352875	303633	Soil	Nunes Inlet, northern tip of peninsula, near MW-111
SO-055-NP	9/8/2004	352903	303015	Soil	River bank at Nunes property
SO-058-WT	9/8/2004	353022	303579	Soil	River bank between MW-111and 112
SO-050-NP	9/8/2004	353037	303207	Soil	Nunes Inlet, southern tip of peninsula
SO-053-NP	9/8/2004	353076	303462	Soil	Nunes Inlet, bank of peninsula
SO-052-NP	9/8/2004	353123	303409	Soil	Nunes Inlet, river bank near curve, west of MW-112
SO-051-NP	9/8/2004	353137	303277	Soil	Nunes Inlet, river bank
SO-046-DF	9/9/2004	348790	305863	Soil	River bank between MW-501 and North Inlet
SO-FD-12	9/9/2004	348790	305863	Soil	River bank between MW-501 and North Inlet, same as SO-046-DF
SO-047-DF	9/9/2004	348997	305875	Soil	River bank just upstream of North Inlet
SO-048-DF	9/9/2004	349131	305910	Soil	Bank of North Inlet near PZ-14
SO-049-DF	9/9/2004	349151	305835	Soil	River bank just downstream of North Inlet near MW-106
SO-041-LF	9/9/2004	350662	304265	Soil	River bank near SEA-603 northwest of Pond B
SO-042-LF	9/9/2004	350876	304137	Soil	River bank near Pond B
SO-061-WT	9/9/2004	350881	305050	Soil	WT-C, southwest shore, near PZ-12

Boring Location/Sample ID	Date Collected	Easting	Northing	Sample Matrix	Comments
SO-062-WT	9/9/2004	351516	304644	Soil	WT-B, southwest shore, northeast of MW-108
SO-043-LF	9/9/2004	351563	303928	Soil	River bank near Pond C
SO-063-WT	9/9/2004	352309	304150	Soil	WT-B, southwest shore, near PZ-11
SO-087-UI	9/9/2004	352537	303076	Soil	UI, between SEA-607 and SEA-608
SO-085-UI	9/9/2004	352567	303613	Soil	UI, shore of Pond A northwest of PZ-16
SO-084-UI	9/9/2004	352628	303661	Soil	UI, top of river bank northwest of PZ-16
SO-086-UI	9/9/2004	352659	303219	Soil	UI, top of waste mound northeast of SEA-607
SO-057-NP	9/9/2004	352773	302716	Soil	River bank just upstream of Pratt Dam
SO-059-WT	9/9/2004	352938	303887	Soil	Vacant land between Lenox Street Well and MW-110
SO-072-MF	9/10/2004	346741	309057	Soil	South end of Mackland Farms
SO-073-MF	9/10/2004	346761	309100	Soil	South end of Mackland Farms
SO-074-MF	9/10/2004	346781	309152	Soil	South end of Mackland Farms
SO-044-QW	9/10/2004	348682	305666	Soil	QW, north end, north of GZ-1 above river bank
SO-076-QW	9/10/2004	348868	305613	Soil	QW, north of MW-502, above river bank
SO-FD-13	9/10/2004	348868	305613	Soil	QW, north of MW-502, same as SO-076-QW
SO-075-QW	9/10/2004	348876	305654	Soil	QW, north of MW-502, toe of river bank
SO-045-QW	9/10/2004	349548	305519	Soil	QW, on river bank
SO-081-UI	9/10/2004	351766	303901	Soil	UI, top of river bank between PZ-17 and PZ-18
SO-082-UI	9/10/2004	351837	303750	Soil	UI, shore of Pond A between PZ-17 and PZ-18
SO-080-UI	9/10/2004	351894	303384	Soil	UI, ground surface near north end of buried waste
SO-079-UI	9/10/2004	351974	303434	Soil	UI, top of large soil mound near west shore of Pond A
SO-078-UI	9/10/2004	352081	303353	Soil	UI, soil mound near west shore of Pond A
SO-077-UI	9/10/2004	352178	303231	Soil	UI, on top of waste near former excavator
SO-083-UI	9/10/2004	352232	303798	Soil	UI, shore of Pond A near PZ-17
SO-088-UI	9/10/2004	352354	302798	Soil	UI, river bank along back channel
SO-091-WT	11/27/2004	350881	305050	Soil	WT-C, southwest shore, same as SO-061-WT
SO-092-WT	11/27/2004	351516	304644	Soil	WT-B, southwest shore, same as SO-062-WT
SO-FD-21	11/27/2004	351516	304644	Soil	WT-B, southwest shore, same as SO-062-WT
SO-090-UI	11/27/2004	352567	303613	Soil	UI, shore of Pond A, same as SO-085-UI
SO-FD-20	11/27/2004	352567	303613	Soil	UI, shore of Pond A, same as SO-085-UI
SO-089-UI	11/27/2004	352628	303661	Soil	UI, top of river bank, same as SO-084-UI
SW-001-UI	8/28/2003	352478	303295	Surface Water	Pond E, south shore
SW-002-UI	8/28/2003	352322	303548	Surface Water	Middle of Pond A
SW-FD01	8/29/2003	352279	303356	Surface Water	Shore of Pond A near PZ-09, same as SW-003-UI
SW-003-UI	8/29/2003	352279	303356	Surface Water	South shore of Pond A near PZ-09
SW-004-UI	8/29/2003	352172	303168	Surface Water	Excavator Pond - small pond on top of buried waste on UI
SW-005-UI	8/29/2003	351747	303610	Surface Water	West shore of Pond A
SW-006-UI	8/29/2003	352761	303287	Surface Water	Southeast shore of Pond A
SW-007-UI	9/2/2003	352484	303117	Surface Water	Pond D, southeast shore
SW-008-BR	9/2/2003	352735	302367	Surface Water	Pond F, nearshore subsample location A
SW-009-WT	9/3/2003	352646	304086	Surface Water	WT-A, shore near PZ-10
SW-010-WT	9/3/2003	352842	304421	Surface Water	WT-B, northeast shore, downstream of Panda culvert
SW-011-WT	9/3/2003	352504	304330	Surface Water	WT-B, mid-pond, southeast end
SW-012-WT	9/3/2003	351470	305229	Surface Water	WT-C, mid-pond, northeast area, west of MW-EA-2
SW-013-WT	9/4/2003	352327	304194	Surface Water	WT-B, southwest shore along RR, near PZ-11
SW-014-WT	9/4/2003	351040	305533	Surface Water	WT-C, north shore near PZ-13
SW-015-WT	9/4/2003	351365	305705	Surface Water	WT-C, Monastery Brook just downstream of road
SW-016-WT	9/4/2003	349270	306035	Surface Water	WT-D, north end near PZ-15
SW-017-WT	9/5/2003	350890	305078	Surface Water	WT-C, southwest shore along RR, near PZ-12
SW-018-WT	9/5/2003	350496	305336	Surface Water	WT-C, southwest shore along RR, northwest of PZ-12
SW-019-WT	9/5/2003	351002	304113	Surface Water	Pond B near PZ-03
SW-020-LF	9/5/2003	351481	303930	Surface Water	Pond C, close to PZ-02
SW-021-WT	9/5/2003	353121	303354	Surface Water	Inlet off Blackstone River adjacent to Nunes Property
SW-022-BR	9/5/2003	345490	312537	Surface Water	Blackstone River 250 ft upstream of Ashton Dam
SW-023-BR	9/6/2003	352567	302605	Surface Water	Back channel, downstream end, neashore location (subsample A)
SW-024-BR	9/6/2003	352135	302922	Surface Water	Back channel, off of UI bank
SW-025-BR	9/6/2003	351456	303575	Surface Water	Back channel, middle, upstream end
SW-026-BR	9/8/2003	352690	302735	Surface Water	Main channel upstream of Pratt Dam, subsample A location close to PZ-06
SW-FD-02	9/8/2003	352690	302735	Surface Water	Main channel upstream of Pratt Dam, same as SE-026-BR
SW-027-BR	9/8/2003	352779	303669	Surface Water	Main channel near MW-111
SW-028-BR	9/8/2003	352320	303984	Surface Water	Main channel off landfill bank, near PZ-01
SW-029-BR	9/9/2003	351551	303889	Surface Water	Main channel off landfill bank, near Pond C
SW-FD-03	9/9/2003	351551	303889	Surface Water	Main channel near Pond C, same as SE-029-BR
SW-030-BR	9/9/2003	350958	304015	Surface Water	Main channel off landfill bank, near Pond B
SW-031-BR	9/9/2003	350323	304420	Surface Water	Main channel off landfill bank, near P-8
SW-032-BR	9/10/2003	349117	305833	Surface Water	Main channel just downstream of North Inlet
SW-033-BR	9/10/2003	347976	306035	Surface Water	Main channel near P-5
SW-034-BR	9/10/2003	347020	307232	Surface Water	Main channel downstream of Martin Street
SW-049-BR	8/30/2004	346826	310413	Surface Water	North bank downstream of Owens Corning plant
SW-045-BR	8/30/2004	346903	309018	Surface Water	North bank between OC plant and Roger Williams
SW-044-BR	8/30/2004	347061	307158	Surface Water	Near AD+05550 (SE-034-BR), end of peninsula
SW-043-BR	8/30/2004	350184	304781	Surface Water	Near SEA-602A/B, off of LF bank
SW-047-BR	8/30/2004	350628	304243	Surface Water	Near SEA-603, off of LF bank

Boring Location/Sample ID	Date Collected	Easting	Northing	Sample Matrix	Comments
SW-041-BR	8/30/2004	351597	303879	Surface Water	Near Pond C, off of opposite (UI) bank
SW-046-BR	8/30/2004	352890	303046	Surface Water	Between Nunes Inlet and Pratt Dam, off of NP bank
SW-FD-11	8/30/2004	352890	303046	Surface Water	Main channel off of NP bank, FD of SW-046-BR
SW-050-BR	8/31/2004	345403	312315	Surface Water	Immediately upstream of Ashton Dam, south bank off dam
SW-051-DF	8/31/2004	349116	305924	Surface Water	Inlet off of Blackstone River north of LF, near DF1-3
SW-055-WT	8/31/2004	349320	306016	Surface Water	WT-D, southeast of PZ-15
SW-048-BR	8/31/2004	349566	305538	Surface Water	Downstream of North Inlet, off of QW bank
SW-042-BR	8/31/2004	352690	302735	Surface Water	Middle of main channel, same as SW-026-BR
SW-054-BR	9/1/2004	345628	312400	Surface Water	Immediately upstream of Ashton Dam, north bank
SW-052-WT	9/1/2004	349324	306113	Surface Water	Ditch draining sand and gravel pit, north of WT-D
SW-059-WT	9/1/2004	351440	305562	Surface Water	Mouth of Monastery Brook downstream of road
SW-062-WT	9/1/2004	351508	305289	Surface Water	WT-C, mid-pond, northeast area, north of MW-EA-2
SW-061-WT	9/1/2004	352372	304608	Surface Water	WT-B, off-shore, west of MW-EA-1
SW-058-WT	9/1/2004	352774	304071	Surface Water	WT-A, middle, deepest part
SW-070-LF	9/2/2004	350926	304138	Surface Water	Pond B, middle, northwest of PZ-03
SW-064-BR	9/2/2004	351791	303170	Surface Water	Middle of back channel off of UI bank
SW-060-WT	9/2/2004	351895	304852	Surface Water	WT-B, northeast shore
SW-057-WT	9/2/2004	352084	304607	Surface Water	WT-B, off-shore, middle
SW-065-BR	9/2/2004	352478	302602	Surface Water	Back channel off of canal bank, southeast end
SW-069-NP	9/2/2004	353122	303341	Surface Water	Inlet off BR main channel next to NP, close to SE-021-NP
SW-FD-12	9/2/2004	353122	303341	Surface Water	PDI-02-NP, same as SW-069-NP
SW-073-LF	9/3/2004	350848	304184	Surface Water	Pond B, northwest end
SW-067-BR	9/3/2004	352007	302937	Surface Water	Back channel off of canal bank
SW-066-BR	9/3/2004	352272	302718	Surface Water	Back channel off of canal bank
SW-076-UI	9/3/2004	352313	303353	Surface Water	Pond D, north shore
SW-075-UI	9/3/2004	352417	303137	Surface Water	Pond D, middle off south shore
SW-063-WT	9/6/2004	350942	305250	Surface Water	WT-C, off-shore, north of PZ-12
SW-072-BR	9/6/2004	351393	303624	Surface Water	Back channel off of canal bank, northwest end
SW-071-BR	9/6/2004	351567	303403	Surface Water	Back channel off of canal bank
SW-077-UI	9/6/2004	351696	303493	Surface Water	Small pool northwest of Pond A on UI
SW-068-BR	9/6/2004	351730	303184	Surface Water	Back channel off of canal bank
SW-078-UI	9/6/2004	352438	303325	Surface Water	Pond E, north shore
SW-083-BR	9/6/2004	352717	302444	Surface Water	Pond F, northwest area, near-shore
SW-082-BR	9/6/2004	352820	302413	Surface Water	Pond F, northeast area, near-shore
SW-080-UI	9/7/2004	351994	303594	Surface Water	Pond A, middle (west end)
SW-084-UI	9/7/2004	352049	303465	Surface Water	Pond A, west shore
SW-086-UI	9/7/2004	352149	303734	Surface Water	Pond A, northeast shore
SW-085-UI	9/7/2004	352447	303427	Surface Water	Pond A, southwest shore
SW-079-UI	9/7/2004	352447	303531	Surface Water	Pond A, middle (deepest part)
SW-FD-13	9/7/2004	352447	303531	Surface Water	Pond A, middle, same as SW-079-UI
SW-056-UI	9/7/2004	352447	303531	Surface Water	Pond A, middle, same location as SW-079-UI, near bottom
SW-087-UI	9/7/2004	352478	303603	Surface Water	Pond A, east shore
SW-081-BR	9/7/2004	352703	302372	Surface Water	Pond F, southwest area (deepest part)
SW-053-WT	9/9/2004	352950	304500	Surface Water	WT-B, on northeast shore below Panda Culvert
SW-074-LF	9/10/2004	351471	303952	Surface Water	Pond C, northwest of PZ-02
SO-TB01	8/18/2003	Not Available		QA/QC Blank	Trip Blank
SOER01	8/18/2003	Not Available		QA/QC Blank	Equipment rinsate blank
GW-TB01	8/19/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB02	8/19/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB-04	8/19/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB-3	8/19/2003	Not Available		QA/QC Blank	Trip Blank
GW-ER1	8/19/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SO-TB-2	8/19/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB05	8/20/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB04	8/20/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB05	8/21/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB-06	8/21/2003	Not Available		QA/QC Blank	Trip Blank
SO-ER-02	8/21/2003	Not Available		QA/QC Blank	Equipment rinsate blank
GW-TB06	8/22/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB07	8/22/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB08	8/26/2003	Not Available		QA/QC Blank	Trip Blank
SO-ER03	8/26/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SO-TB09	8/27/2003	Not Available		QA/QC Blank	Trip Blank
SO-ER04	8/27/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SW-TB01	8/28/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB10	8/28/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB01	8/28/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB02	8/28/2003	Not Available		QA/QC Blank	Trip Blank
SW-ER01	8/28/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SW-TB02	8/29/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB03	8/29/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB04	8/29/2003	Not Available		QA/QC Blank	Trip Blank
SE-ER01	8/29/2003	Not Available		QA/QC Blank	Equipment rinsate blank

Boring Location/Sample ID	Date Collected	Easting	Northing	Sample Matrix	Comments
SW-TB-05	9/2/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB03	9/2/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB04	9/3/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB06	9/3/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB07	9/3/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB08	9/3/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB05	9/5/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB09	9/5/2003	Not Available		QA/QC Blank	Trip Blank
SO-ER05	9/5/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SE-TB-06	9/6/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB-10	9/6/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB10	9/6/2003	Not Available		QA/QC Blank	Trip Blank
SO-TB11	9/6/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB-07	9/8/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB08	9/8/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB09	9/8/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB-11	9/8/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB12	9/8/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB-13	9/8/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB-14	9/8/2003	Not Available		QA/QC Blank	Trip Blank
SW-ER02	9/8/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SE-ER02	9/8/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SE-TB10	9/9/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB-15	9/9/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB-16	9/9/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB-17	9/9/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB11	9/10/2003	Not Available		QA/QC Blank	Trip Blank
SE-TB12	9/10/2003	Not Available		QA/QC Blank	Trip Blank SE-034
SW-TB18	9/10/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB19	9/10/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB20	9/10/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB21	9/10/2003	Not Available		QA/QC Blank	Trip Blank
SW-TB22	9/10/2003	Not Available		QA/QC Blank	Trip Blank
SW-ER03	9/10/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SE-ER03	9/10/2003	Not Available		QA/QC Blank	Equipment rinsate blank
GW-TB07	9/29/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB08	9/29/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB09	9/30/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB-010	9/30/2003	Not Available		QA/QC Blank	Trip Blank
GW-ER-002	9/30/2003	Not Available		QA/QC Blank	Equipment rinsate blank
GW-TB10	10/1/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB11	10/1/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB12	10/2/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB13	10/2/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB14	10/3/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB15	10/3/2003	Not Available		QA/QC Blank	Trip Blank
GW-TB16	10/4/2003	Not Available		QA/QC Blank	Trip Blank
GW-ER-03	10/4/2003	Not Available		QA/QC Blank	Equipment rinsate blank
SE-ER-11	8/30/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SE-TB-40	8/30/2004	Not Available		QA/QC Blank	Trip Blank
SW-ER-11	8/30/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SW-TB-40	8/30/2004	Not Available		QA/QC Blank	Trip Blank
SE-TB-41	8/31/2004	Not Available		QA/QC Blank	Trip Blank
SW-TB-41	8/31/2004	Not Available		QA/QC Blank	Trip Blank
SE-TB-42	9/1/2004	Not Available		QA/QC Blank	Trip Blank
SW-TB-42	9/1/2004	Not Available		QA/QC Blank	Trip Blank
SE-ER-12	9/2/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SE-TB-43	9/2/2004	Not Available		QA/QC Blank	Trip Blank
SW-ER-12	9/2/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SW-TB-43	9/2/2004	Not Available		QA/QC Blank	Trip Blank
SE-TB-44	9/3/2004	Not Available		QA/QC Blank	Trip Blank
SW-TB-44	9/3/2004	Not Available		QA/QC Blank	Trip Blank
SE-TB-45	9/6/2004	Not Available		QA/QC Blank	Trip Blank
SW-TB-45	9/6/2004	Not Available		QA/QC Blank	Trip Blank
SE-TB-46	9/7/2004	Not Available		QA/QC Blank	Trip Blank
SE-ER-13	9/7/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SW-ER-13	9/7/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SW-TB-46	9/7/2004	Not Available		QA/QC Blank	Trip Blank
SO-ER-11	9/8/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SO-TB-40	9/8/2004	Not Available		QA/QC Blank	Trip Blank
SW-TB-47	9/9/2004	Not Available		QA/QC Blank	Trip Blank
SO-ER-12	9/9/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SO-TB-41	9/9/2004	Not Available		QA/QC Blank	Trip Blank

Boring Location/Sample ID	Date Collected	Easting	Northing	Sample Matrix	Comments
SW-TB-48	9/10/2004	Not Available		QA/QC Blank	Trip Blank
SO-ER-13	9/10/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SO-TB-42	9/10/2004	Not Available		QA/QC Blank	Trip Blank
GW-TB-40	9/20/2004	Not Available		QA/QC Blank	Trip Blank
GW-ER-11	9/21/2004	Not Available		QA/QC Blank	Equipment rinsate blank
GW-TB-41	9/21/2004	Not Available		QA/QC Blank	Trip Blank
GW-TB-42	9/22/2004	Not Available		QA/QC Blank	Trip Blank
GW-ER-12	9/23/2004	Not Available		QA/QC Blank	Equipment rinsate blank
GW-TB-43	9/23/2004	Not Available		QA/QC Blank	Trip Blank
GW-ER-13	9/24/2004	Not Available		QA/QC Blank	Equipment rinsate blank
GW-TB-44	9/24/2004	Not Available		QA/QC Blank	Trip Blank
GW-TB-45	9/27/2004	Not Available		QA/QC Blank	Trip Blank
GW-TB-46	9/28/2004	Not Available		QA/QC Blank	Trip Blank
GW-ER-14	9/30/2004	Not Available		QA/QC Blank	Equipment rinsate blank
GW-TB-47	9/30/2004	Not Available		QA/QC Blank	Trip Blank
GW-TB-48	10/1/2004	Not Available		QA/QC Blank	Trip Blank
SO-ER-20	11/27/2004	Not Available		QA/QC Blank	Equipment rinsate blank
SO-TB-20	11/27/2004	Not Available		QA/QC Blank	Trip Blank

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
FISH TISSUE
RI REPORT
PETERSON PURITAN SITE OU2,
CUMBERLAND AND LINCOLN, RHODE ISLAND

Sample ID	Location/Region	Analyses							
		Date Collected	TCL SVOCs	TAL Metals	PCBs	% Lipids	Pesticides	Notes
BR1-FI-121	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Bluegill
BR1-FI-122	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Bluegill
BR1-FI-123	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Bluegill
BR1-FI-124	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Bluegill
BR1-FI-125	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Bluegill; A & B Scales
BR1-FI-126	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Pumpkinseed; Wound between hard/soft dorsal
BR1-FI-127	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Pumpkinseed
BR1-FI-128	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Pumpkinseed
BR1-FI-113	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	White Sucker; Scar on left side
BR1-FI-114	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	White Sucker
BR1-FI-115	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	White Sucker
BR1-FI-116	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	White Sucker
BR1-FI-117	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	White Sucker
BR1-FI-118	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	White Sucker
BR1-FI-119	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	White Sucker
BR1-FI-120	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	White Sucker
BR1-FI-129	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Common Shiner
BR1-FI-130	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Common Shiner
BR1-FI-131	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Common Shiner
BR1-FI-132	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Common Shiner
BR1-FI-133	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Common Shiner
BR1-FI-134	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Common Shiner
BR1-FI-135	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Common Shiner
BR1-FI-136	BR-1; Background upstream of Ashton Dam	9/29/05	X	X	X	X	X	Common Shiner
BR2-FI-73	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Largemouth Bass
BR2-FI-74	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Largemouth Bass
BR2-FI-75	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Largemouth Bass
BR2-FI-76	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Largemouth Bass

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
FISH TISSUE
RI REPORT
PETERSON PURITAN SITE OU2,
CUMBERLAND AND LINCOLN, RHODE ISLAND

Sample ID	Location/Region	Analyses						
		Date Collected	TCL SVOCs	TAL Metals	PCBs	% Lipids	Pesticides	Notes
BR2-FI-77	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Largemouth Bass
BR2-FI-78	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Largemouth Bass; Hookscar on left mandible
BR2-FI-79	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Largemouth Bass
BR2-FI-80	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-81	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-82	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-83	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-84	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-85	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-86	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-87	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-88	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	White Sucker
BR2-FI-89	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Common Shiner
BR2-FI-90	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Common Shiner
BR2-FI-91	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Common Shiner
BR2-FI-92	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Common Shiner
BR2-FI-93	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Common Shiner
BR2-FI-94	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Common Shiner
BR2-FI-95	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Common Shiner
BR2-FI-96	BR-2; Background downstream of Ashton Dam	9/28/05	X	X	X	X	X	Common Shiner
BR3-FI-1	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Largemouth Bass
BR3-FI-2	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Largemouth Bass
BR3-FI-3	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Largemouth Bass
BR3-FI-4	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Largemouth Bass; Hookscar
BR3-FI-5	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Largemouth Bass; Mild blackspot
BR3-FI-6*	BR-3; Site river main channel	9/28/05	X	X	X	X	X	Largemouth Bass; Lesions on anal fin
BR3-FI-7*	BR-3; Site river main channel	9/28/05	X	X	X	X	X	Largemouth Bass
BR3-FI-8*	BR-3; Site river main channel	9/28/05	X	X	X	X	X	Largemouth Bass
BR3-FI-9	BR-3; Site river main channel	9/27/05	X	X	X	X	X	White Sucker

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
FISH TISSUE
RI REPORT
PETERSON PURITAN SITE OU2,
CUMBERLAND AND LINCOLN, RHODE ISLAND

Sample ID	Location/Region	Analyses						
		Date Collected	TCL SVOCs	TAL Metals	PCBs	% Lipids	Pesticides	Notes
BR3-FI-10	BR-3; Site river main channel	9/27/05	X	X	X	X	X	White Sucker
BR3-FI-11	BR-3; Site river main channel	9/27/05	X	X	X	X	X	White Sucker; Lesion on anterior pectoral fin
BR3-FI-12	BR-3; Site river main channel	9/27/05	X	X	X	X	X	White Sucker
BR3-FI-13	BR-3; Site river main channel	9/27/05	X	X	X	X	X	White Sucker
BR3-FI-14*	BR-3; Site river main channel	9/28/05	X	X	X	X	X	White Sucker
BR3-FI-15*	BR-3; Site river main channel	9/28/05	X	X	X	X	X	White Sucker
BR3-FI-16*	BR-3; Site river main channel	9/28/05	X	X	X	X	X	White Sucker
BR3-FI-17*	BR-3; Site river main channel	9/28/05	X	X	X	X	X	Common Shiner; Moderate blackspot
BR3-FI-18	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Common Shiner
BR3-FI-19	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Common Shiner
BR3-FI-20	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Common Shiner
BR3-FI-21	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Common Shiner
BR3-FI-22	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Common Shiner
BR3-FI-23	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Common Shiner; Mild blackspot
BR3-FI-24	BR-3; Site river main channel	9/27/05	X	X	X	X	X	Common Shiner
P1-FI-25	P-1; Pond A	9/27/05	X	X	X	X	X	Largemouth Bass
P1-FI-26	P-1; Pond A	9/27/05	X	X	X	X	X	Largemouth Bass
P1-FI-27	P-1; Pond A	9/27/05	X	X	X	X	X	Largemouth Bass
P1-FI-28	P-1; Pond A	9/27/05	X	X	X	X	X	Largemouth Bass; Scar on lower left quadrant
P1-FI-29	P-1; Pond A	9/27/05	X	X	X	X	X	Largemouth Bass
P1-FI-30	P-1; Pond A	9/27/05	X	X	X	X	X	Largemouth Bass; Hookscar on right mandible
P1-FI-31	P-1; Pond A	9/27/05	X	X	X	X	X	Largemouth Bass
P1-FI-32	P-1; Pond A	9/27/05	X	X	X	X	X	Largemouth Bass; Lesion on left maxillary
P1-FI-33	P-1; Pond A	9/27/05	X	X	X	X	X	White Sucker
P1-FI-34	P-1; Pond A	9/27/05	X	X	X	X	X	White Sucker
P1-FI-35	P-1; Pond A	9/27/05	X	X	X	X	X	White Sucker
P1-FI-36	P-1; Pond A	9/27/05	X	X	X	X	X	White Sucker
P1-FI-37	P-1; Pond A	9/27/05	X	X	X	X	X	White Sucker
P1-FI-38	P-1; Pond A	9/27/05	X	X	X	X	X	White Sucker

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
FISH TISSUE
RI REPORT
PETERSON PURITAN SITE OU2,
CUMBERLAND AND LINCOLN, RHODE ISLAND

Sample ID	Location/Region	Analyses						
		Date Collected	TCL SVOCs	TAL Metals	PCBs	% Lipids	Pesticides	Notes
P1-FI-39	P-1; Pond A	9/27/05	X	X	X	X	X	White Sucker; Moderate blackspot
P1-FI-40	P-1; Pond A	9/27/05	X	X	X	X	X	White Sucker
P1-FI-41	P-1; Pond A	9/27/05	X	X	X	X	X	Bluegill
P1-FI-42	P-1; Pond A	9/27/05	X	X	X	X	X	Bluegill
P1-FI-43	P-1; Pond A	9/27/05	X	X	X	X	X	Bluegill
P1-FI-44	P-1; Pond A	9/27/05	X	X	X	X	X	Bluegill
P1-FI-45	P-1; Pond A	9/27/05	X	X	X	X	X	Bluegill
P1-FI-46	P-1; Pond A	9/27/05	X	X	X	X	X	Bluegill
P1-FI-47	P-1; Pond A	9/27/05	X	X	X	X	X	Bluegill
P1-FI-48	P-1; Pond A	9/27/05	X	X	X	X	X	Bluegill
P2-FI-49	P-2; Pond F	9/27/05	X	X	X	X	X	Bluegill
P2-FI-50	P-2; Pond F	9/27/05	X	X	X	X	X	Bluegill
P2-FI-51	P-2; Pond F	9/27/05	X	X	X	X	X	Bluegill
P2-FI-52	P-2; Pond F	9/27/05	X	X	X	X	X	Bluegill
P2-FI-53	P-2; Pond F	9/27/05	X	X	X	X	X	Bluegill
P2-FI-54	P-2; Pond F	9/27/05	X	X	X	X	X	Bluegill
P2-FI-55	P-2; Pond F	9/27/05	X	X	X	X	X	Bluegill
P2-FI-56	P-2; Pond F	9/27/05	X	X	X	X	X	Pumpkinseed
P2-FI-57	P-2; Pond F	9/27/05	X	X	X	X	X	White Sucker
P2-FI-58	P-2; Pond F	9/27/05	X	X	X	X	X	White Sucker
P2-FI-59	P-2; Pond F	9/27/05	X	X	X	X	X	White Sucker
P2-FI-60	P-2; Pond F	9/27/05	X	X	X	X	X	White Sucker
P2-FI-61	P-2; Pond F	9/27/05	X	X	X	X	X	White Sucker
P2-FI-62	P-2; Pond F	9/27/05	X	X	X	X	X	White Sucker
P2-FI-63	P-2; Pond F	9/27/05	X	X	X	X	X	White Sucker
P2-FI-64	P-2; Pond F	9/27/05	X	X	X	X	X	White Sucker
P2-FI-65	P-2; Pond F	9/27/05	X	X	X	X	X	Golden Shiner
P2-FI-66	P-2; Pond F	9/27/05	X	X	X	X	X	Golden Shiner; Lesion on left anal fin
P2-FI-67	P-2; Pond F	9/27/05	X	X	X	X	X	Golden Shiner

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
FISH TISSUE
RI REPORT
PETERSON PURITAN SITE OU2,
CUMBERLAND AND LINCOLN, RHODE ISLAND

Sample ID	Location/Region	Analyses						
		Date Collected	TCL SVOCs	TAL Metals	PCBs	% Lipids	Pesticides	Notes
P2-FI-68	P-2; Pond F	9/27/05	X	X	X	X	X	Golden Shiner
P2-FI-69	P-2; Pond F	9/27/05	X	X	X	X	X	Golden Shiner
P2-FI-70	P-2; Pond F	9/27/05	X	X	X	X	X	Golden Shiner
P2-FI-71	P-2; Pond F	9/27/05	X	X	X	X	X	Golden Shiner
P2-FI-72	P-2; Pond F	9/27/05	X	X	X	X	X	Golden Shiner
PG-FI-97	P-6; Pond Background	9/29/05	X	X	X	X	X	Largemouth Bass
PG-FI-98	P-6; Pond Background	9/29/05	X	X	X	X	X	Largemouth Bass
PG-FI-99	P-6; Pond Background	9/29/05	X	X	X	X	X	Largemouth Bass
PG-FI-100	P-6; Pond Background	9/29/05	X	X	X	X	X	Largemouth Bass
PG-FI-101	P-6; Pond Background	9/29/05	X	X	X	X	X	Largemouth Bass
PG-FI-102	P-6; Pond Background	9/29/05	X	X	X	X	X	Largemouth Bass
PG-FI-103	P-6; Pond Background	9/29/05	X	X	X	X	X	Largemouth Bass
PG-FI-104	P-6; Pond Background	9/29/05	X	X	X	X	X	Largemouth Bass
PG-FI-105	P-6; Pond Background	9/29/05	X	X	X	X	X	Bluegill
PG-FI-106	P-6; Pond Background	9/29/05	X	X	X	X	X	Bluegill
PG-FI-107	P-6; Pond Background	9/29/05	X	X	X	X	X	Bluegill; Upper caudal lobe missing
PG-FI-108	P-6; Pond Background	9/29/05	X	X	X	X	X	Bluegill
PG-FI-109	P-6; Pond Background	9/29/05	X	X	X	X	X	Bluegill
PG-FI-110	P-6; Pond Background	9/29/05	X	X	X	X	X	Bluegill
PG-FI-111	P-6; Pond Background	9/29/05	X	X	X	X	X	Bluegill
PG-FI-112	P-6; Pond Background	9/29/05	X	X	X	X	X	Bluegill

* = collected from backwater behind island

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
SEDIMENT
RI REPORT
PETERSON PURITAN SUPERFUND SITE OU2, CUMBERLAND, AND LINCOLN, RHODE ISLAND

Sample ID	Date Collected	Analyses										Notes
		VOCs	SVOCs	Metals	PCBs	Pesticides	AVS-SEM	TOC	Grainsize	% Moisture	Benthic Analysis	
T05BL-001	6/23/2005	X	X	X	X	X	X	X	X	X	X	Background sample, collected from Blackstone River approx. 1,700 ft downstream from Ashton Dam.
T05BL-002	6/23/2005	X	X	X	X	X	X	X	X	X	X	Background sample, collected from Blackstone River approx. 3,300 ft downstream from Ashton Dam.
T05BL-003	6/23/2005	X	X	X	X	X	X	X	X	X	X	Background sample, collected from pond along NE bank of Blackstone River approx. 1,000 ft upstream from Ashton Dam.
T05BL-004	6/23/2005	X	X	X	X	X	X	X	X	X	X	Background sample, collected from pond along NE bank of Blackstone River approx. 400 ft upstream from Ashton Dam
T05BL-005	6/23/2005	X	X	X	X	X	X	X	X	X	X	Background sample collected from Blackstone River immediately upstream of Ashton Dam.
T05BL-006	6/23/2005	X	X	X	X	X	X	X	X	X	X	Background sample, collected from Blackstone River approx. 2,000 ft upstream of Ashton Dam
T05BL-007	6/23/2005	X	X	X	X	X	X	X	X	X	X	Background sample, collected from Blackstone River approx. 2,300 ft upstream of Ashton Dam.
T05BR-001	6/21/2005	X	X	X	X	X	X	X	X	X	X	Blackstone River main channel approx. 250 ft upstream from Pratt Dam.
T05BR-002	6/21/2005	X	X	X	X	X	X	X	X	X		Blackstone River main channel, near S bank of Landfill.
T05BR-003	6/21/2005	X	X	X	X	X	X	X	X	X	X	Blackstone River main channel, near NE bank.
T05BR-004	6/22/2005	X	X	X	X	X	X	X	X	X		Blackstone River main channel, near SW bank of Landfill and Pond B.
T05BR-005	6/22/2005	X	X	X	X	X	X	X	X	X	X	Blackstone River main channel, near Nunes Property and Pond I.
T05BR-006	6/22/2005	X	X	X	X	X	X	X	X	X	X	Blackstone River main channel, near E bank of Quinnville Well field.
T05BR-007	6/23/2005	X	X	X	X	X	X	X	X	X	X	Blackstone River back channel, near SW bank of Unnamed Island.
T05PA-001	6/21/2005	X	X	X	X	X	X	X	X	X	X	E side of Pond A
T05PA-003	6/21/2005	X	X	X	X	X	X	X	X	X	X	W side of Pond A
T05PD-002	6/21/2005	X	X	X	X	X	X	X	X	X	X	SE side of Pond D
T05PF-004	6/21/2005	X	X	X	X	X	X	X	X	X	X	Center of Pond F
T05WB-001	6/21/2005	X	X	X	X	X	X	X	X	X		SE side of Wetland B
T05WB-002	6/21/2005	X	X	X	X	X	X	X	X	X		SE side of Wetland C
T05WD-003	6/21/2005	X	X	X	X	X	X	X	X	X		NW side of Wetland D
BD062205	6/22/2005	X	X	X	X	X	X	X	X	X		Field Duplicate of T05BR-004
BD062105	6/21/2005	X	X	X	X	X	X	X	X	X		Field Duplicate of T05PD-002

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
SURFACE WATER
RI REPORT
PETERSON PURITAN SUPERFUND SITE OU2, CUMBERLAND AND LINCOLN, RHODE ISLAND

Sample ID	Date Collected	Analyses									Notes
		PAHs	Total Metals	Dissolved Metals	PCBs	Pesticides	Hardness	TDS	TSS	Benthic Analysis	
SW-1 ash	4/4/2005	X	X	X	X	X	X	X	X		Approx. 700 feet downstream from Ashton Dam (upstream from OU-2)
SW-2 ash	4/4/2005	X	X	X	X	X	X	X	X		Approx. 700 feet downstream from Ashton Dam (upstream from OU-2)
SW-3 Pratt	4/4/2005	X			X	X		X	X		Immediately upstream from Pratt Dam (downstream end of OU-2)
SW-3 Pratt Cumberland	4/4/2005		X	X			X				Immediately upstream from Pratt Dam (downstream end of OU-2)
SW-4 Pratt	4/4/2005	X			X	X		X	X		Immediately upstream from Pratt Dam (downstream end of OU-2)
SW-4 Pratt Lincoln	4/4/2005		X	X			X				Immediately upstream from Pratt Dam (downstream end of OU-2)

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
GROUNDWATER
REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SUPERFUND SITE OU2,
CUMBERLAND AND LINCOLN, RHODE ISLAND

Monitoring Well Number	Analyses						
	Date Collected	VOCs	TCL SVOCs	TAL Metals/Cyanide	Pesticides/PCBs	Notes
NOVEMBER-DECEMBER 2005						
MW-106A	12/2/2005	X	X	X	X	
MW-106B	12/2/2005	X	X	X	X	
MW-106C	12/2/2005	X	X	X	X	
MW-108AA	12/7/2005	X	X	X	X	
MW-A2	12/8/2005	X	X	X	X	
MW-C1	12/7/2005	X	X	X	X	
MW-C2	12/06/05	X	X	X	X	
MW-EA-1	12/09/05	X	X	X	X	
SEA-603	12/06/05	X	X	X	X	
SEA-602A	12/07/05	X	X	X	X	
SEA-605	12/07/05	X	X	X	X	
SEA-606	12/05/05	X	X	X	X	
SEA-608	01/10/06	X	X	X	X	
MW-502		X	X	X	X	
MW-112AA	11/30/05	X	X	X	X	Sampled due to well proximity to the bedrock valley and the Lenox Street water supply well.
MW-112A	11/30/05	X	X	X	X	Sampled due to well proximity to the bedrock valley and the Lenox Street water supply well.
MW-112B	11/30/05	X	X	X	X	Sampled due to well proximity to the bedrock valley and the Lenox Street water supply well.
MW-112C	11/30/05	X	X	X	X	Sampled due to well proximity to the bedrock valley and the Lenox Street water supply well.
GLF-700A	12/06/05	X	X	X	X	
GLF-704	12/06/05	X	X	X	X	
GLF-706	11/29/05	X	X	X	X	
GLF-706A	11/29/05	X	X	X	X	
GUI-701	12/08/05	X	X	X	X	
GUI-702	01/10/06	X	X	X	X	
GUI-703	01/10/06	X	X	X	X	
GNP-705	11/28/05	X	X	X	X	
GNP-705B	12/01/05	X	X	X	X	
GNP-707	11/29/05	X	X	X	X	
GNP-708	11/29/05	X	X	X	X	
MARCH 2007						

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
GROUNDWATER
REMEDIAL INVESTIGATION REPORT
PETERSON PURITAN SUPERFUND SITE OU2,
CUMBERLAND AND LINCOLN, RHODE ISLAND

Monitoring Well Number	Analyses						
	Date Collected	VOCs	TCL SVOCs	TAL Metals/Cyanide	Pesticides/PCBs		Notes
MW-108C	3/14/2007	X		X			Selected based on only one previous sample collected.
MW-109A	3/14/2007	X		X			Selected based on only one previous sample collected.
MW-109C	3/14/2007	X		X			Selected based on only one previous sample collected.
MW-110B	3/14/2007	X		X			Selected based on only one previous sample collected.
MW-110C	3/14/2007	X		X			Selected based on only one previous sample collected.
MW-112C	3/14/2007	X		X			Selected based on only one previous sample collected.
MW-C2	03/13/07	X		X			Selected based on only one previous sample collected.
SEA-602A	03/13/07	X		X			Selected based on only one previous sample collected.
GUI-703	03/14/07	X		X			Selected based on only one previous sample collected.
GLF-704	03/13/07	X		X			Selected based on only one previous sample collected.
GNP-705	03/13/07	X		X			Selected based on only one previous sample collected.
GNP-705B	03/13/07	X		X			Selected based on only one previous sample collected.
GLF-706	03/13/07	X		X			Selected based on only one previous sample collected.
GNP-708	03/12/07	X		X			Selected based on only one previous sample collected.
GNP-708A	03/12/07	X		X			Selected based on only one previous sample collected.

TABLE B-2
SUMMARY OF PHASE 1B REMEDIAL INVESTIGATION SAMPLES
SOIL
RI REPORT
PETERSON PURITAN SUPERFUND SITE OU2, CUMBERLANDAND LINCOLN, RHODE ISLAND

Boring Location ID	Interval	Date Collected	VOCs	SVOCs	Metals/Cyanide	PCBs	Pesticides	PCDDs/PCDFs	% Moisture	Comments
LLF-002(0-1)	0'-1'	12/1/2005						X	X	S corner of Landfill near River, N of Pond
LLF-003(0-1)	0'-1'	12/1/2005						X	X	S corner of Landfill near River, NW of Pond C
LLF-004(0-1)	0'-1'	12/1/2005						X	X	S corner of Landfill at River, SW of Pond C
LUI-005	0'-1'	12/8/2005						X	X	channel split
LUI-006	0'-1'	12/8/2005						X	X	N side of Unnamed Island adjacent main river channel
LNP-007(0-1)	0'-1'	12/1/2005						X	X	S corner of landfill near River, N of Pond C
LNP-008(0-1)	0'-1'	12/1/2005						X	X	S corner of landfill near River, NW of Pond C
PCDD/PCDF-1	0'-1'	12/1/2005						X	X	Field Duplicate of LNP-008(0-1)
LOU-001(0-1)	0'-1'	12/1/2005						X	X	NW corner of Landfill at Blackstone River
LQW-009(0-1)	0'-1'	11/30/2005	X	X	X	X	X		X	SE corner of well field
DUP-1	0'-1'	11/30/2005	X	X	X	X	X		X	Field Duplicate of LQW-009(0-1)
LQW-010(0-1)	0'-1'	12/1/2005	X	X	X	X	X		X	SE side of well field near river
LQW-011	0'-1'	12/2/2005	X	X	X	X	X		X	SE center of well field near river
LQW-012(0-1)	0'-1'	11/30/2005		X	X	X	X		X	SE side of well field near canal
LQW-012B	0'-1'	12/2/2005	X							Re-sample of location LQW-012(0-1)
LQW-013(0-1)	0'-1'	12/1/2005	X	X	X	X	X		X	Center of well field
LQW-014(0-1)	0'-1'	12/1/2005	X	X	X	X	X		X	NW center of well near river
LQW-015(0-1)	0'-1'	11/30/2005		X	X	X	X		X	SE center of well field near canal
LQW-015B	0'-1'	12/2/2005	X							Resample of location LQW-015(0-1)
LQW-016(0-1)	0'-1'	11/30/2005		X	X	X	X		X	NW center of well field near canal
LQW-016B	0'-1'	12/2/2005	X							Resample of location LQW-016(0-1)
LQW-017(0-1)	0'-1'	11/30/2005		X	X	X	X		X	NW side of well field interior
LQW-017B	0'-1'	12/2/2005	X							Resample of location LQW-017(0-1)
LQW-018(0-1)	0'-1'	11/30/2005		X	X	X	X		X	NW side of well field near canal
LQW-018B	0'-1'	12/2/2005	X							Resample of location LQW-018(0-1)
SO-100-NP	2'-7'	11/1/2006	X	X	X		X		X	
SO-101-NP	0'-1'	11/1/2006	X	X	X		X		X	
SO-101-NP	2'-9'	11/1/2006	X	X	X		X		X	
SO-102-NP	0'-1'	10/31/2006	X	X	X		X		X	
SO-102-NP	2'-8.5'	10/31/2006	X	X	X		X		X	
SO-103-NP	2'-7'	11/1/2006	X	X	X		X		X	
SO-104-NP	2'-3.4'	11/2/2007	X	X	X		X		X	
SO-105-NP	2'-3.4'	11/2/2006	X	X	X		X		X	
SO-106-NP	2'-5'	11/2/2006	X	X	X		X		X	
SO-107-NP	0'-1'	11/2/2006	X	X	X		X		X	
SO-107-NP	2'-10'	11/2/2006	X	X	X		X		X	
SO-108-NP	3'-8'	11/2/2006	X	X	X		X		X	
SO-108-NP	3'-8'	11/2/2006	X	X	X		X		X	

TABLE B-3
SUMMARY OF 2009 SUPPLEMENTAL UNNAMED ISLAND INVESTIGATION SAMPLES
RI REPORT
PETERSON PURITAN SITE OU2,
CUMBERLAND AND LINCOLN, RHODE ISLAND

Boring Location ID	Sample Interval (feet bgs)	Date Collected	Sample Matrix	Comments
SO-200-U1-0-1'	0-1	11/18/2009	Soil	Unnamed Island Additional Characterization
SO-200-U1-5-6'	5-6	11/18/2009	Soil	Unnamed Island Additional Characterization
SO-203-U1-0-1'	0-1	11/18/2009	Soil	Unnamed Island Additional Characterization
SO-205-U1-3-4.5	3-4.5	11/19/2009	Soil	Unnamed Island Additional Characterization
SO-213-U1-0-1'	0-1	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-214-U1-0-1'	0-1	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-215-U1-0-1'	0-1	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-216-U1-0-1'	0-1	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-201-UI-4-6'	4-6	11/24/2009	Soil	Unnamed Island Additional Characterization
SO-218-UI-1-5'	1-5	11/23/2009	Soil	Unnamed Island Additional Characterization
SO-219-UI-1-5'	1-5	11/23/2009	Soil	Unnamed Island Additional Characterization
SO-220-UI-1-4.5'	1-4.5	11/23/2009	Soil	Unnamed Island Additional Characterization
SO-223F-UI-0-1'	0-1	11/24/2009	Soil	Unnamed Island Additional Characterization
SO-225A-UI-1.5-5'	1.5-5	11/24/2009	Soil	Unnamed Island Additional Characterization
SO-226A-UI-6-8'	6-8	11/24/2009	Soil	Unnamed Island Additional Characterization
SO-227B-UI-1-5'	1-5	11/24/2009	Soil	Unnamed Island Additional Characterization
SO-200-UI (0-1')	0-1	11/18/2009	Soil	Unnamed Island Additional Characterization
SO-200-UI (5-6')	5-6	11/18/2009	Soil	Unnamed Island Additional Characterization
SO-201-UI (4-6')	4-6	11/18/2009	Soil	Unnamed Island Additional Characterization
SO-203-UI (5-7')	5-7	11/18/2009	Soil	Unnamed Island Additional Characterization
SO-204-UI (2-4')	2-4	11/19/2009	Soil	Unnamed Island Additional Characterization
SO-205-UI (2-4')	2-4	11/19/2009	Soil	Unnamed Island Additional Characterization
SO-207B-UI (1-2')	1-2	11/19/2009	Soil	Unnamed Island Additional Characterization
SO-207B-UI (2-3')	2-3	11/19/2009	Soil	Unnamed Island Additional Characterization
SO-208B-UI (0-1')	0-1	11/19/2009	Soil	Unnamed Island Additional Characterization
SO-208B-UI (1-5')	1-5	11/19/2009	Soil	Unnamed Island Additional Characterization
SO-206-UI (2-3')	2-3	11/19/2009	Soil	Unnamed Island Additional Characterization
SO-209-UI (0-1')	0-1	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-210B-UI (1.25-4')	1.25-4	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-211-UI (0-1')	0-1	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-212-UI (1-4.5')	1-4.5	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-217-UI (0-1')	0-1	11/20/2009	Soil	Unnamed Island Additional Characterization
SO-222-UI-1-3'	1-3	11/23/2009	Soil	Unnamed Island Additional Characterization
SO-223F-UI-11-12'	11-12	11/23/2009	Soil	Unnamed Island Additional Characterization
SO-224A-UI-1-5'	1-5	11/23/2009	Soil	Unnamed Island Additional Characterization
SO-225A-UI-0-1'	0-1	11/24/2009	Soil	Unnamed Island Additional Characterization
SO-228-UI-12-14'	12-14	11/24/2009	Soil	Unnamed Island Additional Characterization
DUPLICATE 3	1-5	11/23/2009	Soil	Duplicate sample of SO-219-UI-1-5'
DUPLICATE	1-4.5	11/20/2009	Soil	Duplicate sample ofSO-212-UI (1-4.5')
DUP-2	0-1	11/24/2009	Soil	Duplicate sample ofSO-225A-UI-0-1'
GW-201-UI	Not Available	11/24/2009	Ground Water	Unnamed Island Additional Characterization
GW-207B-UI	Not Available	11/24/2009	Ground Water	Unnamed Island Additional Characterization
GW-208B-UI	Not Available	11/24/2009	Ground Water	Unnamed Island Additional Characterization
GW-224A-UI	Not Available	11/24/2009	Ground Water	Unnamed Island Additional Characterization
DUPLICATE-3	Not Available	11/24/2009	Ground Water	Duplicate sample of GW-201-UI
RB-1	Not Available	11/24/2009	QA/QC - Blank	Equipment rinsate blank
RB-3	Not Available	11/24/2009	QA/QC - Blank	Equipment rinsate blank
RB-2	Not Available	11/24/2009	QA/QC - Blank	Equipment rinsate blank
TRIP BLANK	Not Available	11/24/2009	QA/QC - Blank	Trip blank
TRIP BLANK	Not Available	11/18/2009	QA/QC - Blank	Trip blank
TRIP BLANK	Not Available	11/19/2009	QA/QC - Blank	Trip blank
TRIP BLANK	Not Available	11/23/2009	QA/QC - Blank	Trip blank

ARCADIS

Appendix C

Phases 1A/1AExp Geophysical and Bathymetric Surveys

Table D1-1
Phase 1A/1AExp Vertical Survey Data (NGVD29) - Wells and Piezometers
Peterson/Puritan OU2

Measuring Point	Ground Elevation 2003-04	MP Elevation 2003	MP Elevation 2004	Comments
C-1	59.28	---	61.38	Top of cap (cap couldn't be removed) near Lenox Street
GZ-1-1	64.62	67.08	67.08	
GZ-4-1	62.25	63.49	63.49	
L-2	68.19	69.94	69.94	
MW-106A	66.79	68.61	68.61	
MW-106B	66.79	68.55	68.55	
MW-106C	66.79	68.20	68.20	
MW-107A	79.54	81.46	81.46	
MW-107B	79.54	81.53	81.53	
MW-107C	79.54	81.55	81.55	
MW-108A	67.41	69.00	69.00	
MW-108AA	67.41	69.19	69.19	
MW-108B	67.41	69.31	69.31	
MW-108C	67.41	69.26	69.26	
MW-109A	67.16	68.64	68.64	
MW-109AA	67.16	67.77	67.77	
MW-109B	67.16	69.13	69.13	
MW-109C	67.16	69.30	69.30	
MW-110A	65.89	66.91	66.91	
MW-110B	65.89	67.50	67.50	
MW-110C	65.89	67.93	67.93	
MW-111A	62.56	64.13	64.13	
MW-111AA	62.56	64.53	64.53	
MW-111B	62.56	64.01	64.01	
MW-111C	62.56	64.50	64.50	
MW-112A	66.70	68.09	68.09	
MW-112AA	66.70	68.59	68.59	
MW-112B	66.70	68.20	68.20	
MW-112C	66.70	68.09	68.09	
MW-501A	65.78	68.68	68.68	
MW-501B	65.78	68.46	68.46	
MW-501C	65.78	68.47	68.47	
MW-502	71.08	73.47	73.47	
MW-A1	63.23	64.79	64.79	
MW-A2	63.23	65.20	65.20	
MW-B1	60.53	61.92	61.92	
MW-B2	60.53	62.04	62.04	
MW-C1	59.52	61.06	61.06	
MW-C2	59.52	61.48	61.48	
P-6	66.15	67.83	67.83	
P-7	70.03	71.79	71.79	
P-8	59.95	62.53	62.53	
P-9	est. 66	66.07	66.07	
PZ-01	---	59.57	59.71	
PZ-02	---	60.42	60.39	
PZ-03	---	61.11	61.14	
PZ-04	---	55.87	---	Destroyed between Oct-03 and Aug-04
PZ-04A	---	---	53.99	Replacement for PZ-04

Phase 1A/1AExp Vertical Survey Data (NGVD29) - Wells and Piezometers
Peterson/Puritan OU2

Measuring Point	Ground Elevation 2003-04	MP Elevation 2003	MP Elevation 2004	Comments
PZ-05	---	59.95	59.93	
PZ-06	---	59.31	58.89	Moved, probably due to causeway construction
PZ-06A	---	---	56.60	In water adjacent to PZ-06
PZ-07	---	59.57	59.60	
PZ-08	59.37	63.26	---	Destroyed between Jul-04 and Aug-04
PZ-09	---	58.24	57.75	Repaired and changed elevation Aug-04
PZ-10	---	63.70	63.70	
PZ-11	---	63.53	63.55	
PZ-12	---	64.14	64.14	
PZ-13	---	65.11	65.11	
PZ-14	---	61.72	61.68	Checked for repair, changed elev. slightly in Aug-04
PZ-15	---	68.49	68.49	
PZ-15A	---	---	69.12	In water at WT-D adjacent to PZ-15
PZ-16	62.72	66.08	66.08	
PZ-17	61.84	65.15	65.15	
PZ-18	62.29	65.96	65.97	
PZ-19	---	69.69	69.69	
PZ-20	---	---	59.11	New piezometer inst. Aug-04 upstream in main channel
SEA-601	60.41	63.47	63.47	
SEA-602A	59.75	62.51	62.51	
SEA-602B	59.75	61.99	61.99	
SEA-603	59.23	61.97	61.97	
SEA-604	62.45	65.34	65.34	
SEA-605	62.32	65.20	65.20	
SEA-606	61.46	64.43	64.43	
SEA-607	62.97	65.82	65.82	
SEA-608	64.51	67.02	67.02	
HW-01	---	69.64	69.64	Chiseled square on top of headwall
HW-02	---	59.37	59.37	Invert Elev. 54.08, 24" Pipe
HW-03	---	---	61.56	NE corner CB Frame on concrete spillway, WT-A

Notes:

Measuring point (MP) is the top of the inner casing (riser) for wells and piezometers (PZ), or a notch in the concrete headwall above the culvert for the headwall (HW) points.

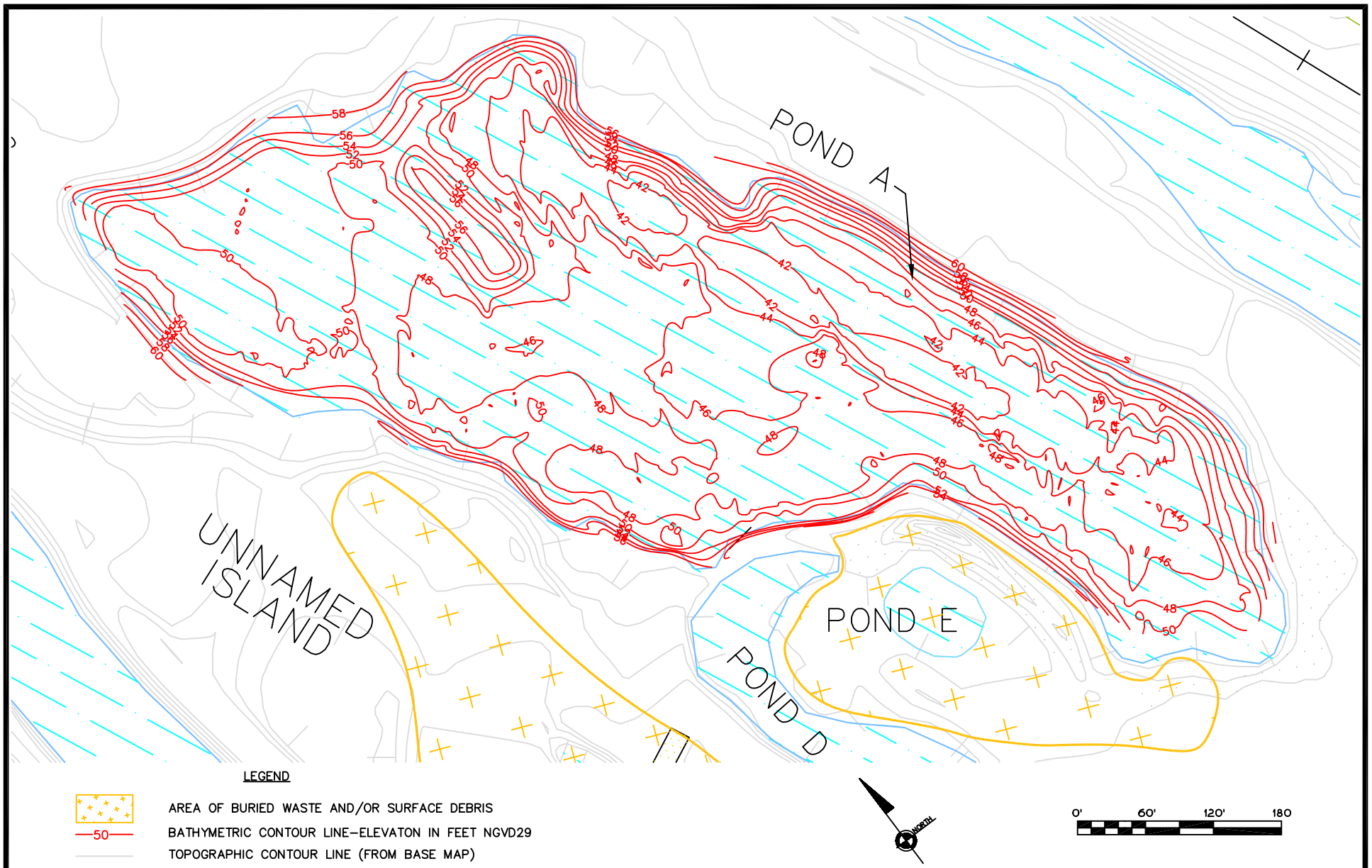
All elevations are reported in this table relative to NGVD29 datum. All elevations were originally surveyed relative to NAVD88, and converted to NGVD29 by adding 0.79 ft.

All elevations surveyed by Tilton & Associates, Inc. of North Attleboro, Massachussetts, in August-September 2003, and September-October 2004.

Shaded values were reported as different values in 2003. They have been corrected after verification surveying performed in October 2004. Values reported prior to October 2004 should be disregarded.

Table D1-2
Phase 1A Vertical Survey Data (NGVD29) - Surface Water Bodies, Bottom Elevations
Peterson/Puritan OU2

Surface Water Body	Elevation (ft NGVD29)	Source
Blackstone River main channel - bank at PZ-01	53.8	Potentiometric surveys 2003-2004
Blackstone River main channel - bank at PZ-06	53.9	Potentiometric surveys 2003-2004
Blackstone River main channel - bank at PZ-20	<55.9	Potentiometric surveys 2003-2004
Blackstone River main channel - deepest section at BRF-03 (near PZ-01)	50.9	Shield flow profile at BRF-03 on 9/27/03
Blackstone River back channel	48-52	Tilton bathymetric survey 8/04
Pond F - deepest sections	45	Tilton bathymetric survey 8/04
Pond F - bank at PZ-05	53.8	Potentiometric surveys 2003-2004
LF - Pond B bottom at PZ-03	56.5	Potentiometric surveys 2003-2004
LF - Pond C - bank at PZ-02	55.4	Potentiometric surveys 2003-2004
UI - North Pool	51.1	Tilton survey 9/15/04
UI - Pond D - Location 1 (south end)	50.7	Tilton survey 9/15/04
UI - Pond D - Location 2 (north end)	54.1	Tilton survey 10/06/04
UI - Pond E	50.6	Tilton survey 9/15/04
UI - Pond A - deepest section	41	Tilton bathymetric survey 8/04
UI - Pond A - bank at PZ-09	<54.1	Potentiometric surveys 2003-2004
Wetland A - bank at test well C-1	59.3	Tilton survey 9/28/04
Wetland A - bank at PZ-10	58.3	Potentiometric surveys 2003-2004
Wetland B - bank at PZ-11	58.2	Potentiometric surveys 2003-2004
Wetland C - bank at PZ-12	59.3	Potentiometric surveys 2003-2004
Wetland D - bottom at PZ-15	<66.5	Potentiometric surveys 2003-2004
Wetland D - outfall at HW-01	66.3	Potentiometric surveys 2003-2004



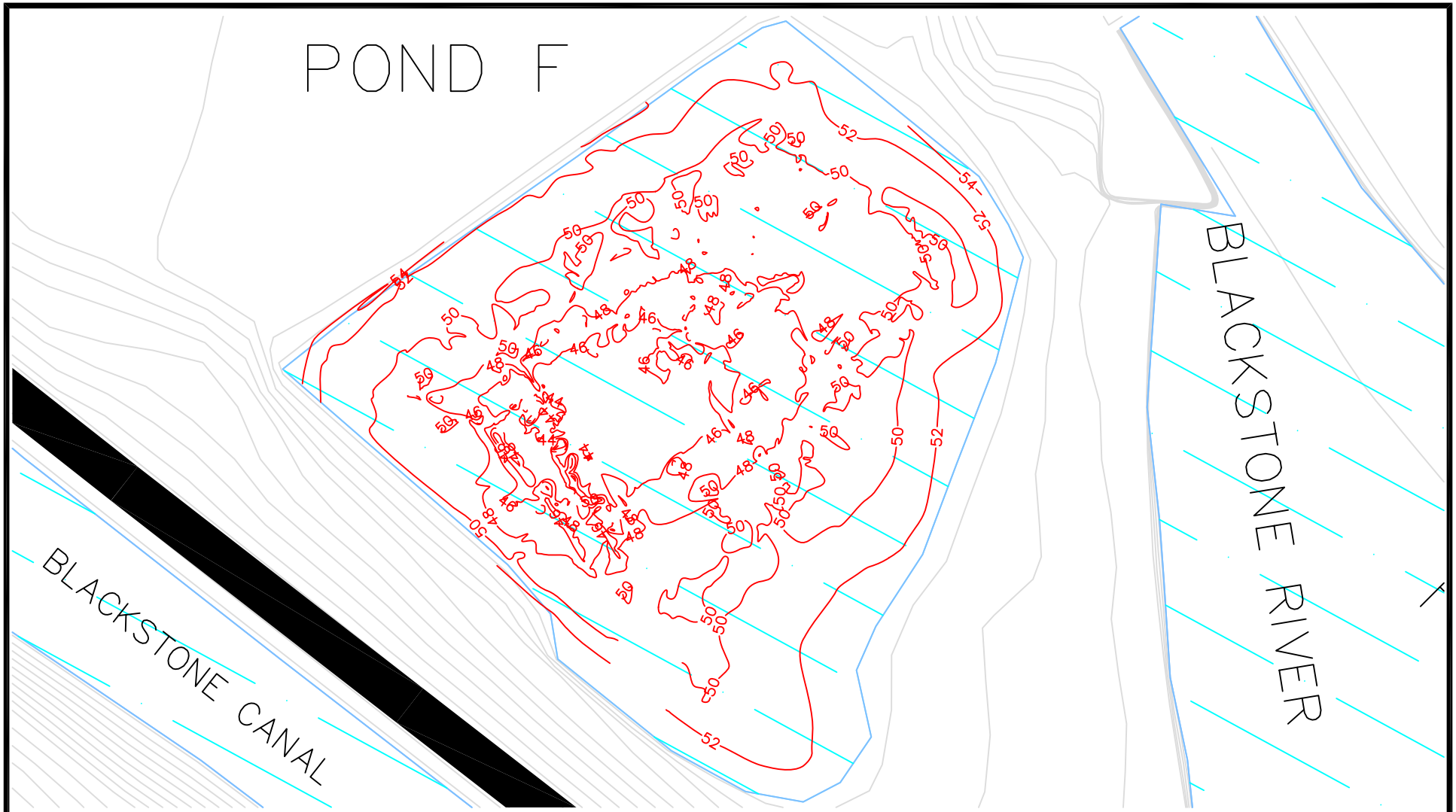
JANUARY 2005

PROJECT NO: 300-1821
DRAWN BY: BG
APPROVED BY: ALD

FIGURE D1-1

BATHYMETRIC CONTOUR MAP- POND A
PETERSON/PURITAN OU2
CUMBERLAND, RHODE ISLAND

SHIELD
ENVIRONMENTAL ASSOCIATES, INC.
2456 Fortune Drive, Suite 100
Lexington, KY 40509
(859) 294-5155



JANUARY 2005

PROJECT NO: 300-1821
DRAWN BY: BG
APPROVED BY: ALD

FIGURE D1-2

BATHYMETRIC CONTOUR MAP- POND F
PETERSON/PURITAN OU2
CUMBERLAND, RHODE ISLAND

SHIELD
ENVIRONMENTAL ASSOCIATES, INC.
2456 Fortune Drive, Suite 100
Lexington, KY 40509
(859) 294-5155

Weston Geophysical ENGINEERS
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325 West Main Street
Northborough, Massachusetts 01532
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Fax (508) 393-7674

August 26th, 2003

Ms. Alison L. Dunn, P.G.
Senior Hydrogeologist
Shield Environmental Associates, Inc.
2456 Fortune Drive, Suite 100
Lexington, Kentucky 40509

Subject: Geophysical Investigation at the Peterson / Puritan OU-2 Facility
Cumberland, Rhode Island

Dear Ms. Dunn:

In accordance with your authorization, Weston Geophysical Engineers conducted a geophysical investigation at the above referenced site. The purpose of the geophysical survey is to provide electromagnetic earth conductivity information on possible zones of leachate downgradient from the landfill and to assist in the delineation of the boundary of landfill material.

The enclosed report documents our findings and provides recommended locations for further investigation. The field effort was completed on August 13th, 2003 and preliminary results were submitted to Shield on August 18th, 2003.

We appreciate this opportunity to provide you with our services, please call the undersigned if you have any questions.

Sincerely,

WESTON GEOPHYSICAL ENGINEERS

Peter B. Hubbard
Project Geophysicist

pbh:W351:enclosure

Raleigh, North Carolina
(919) 839-8515

Geophysical Investigation
Electromagnetic Induction Survey
at the
Peterson / Puritan OU-2 Facility
Cumberland, Rhode Island

submitted to

Shield Environmental Associates, Inc.
2456 Fortune Drive
Lexington, Kentucky 40509

Weston Geophysical Engineers
325 West Main Street
Northborough, Massachusetts 01532

Tel: (508) 393-4600
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August, 2003

TABLE OF CONTENTS

SECTION **Page No.**

Introduction..... 1

Geophysical Survey Methodology..... 1

Results..... 2

Recommendations..... 3

FIGURES

Figure 1. Plan Map Showing Geophysical Survey Coverage

Figure 2. Combined Inphase and Quadrature Components for all Profile Lines

Figure 3. Line 1 Inphase Components

Figure 4. Line 2 Inphase Components

Figure 5. Line 3 Inphase Components

Figure 6. Line 1 Quadrature Components

Figure 7. Line 2 Quadrature Components

Figure 8 Line 3 Quadrature Componenets

APPENDICES

APPENDIX A – Electromagnetic Induction Standard Operating Procedure

Introduction

The purpose of this investigation was to locate possible leachate conditions downgradient of the landfill between the toe of the landfill and the Blackstone River through the implementation of an electromagnetic induction survey (EMI). The EMI method is capable of detecting electrical conductivity contrasts between contaminated and uncontaminated soils and other earth materials. This information is anticipated to help support the Remedial Investigation/Feasibility Study (RI/FS) activities at the site by providing possible leachate locations to focus further intrusive investigations at the site.

Prior to the geophysical investigation, three survey line paths were established to provide easy access and to clear a majority of the surface metal debris from the survey area. The extent of the vegetation and the debris encountered along the proposed profile line locations prohibited the creation of three continuous parallel survey lines. Shield environmental established the lines throughout the survey area. The geophysical field effort was completed on August 12th and 13th, 2003.

Geophysical Survey Methodology

The area investigated included an approximate 2,900-foot by 100-foot area between the toe of the landfill and the Blackstone River. One continuous EMI profile line (2,900 feet) along the recently constructed road was acquired as well as two other profile lines; one along the southern portion starting near Station 600 continuing along the river bank, the other profile line started adjacent to Station 2000 and continued on part of the landfill slope while remaining parallel to the longer continuous profile line.

Survey control points were established at 50-foot increments for each profile line; with wooden survey stakes placed at 200-foot increments, survey lines end points and corners, 50-foot points were marked with plastic pin flags. Field notes were recorded to indicate the location of the survey lines relative to existing cultural features.

The area of geophysical investigation is shown on Figure 1. The point locations indicated on the plan map correspond to geophysical profile line stationing at every 200 feet. These points were placed in the field by measured distances along the line and later located relative to the site coordinates by differentially corrected GPS measurements provided by Shield Environmental.

An EMI survey was conducted along each of the survey lines. EMI data were processed by custom designed software that converts the raw EMI data to user specified coordinate data with in-phase and quadrature component electromagnetic conductivity values. The data were organized for import into commercially available contour software packages through the use of command language processing routines. Preliminary profile data was available for examination at the conclusion of each survey line. Color-coded conductivity profile lines of the various EMI components were generated for inclusion in this report.

A Geophex GEM-2 multifrequency electromagnetic induction instrument was used because it offers increased detection and characterization capabilities over other, commercially available EMI instruments. This multi-frequency and high speed data acquisition system provides higher resolution data than the other systems, enabling additional data on possible depth parameters and closer spaced sampling. The GEM-2 multifrequency electromagnetic instrument is a self-contained lightweight programmable digital recording system capable of recording EMI response data at up to 10 transmitter frequencies (270 to 18,210 Hz) and at a sampling rate of 0.2 second.

The optimum EMI frequency settings for this investigation were determined through a test profile along the centerline path prior to the acquisition of the EMI data. Five frequencies were selected from this test because of their low signal to noise ratio. The five frequencies (330, 930, 2,790, 8,190, and 15,150 Hz) were then programmed into the GEM control unit set to record at 0.2 second intervals). Normal walking speed translates this sampling rate to a sample rate of approximately 1 sample every 1.5-foot.

Additionally, when configured with a low frequency (330Hz), the signal response at this low frequency is equivalent to the magnetic susceptibility for each of the data samples. This data can be useful in discriminating the leachate from possible buried metal objects.

The procedure for this investigation is further detailed in Appendix A – EMI Standard Operating Procedure.

Results

The results of this investigation can be shown through a number of presentation methods. The presentation used by Weston to indicate the possible leachate locations is best described as a composite graph indicating the summation of all of the inphase and quadrature components. Figure 2 shows this composite profile with all three profiles shown relative to each other as well as the indicated recommended locations for further intrusive investigation. This figure was submitted in a preliminary format on August 18th, 2003.

The profile data shown on Figure 2 are the “weighted-average” smoothed profile data. The weighted-average processing removed most of the high frequency noise generated by the abundant surface and near surface metallic debris.

Significant observations can be made from the interpretation of this figure; specifically, the near flat signal along Line 2 which is closer to the river bank, and where Line 1 is closest to the river shoreline, show that both of these areas have very little conductivity changes, indicating that the data are not indicative of landfill material and that there are no indications of zones of significant leachate contamination.

Additionally, the EMI profile data in the areas along the beginning of Line 1 and all of Line 3 are consistent with results anticipated for landfill material. This was visually confirmed while acquiring the data in these areas. Line 2 intersects a portion of an area described on the plan map as Pond B. The EMI signal in this area indicates a lower conductivity than that of the surrounding area; this may be an indication of concentration of leachate in the pond area.

Recommendations

The recommended locations for further investigation are shown on Figure 2. This figure includes station locations for each of the three profile lines that we would recommend for further investigation to confirm the presence of higher concentrations of leachate or some other cause. The recommended locations typically are locations where the quadrature component is anomalously lower or higher than the adjacent areas. The anomalous quadrature areas were then compared to the inphase component to provide an indication of the source of the anomalous conductivity.

The following table summarizes the location shown on Figure 2:

Line 1 Station 0125	Confirmation of Debris Field 4
Line 1 Station 0250	Low Quadrature – Low Inphase
Line 1 Station 0550	Low Quadrature – High Inphase
Line 1 Station 1125	Low Quadrature
Line 1 Station 1400	Lowest Quadrature Component Values
Line 1 Station 1725	High Quadrature – Low Inphase
Line 2 Station 0350	Low Quadrature at Pond B
Line 3 Station 0350	Low Quadrature – High Inphase

FIGURES

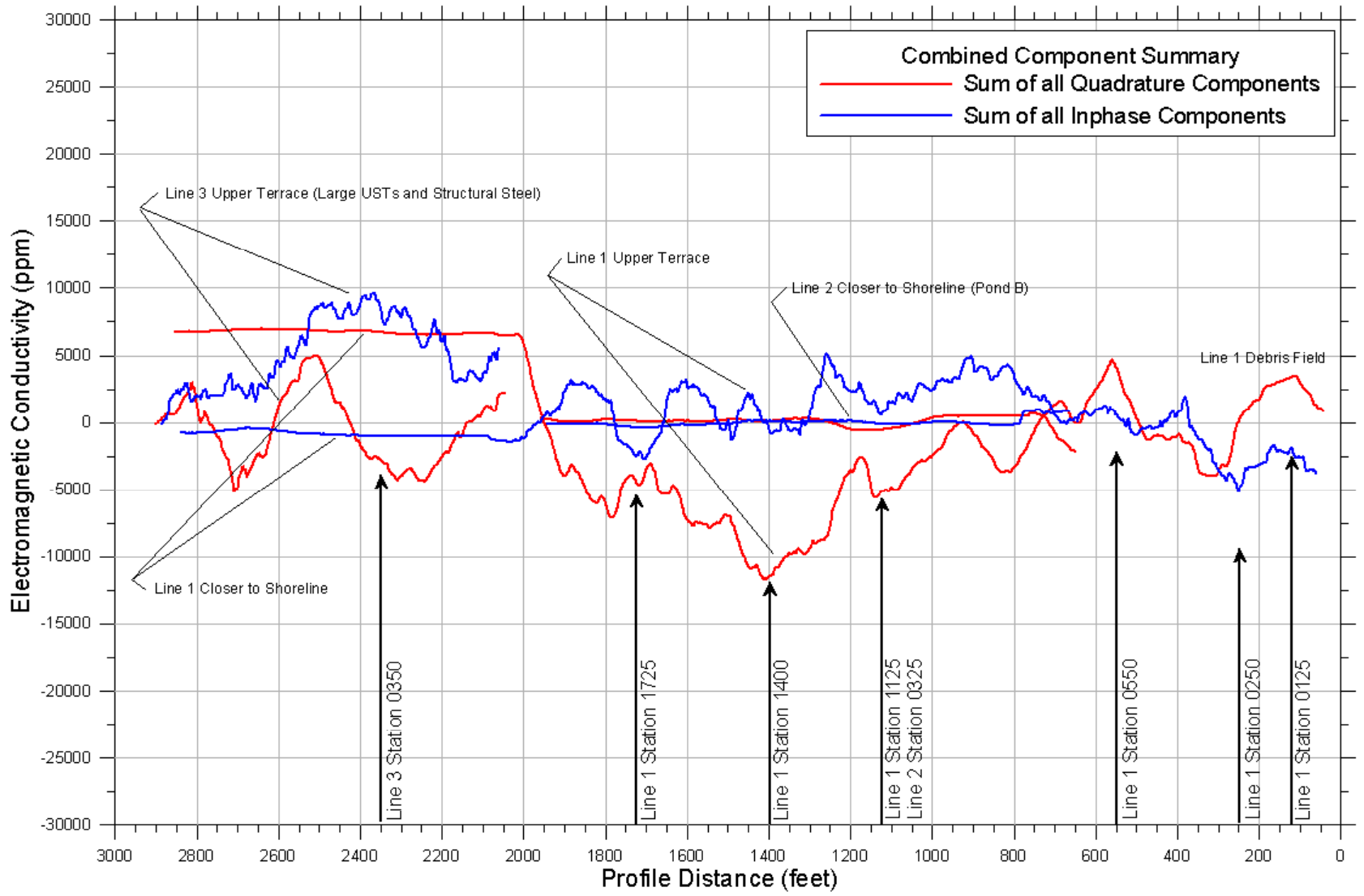


Base Map provided by Shield Environmental Associates, Inc.

EMI Profile Line (Stations Values shown in Feet) L1 0200 L1 0000

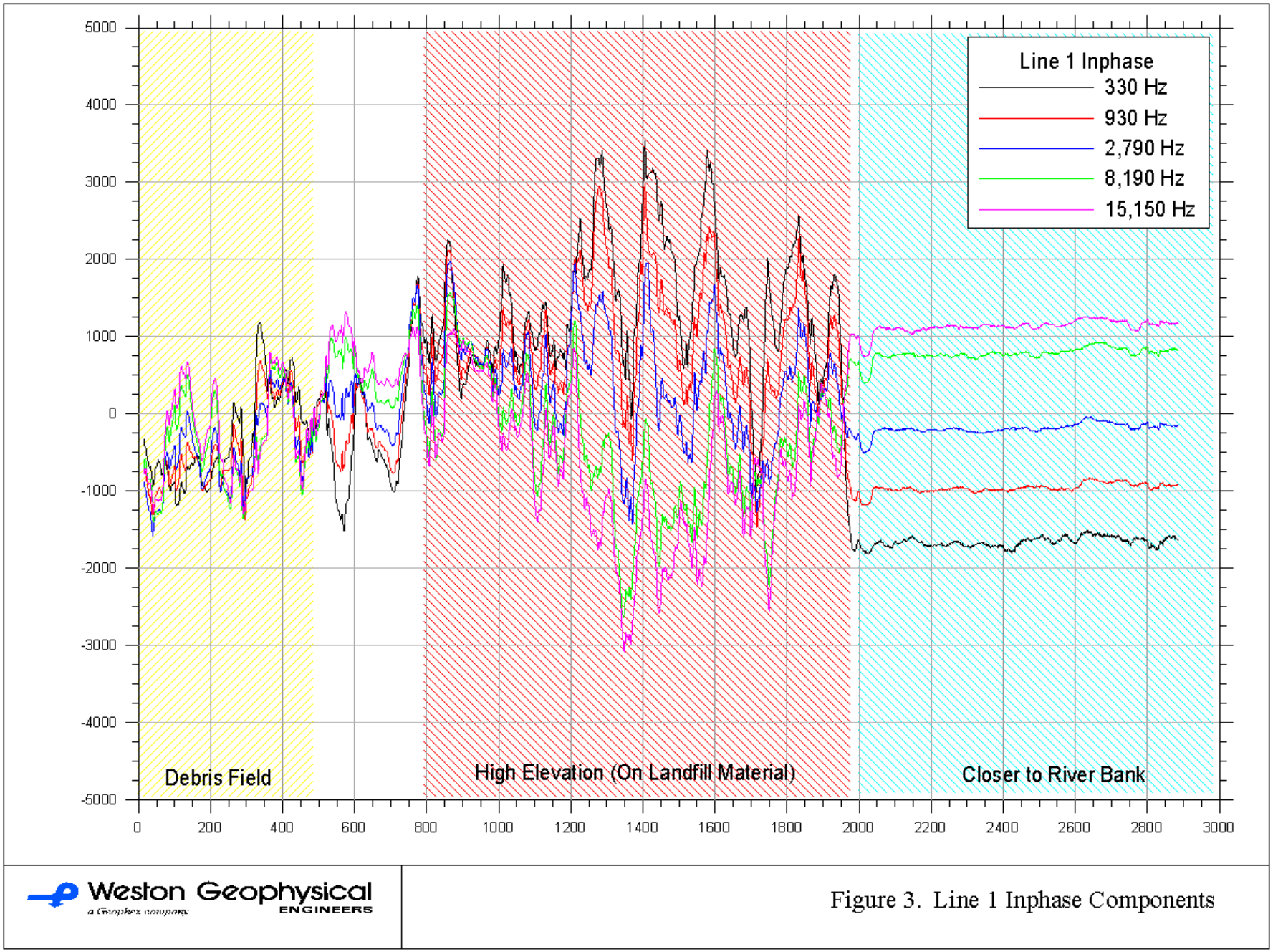
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Figure 1. Plan Map Showing Geophysical Survey Coverage



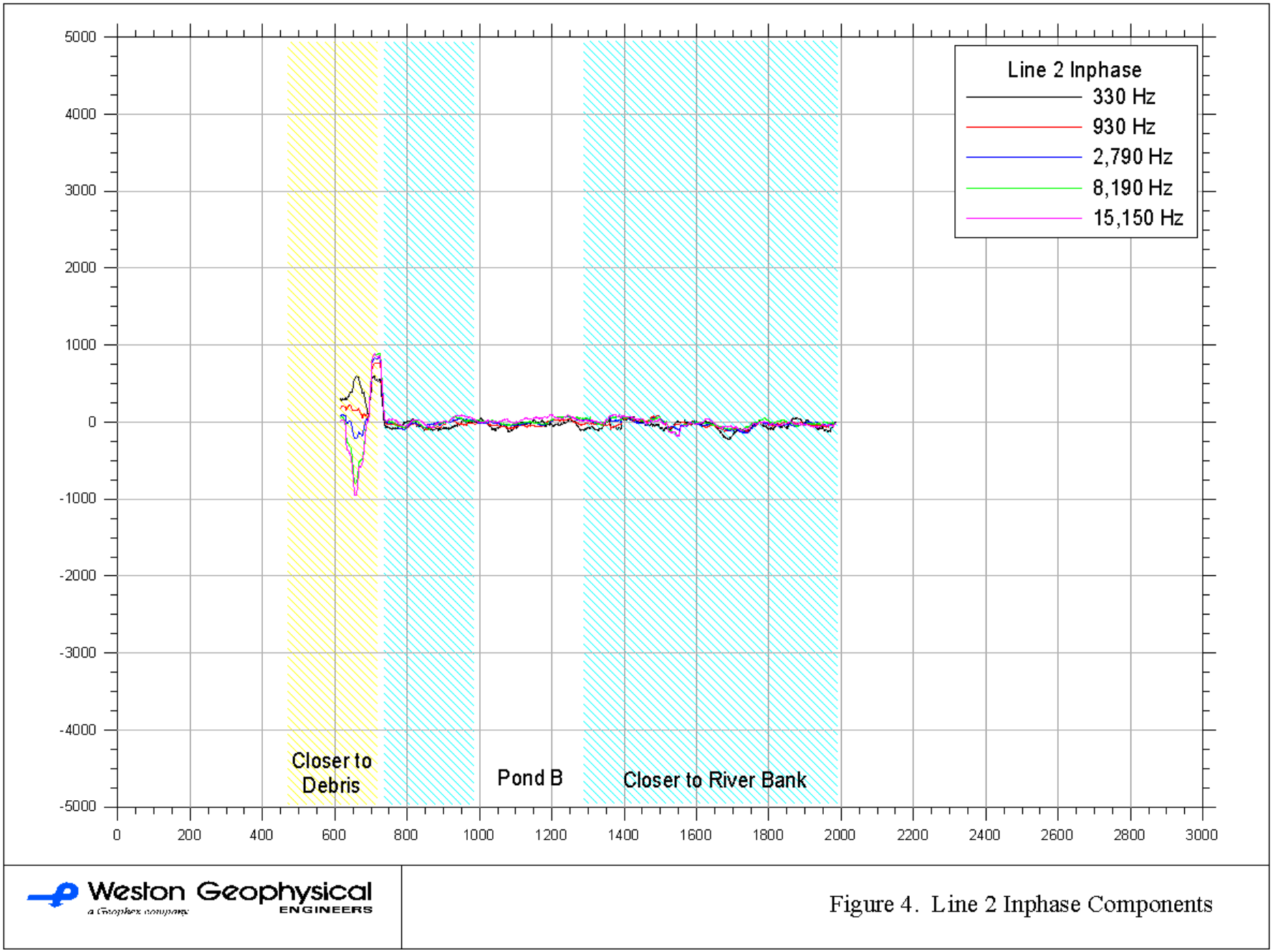
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Figure 2. Combined Inphase and Quadrature Components for all Profile Lines



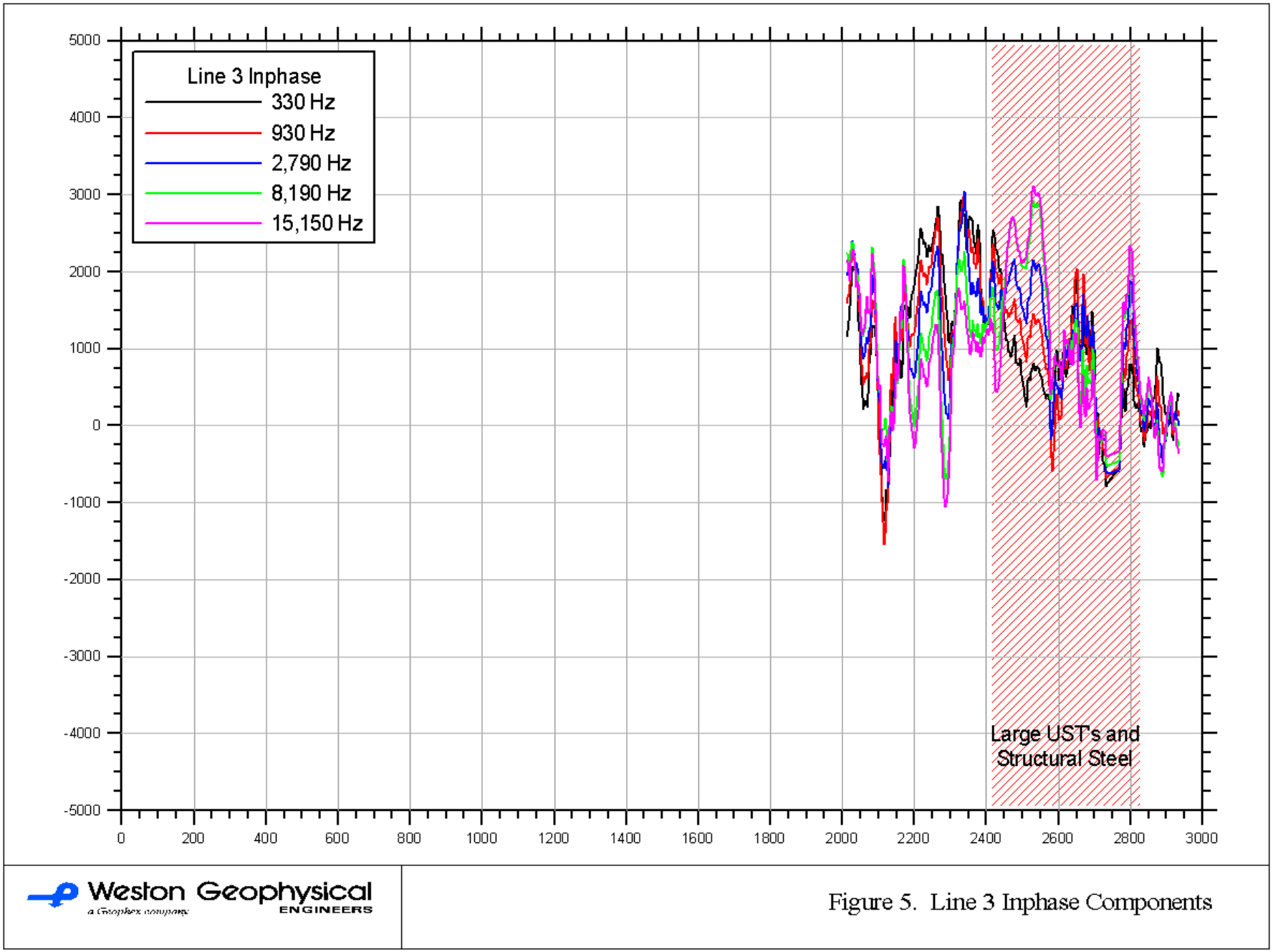
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Figure 3. Line 1 Inphase Components



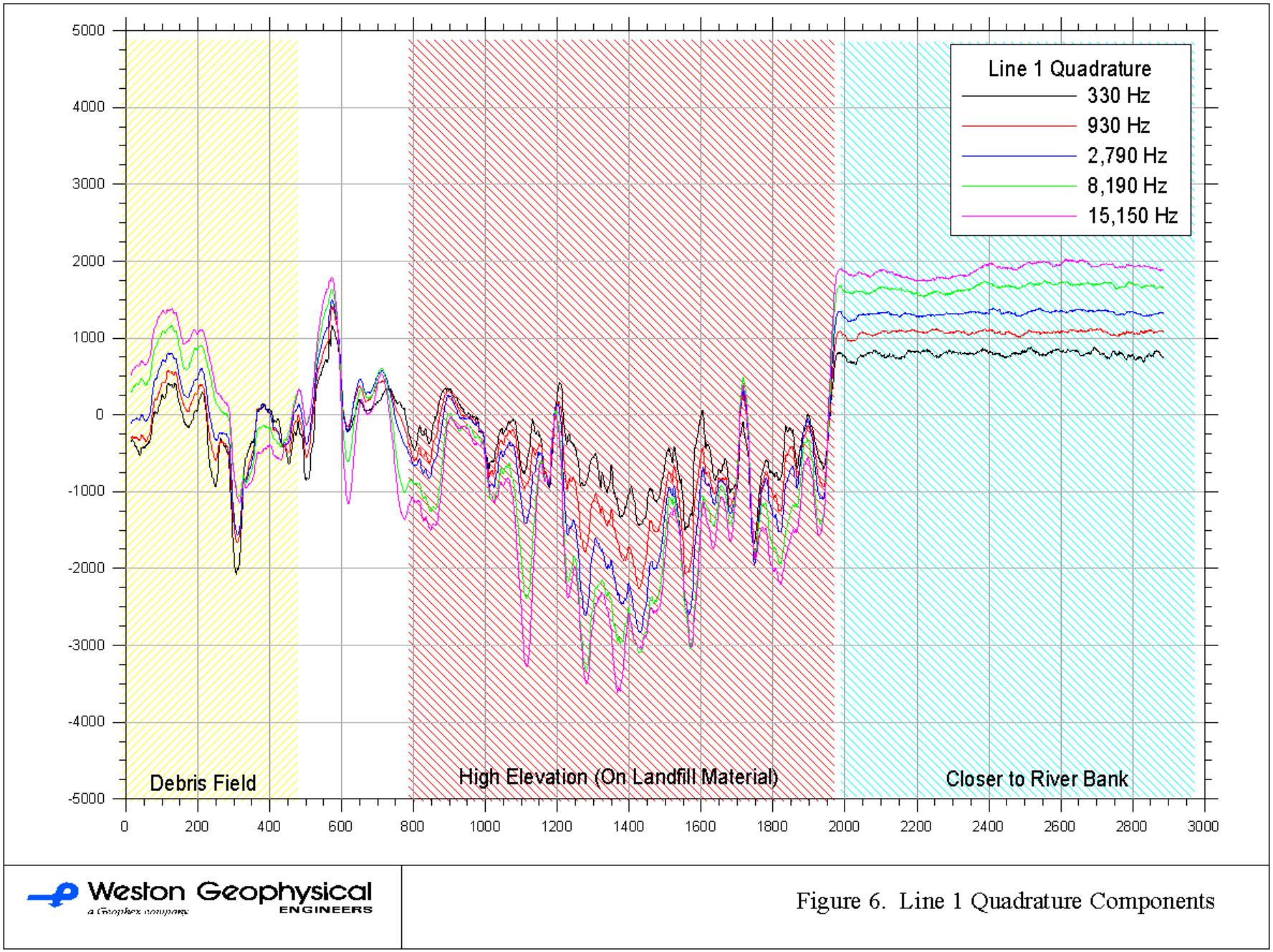
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Figure 4. Line 2 Inphase Components



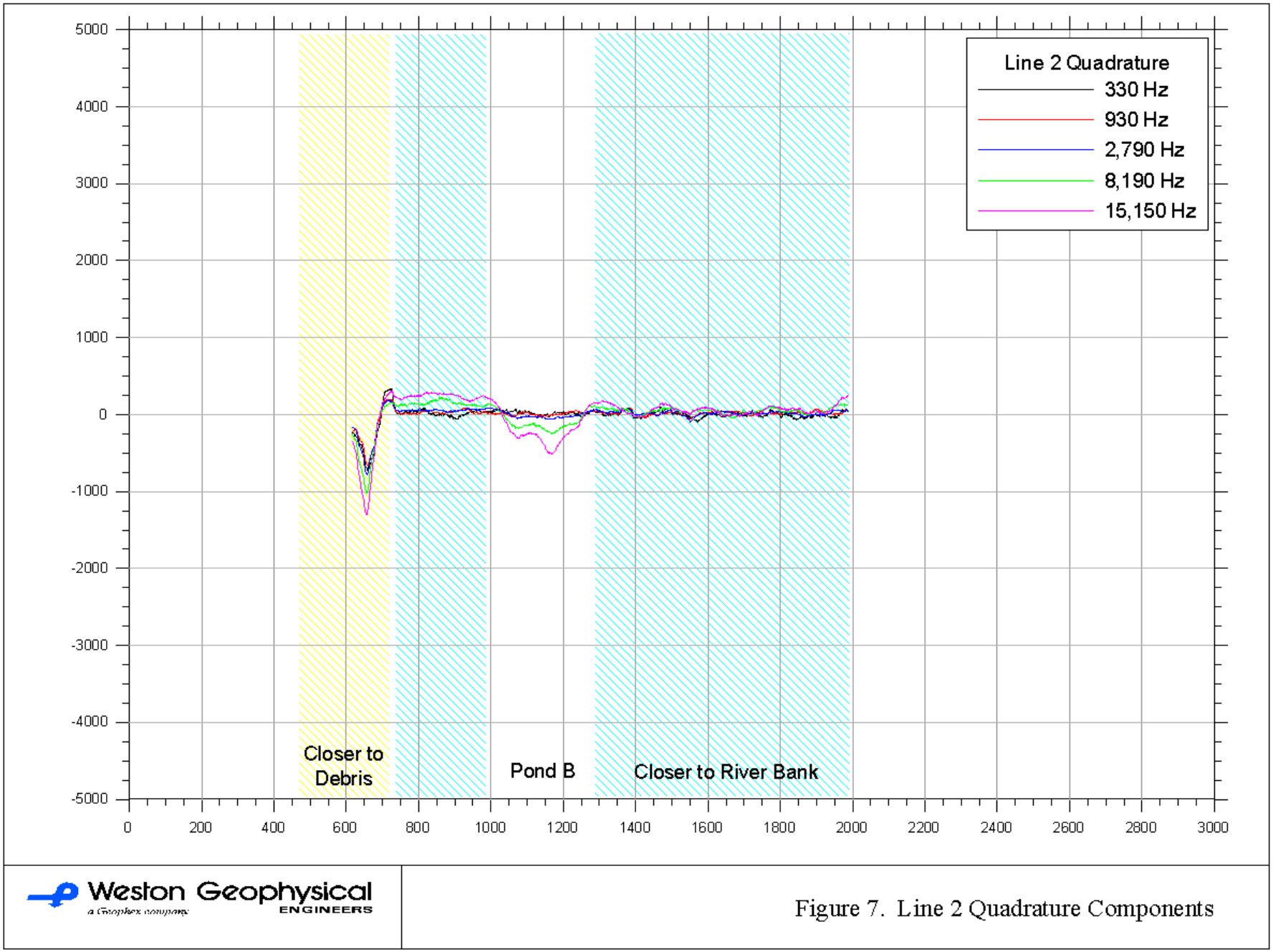
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Figure 5. Line 3 Inphase Components



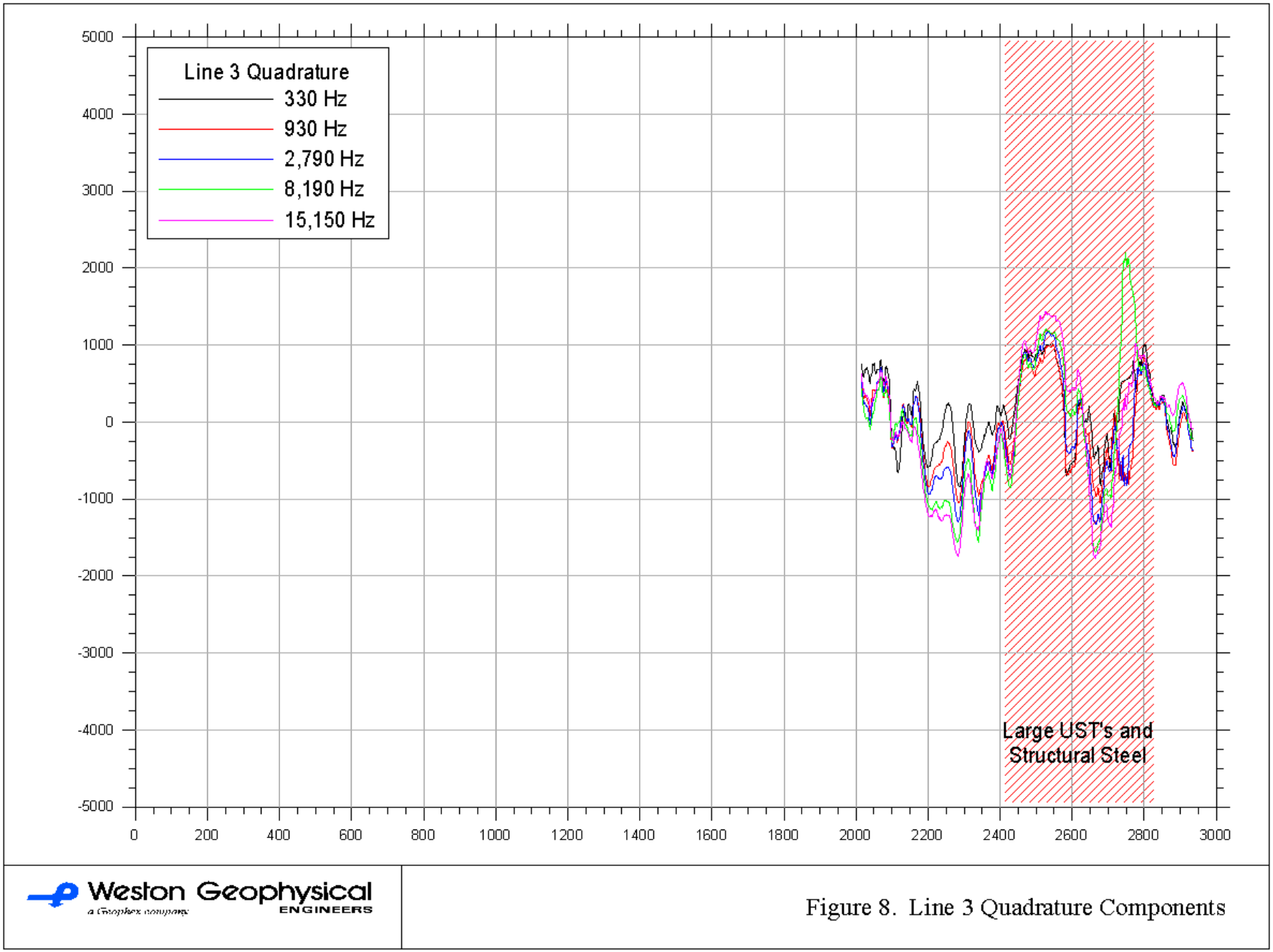
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Figure 6. Line 1 Quadrature Components



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Figure 7. Line 2 Quadrature Components



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Figure 8. Line 3 Quadrature Components

APPENDIX A

Electromagnetic Induction Standard Operating Procedure

Application

This Scope of Work (SOP) is provided as a guide for conducting a geophysical electromagnetic induction (EMI) survey using a Geophex GEM-2 Conductivity Meter. A surface EMI survey can be conducted to locate buried materials or anomalies and/or to identify ground water plumes with elevated electrical conductivity characteristics.

Equipment and Supplies

The following equipment and supplies will be available for conducting an EMI survey:

- Project Scope of Work and Health and Safety Plan (HASP) as provided by SHIELD
- Geophex GEM-2 Conductivity Meter
- Personal protective equipment (PPE), as appropriate
- Field logbook
- Site map
- Camera
- Measuring tape(s)
- Global Positioning System (GPS) equipment
- Survey flags and other marking materials

Procedures

The following procedures will be adhered to when conducting an EMI survey:

1. The Scope of Work will be reviewed to determine survey parameters and location.

2. The required equipment will be assembled and tested in accordance with normal operating procedures.

3. The appropriate PPE will be donned. The appropriate level will be determined prior to arrival at the site.

4. Proposed EMI grid pattern traverses will be positioned by taped distance measurements relative to a pre-determined starting location relative to the toe of the slope of the landfill and further reference to roads, buildings, or other semipermanent features and the existing site coordinate system, if appropriate.

5. Bush cutting, if needed, will be performed by others before geophysical data collection to enable the field geophysicist to walk at a uniform pace.

6. Uniform (every 50-feet) traverse stations will be marked on the ground surface using chalk, spray paint, or labeled pin flags or stakes, as appropriate. At this time the individual traverse line spacing is determined to be 40-feet. It is anticpated that the traverse lines may be separated into 3 sections to facilitate stationing around the three sides of the landfill. The traverse stations will be determined with a fiberglass measuring tape or distance-measuring wheel, as appropriate. Traverse deviations (i.e., obstacles or traverse bends) will be noted in the field logbook or data sheet. Traverse orientations will be recorded in the field logbook or data sheet, or on a plan map (if available).

7. Site conditions will be observed for power lines or aboveground metal objects within approximately 20 feet of a survey traverse since they may adversely affect EMI conductivity measurements. Anomalies caused by buried metal objects within those regions may be difficult to distinguish from anomalies caused by aboveground objects or subsurface lines or utilities.

8. The Geophex GEM-2 instrument will be assembled and functionally checked in accordance with the manufacturer's instructions prior to a survey.

9. The instrument will be set to record data in the vertical dipole mode.

10. The instrument will be set to record both inphase and quadrature components of the EMI field data. The instrument will be configured to record each of these components at 4 separate transmitter frequencies. Typically, one at a very low frequency for magnetic susceptibility, and the other three to cover a wide range of frequencies (1,000 to 15,000 Hz).

11. The traverse will be walked at a steady pace with the instrument held approximately 3 feet above the ground. Data values are recorded at 0.2-second time intervals (approximately 1-foot distance intervals at an ordinary walking pace). The beginning and end of each traverse will be denoted as well as intermediate distance marks at periodic intervals appropriate to the survey scale.

12. A field logbook or data sheet will be maintained during each survey to record EMI traverse positions and nearby features such as monitoring wells, surface metal, or other field observations.

Quality Assurance/Quality Control (QA/QC)

The following QA/QC procedures will be adhered to:

1. The Geophex GEM-2 instrument is calibrated at the time of manufacture and does not require additional calibration. The instrument however can be tuned to a site-specific conductivity. The Geophex GEM-2 instrument is tuned at the start of each day by recording the effect of a ferrite rod placed over the receiving coil. The deviation of the quadrature and inphase measurement can then applied to the field data prior to final presentation of the data.

2. EMI data values are visible on a digital screen as the data are acquired. The operator will observe the values as they are acquired to confirm proper functioning of the EMI instrument.

3. Digitally recorded EMI data will be transferred in the field to a laptop computer for contouring or plotting. Draft EMI contour maps of each component as well as a sum of all the quadrature components and magnetic susceptibility are typically prepared on the site using Golden Software Surfer contouring program with a Kriging grid algorithm. These contour maps (if prepared) will be examined for EMI anomalies that resemble metallic objects, areas of elevated conductivity, or other conditions judged to be relevant to the client's survey objectives. A second geophysicist will check all preliminary EMI interpretations prior to determining final interpretations.

References

The selected references provide a background for Weston Geophysical normal operating procedures for land base EMI investigations. All references are available at the Geophex, Ltd. website (www.geophex.com) in the publications section.

Geophex, Ltd.; 2003, GEM-2 Operator's Manual.

I.J. Won, D.A. Keiswetter, G.R.A. Fields, and L.C. Sutton, 1996, GEM-2: a new multifrequency electromagnetic sensor, Jour. of Environmental and Engineering Geophysics, v. 1, No. 2, p. 129-138.

Haoping Huang and I.J. Won, 2001, Conductivity and susceptibility mapping using broadband electromagnetic sensors, Journal of Environmental and Engineering Geophysics, v. 5, Issue 4, p. 31-41.

Weston Geophysical ENGINEERS
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325 West Main Street
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Phone (508) 393-4600
Fax (508) 393-7674

October 8th, 2003

Ms. Alison L. Dunn, P.G.
Senior Hydrogeologist
Shield Environmental Associates, Inc.
2456 Fortune Drive, Suite 100
Lexington, Kentucky 40509

Subject: Geophysical Investigation at the Un-named Island
Peterson / Puritan OU-2 Facility, Cumberland, Rhode Island

Dear Ms. Dunn:

In accordance with your authorization, Weston Geophysical Engineers conducted additional geophysical investigation at the above referenced site, specifically around the perimeter of the Un-named Island. The field effort was completed on October 7th, 2003. The purpose of the geophysical survey was to provide electromagnetic earth conductivity information on the extent of possible buried debris zones around the "Pond A" area.

The attached summary and figures documents our findings and provides recommended locations for further investigation. The summary and figures were prepared with the same criteria as our report for the landfill investigation. This submission can be inserted as an addendum to the landfill report.

We appreciate this opportunity to provide you with our additional services, please call the undersigned if you have any questions.

Sincerely,

WESTON GEOPHYSICAL ENGINEERS

Peter B. Hubbard
Project Geophysicist

pbh:W351: attachment

Raleigh, North Carolina
(919) 839-8515

Introduction

The purpose of this investigation was to locate possible buried debris around the perimeter of the Un-named Island adjacent to the OU-2 facility through the implementation of an electromagnetic induction survey (EMI). The EMI method is capable of detecting electrical conductivity contrasts between contaminated and uncontaminated soils and other earth materials. This information is anticipated to help provide additional subsurface information in the areas where additional buried debris was found on the island.

Prior to the geophysical investigation, a survey line path was established to provide easy access to the survey area. The geophysical field effort was completed on October 7th, 2003.

Geophysical Survey Methodology

The area investigated included an approximate 2,870-foot continuous profile line around the island starting in the southeast continuing counter clockwise around the island and ending in the southwest. One continuous EMI profile line (2,900 feet) was acquired as well as an additional 200-foot line extending from the gravel road to a point believed to be off the buried debris material.

Survey control points were established at 100-foot increments for each profile line; with wooden survey stakes placed at 300-foot increments, survey lines end points and corners, 100-foot points were marked with plastic pin flags. Field notes were recorded to indicate the location of the survey lines relative to existing cultural features.

The wooden stake points will be surveyed using GPS. These points were placed in the field by measured distances along the line and later located relative to the site coordinates by differentially corrected GPS measurements provided by Shield Environmental.

An EMI survey was conducted along each of the survey lines. EMI data were processed by custom designed software that converts the raw EMI data to user specified coordinate data with in-phase and quadrature component electromagnetic conductivity values as well as apparent conductivity and magnetic susceptibility. The data were organized for import into commercially available contour software packages through the use of command language processing routines. Preliminary profile data was available for examination at the conclusion of each survey line. Color-coded conductivity profile lines of the various EMI components were generated for inclusion in this report.

A Geophex GEM-2 multifrequency electromagnetic induction instrument was used because it offers increased detection and characterization capabilities over other, commercially available EMI instruments. This multi-frequency and high speed data acquisition system provides higher resolution data than the other systems, enabling additional data on possible depth parameters and closer spaced sampling. The GEM-2 multifrequency electromagnetic instrument is a self-contained lightweight programmable digital recording system capable of recording EMI response data at up to 10 transmitter frequencies (270 to 18,210 Hz) and at a sampling rate of 0.2 second.

The optimum EMI frequency settings for this investigation were determined through a test profile along the centerline path prior to the acquisition of the EMI data. Five frequencies were selected from this test because of their low signal to noise ratio. The five frequencies (330, 930, 2,790, 8,190, and 15,150 Hz) were then programmed into the GEM control unit set to record at 0.2 second intervals). Normal walking speed translates this sampling rate to a sample rate of approximately 1 sample every 1.5-foot.

Additionally, when configured with a low frequency (330Hz), the signal response at this low frequency is equivalent to the magnetic susceptibility for each of the data samples. This data can be useful in discriminating the leachate from possible buried metal objects.

Results

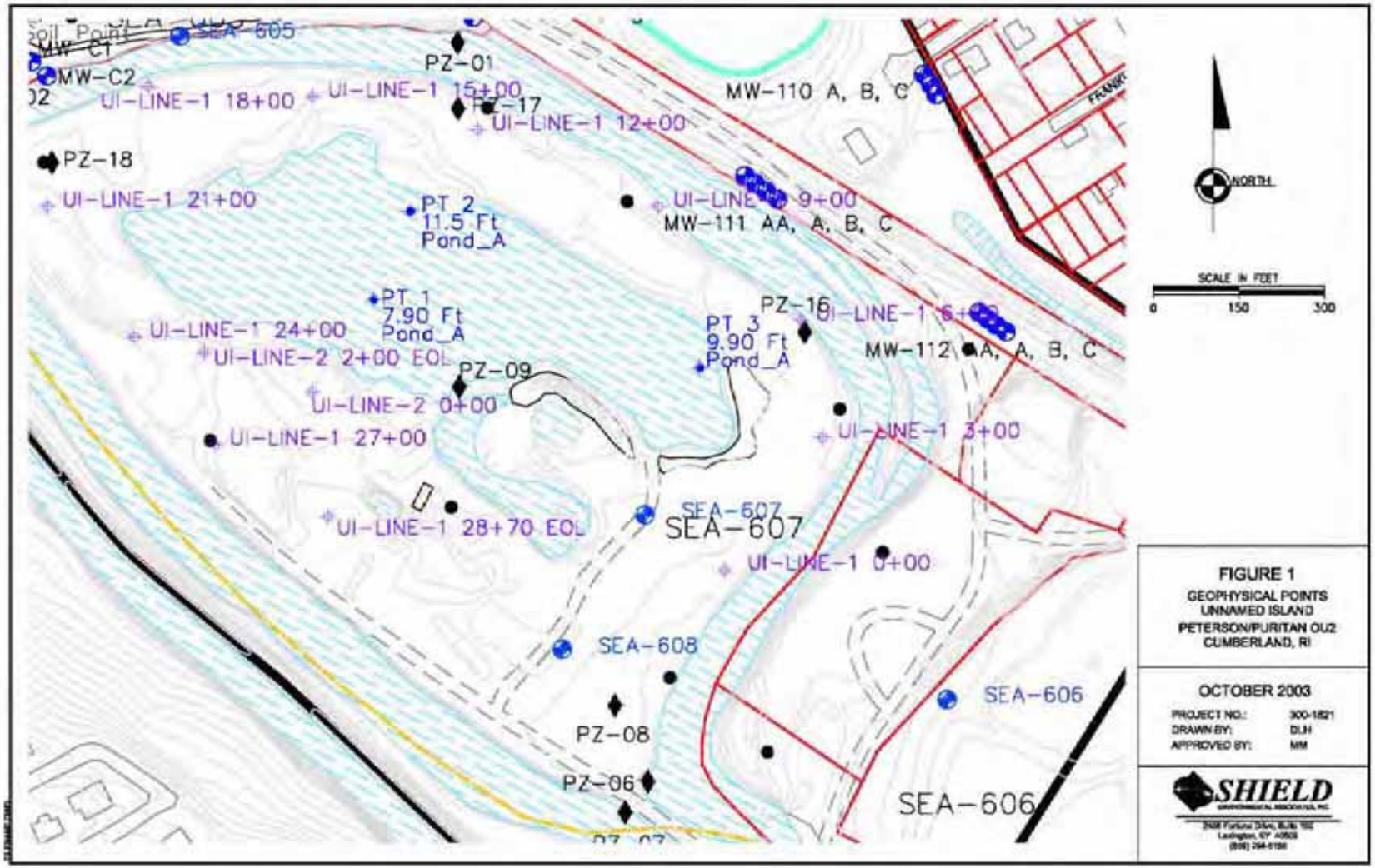
The results of this investigation can be shown on the composite graph indicating the summation of all of the inphase and quadrature components. Figure 1 shows this composite profile for the perimeter Line 1. Figure 2 show the results of the profile along Line 2. Additional figures are provided of Line 1 in more detail showing 300-foot sections of the line.

The profile data shown on Figures 1 and 2 are the “weighted-average” smoothed profile data. The weighted-average processing removed most of the high frequency noise generated by the abundant surface and near surface metallic debris.

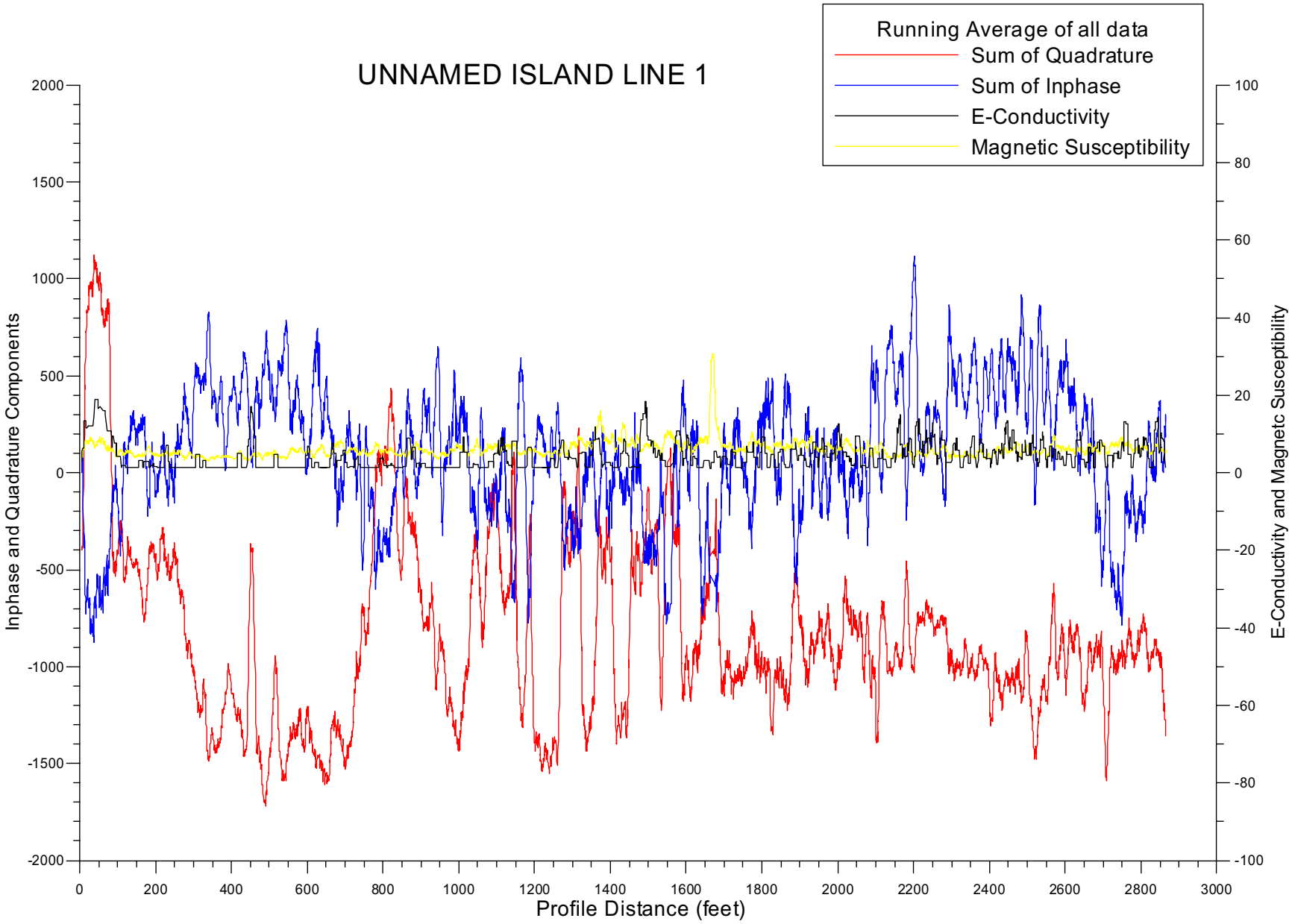
The following table summarizes the anomalous location shown on Figure 1 and 2:

Line 1 Stations 0700 to 1700	High Frequency – High Conductivity signal
Line 2 Stations 0000 to 0120	High Frequency – High Conductivity signal

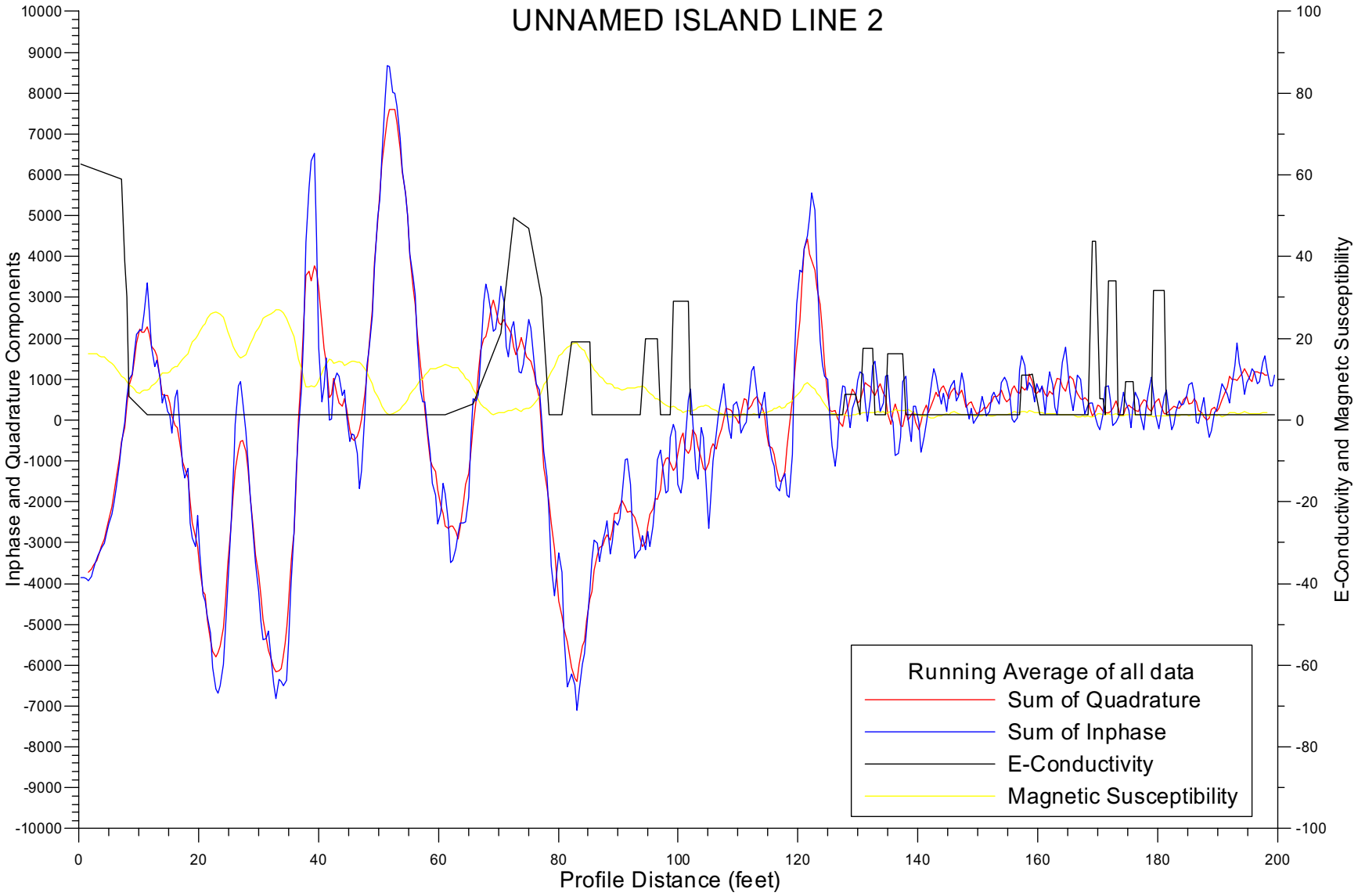
FIGURES



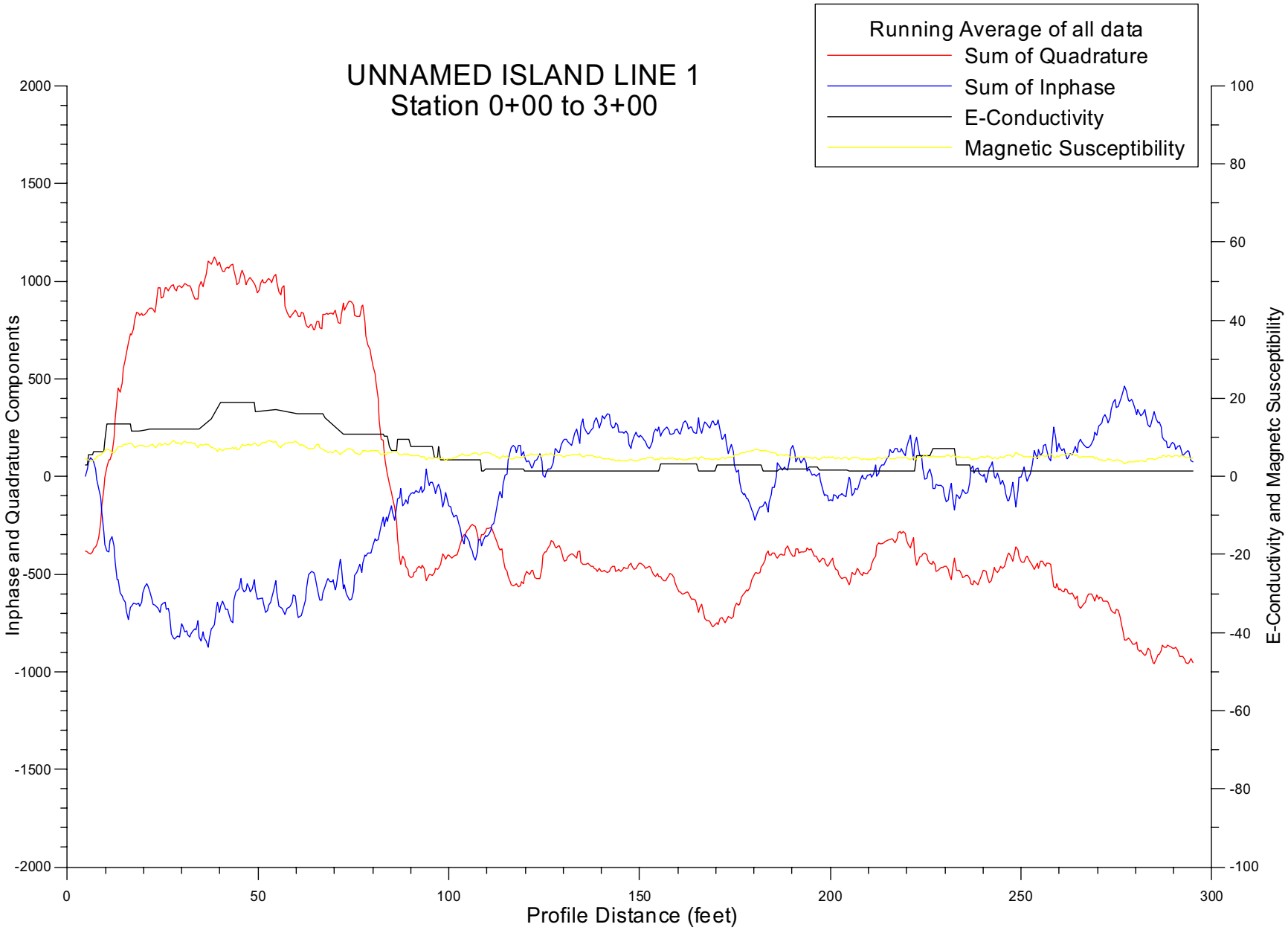
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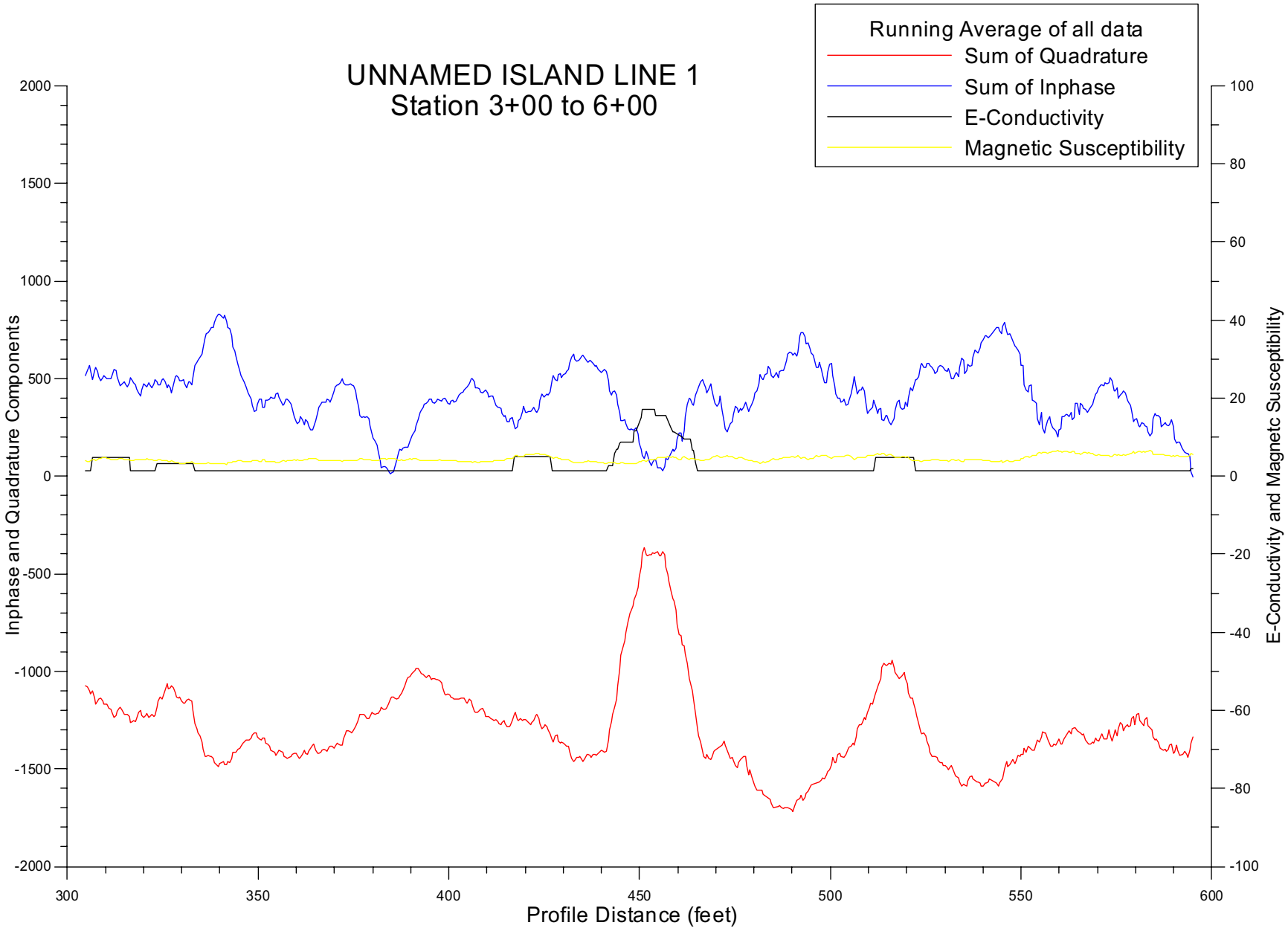
Weston Geophysical Engineers



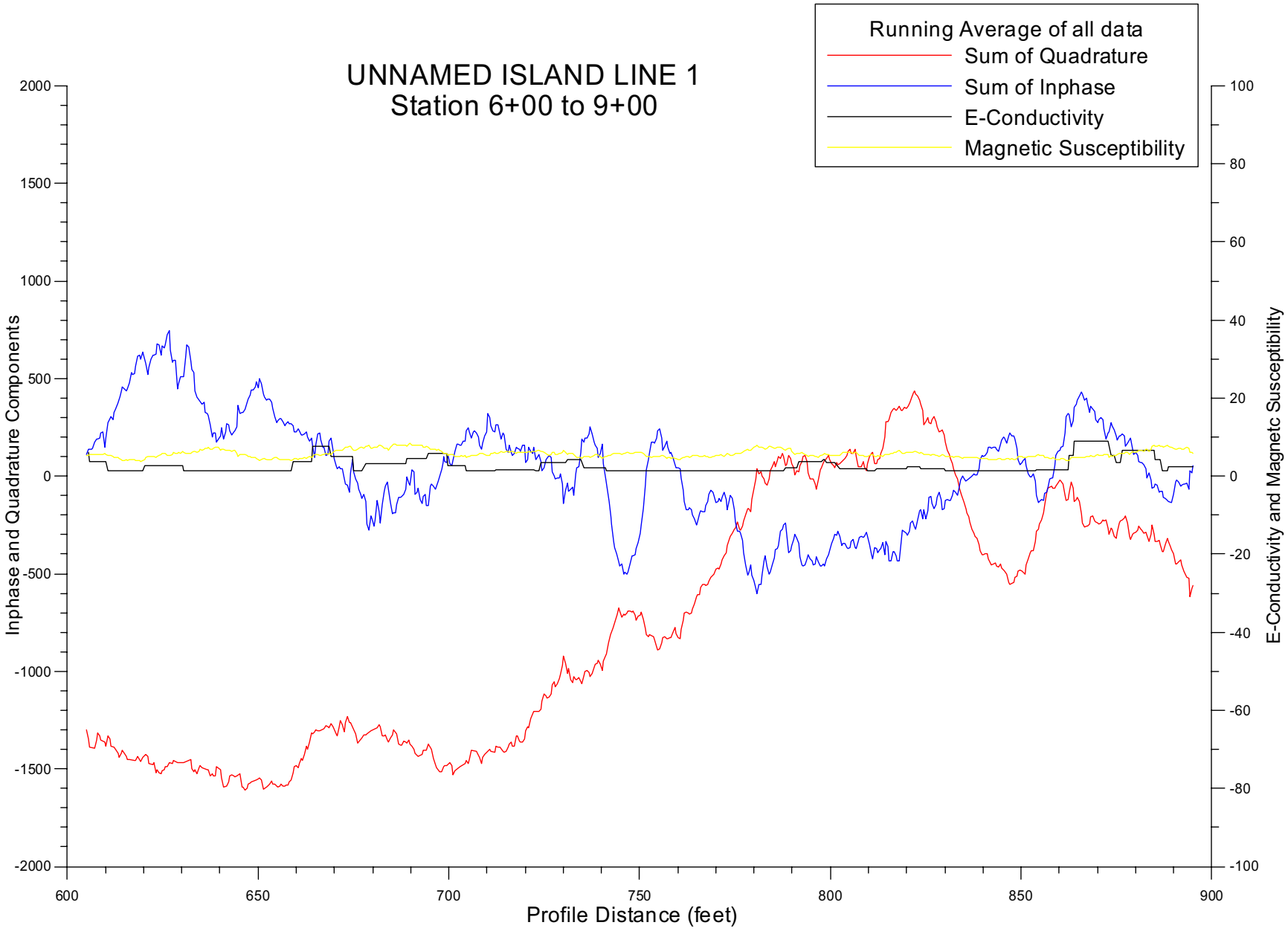
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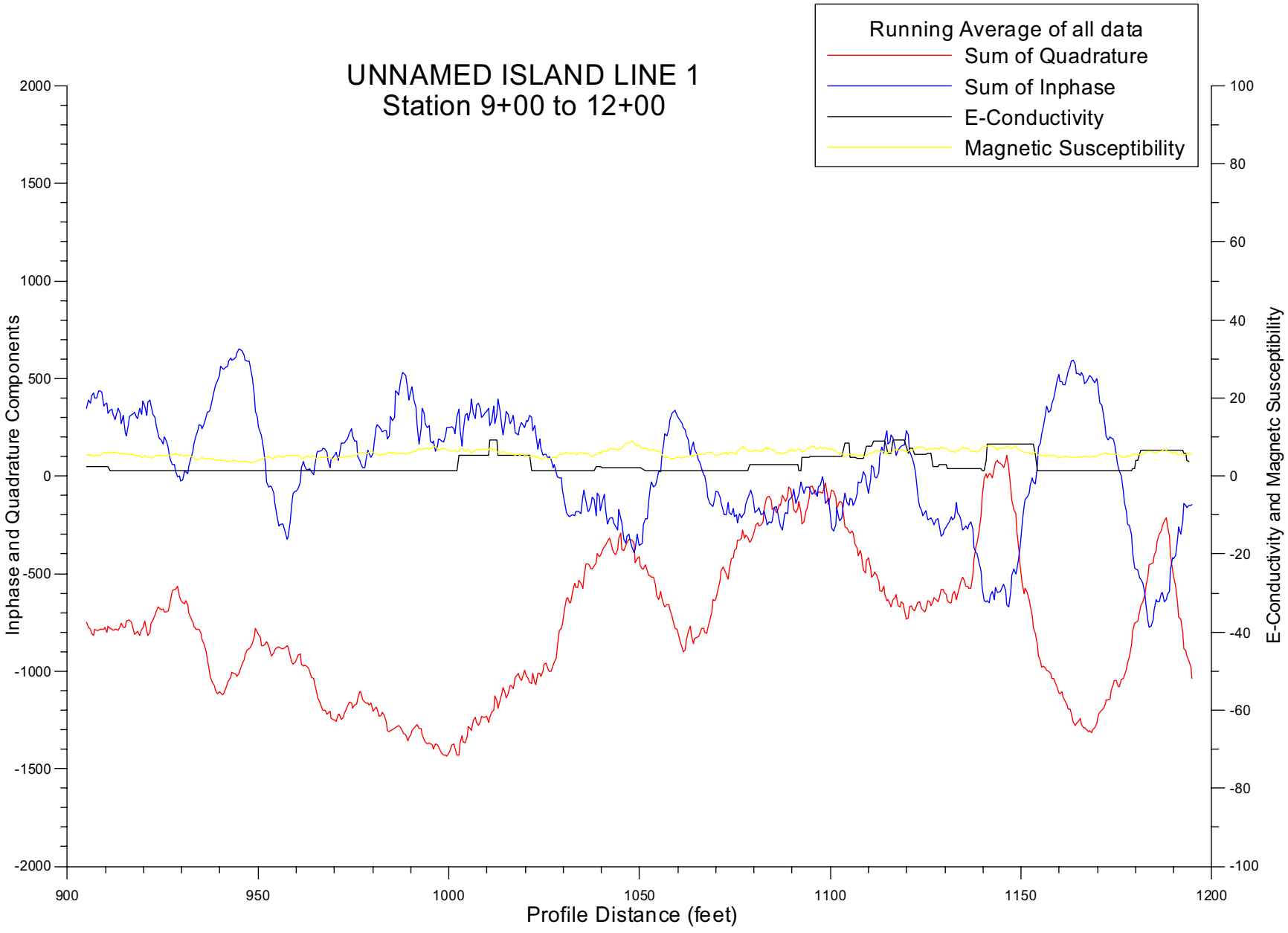
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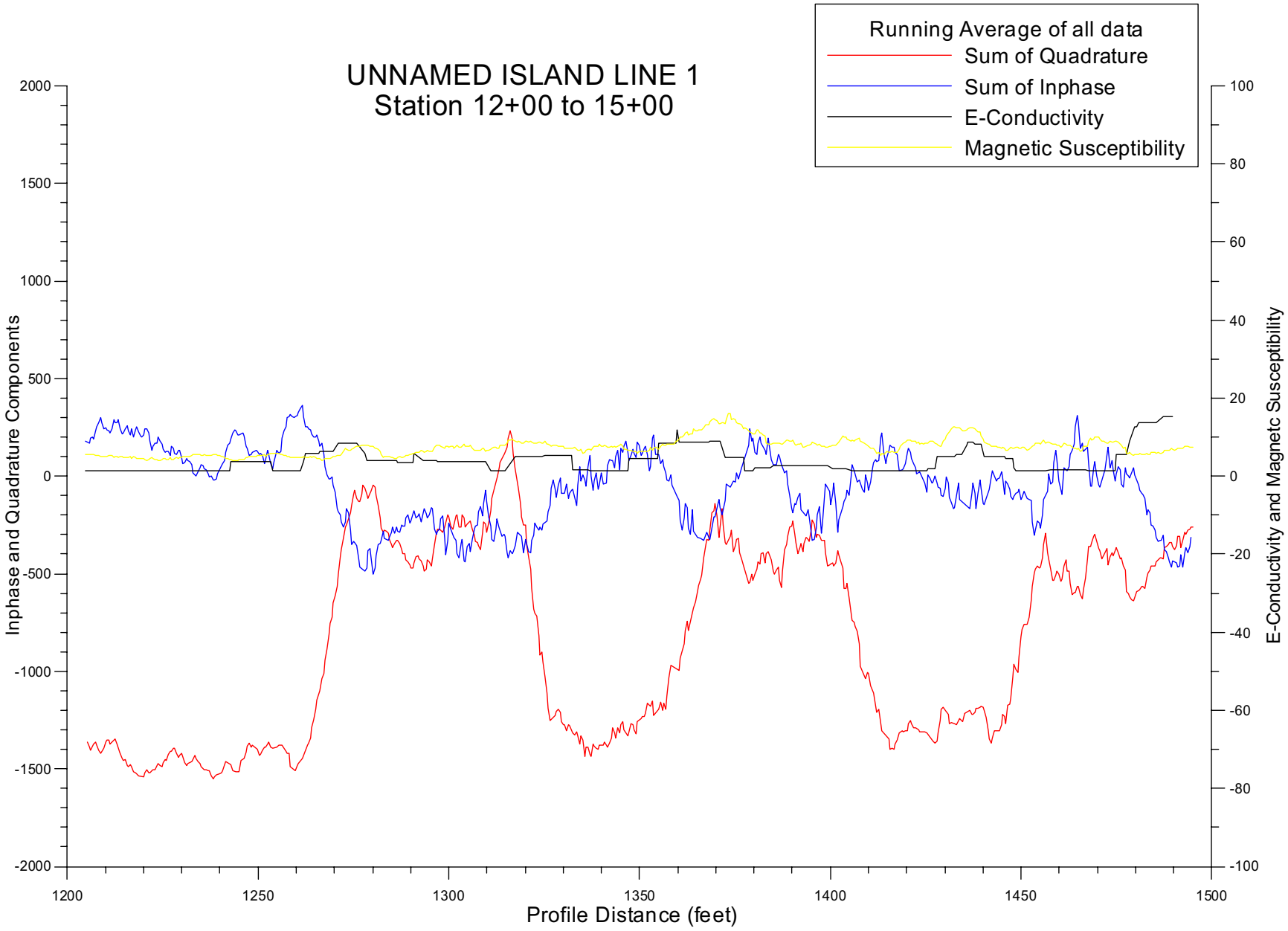
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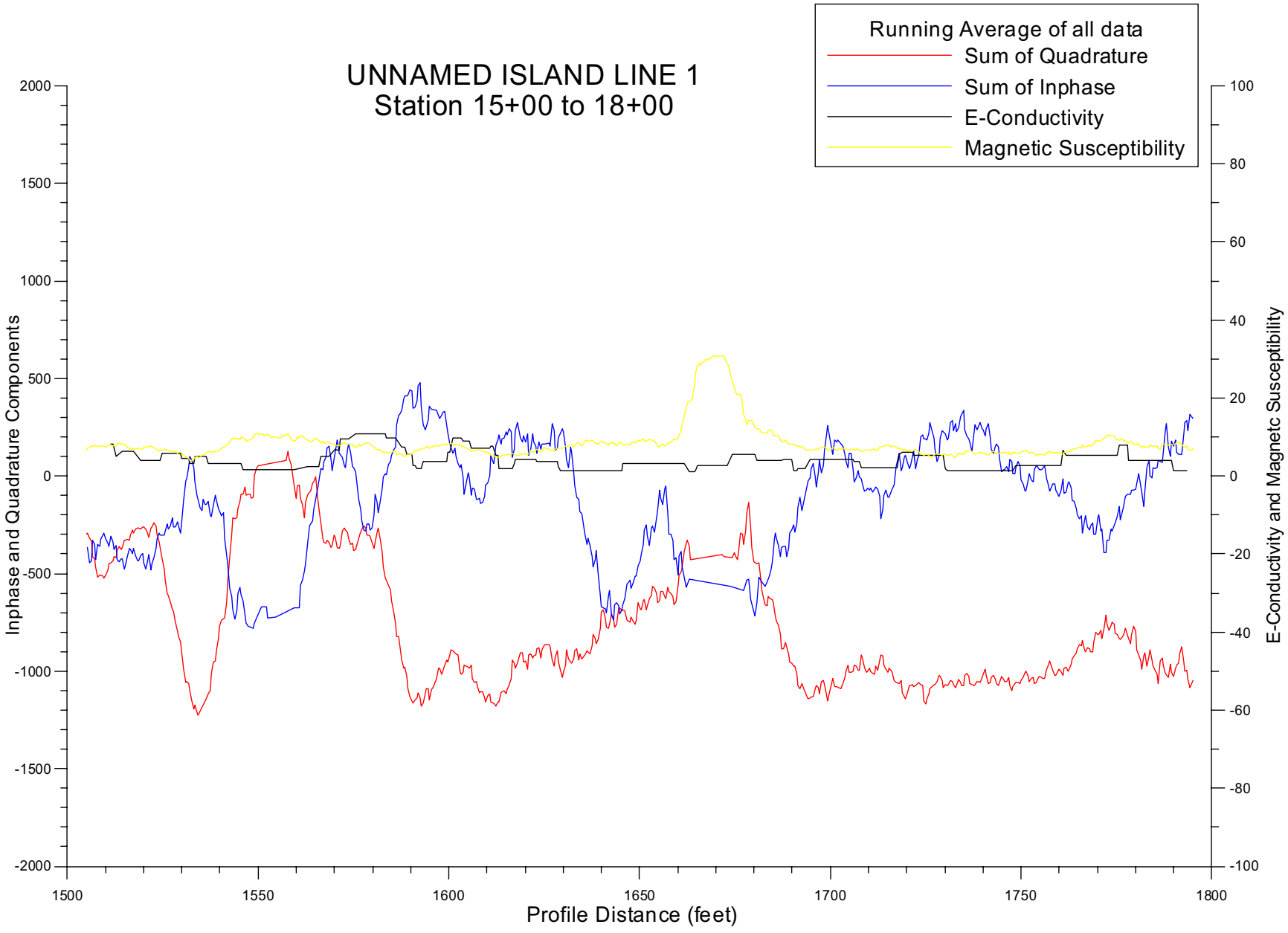
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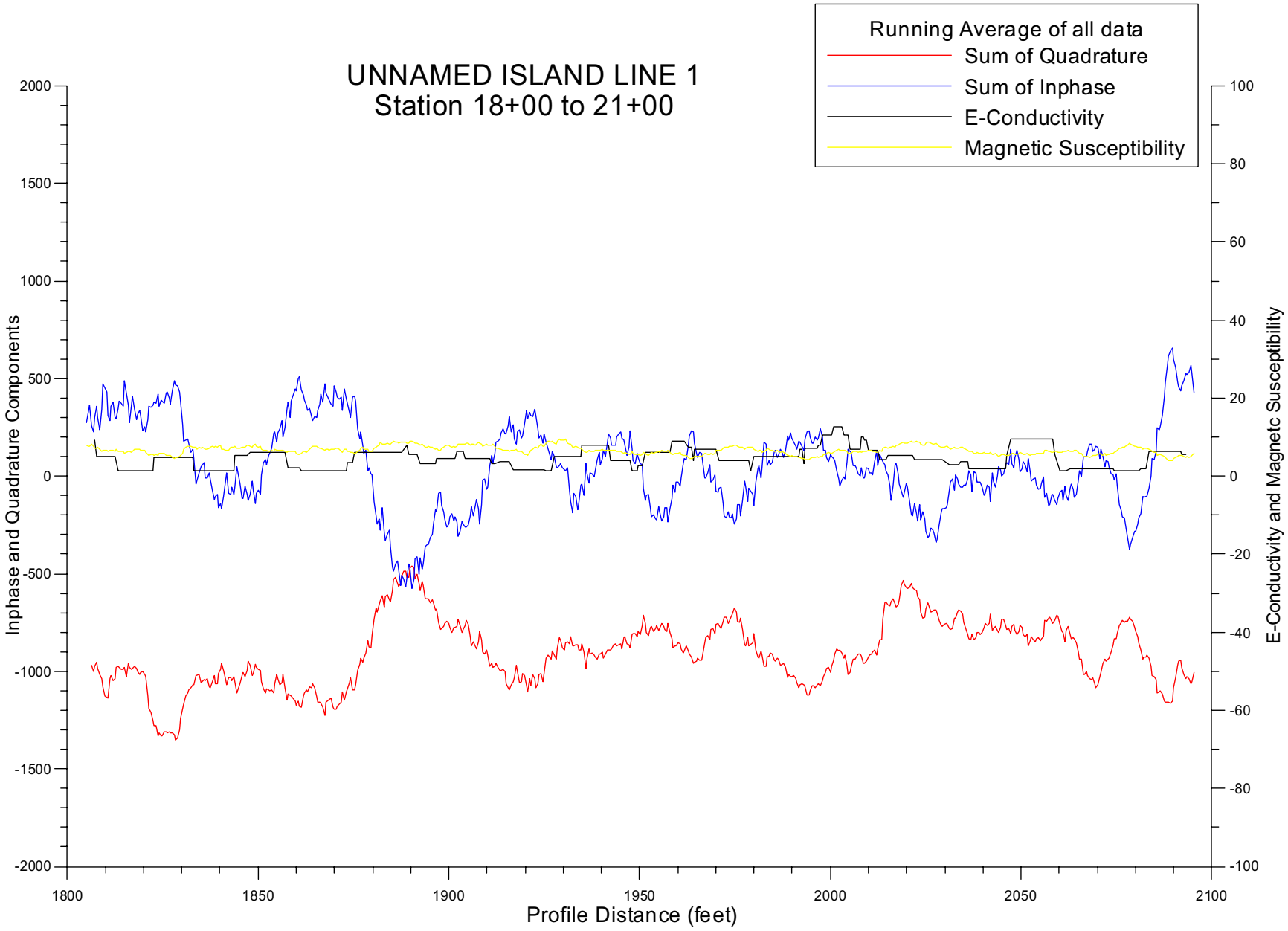
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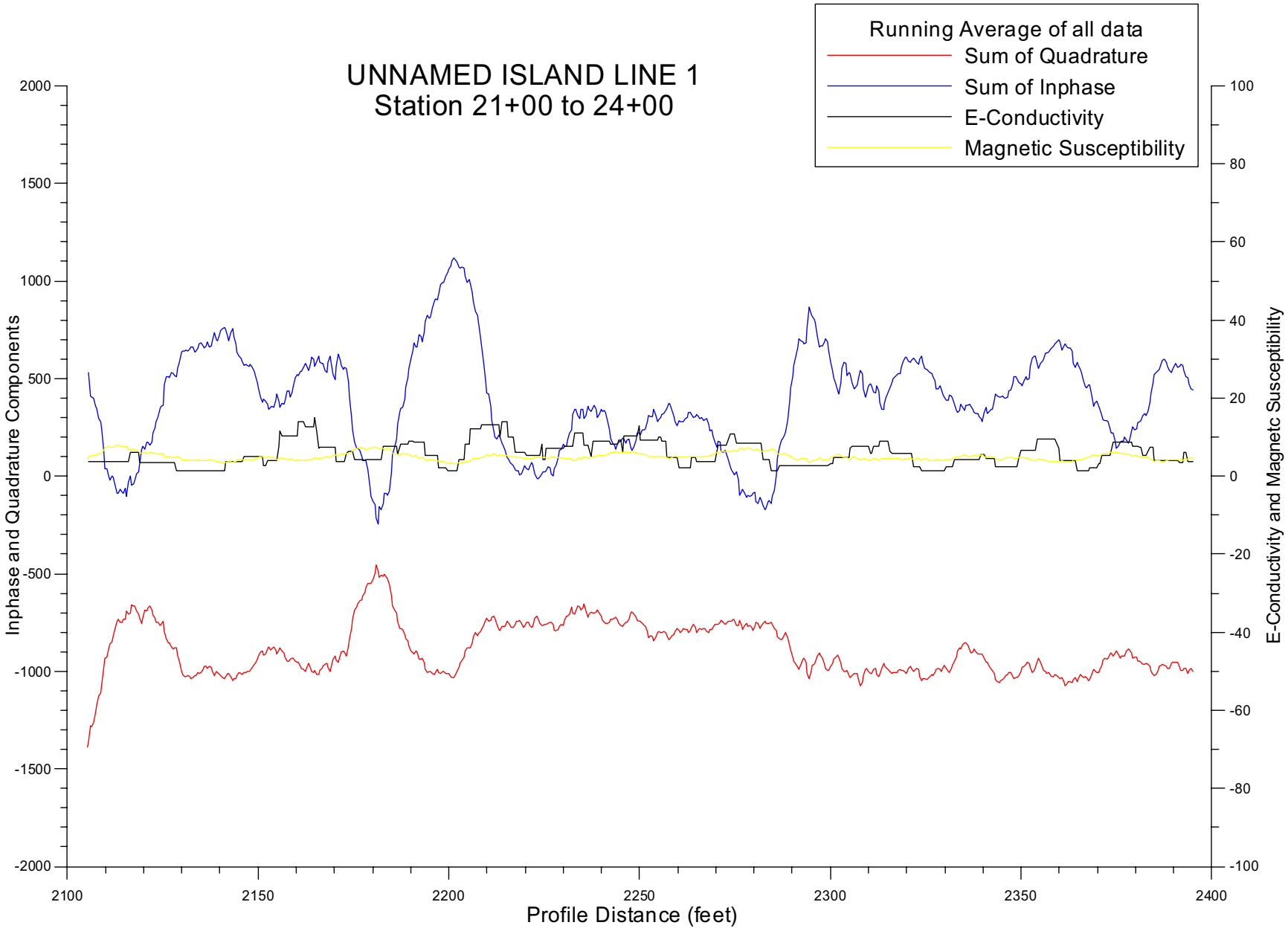
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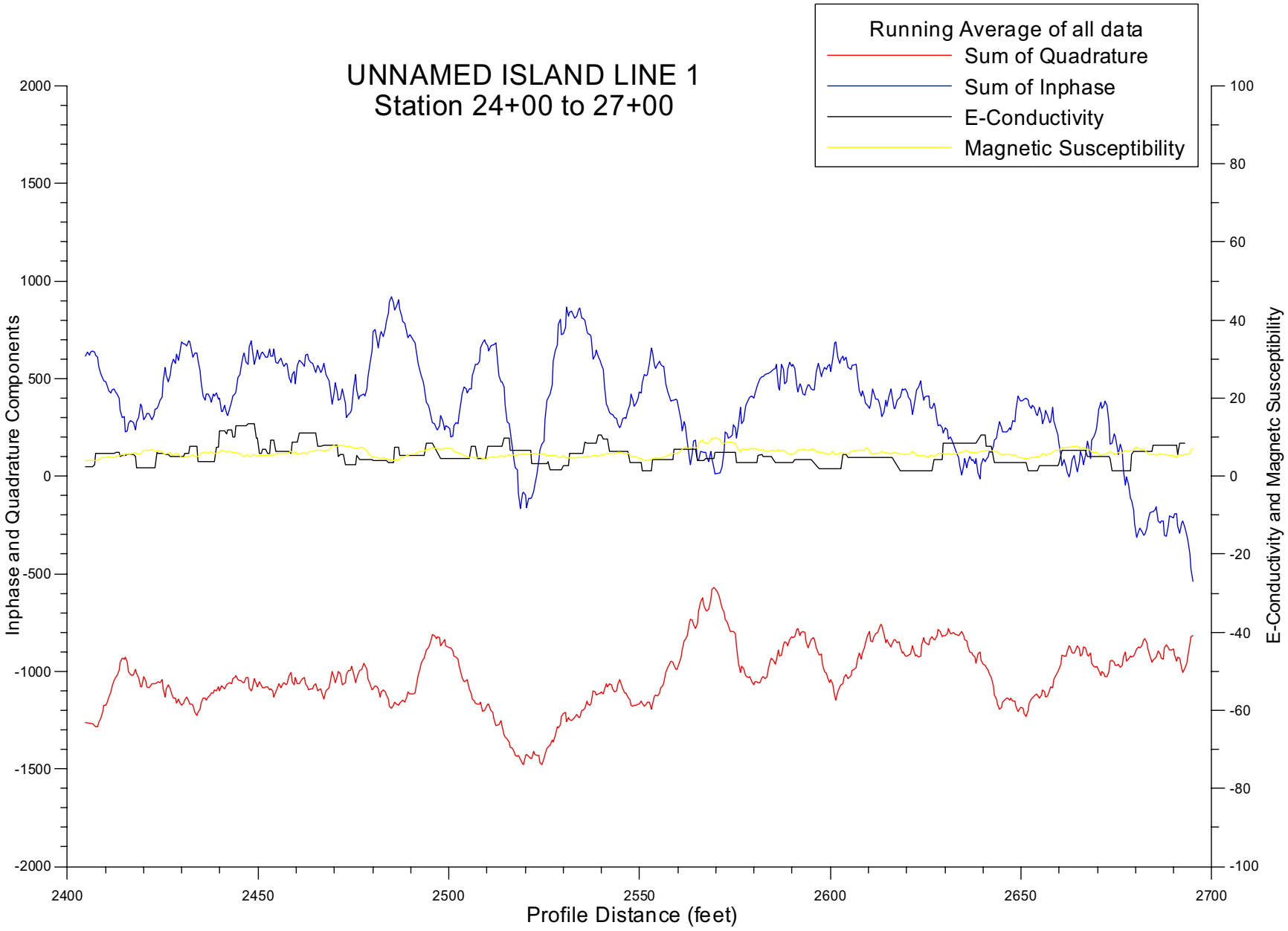
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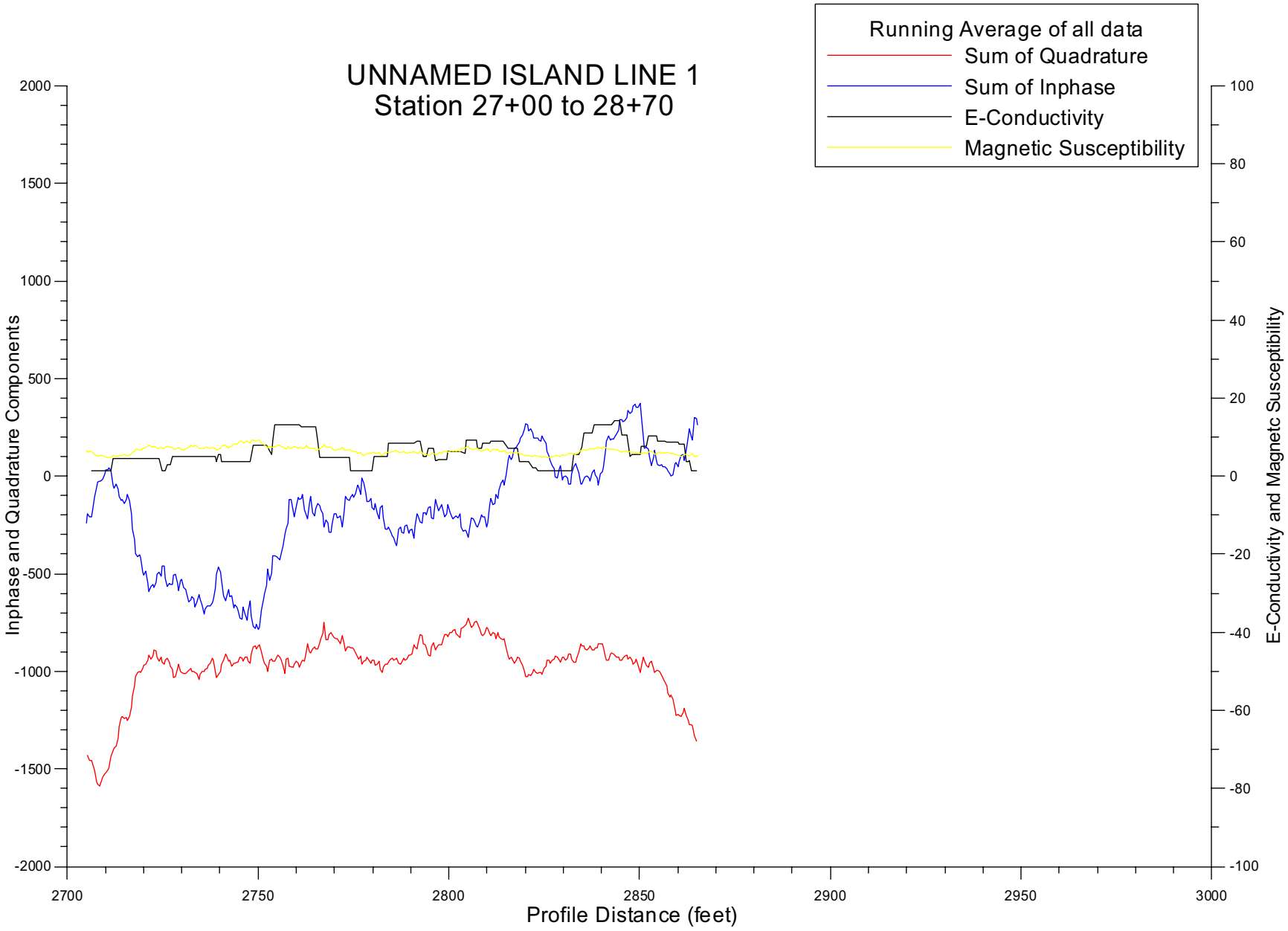
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ZEBRA Environmental Corp.

Shield Environmental Associates
2456 Fortune Drive, Suite 100
Lexington, Kentucky 40509

September 23, 2003

Attention: Ms. Alison Dunn

RE: Summary Report for Direct Sensing Services
J. M. Mills Landfill
Cumberland, Rhode Island
ZEBRA Proposal #: DS07230

Dear Ms. Dunn:

The following is a summary of site activities performed by ZEBRA Environmental at the J.M. Mills Landfill, Cumberland, Rhode Island. The work was performed on August 19 –28, 2003.

PROJECT PERSONNEL ON SITE:
Mr. Mike Morris, Shield Environmental
Mr. Chad Veller, Shield Environmental
Mr. Joseph Sakellis, ZEBRA Environmental
Mr. Daryl VanVranken, ZEBRA Environmental

SUMMARY OF SITE ACTIVITIES

ZEBRA mobilized a fully equipped Electrical Conductivity/Membrane Interface Probe System (EC/MIP) mounted in a 4x4 GMC Van to the site. The "data acquisition vehicle" carried the system controller unit, notebook computer, printer, O.I. Analytical Model 4430 Photoionization Detector (PID) and Flame Ionization Detector (FID), Hewlett Packard Model G1223A, Electron Capture Detector (ECD), generator and all required compressed gases, two (2) complete assemblies of MIP probes, probe rods and trunk lines, as well as all the tools and supplies needed for the EC/MIP logging. The ZEBRA field team utilized a truck mounted Model 5400 Geoprobe unit to advance the EC/MIP probes into the subsurface.

The project involved collecting EC/MIP logs at forty-five (45) locations identified by the representatives of Shield Environmental Associates. Shield Environmental Associates recorded the location of the logging/sampling locations on a site plan.



At each location the EC/MIP probe was advanced to the target depth in 1 foot intervals. As the probe was being driven to depth, the electrical conductivity data and detector responses were being continuously recorded by the system's data acquisition hardware and software. Upon completion of the logging, the probe rod assembly was extracted form the ground and cleaned, and the borehole filled with Portland grout.

The Membrane Interface Probe (MIP) is a percussion tolerant VOC sensor that can continuously log volatile organics that diffuse through a semi-permeable membrane. Using a carrier gas, the VOC's are brought to the surface through tubing, which is connected to a laboratory grade Photoionization Detector (PID), and Electron Capture (ECD), Flame Ionization Detector (FID) for immediate screening. All three of these detectors are mounted in a Hewlett Packard 5890 Series II Gas Chromatograph cabinet.

An integral part of the MIP system is the direct sensing soil conductivity system. This system utilizes a specially designed probe that will withstand the rigors of percussion probing while taking continuous measurements of soil conductivity as it is being driven into the ground. The sensing probe is linked to a control box where the signal is received by a lap top computer. The signal from the probe is matched with precise depth measurements and logged on the screen. The consultant is able to read real time data showing changes in soil conductivity/resistivity. These changes can be used to identify lithology, contaminant plumes, salt-water intrusion, or any other subsurface condition that displays a change in conductivity/resistivity.

A summary of the logging point name and the terminal depth achieved is included below:

Point Name	**Final Depth**	**Point Name**	**Final Depth**	**Point Name**	**Final Depth**
L12895 MIP1	13.39'	L12650 MIP9	30.27'	L12100 MIP17	10.36'
L12850 MIP2	13.13'	L12450 MIP10	10.26'	L12050 MIP18	30.27'
L12800 MIP3	13.33'	L12400 MIP11	10.63'	L12000 MIP19	10.50'
L12750 MIP4	10.53'	L12350 MIP12	30.42'	L21000 MIP20	30.20'
L12700 MIP5	10.14'	L12300 MIP 13	10.34'	L20950 MIP21	10.60'
L12595 MIP6	10.42'	L12250 MIP 14	12.18'	L20900 MIP22	10.00'
L12550 MIP7	9.90'	L12200 MIP15	10.37'	L20850 MIP23	14.60'
L12500 MIP8	10.26'	L12150 MIP 16	16.34'	L20750 MIP24	11.30'

Point Name	Final Depth	Point Name	Final Depth	Point Name	Final Depth
L20715 MIP25	30.55’	L20100 MIP32	10.16’	L10300 MIP39	10.51’
L20800 MIP26	10.28’	L20050 MIP33	1.35’	L10250 MIP40	10.52’
L20360 MIP27	11.89’	L20048 MIP34	1.04’	L10200 MIP41	10.45’
L20300 MIP28	6.33’	L20047 MIP35	10.69’	L10150 MIP42	21.38’
L20250 MIP29	10.42’	L20000 MIP36	10.28’	L10100 MIP43	10.74’
L20200 MIP30	10.45’	L10400 MIP37	10.57’	L10050 MIP44	11.34’
L20150 MIP31	30.33’	L10350 MIP38	10.44’	L10000 MIP45	12.31’

Data Presentation

A Summary Log displaying four channels of data for each location has been prepared for each location. The channels include the soil conductivity log measured in mS/M, the PID, ECD, and FID detector response reported in uV. The Summary Log has been presented in a horizontal format with four channels. The depth below grade is depicted on the X - axis with 0 feet (land surface) located at the bottom left of the page. The maximum depth logged below grade is at the bottom right of the page. Regarding electronic data transfer, all data collected on site has been compiled in an Excel spread sheet and submitted to you.

All logs were left in the custody of Shields on site representative and all drilled holes were sealed and prior to leaving the site.

Data Interpretation

For this project the detectors were run using the highest sensitivity settings. The logs show a negligible response above the baseline for the PID and ECD detectors. If there are volatile organic compounds (VOCs) present, they are below the MIP systems detection limits. Below is a brief overview of the PID and ECD’s operation:

Photo Ionization Detector (PID)

Highly sensitive detector used to detect Hydrocarbons (ionization potential < 10.6 eV)
Compounds of Interest: Volatile Organic Hydrocarbons (Aromatic)
Detection Sensitivity: > 250 PPB
Detection Range: approximately 10^5



The Photo Ionization Detector (PID) responds to molecules whose ionization potential is below 10.6eV, including aromatics and molecules with carbon double bonds. The PID is nondestructive, so the sample can be routed through the PID and passed on, in series, with the FID.

Electron Capture Detector (ECD)
Highly sensitive detector used to detect Halogenated Solvents
Compounds of Interest: Volatile Halogenated Compounds (F, Cl, Br, and I)
Detection Sensitivity: > 100 PPB
Detection Range: approximately 10^5

The ECD detector consists of a sealed stainless steel cylinder containing radioactive Nickel-63. The Nickel-63 emits beta particles (electrons) which collide with the carrier gas molecules, ionizing them in the process. This forms a stable cloud of free electrons in the ECD cell. When electro-negative compounds (especially chlorinated, fluorinated or brominated molecules) such as carbon tetrachloride, PCE, TCE or Vinyl Chloride enter the cell, they immediately combine with some of the free electrons, temporarily reducing the number remaining in the electron cloud. The detector electronics maintain a constant current (of about 1 nanoampere) through the electron cloud, are forced to pulse at a faster rate to compensate for the decreased number of free electrons. The pulse rate is converted to an analog output that is connected to the data system.

The FID did however respond, although at very low levels, to compounds at a depth of about 4 – 5 feet below ground surface. Given that the investigation was performed in a landfill area and ruling out the presence of aromatic and halogenated compounds (PID and ECD) it may be assumed that the FID was indicating the presence of natural gases created by the decomposition of landfill materials. Landfill gas may contain up to 30-40% carbon dioxide (CO_2), and small amounts of non-methane volatile organic compounds such as Hydrogen Sulfide (H_2S). These gases are denser than air and tend to sink. Combining this information with the EC logs one can see a nice correlation to back up this hypothesis. The EC log shows thin clay lenses near the surface. The FID traces for the same locations indicate the presence of compounds lying directly on top of these lenses, as a denser than air landfill gas might behave. When analyzing the more interesting scans the L1 0000 – L1 1800 and the L2 1000 – L2 0715 transects, the pattern that we see is natural gas overlying thin, near surface clay lenses which in turn overlay somewhat silty to clean sands.

Below is a brief overview of the FID and EC:

Flame Ionization Detector
Highly sensitive detector used to detect Hydrocarbons
Compounds of Interest: Volatile Organic Hydrocarbons
Detection Sensitivity: > 200 PPB
Detection Range: approximately 10^7

The FID responds to carbon and therefore produces a signal for all carbon containing compounds. The linear response of the detector is 10^7 and it responds to compounds with

concentrations in the nanogram range depending on the compound. The FID responds to any molecule with a carbon-hydrogen bond, but its response is either poor or nonexistent to compounds such as CCl_4 or NH_3. Since the FID is mass sensitive, and not concentration sensitive, changes in the carrier gas flow rate have little effect on the detector response. It is preferred for general hydrocarbon analysis, with a detection range from 0.2 ppm to almost 100%. The FID response is stable from day to day. It is generally robust and easy to operate. But because it uses a hydrogen diffusion flame to ionize compounds for analysis, it destroys the sample in the process.

Electrical Conductivity (EC) - Overview

Soil conductivity and resistivity (the inverse of conductivity) have long been used as tools to classify soils. Higher electrical conductivities are representative of finer grained sediments, such as silts or clays, while sands and gravels are characterized by distinctly lower electrical conductivities. A few site-specific core samples, either from discrete depths or a continuous core, can be used to verify the lithology represented by electrical conductivity values at a site. The electrical logs are then correlated across the site to show changes in thickness or elevation of lithologic units of interest.

EC logs are used to define zones of lower conductivity, equivalent to coarser grained, more permeable sediments, which will allow the movement of contaminants (hydrocarbons, chlorinated VOC's, or metals) in the subsurface. This information will also assist in the proper placement of monitoring, sparging, or extraction wells.

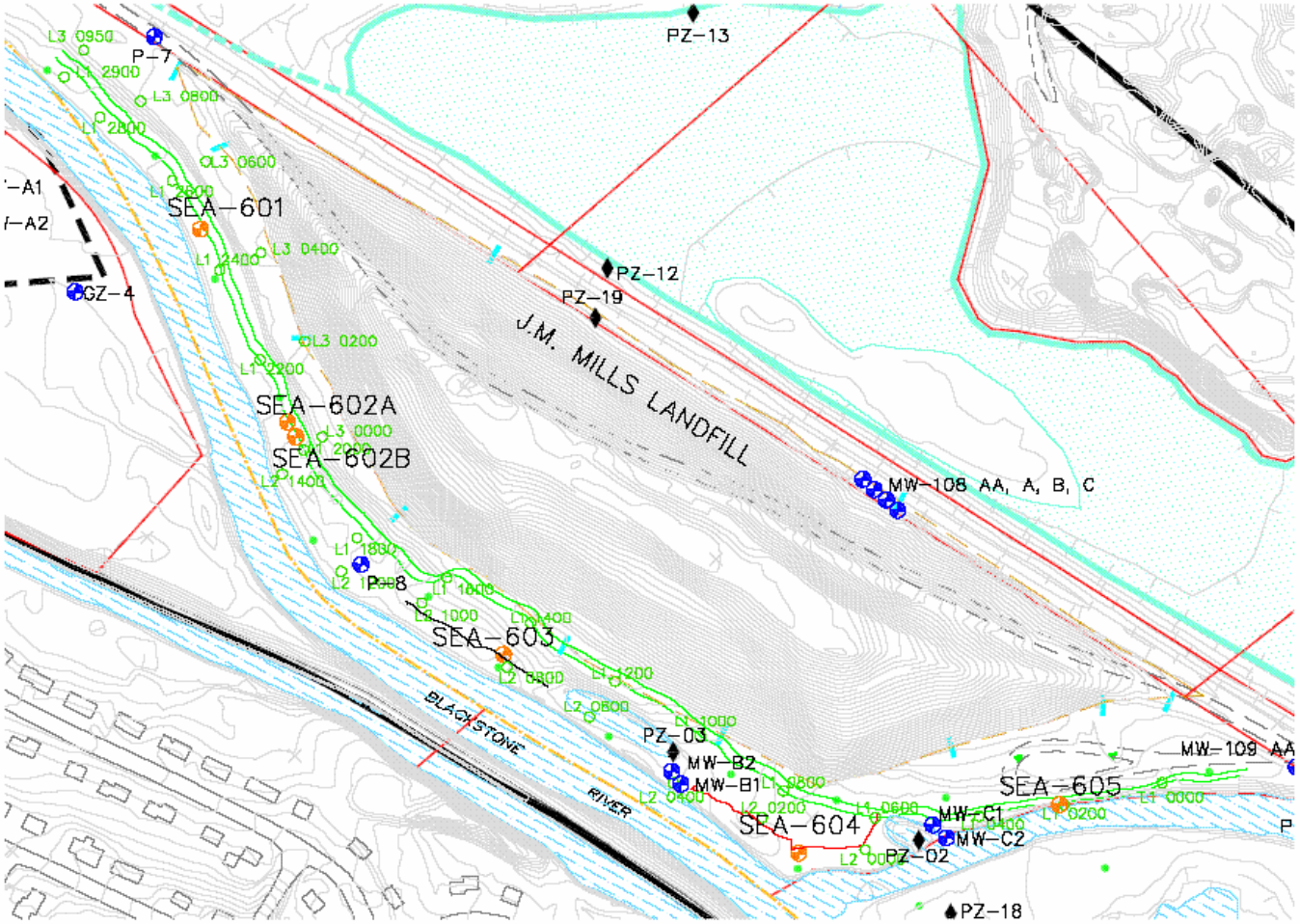
ZEBRA appreciates the opportunity to provide these services and looks forward to working with Shield Environmental Associates in the future. Should there be any questions regarding this project or our other services, please do not hesitate to contact us.

Sincerely yours,

Joseph G. Sakellis
ZEBRA Environmental Corp.

PLF:cc

cc: Matt Ednie, ZEBRA – Albany, NY



LEGEND

- PROPOSED MONITORING WELL LOCATION
- EXISTING MONITORING WELL LOCATION
- STAFF GAUGE/PIEZOMETER LOCATION

SCALE IN FEET

0 200 400

FIGURE 1

WELLS, PIEZOMETERS AND STAFF GAUGE LOCATIONS

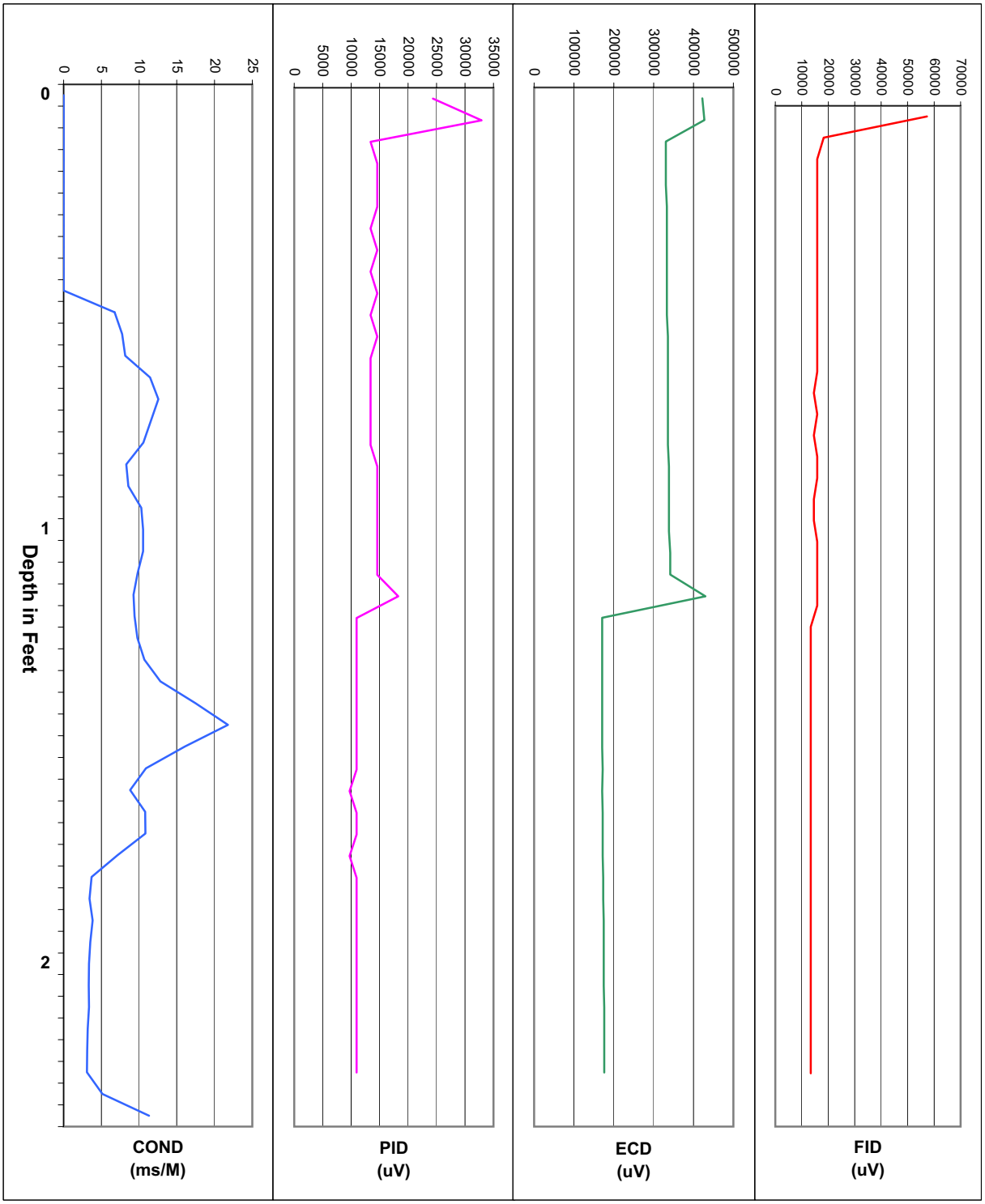
PETERSON/PURITAN OU2
CUMBERLAND, RHODE ISLAND

SEPTEMBER 2003

PROJECT NO.:	300-1821
DRAWN BY:	DLH
APPROVED BY:	ALD

SHIELD ENVIRONMENTAL ASSOCIATES, INC.
2656 Fortune Drive, Suite 100
Lexington, KY 40509
(859) 294-6156

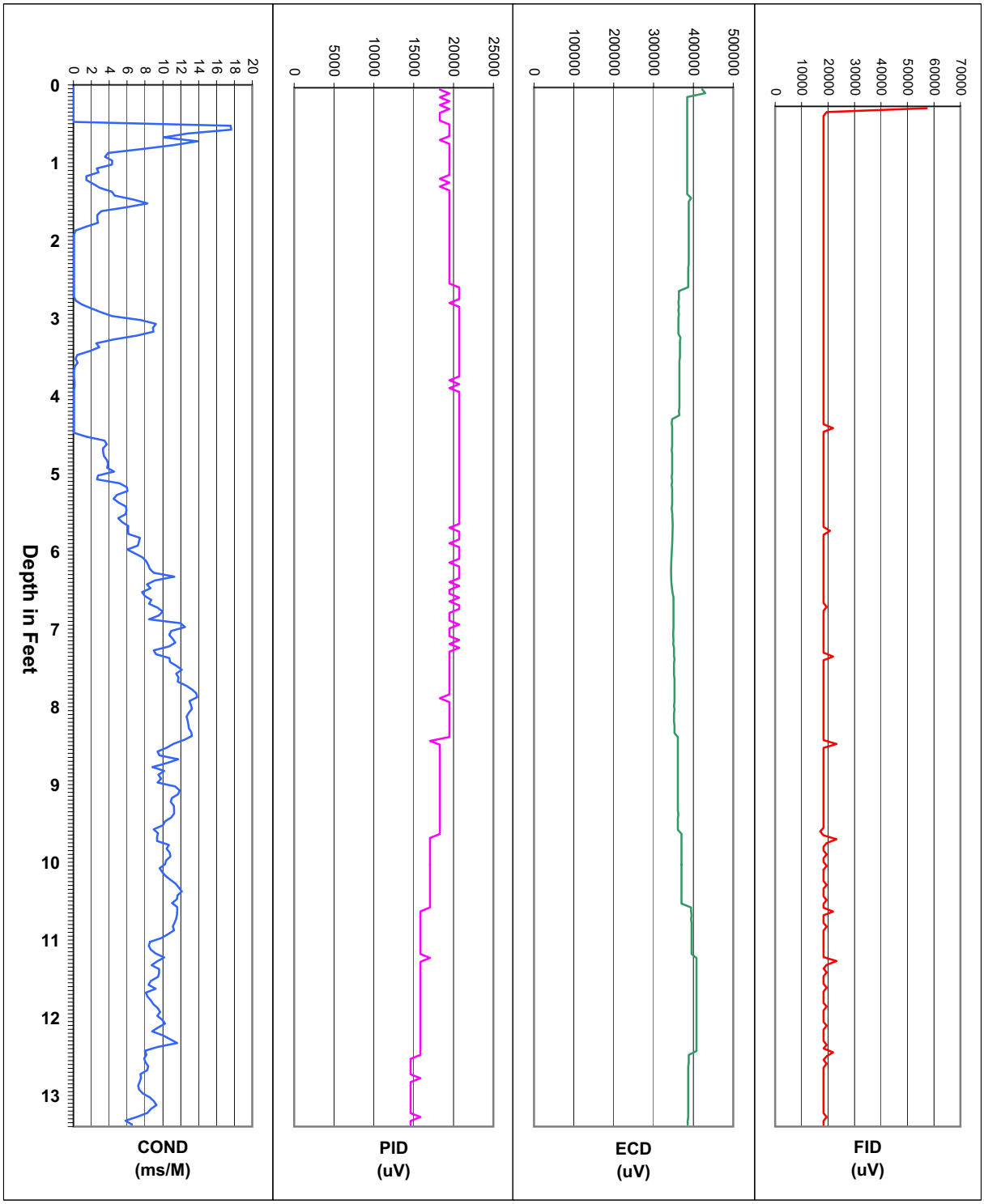
ZEBRA EC/MIP Summary Log, Point L1 2895
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/19/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 1 of 48

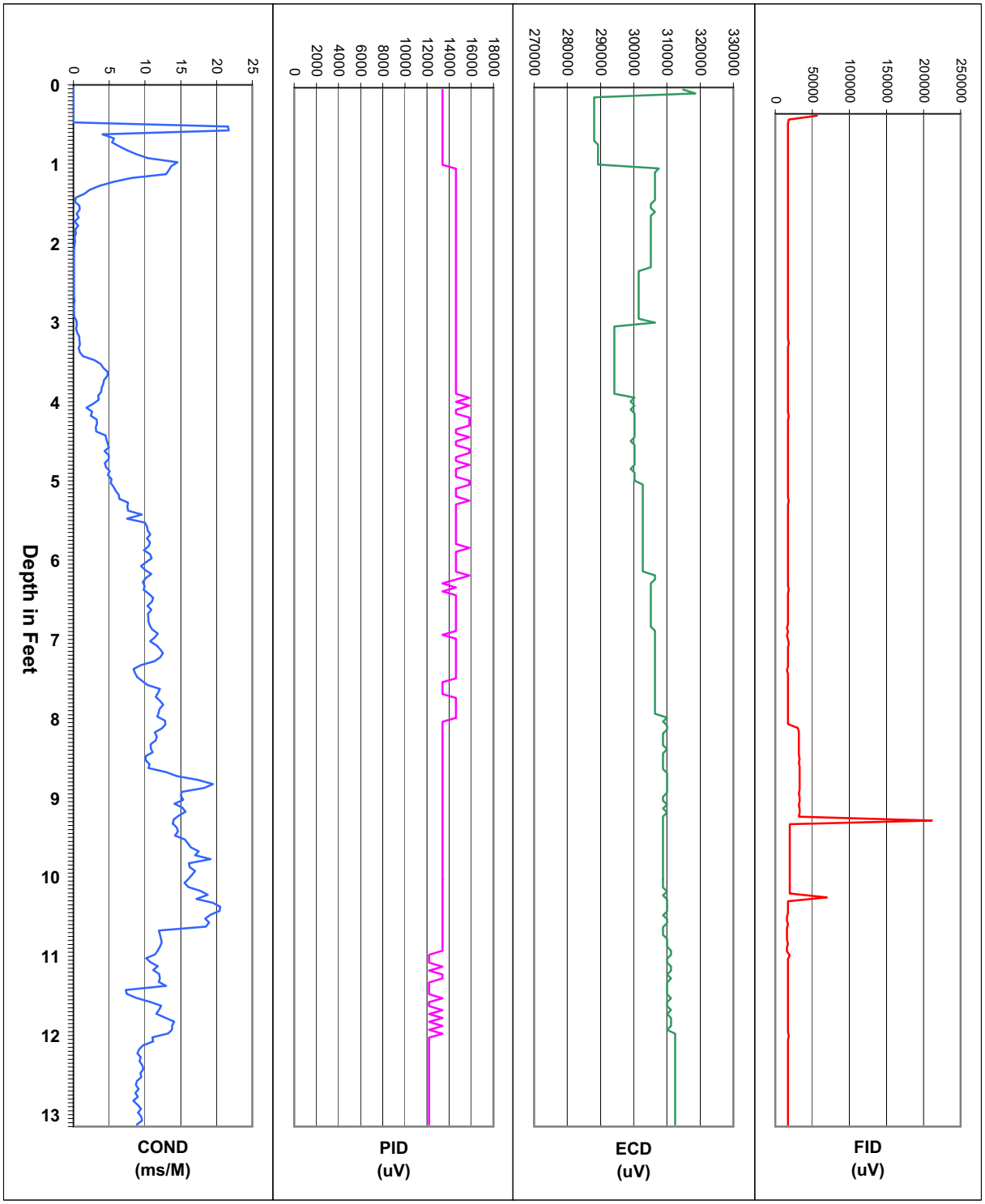
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Operators: JS
Point 2 of 48

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Cumberland, RI

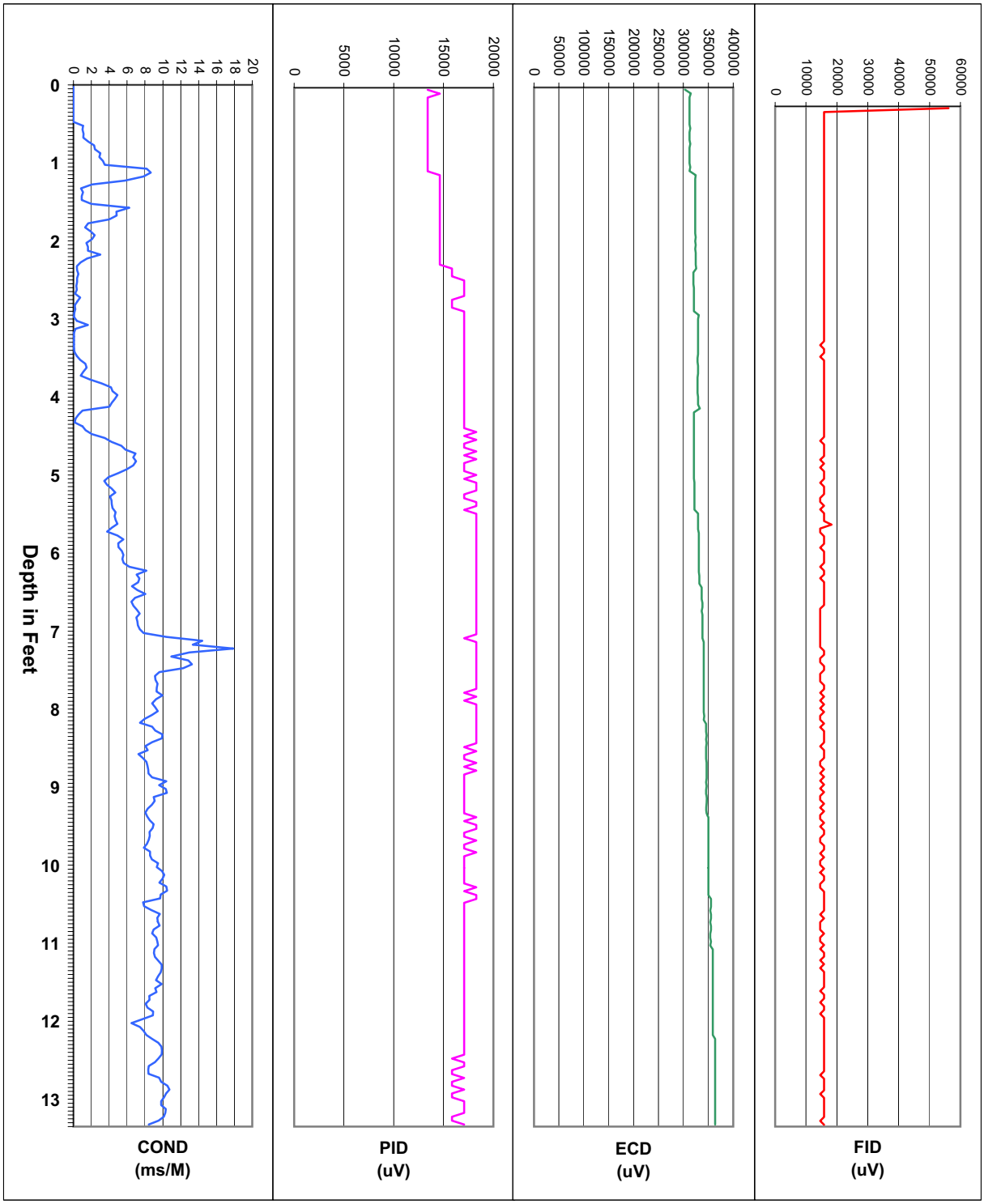


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Date: 8/19/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 3 of 48

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Cumberland, RI

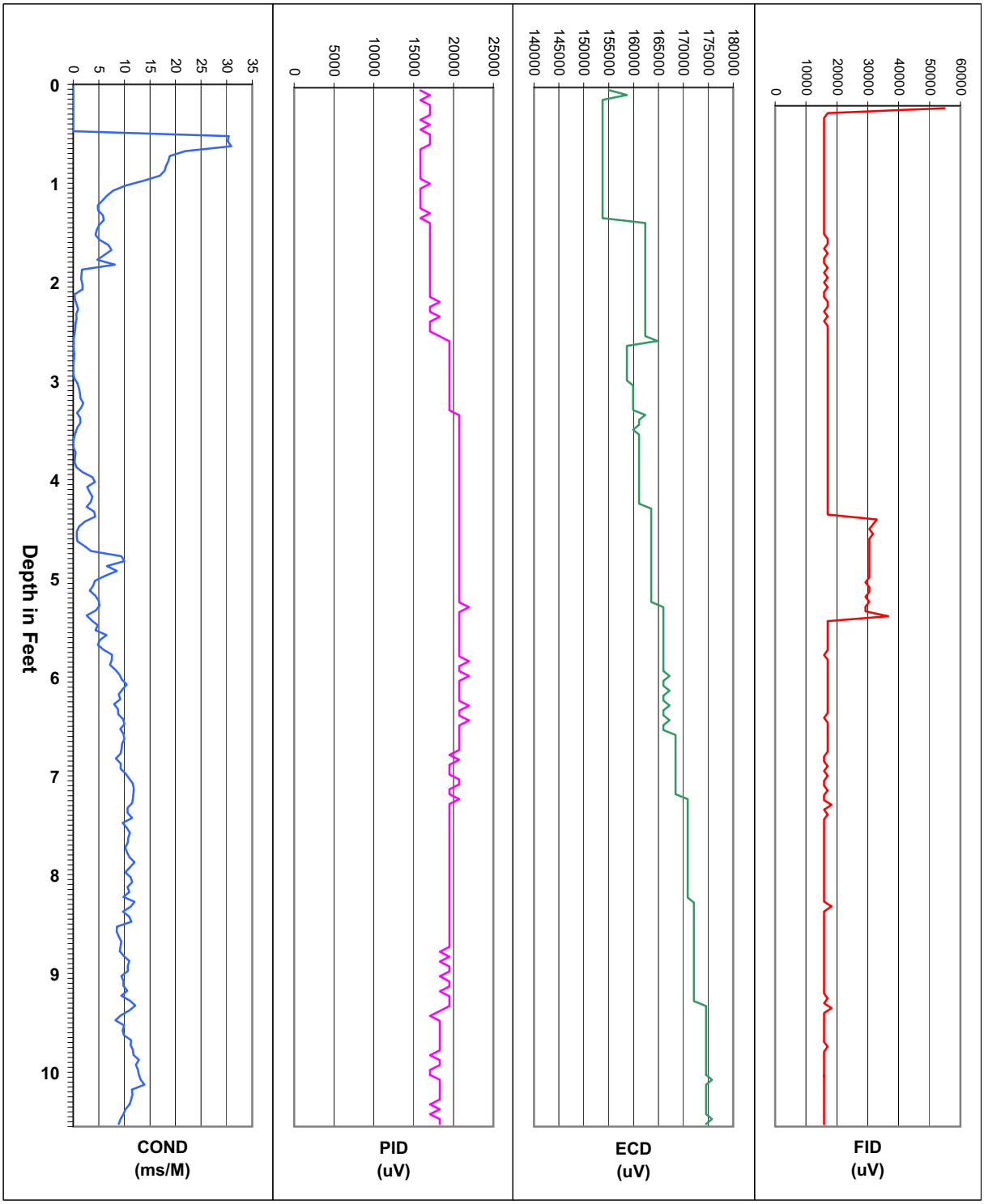


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(516) 596-6300

Date: 8/19/2003
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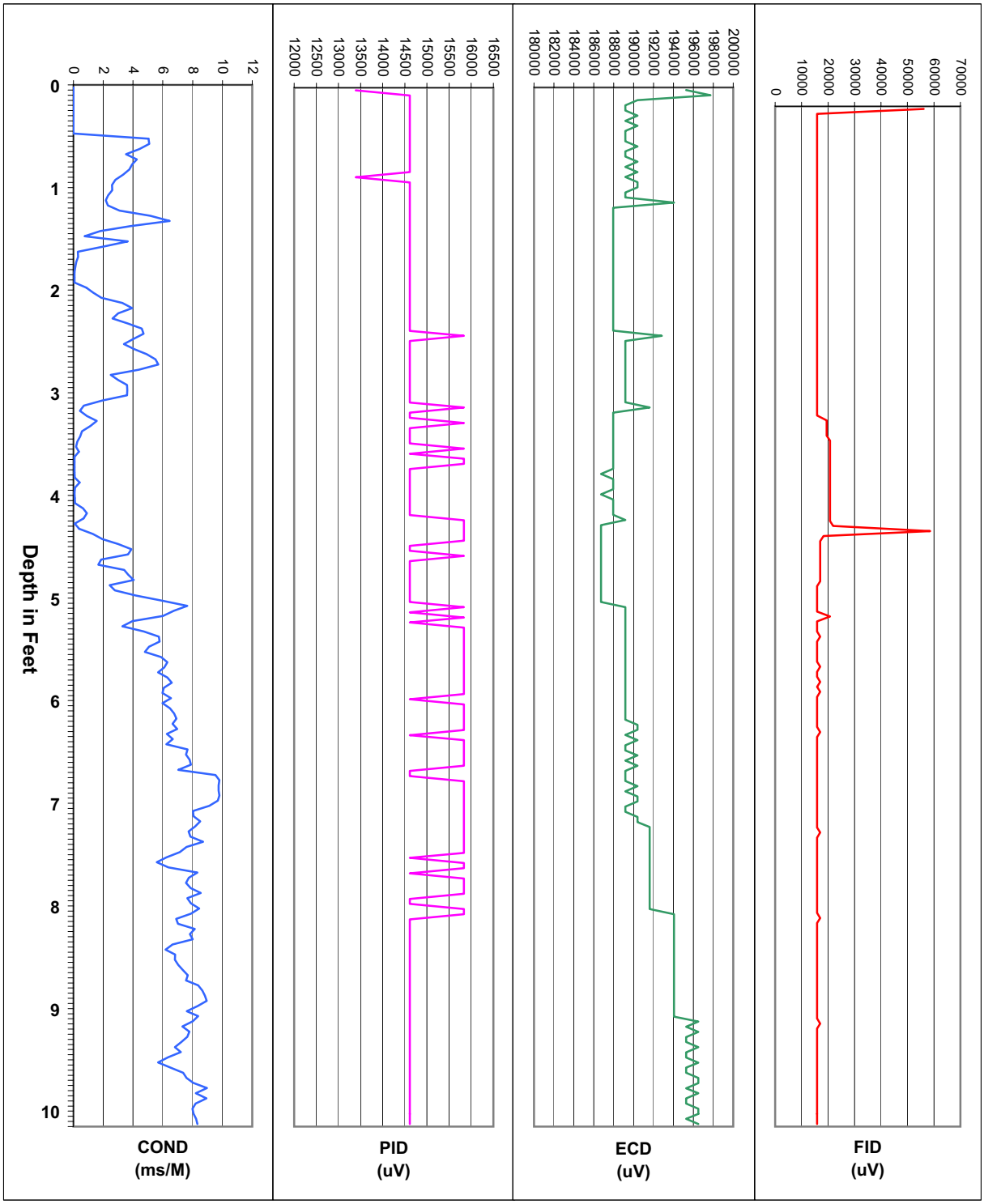


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30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/19/2003
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Proj. #: ZDS07230
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Point 5 of 48

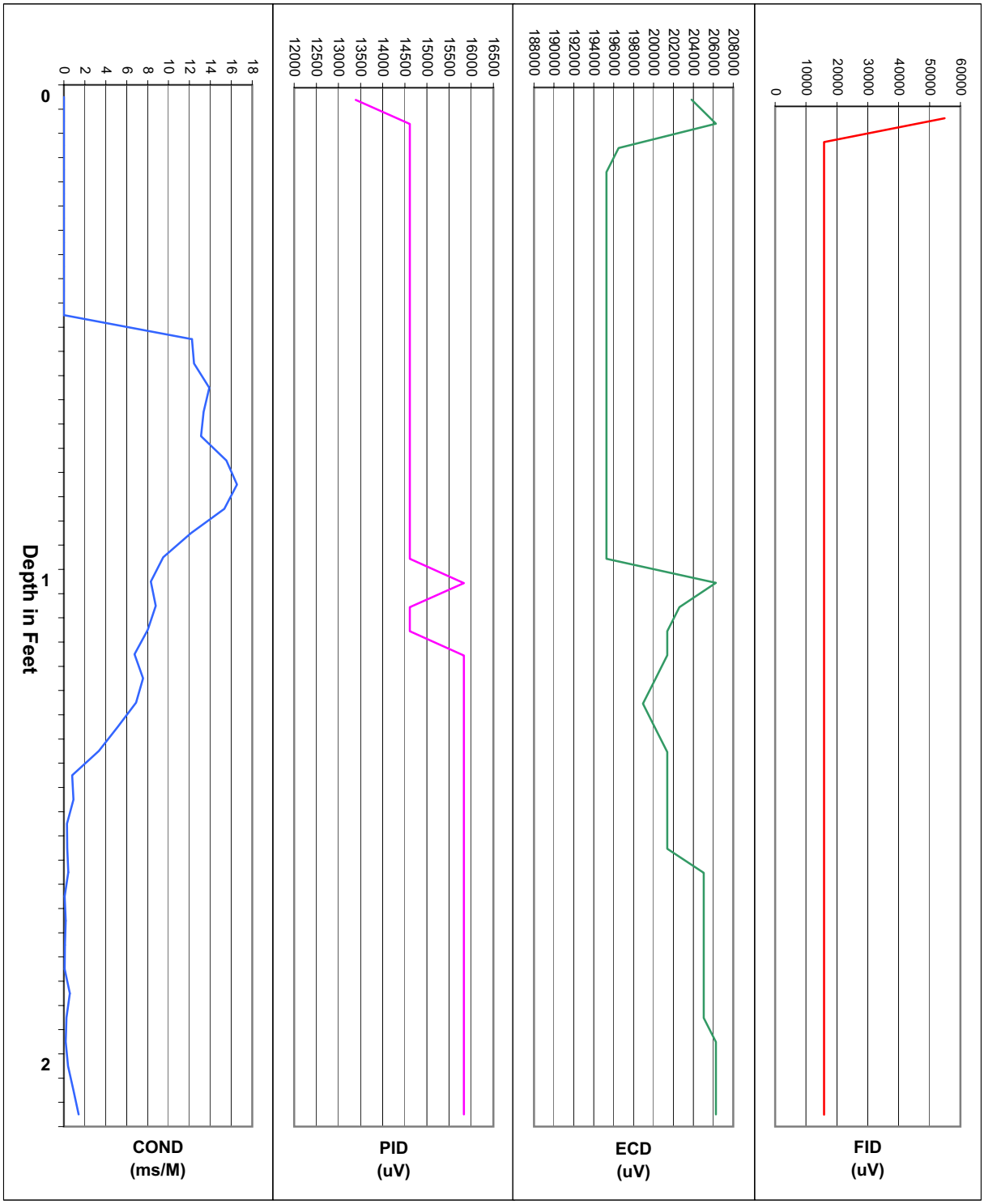
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Cumberland, RI



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by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/20/2003
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Proj. #: ZDS07230
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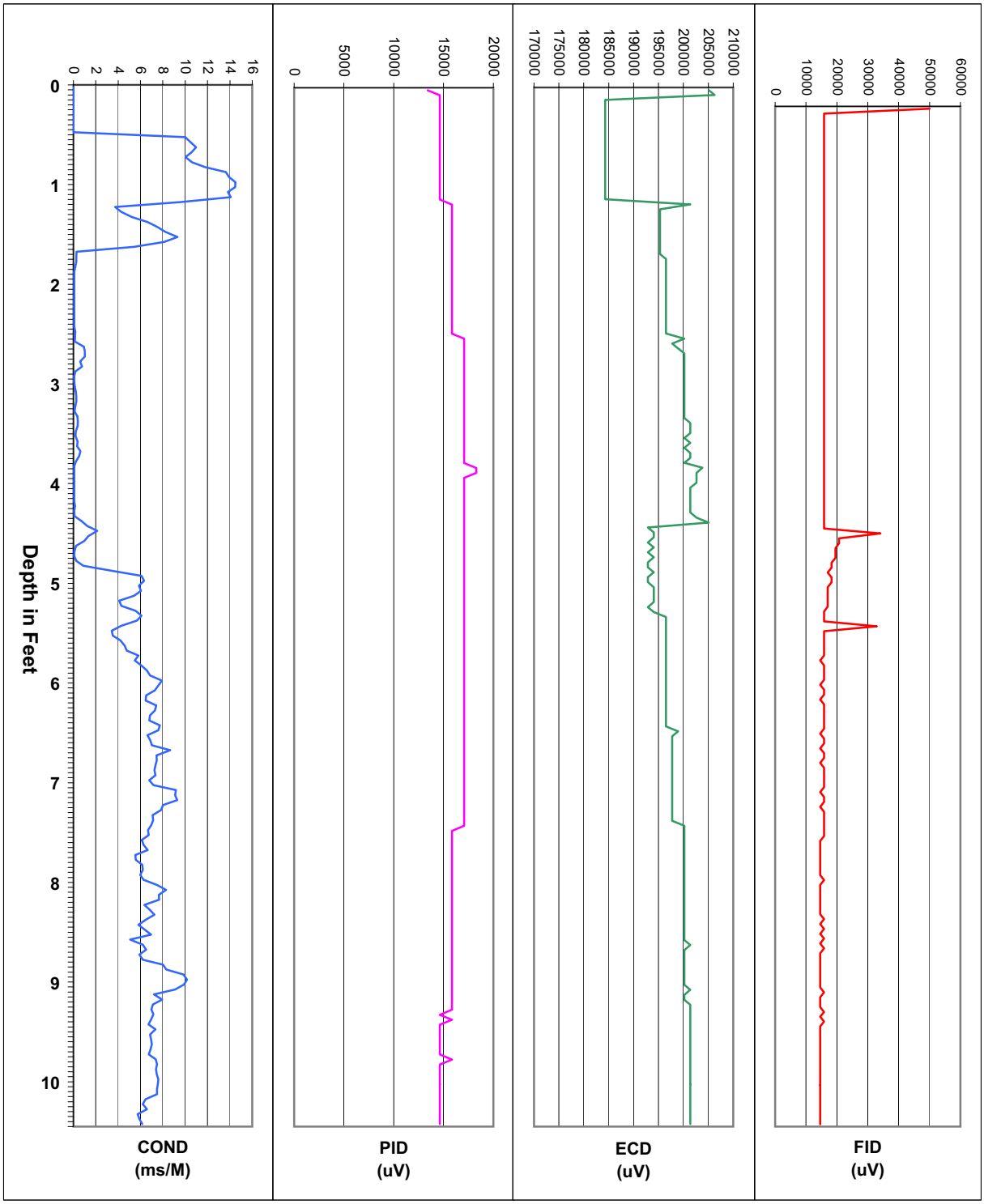
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Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/20/2003
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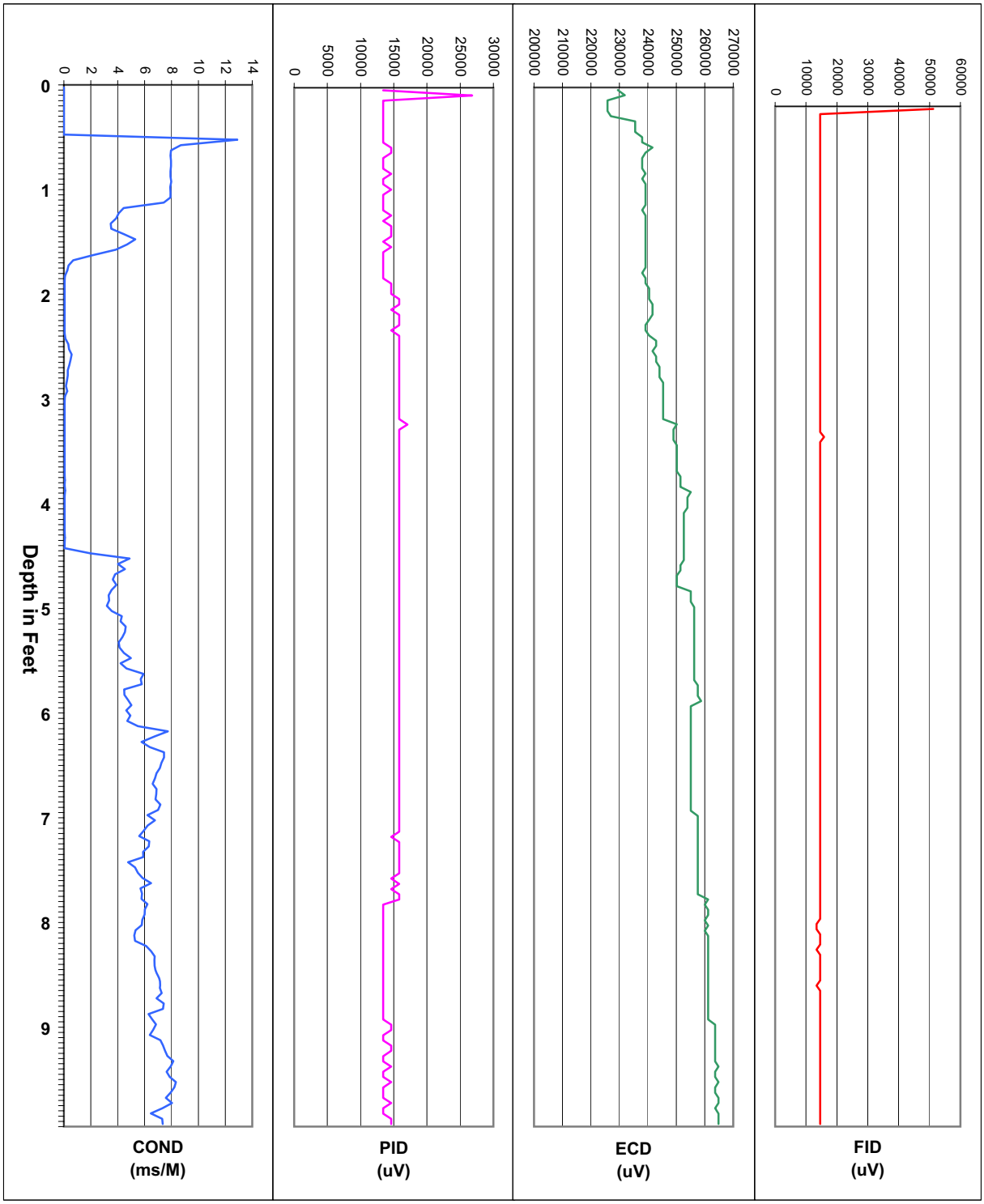
ZEBRA EC/MIP Summary Log, Point L1 2595
Cumberland, RI



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30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/20/2003
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Proj. #: ZDS07230
Operators: JS
Point 8 of 48

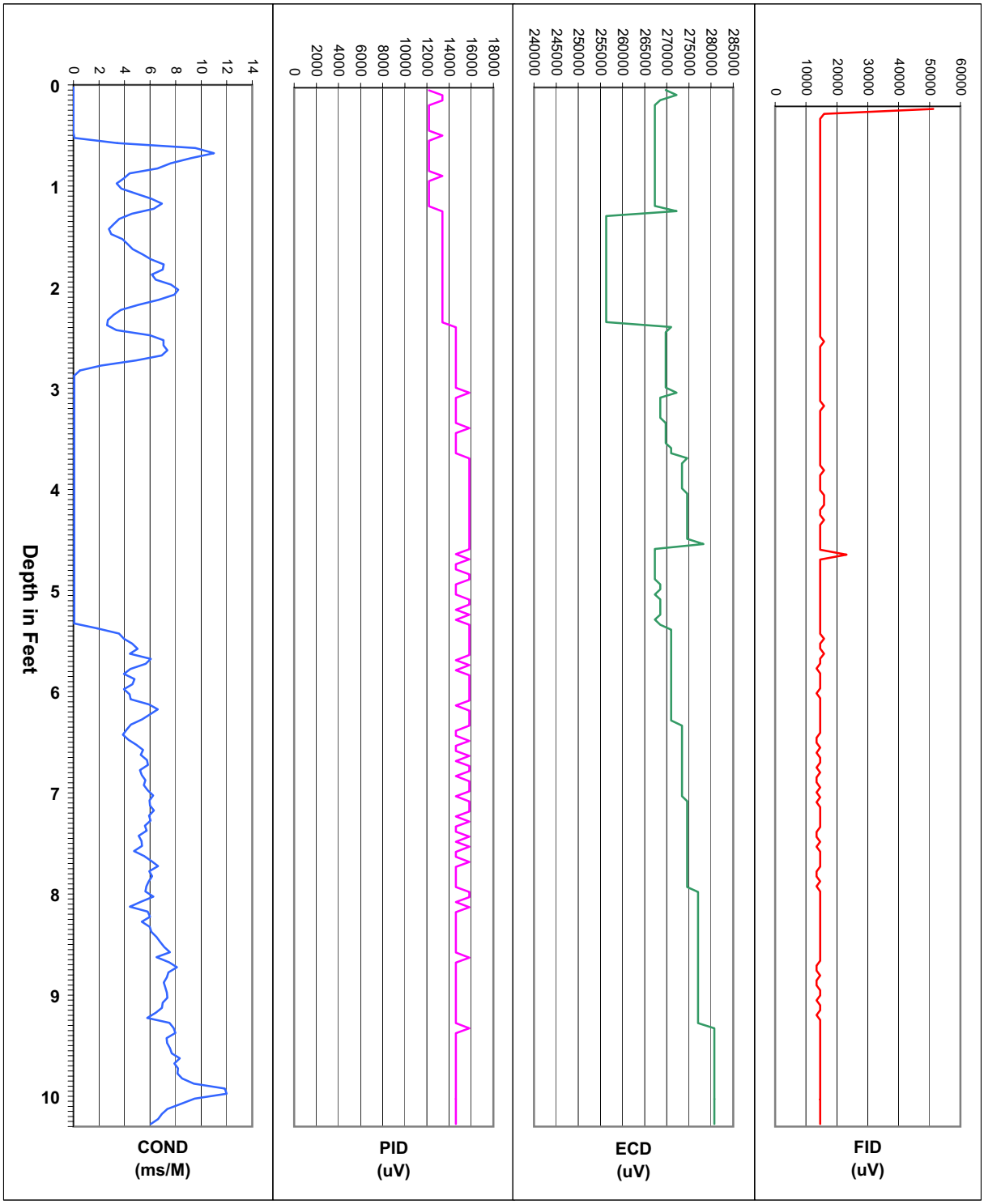
ZEBRA EC/MIP Summary Log, Point L1 2550
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/20/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 9 of 48

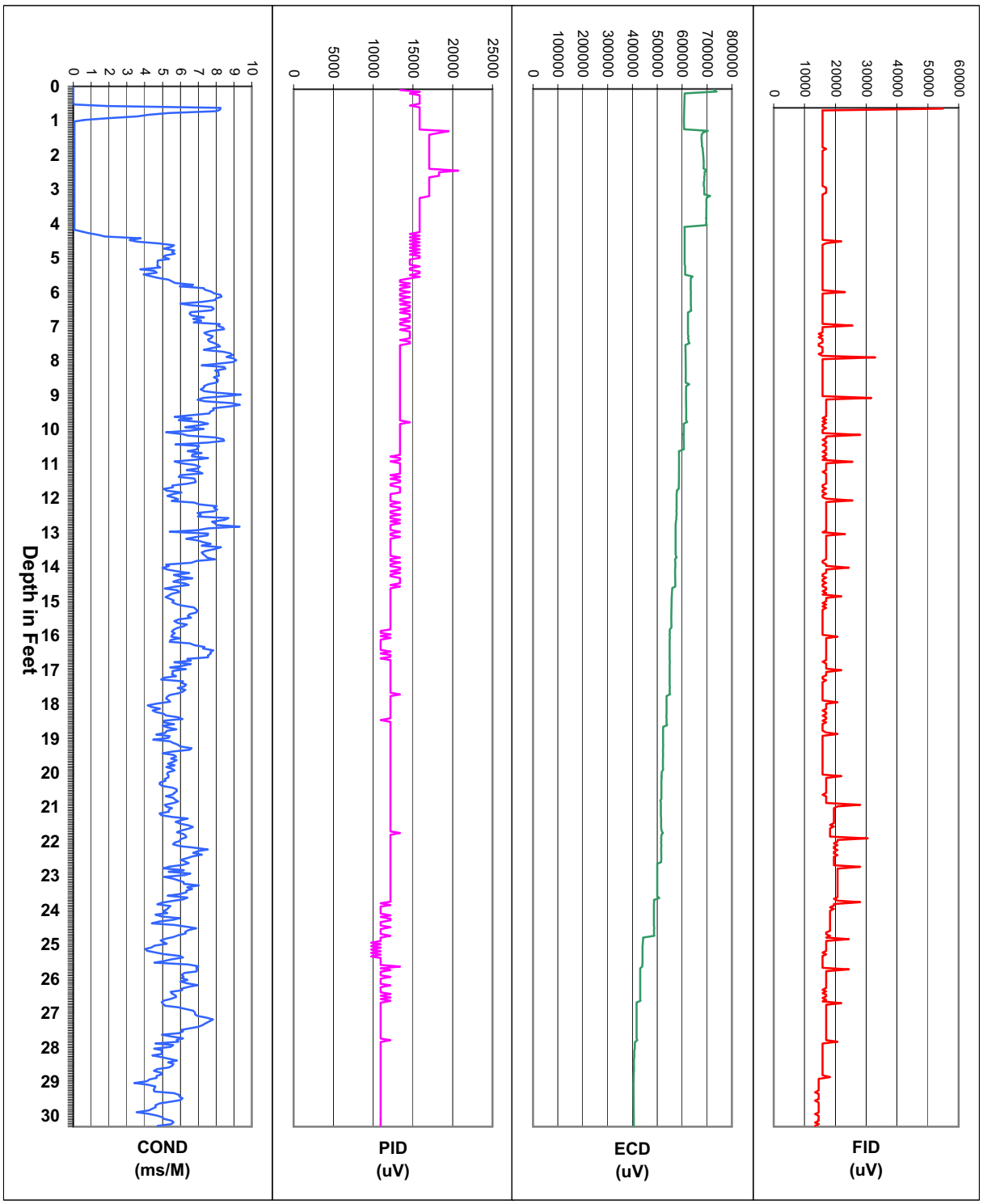
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Cumberland, RI



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by: Zebra Environmental
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Lynbrook, NY 11563
(516) 596-6300

Date: 8/20/2003
Proj. Name: Shield/Cumberland
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Point 10 of 48

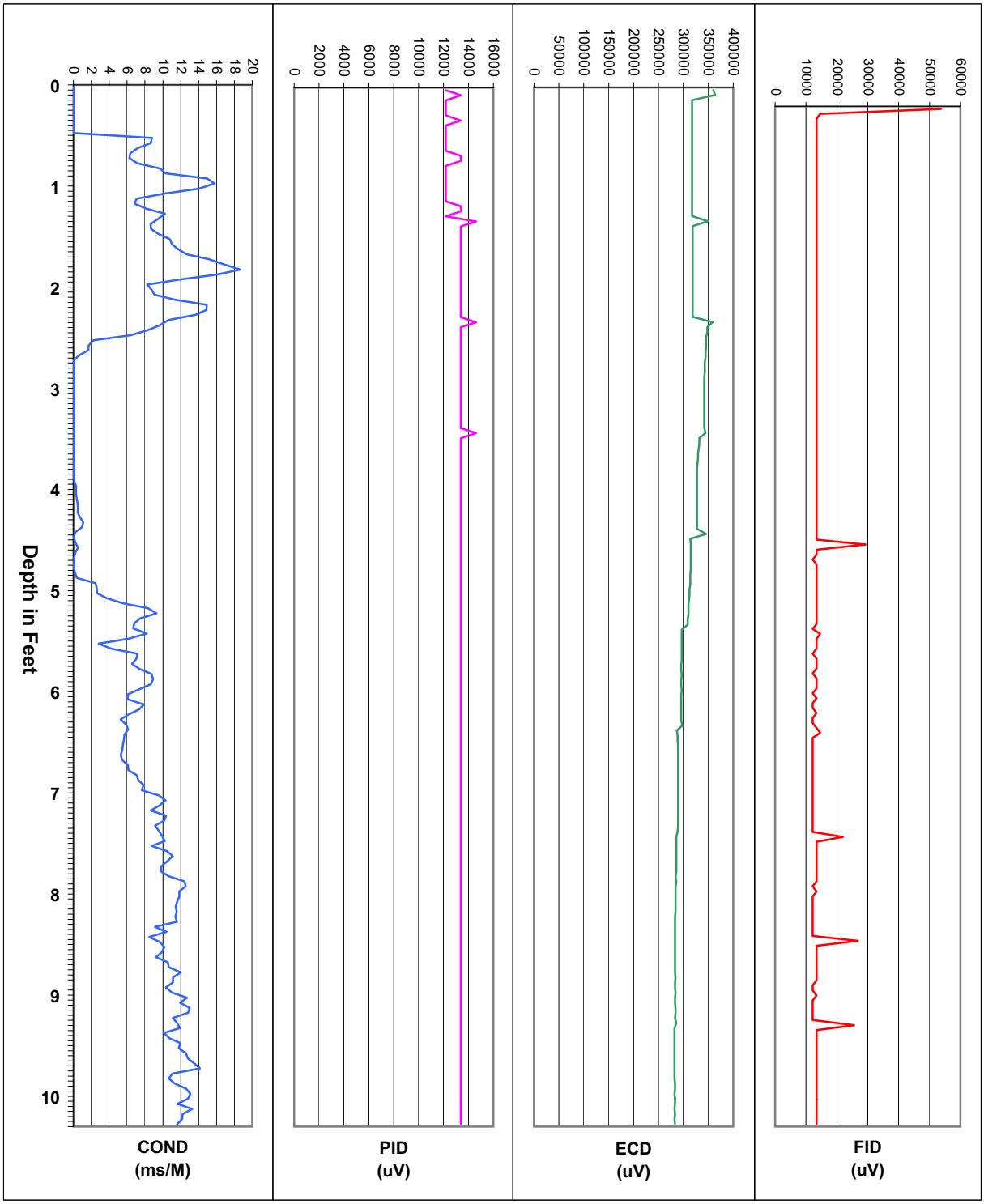
ZEBRA EC/MIP Summary Log, Point L1 2650
Cumberland, RI



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Lynbrook, NY 11563
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Date: 8/20/2003
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Proj. #: ZDS07230
Operators: JS
Point 11 of 48

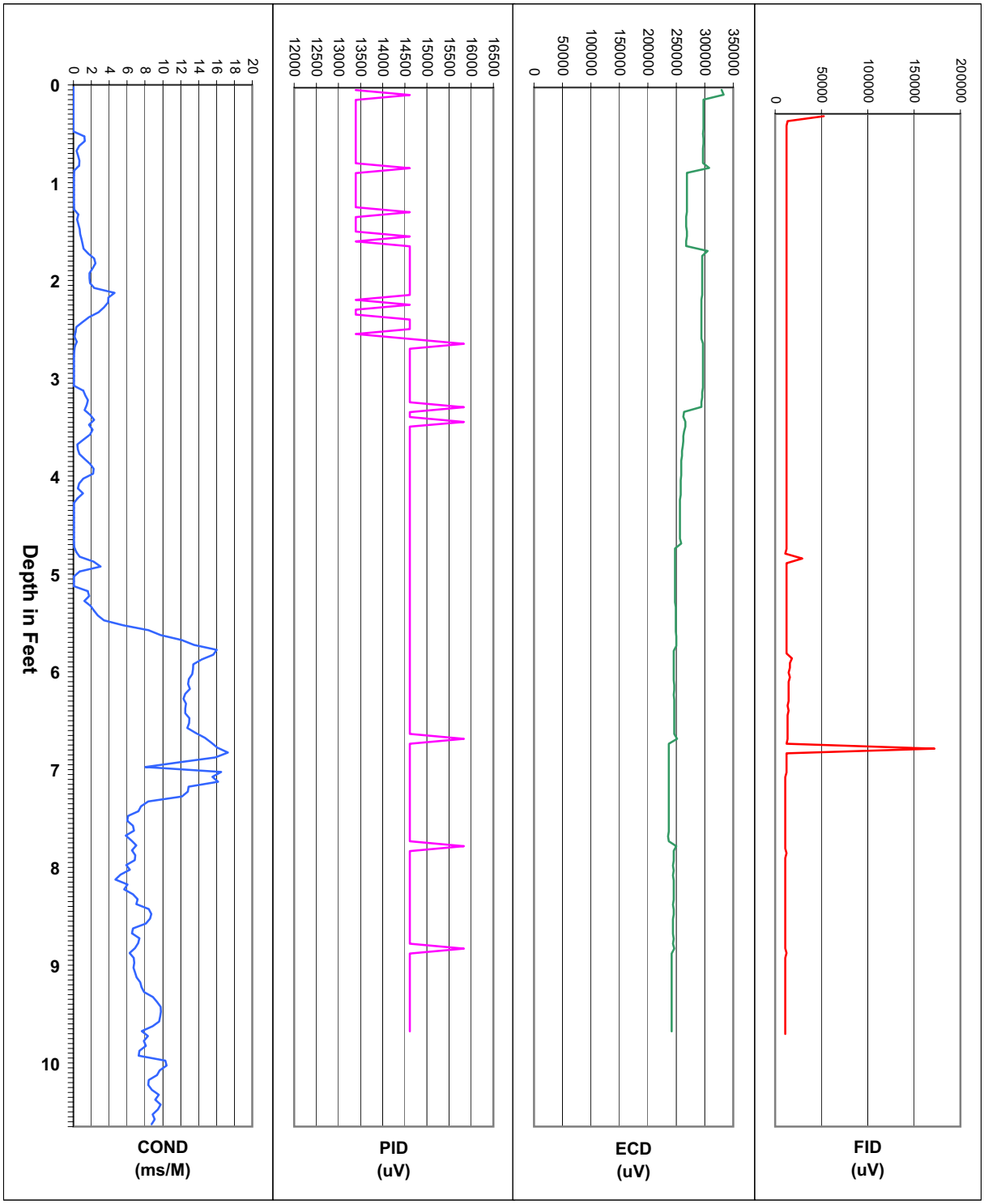
ZEBRA EC/MIP Summary Log, Point L1 2450
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/20/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 12 of 48

ZEBRA EC/MIP Summary Log, Point L1 2400
Cumberland, RI

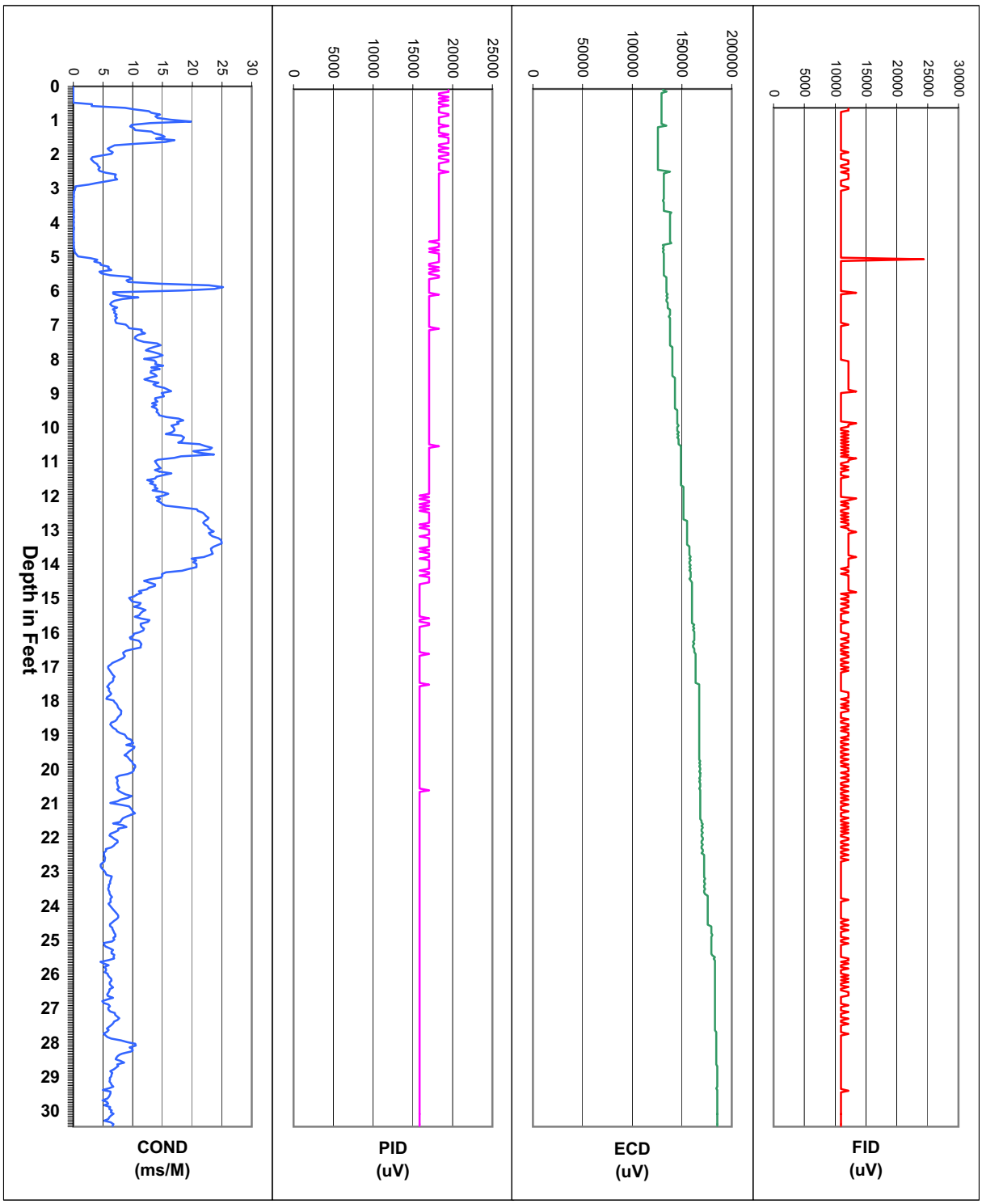


ZEBRA

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by: Zebra Environmental
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Date: 8/20/2003
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Point 13 of 48

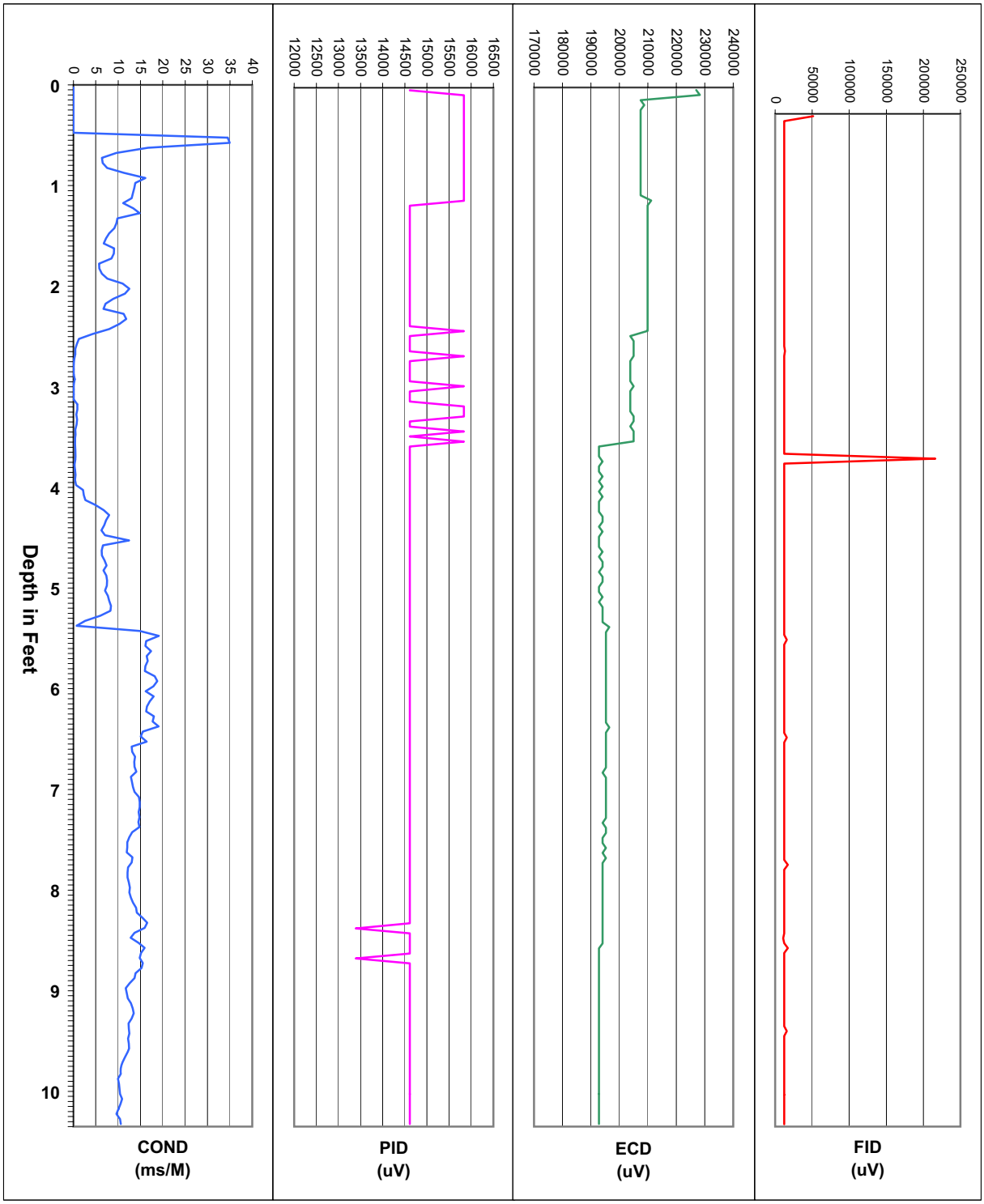
ZEBRA EC/MIP Summary Log, Point L1 2350
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 14 of 48

ZEBRA EC/MIP Summary Log, Point L1 2300
Cumberland, RI

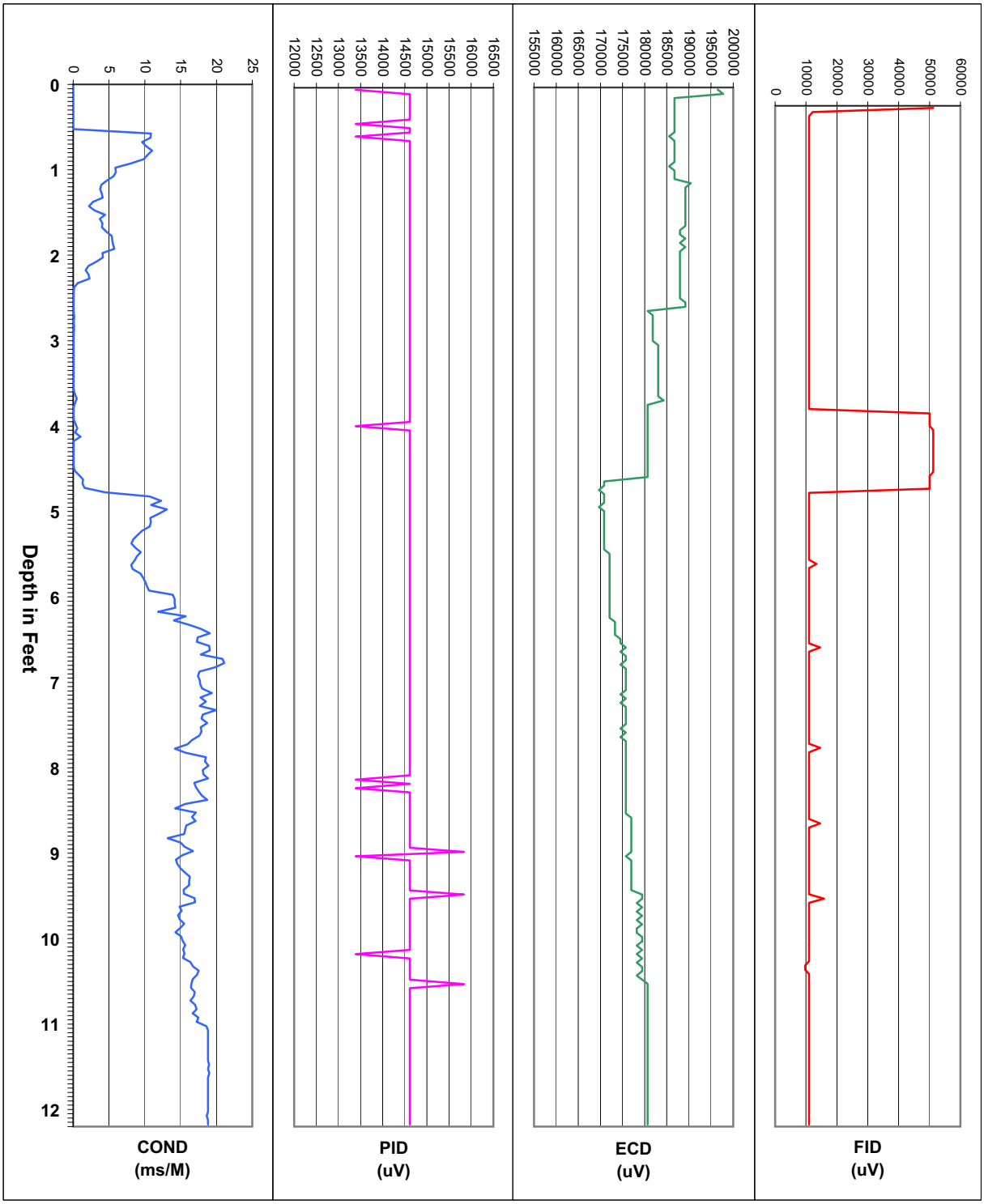


ZEBRA

for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 15 of 48

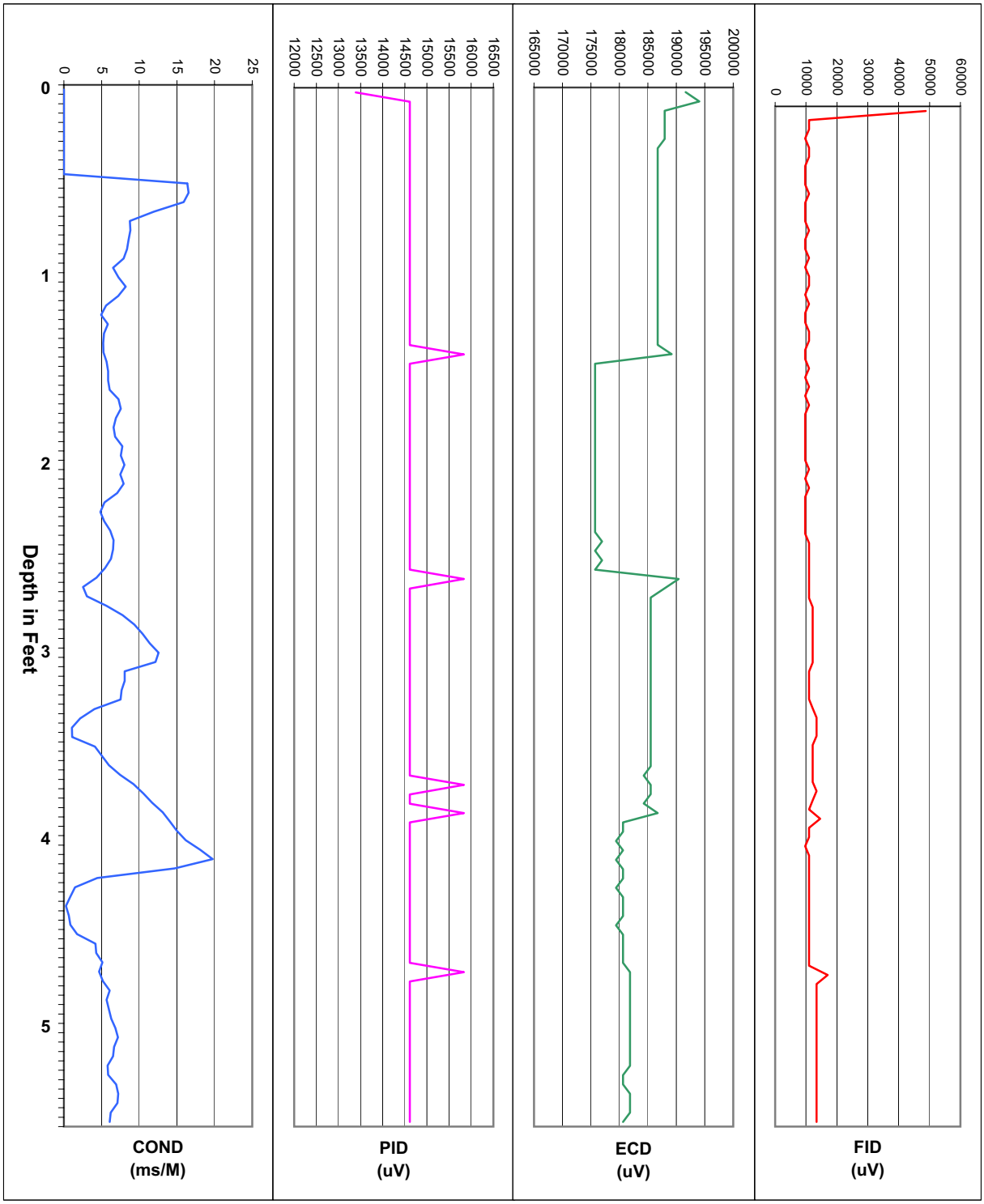
ZEBRA EC/MIP Summary Log, Point L1 2250
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 16 of 48

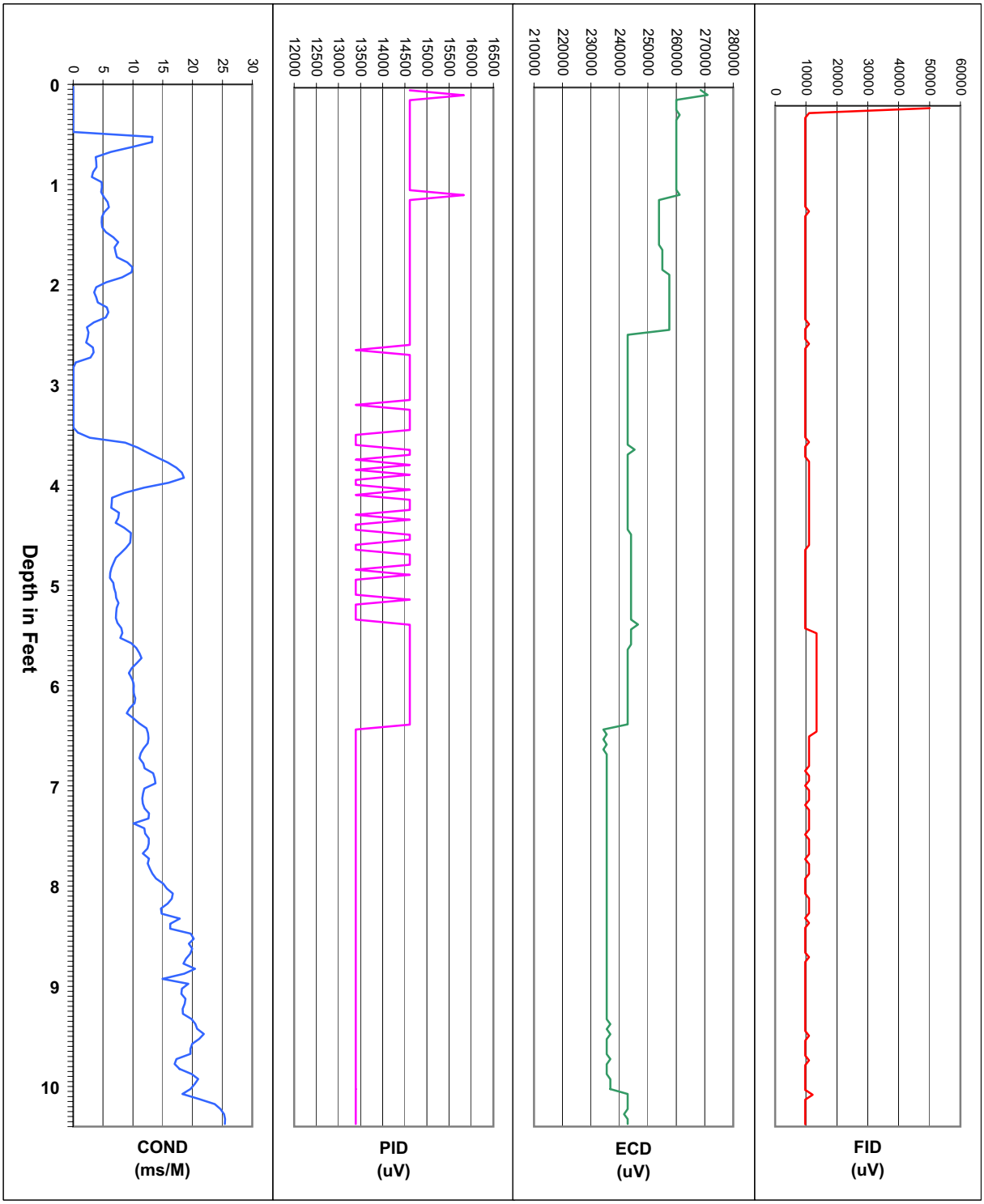
ZEBRA EC/MIP Summary Log, Point L1 2200
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 17 of 48

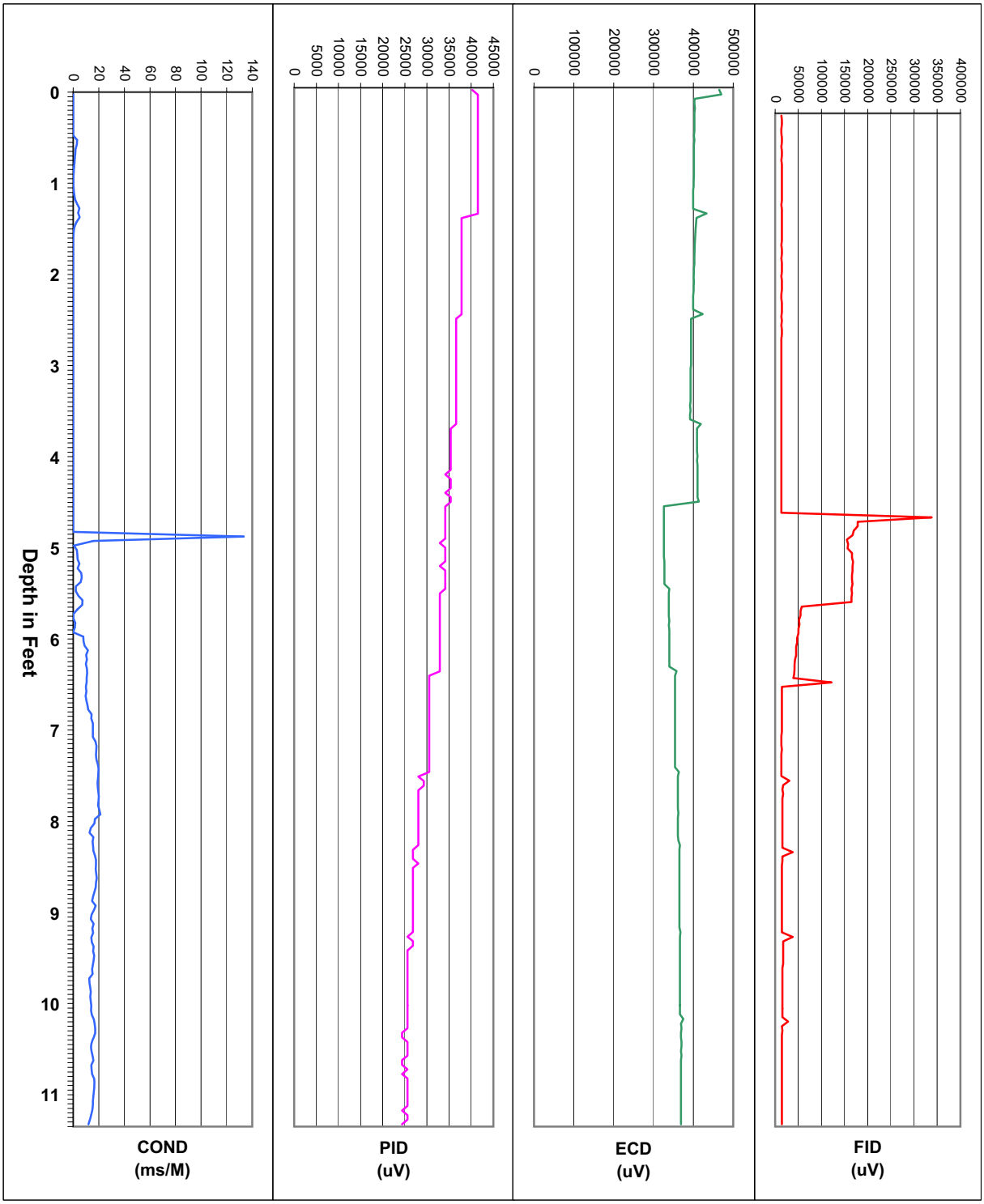
ZEBRA EC/MIP Summary Log, Point L1 2200
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 18 of 48

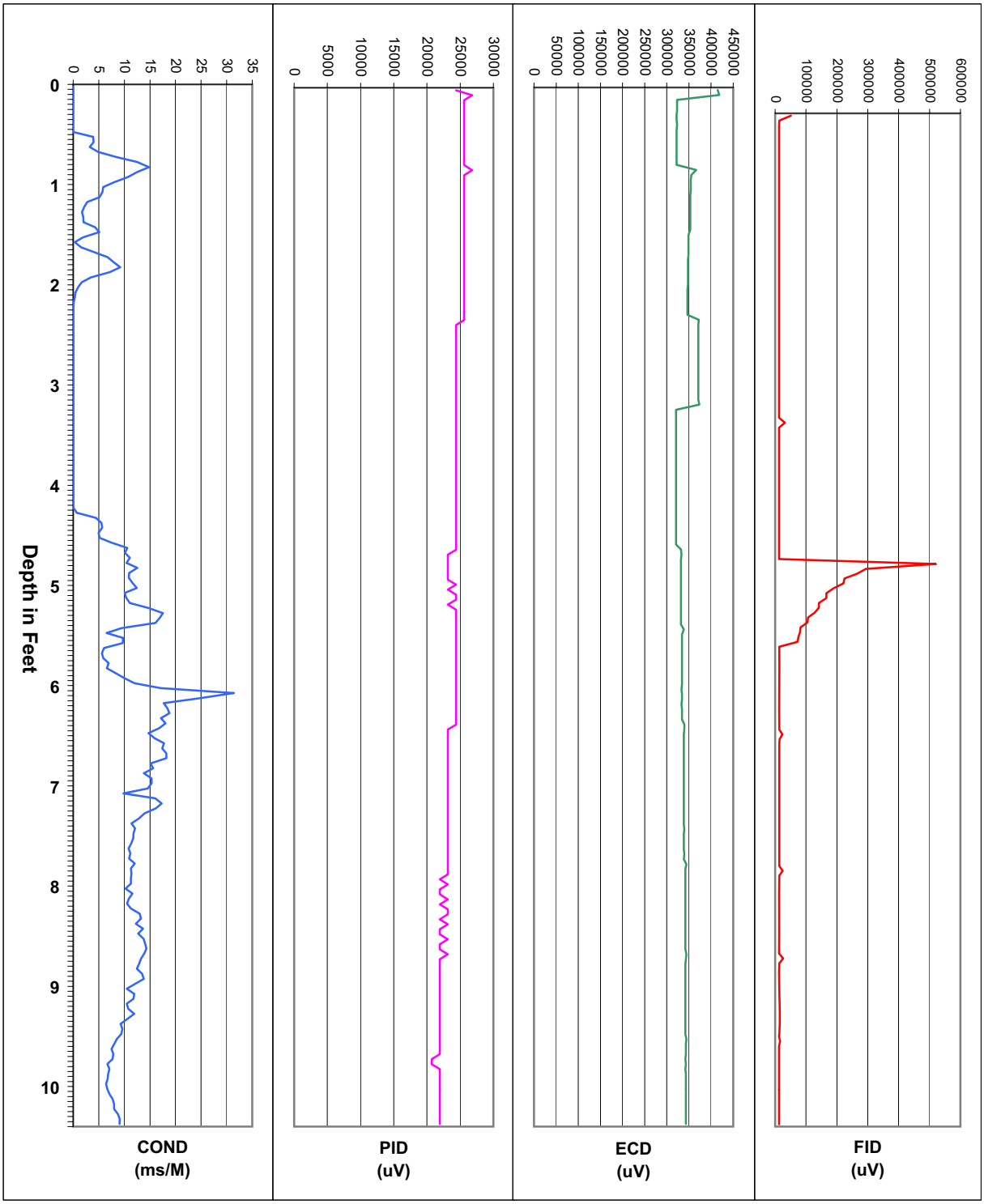
ZEBRA EC/MIP Summary Log, Point L1 2150
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 19 of 48

ZEBRA EC/MIP Summary Log, Point L1 2100
Cumberland, RI

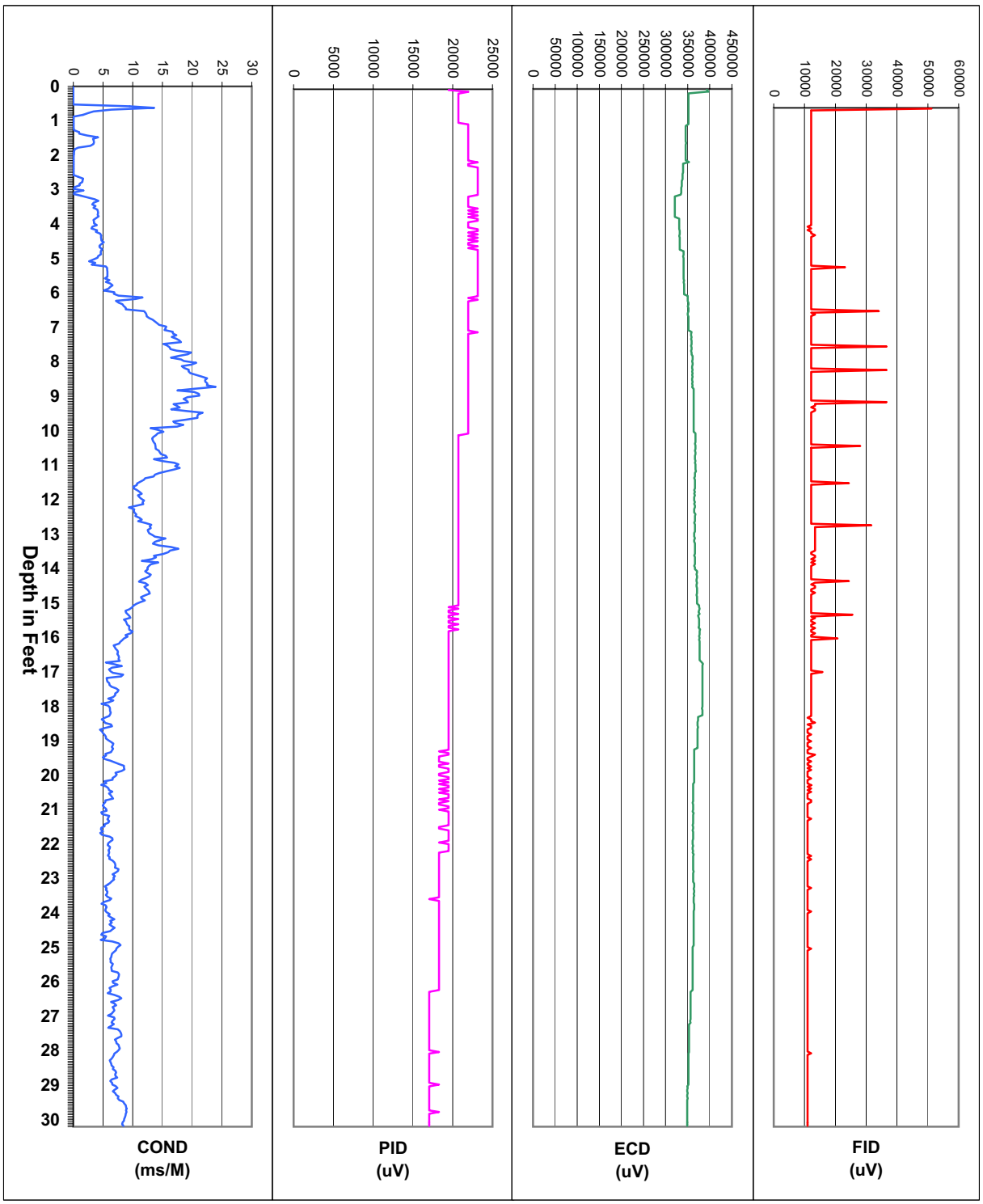


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for: Shield Env.
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(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 20 of 48

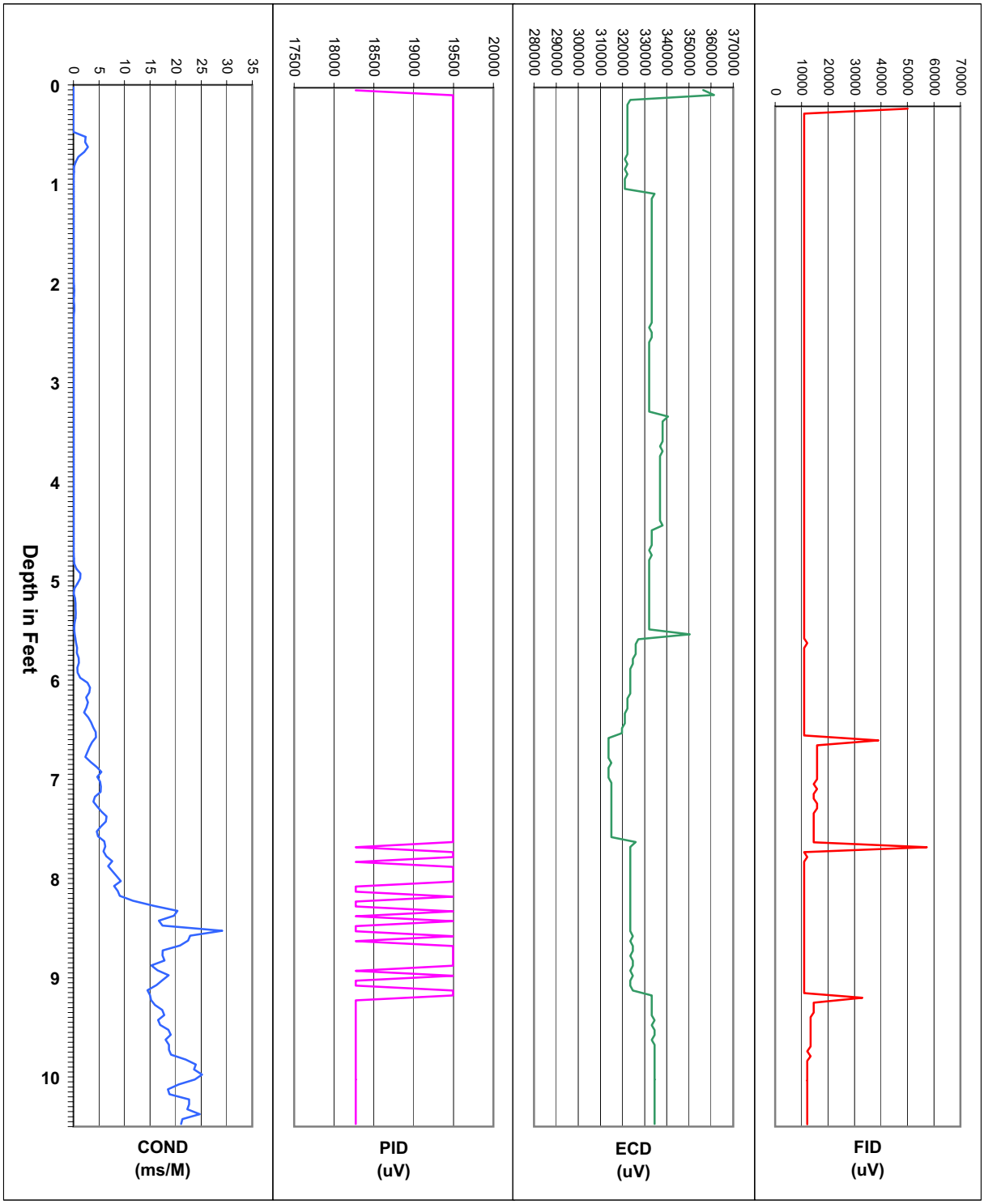
ZEBRA EC/MIP Summary Log, Point L1 2050
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 21 of 48

ZEBRA EC/MIP Summary Log, Point L1 2000
Cumberland, RI

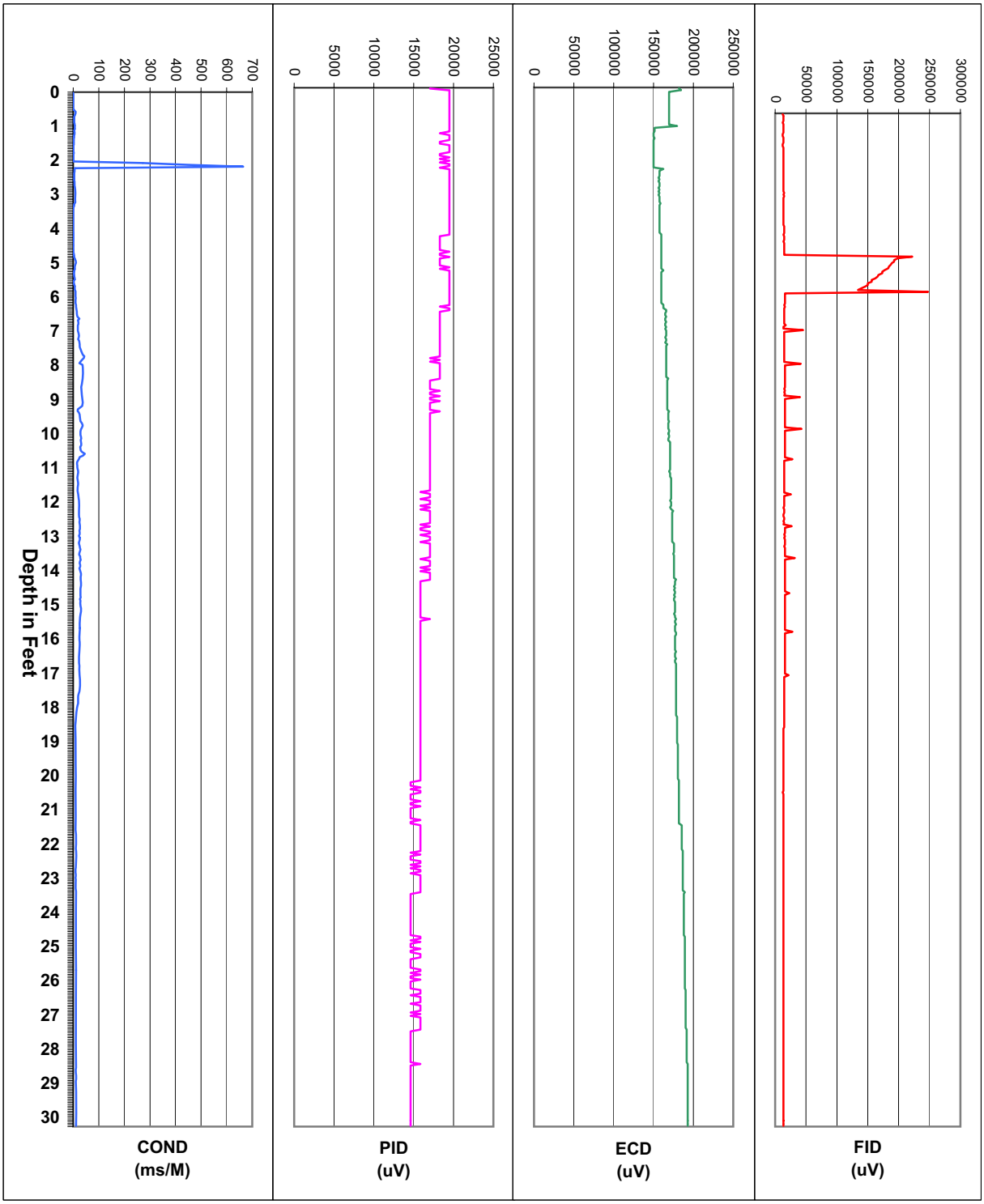


ZEBRA

for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
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(516) 596-6300

Date: 8/21/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 22 of 48

ZEBRA EC/MIP Summary Log, Point L2 1000
Cumberland, RI

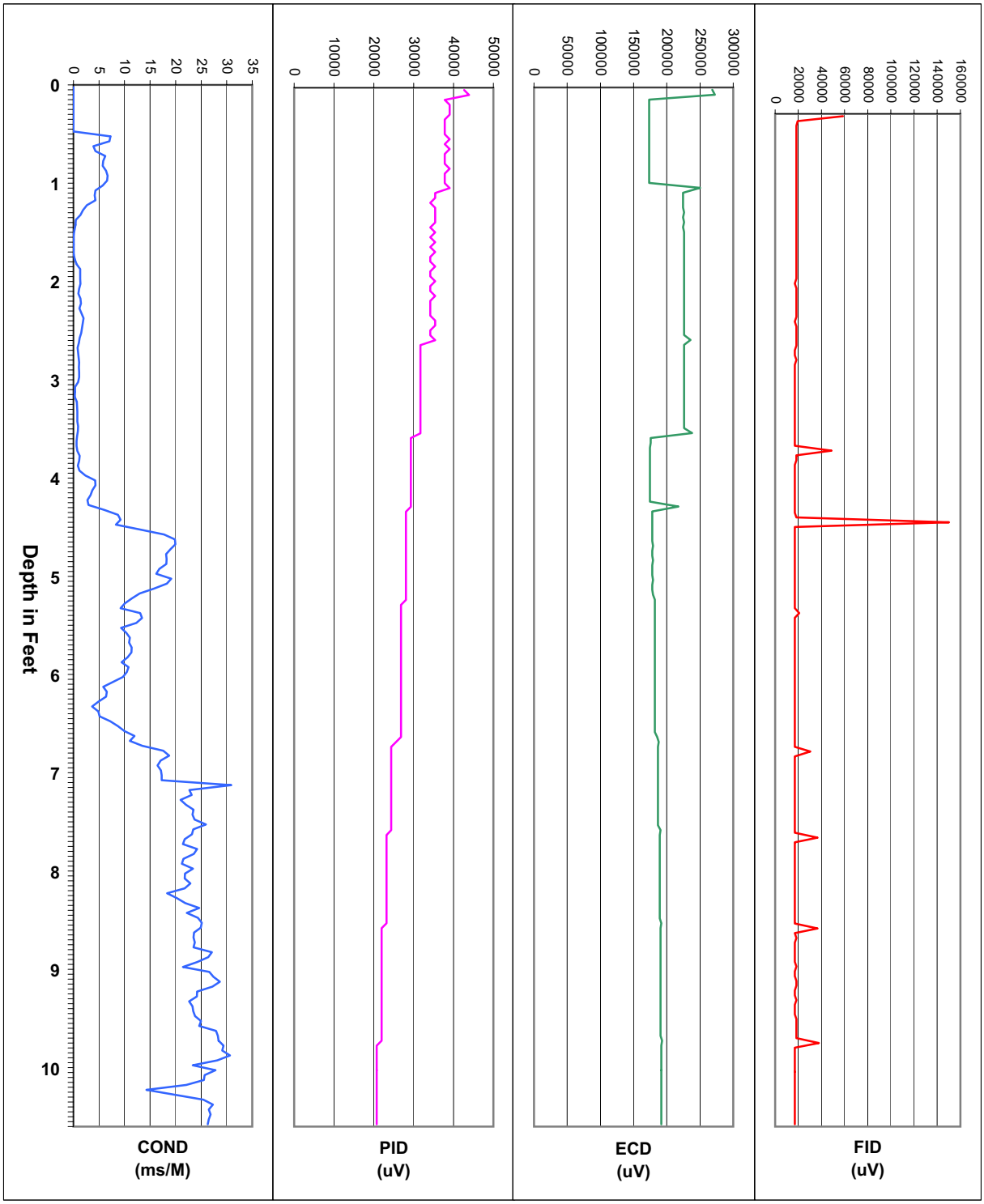


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for: Shield Env.
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30 No. Prospect Avenue
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Date: 8/22/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 23 of 48

ZEBRA EC/MIP Summary Log, Point L2 0950
Cumberland, RI

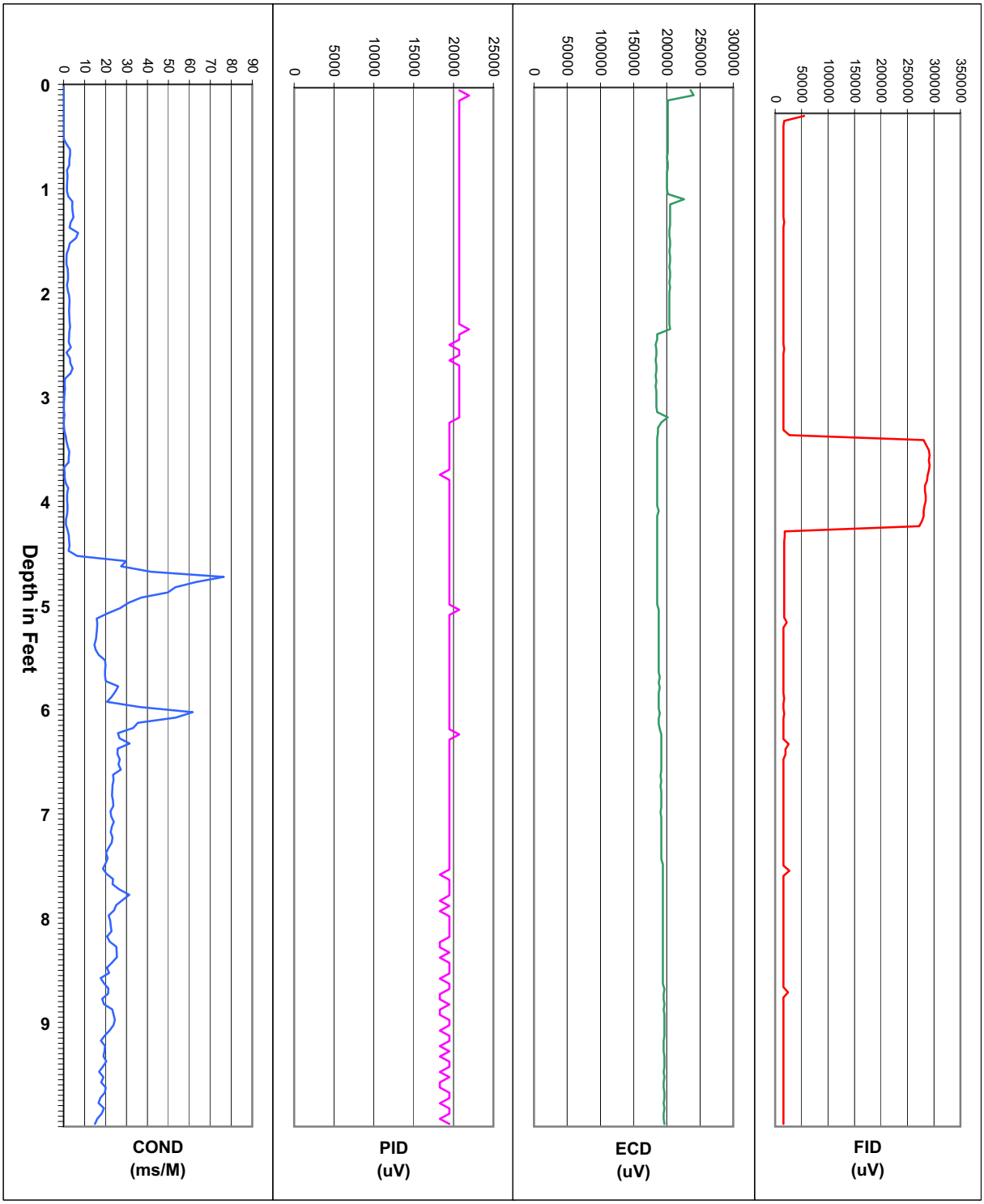


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Date: 8/22/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 24 of 48

ZEBRA EC/MIP Summary Log, Point L2 0900
Cumberland, RI

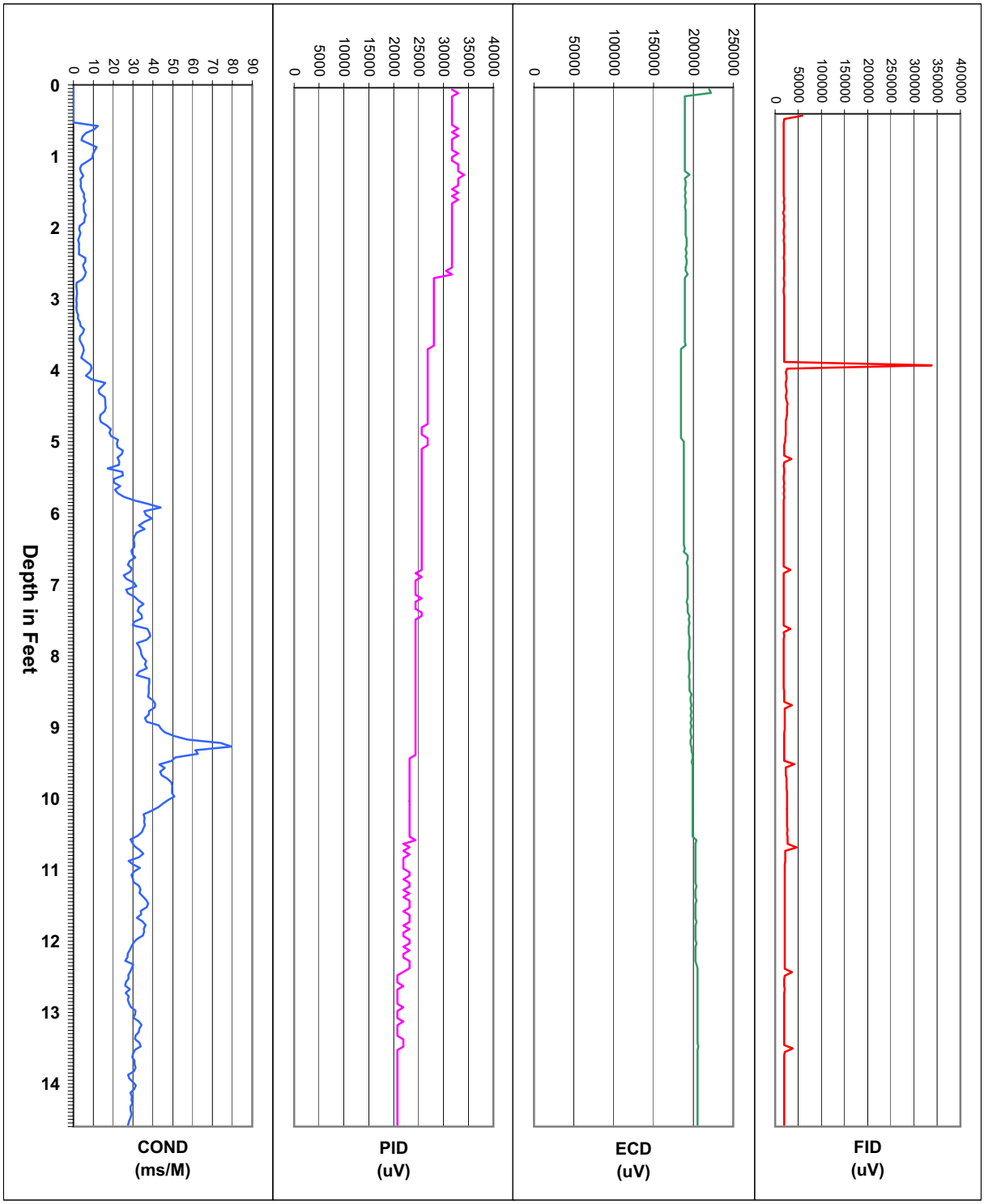


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by: Zebra Environmental
30 No. Prospect Avenue
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(516) 596-6300

Date: 8/22/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 25 of 48

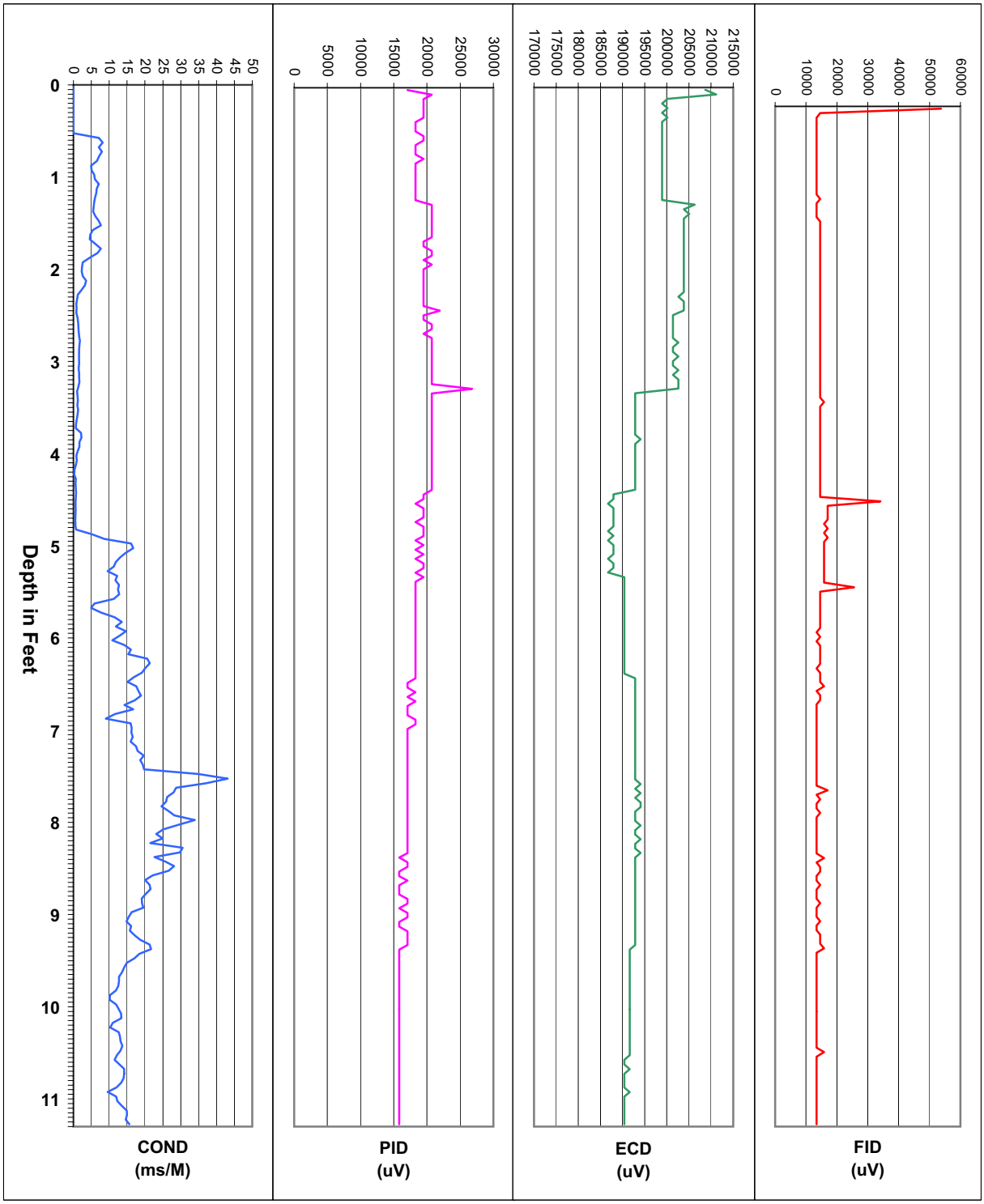
ZEBRA EC/MIP Summary Log, Point L2 0850
Cumberland, RI



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by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/22/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 26 of 48

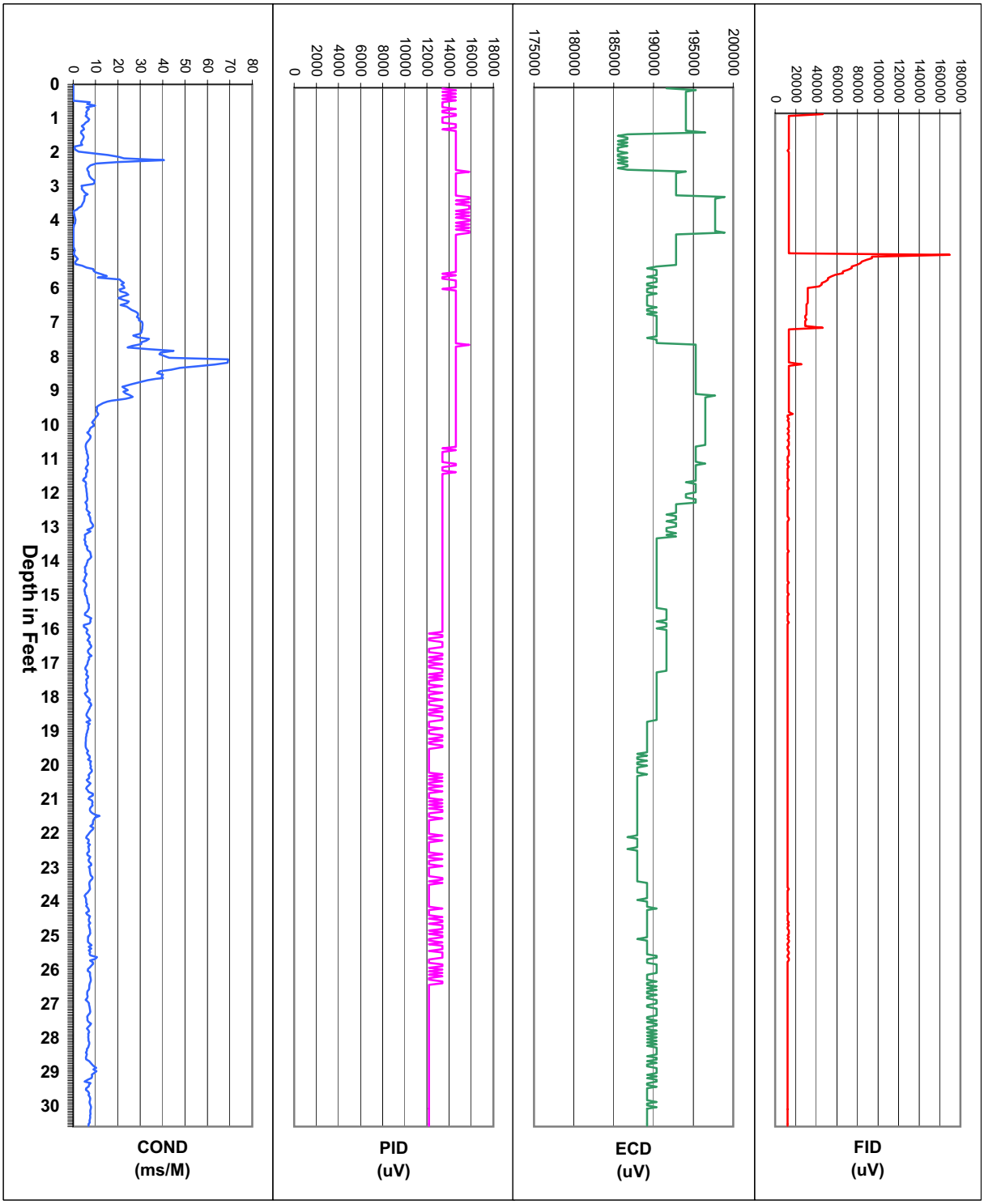
ZEBRA EC/MIP Summary Log, Point L2 0750
Cumberland, RI



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by: Zebra Environmental
30 No. Prospect Avenue
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(516) 596-6300

Date: 8/26/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 27 of 48

ZEBRA EC/MIP Summary Log, Point L2 0715
Cumberland, RI

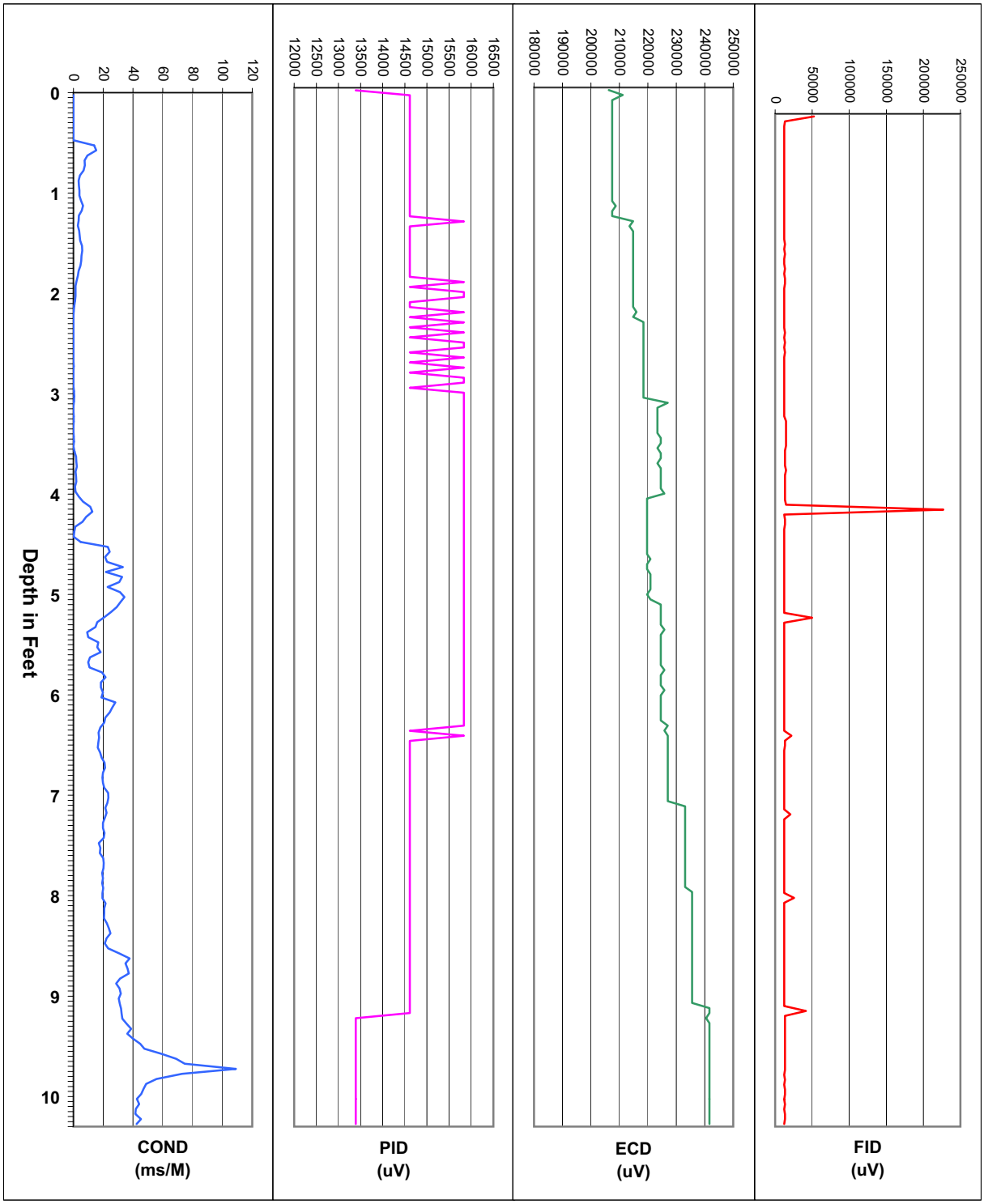


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for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
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(516) 596-6300

Date: 8/26/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 28 of 48

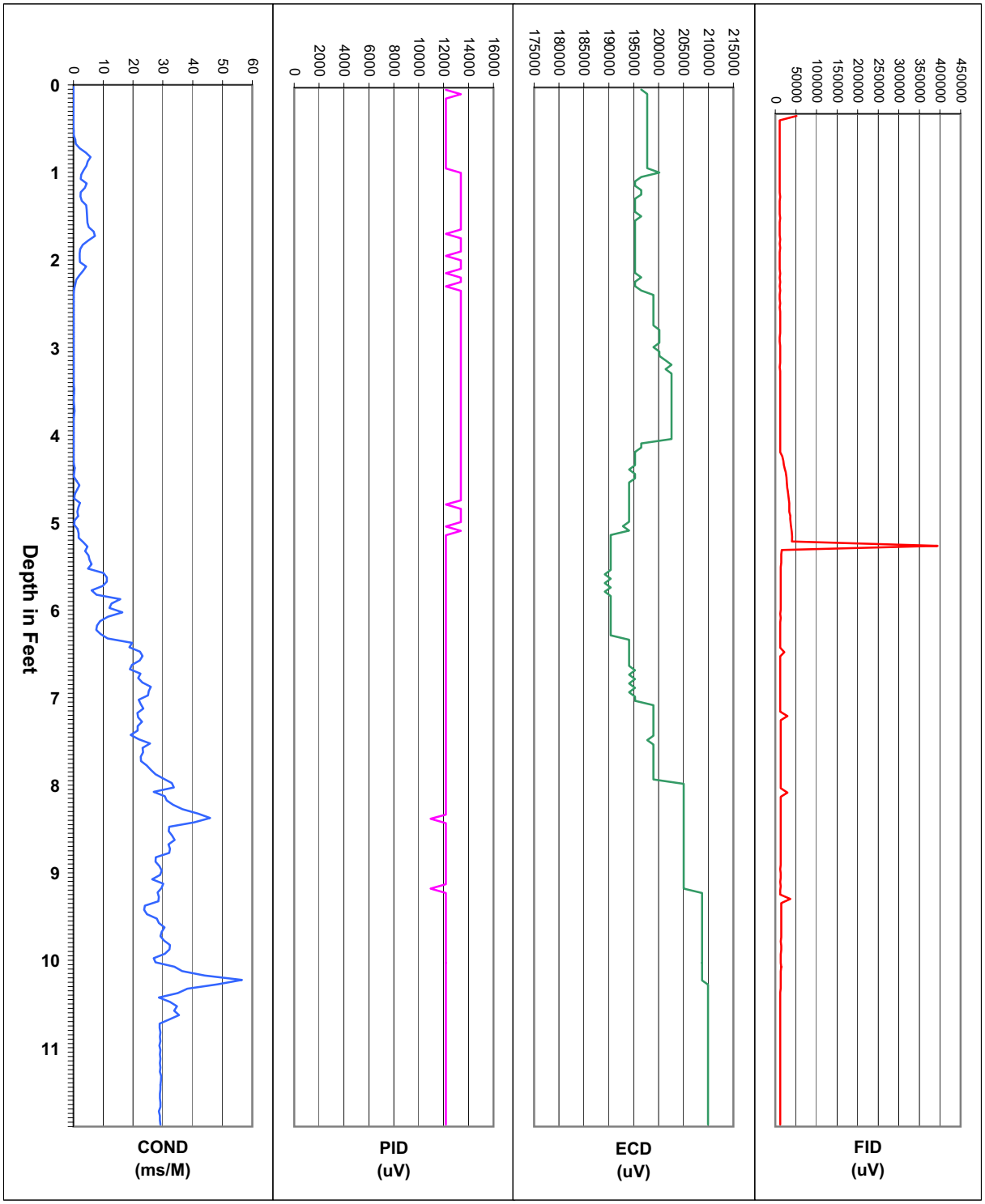
ZEBRA EC/MIP Summary Log, Point L2 0800
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/26/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 29 of 48

ZEBRA EC/MIP Summary Log, Point L2 0360
Cumberland, RI

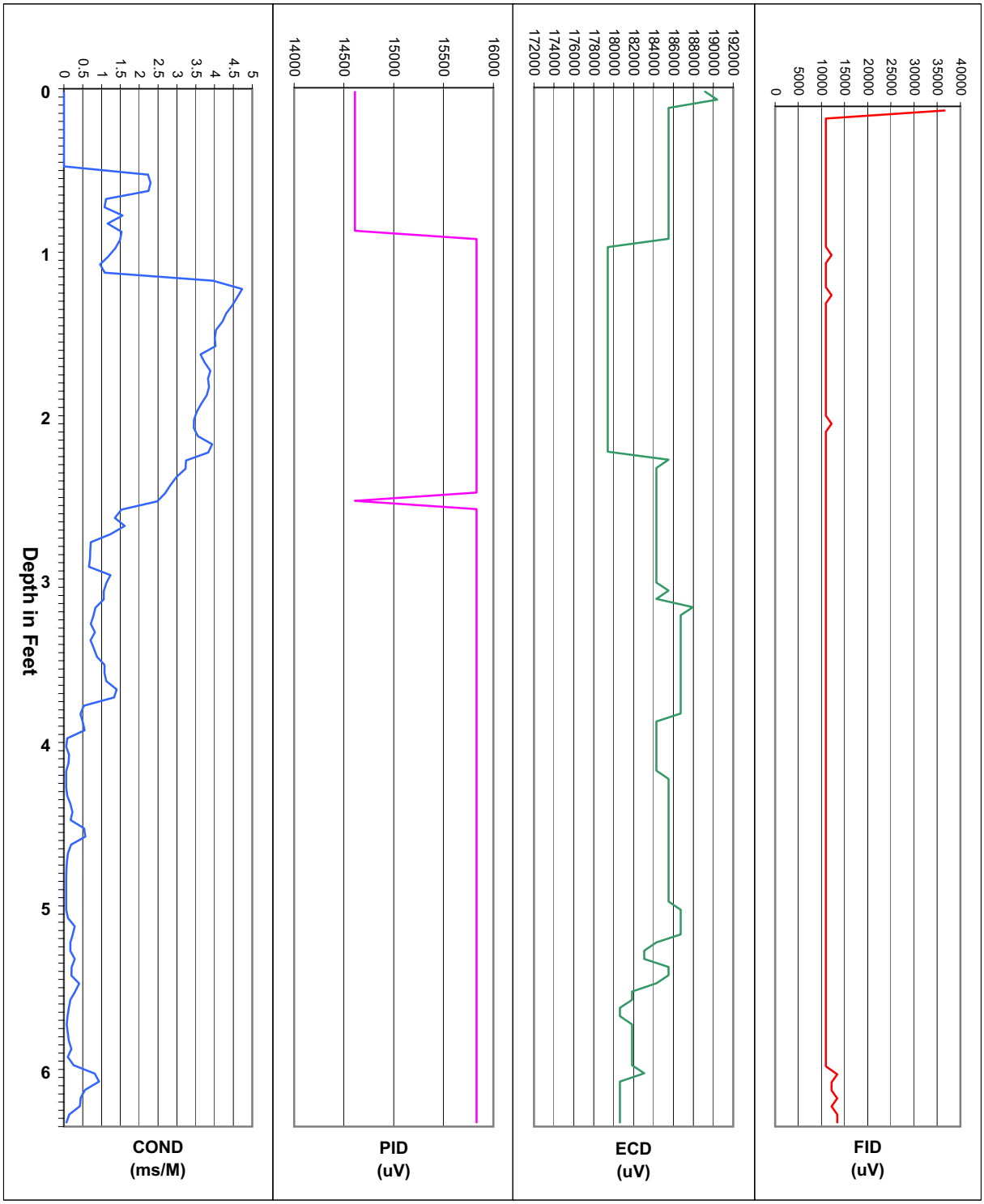


ZEBRA

for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/26/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 30 of 48

ZEBRA EC/MIP Summary Log, Point L2 0300
Cumberland, RI

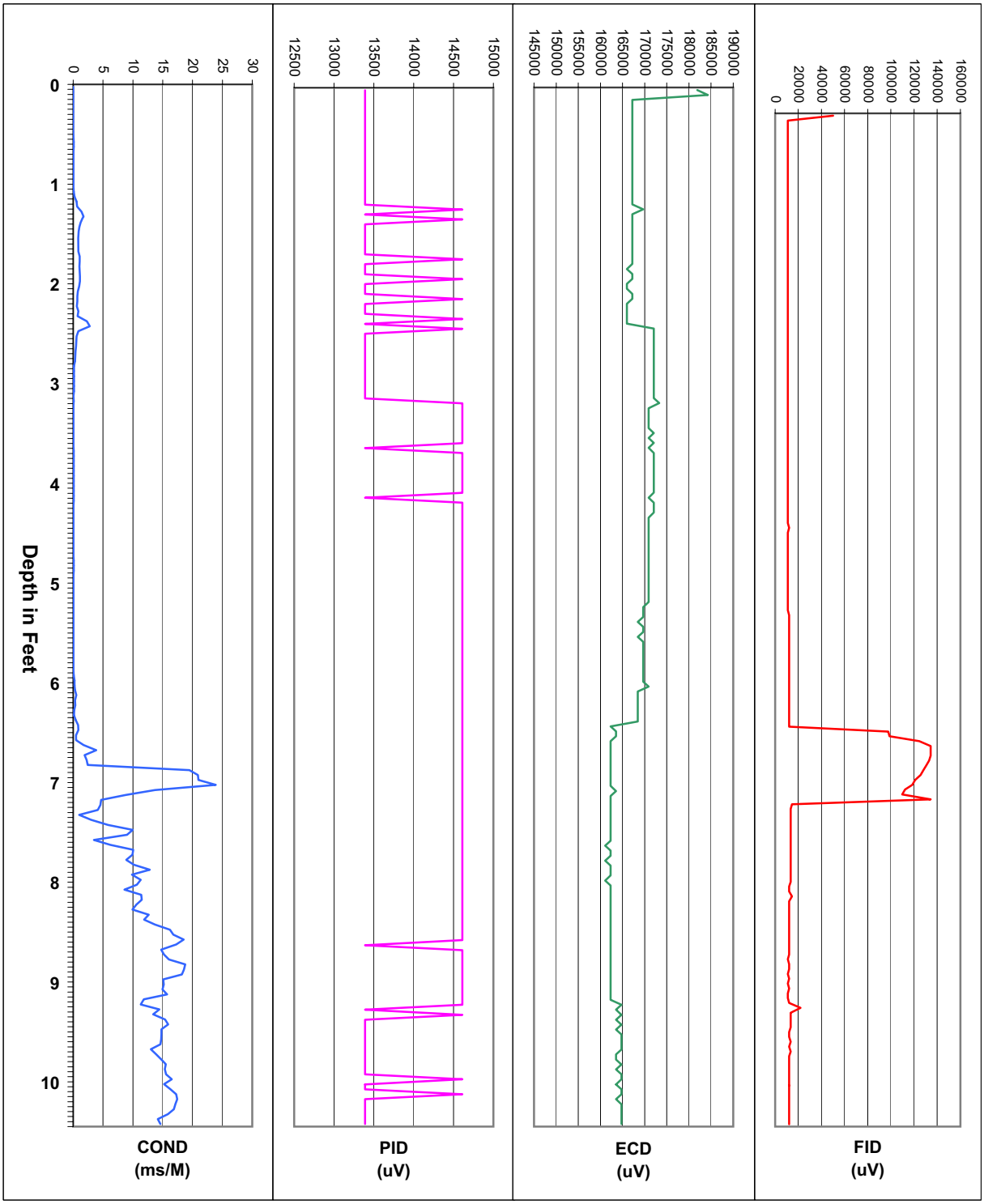


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by: Zebra Environmental
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(516) 596-6300

Date: 8/26/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 31 of 48

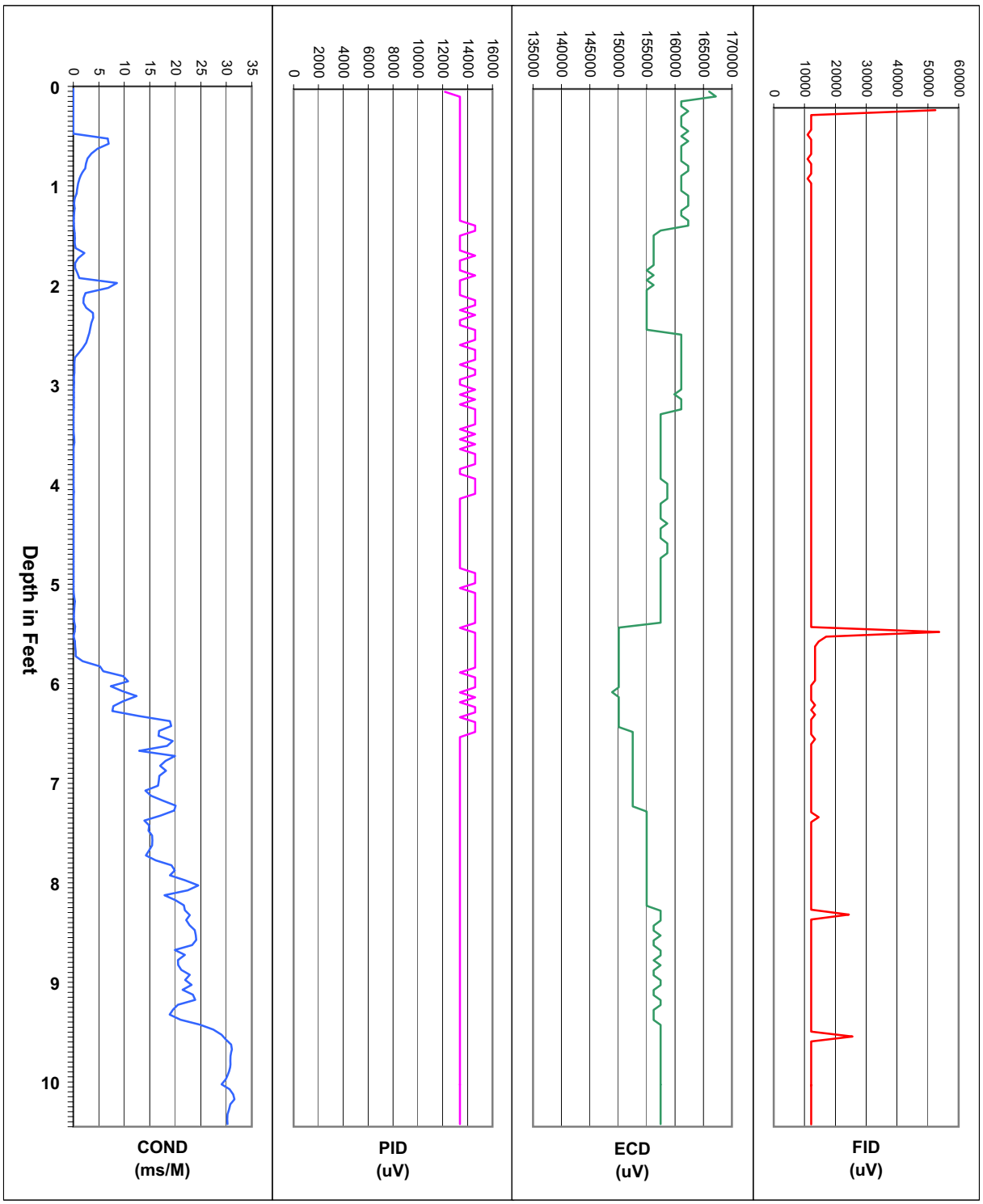
ZEBRA EC/MIP Summary Log, Point L2 0250
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
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Lynbrook, NY 11563
(516) 596-6300

Date: 8/26/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 32 of 48

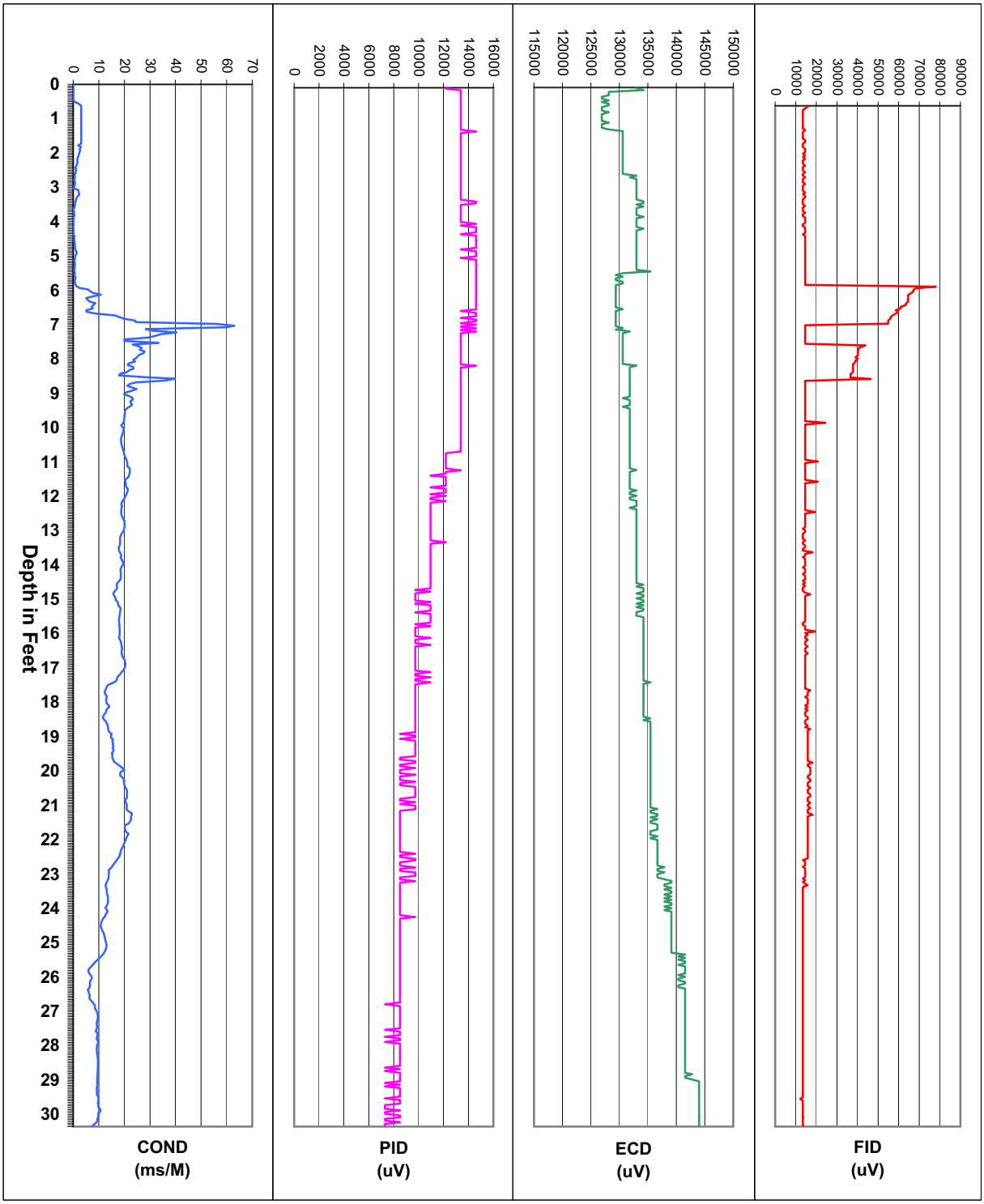
ZEBRA EC/MIP Summary Log, Point L2 0200
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/26/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 33 of 48

ZEBRA EC/MIP Summary Log, Point L2 0150
Cumberland, RI

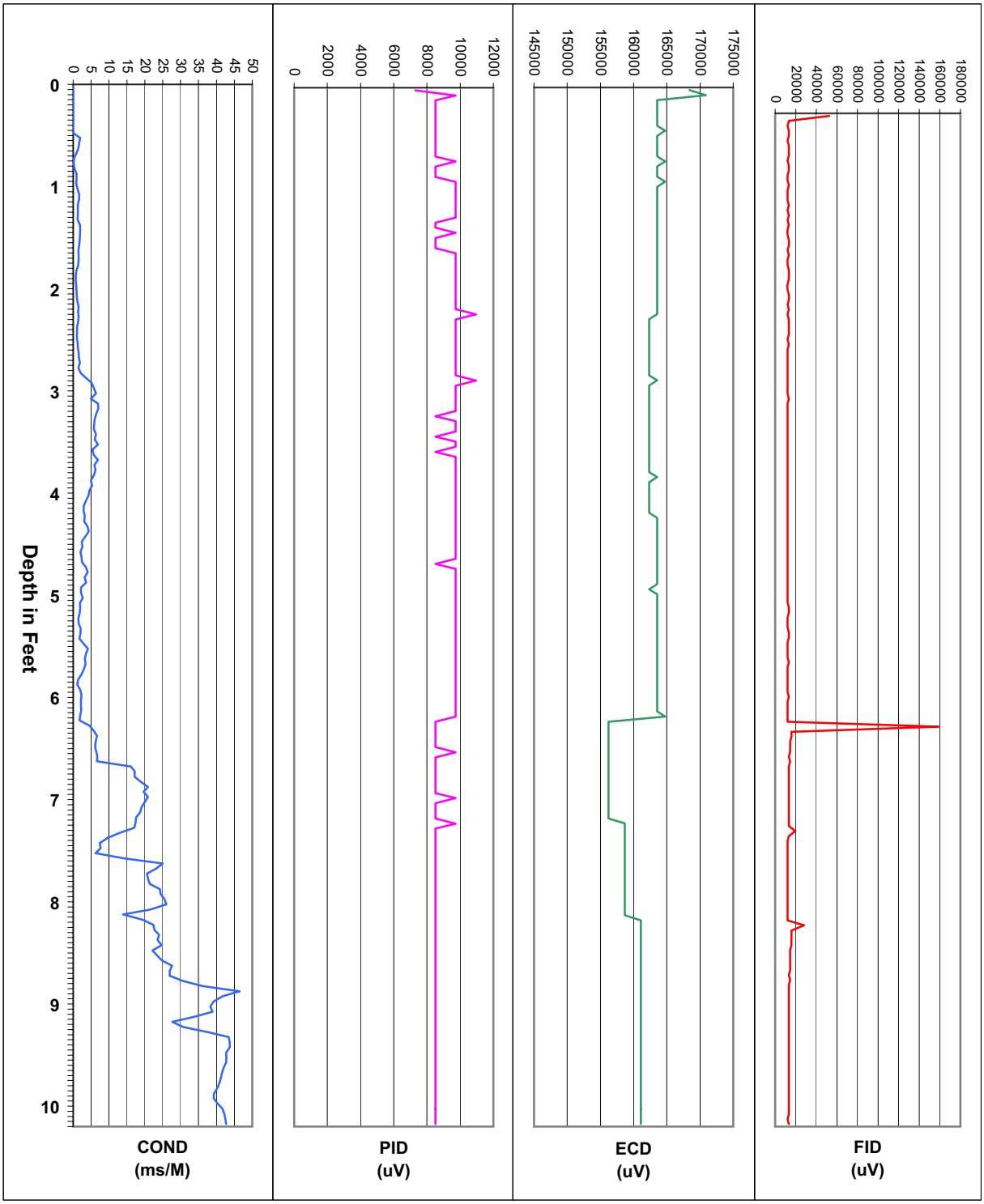


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by: Zebra Environmental
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(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 34 of 48

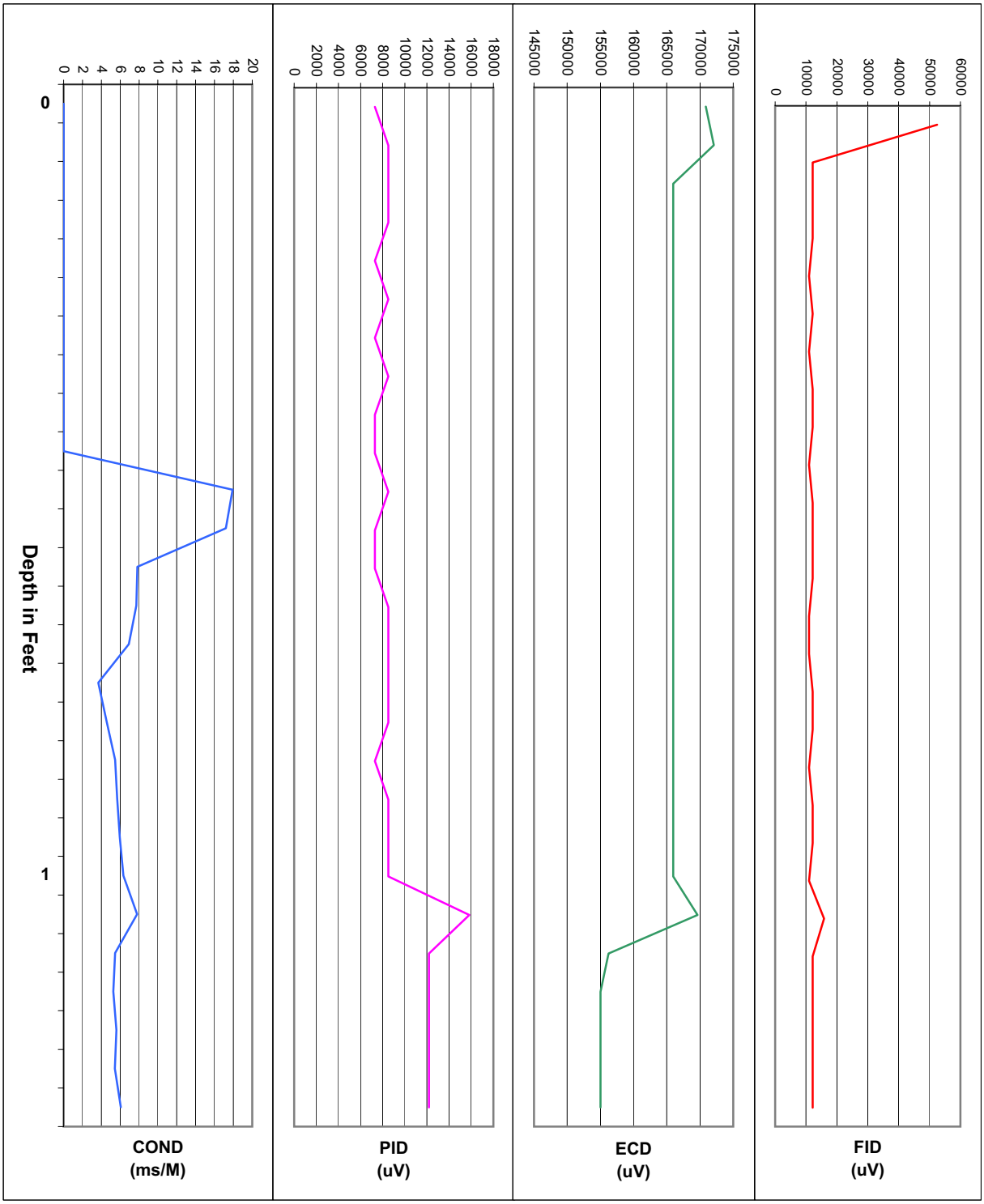
ZEBRA EC/MIP Summary Log, Point L2 0100
Cumberland, RI



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by: Zebra Environmental
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Lynbrook, NY 11563
(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 35 of 48

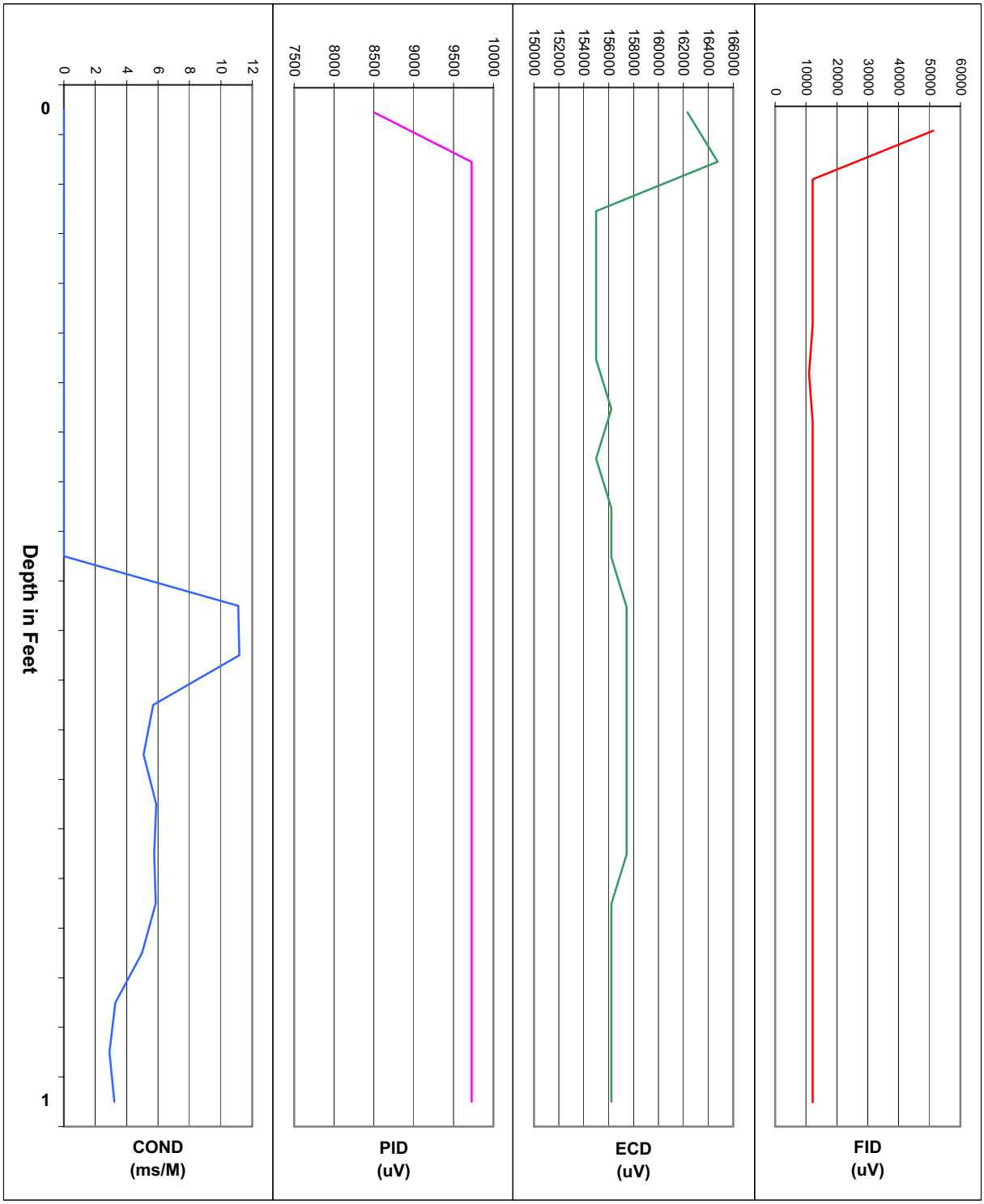
ZEBRA EC/MIP Summary Log, Point L2 0050
Cumberland, RI



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by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 36 of 48

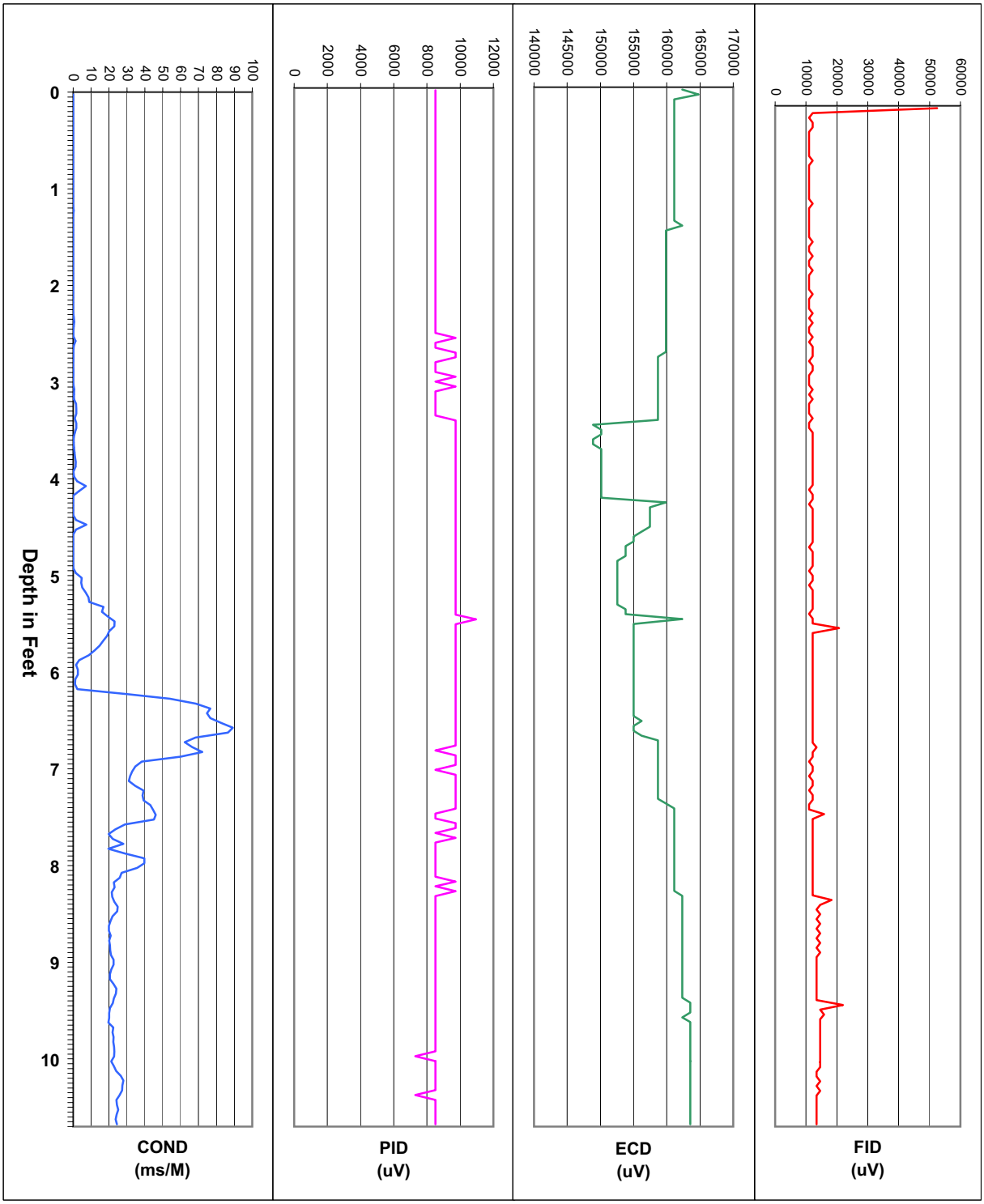
ZEBRA EC/MIP Summary Log, Point L2 0048
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 37 of 48

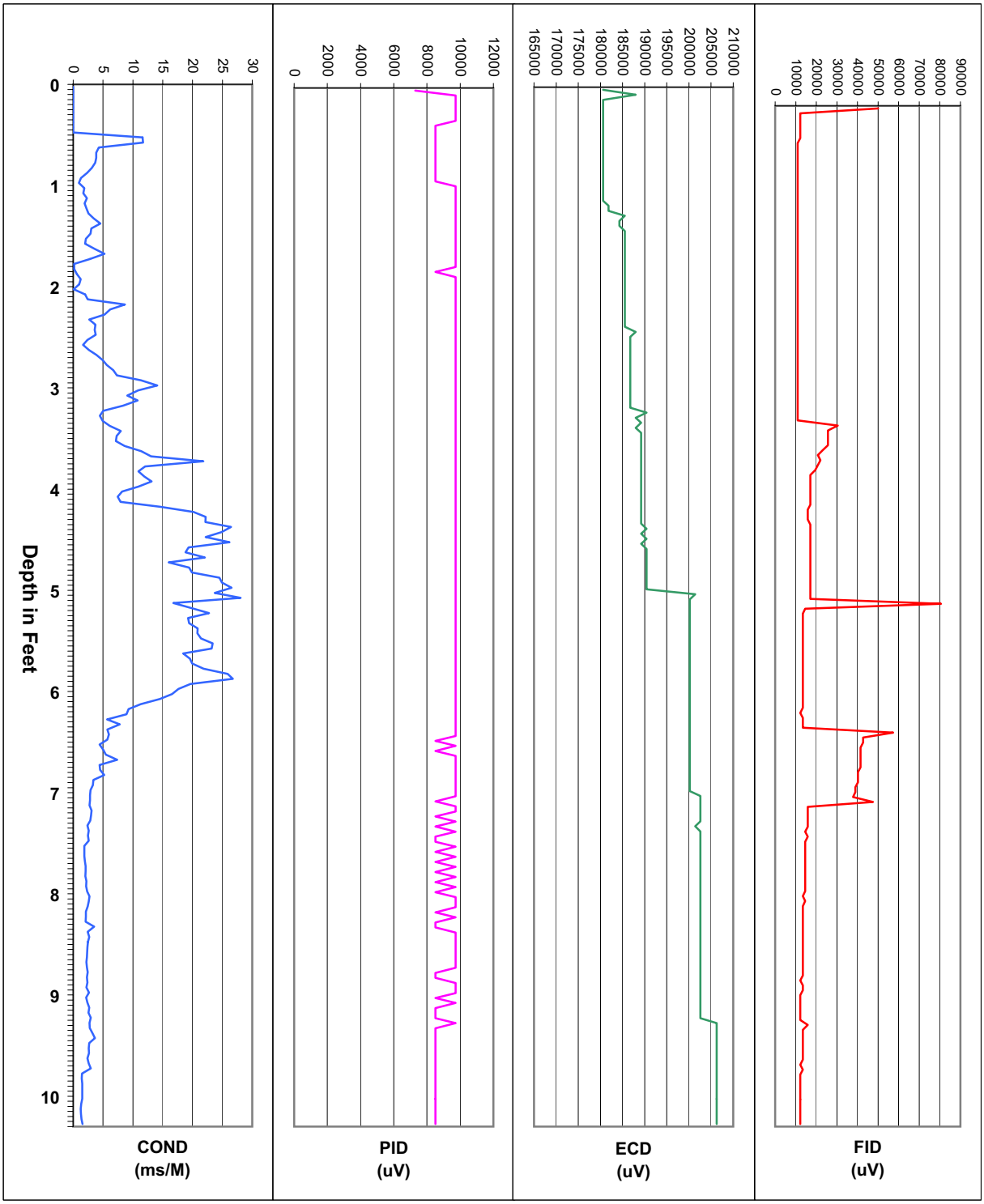
ZEBRA EC/MIP Summary Log, Point L2 0047
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 38 of 48

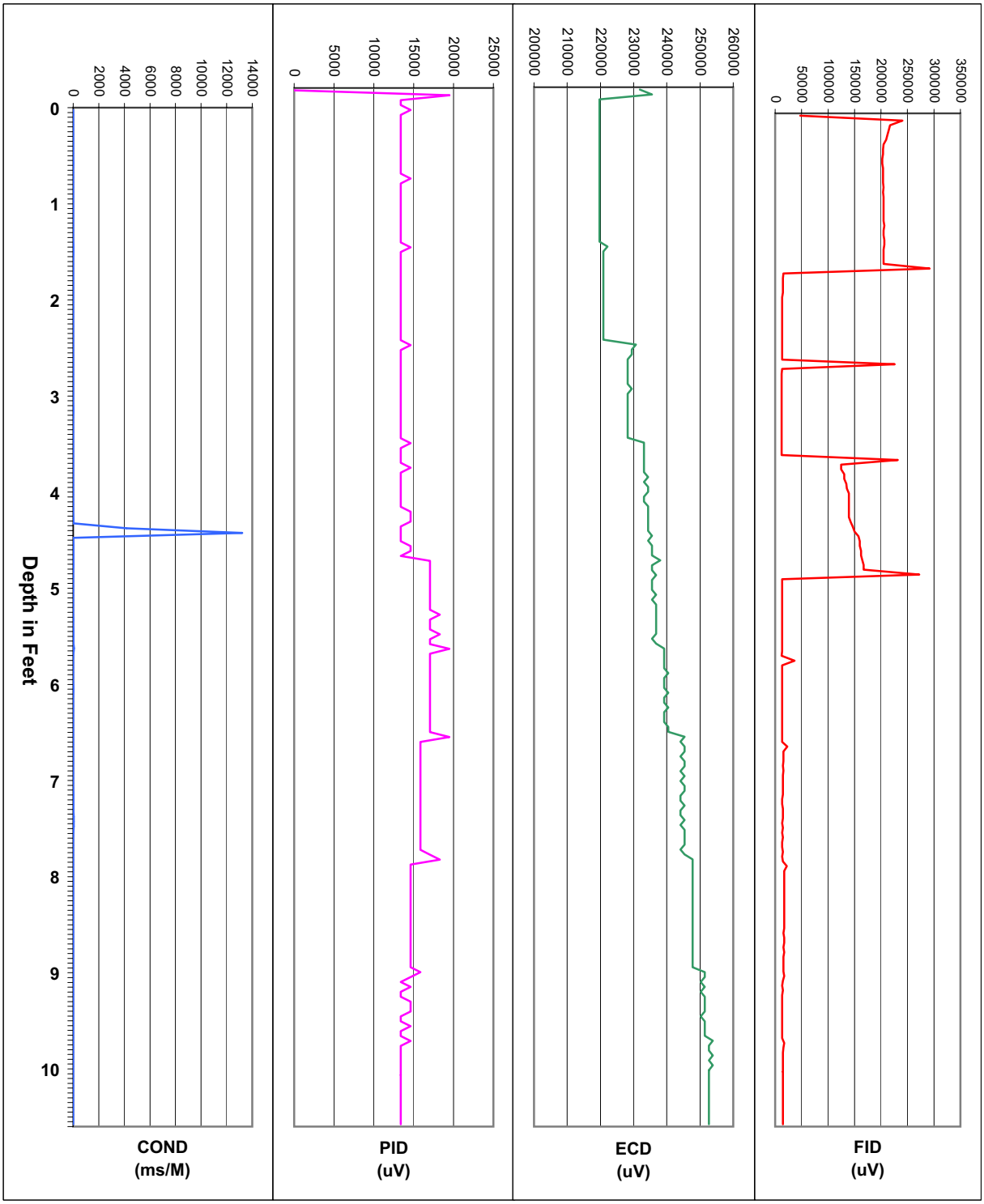
ZEBRA EC/MIP Summary Log, Point L2 0000
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 39 of 48

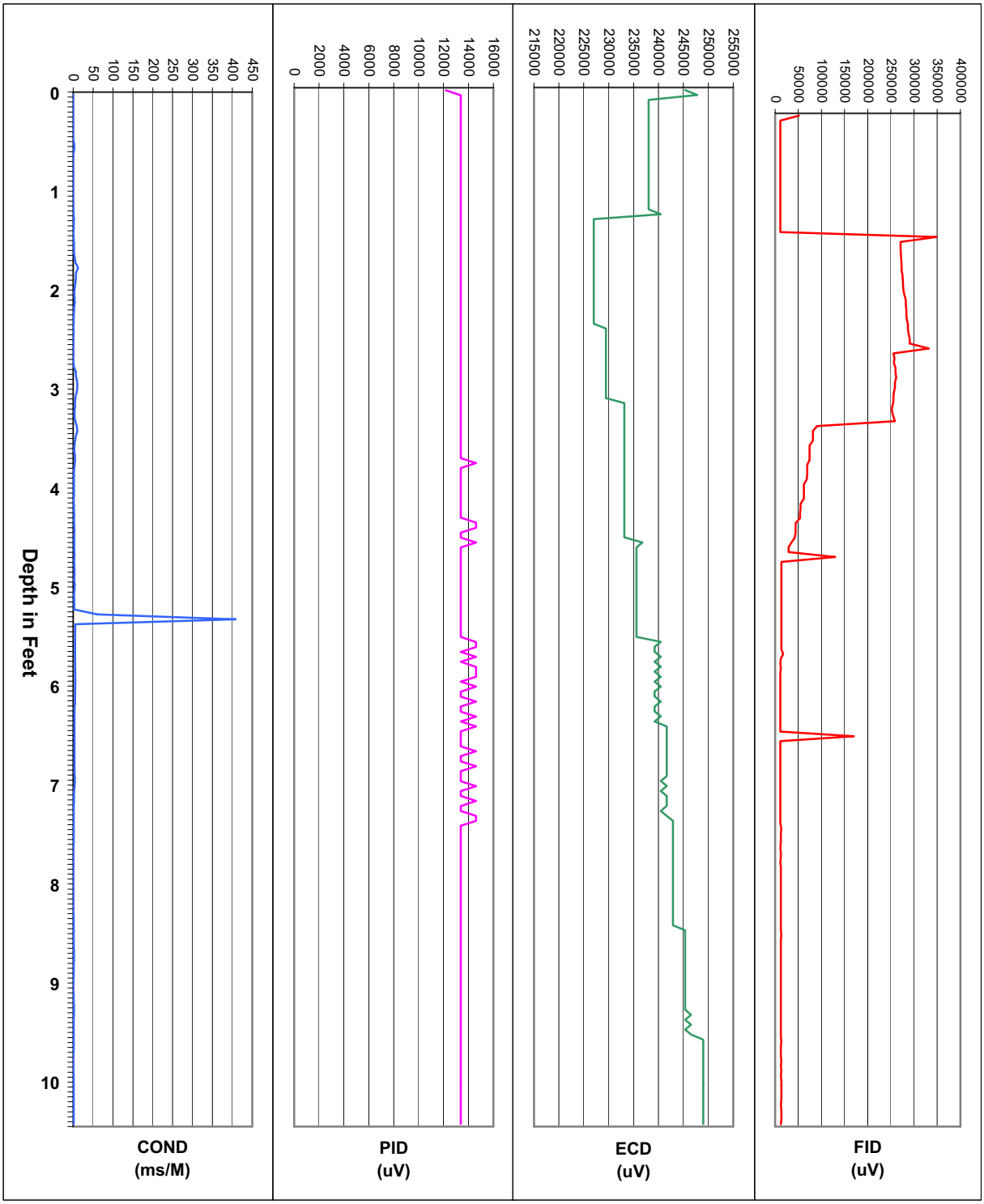
ZEBRA EC/MIP Summary Log, Point L1 0400
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 40 of 48

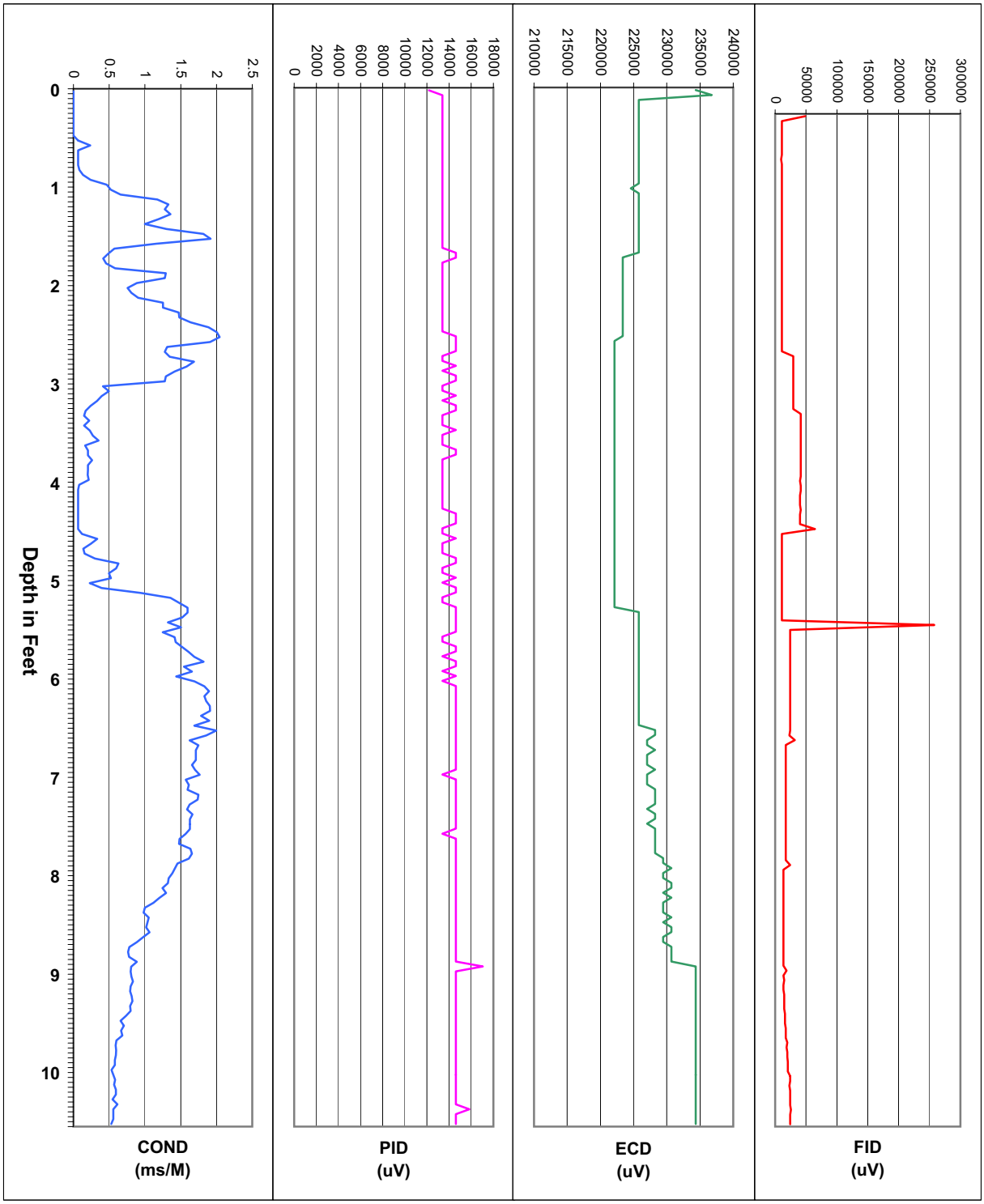
ZEBRA EC/MIP Summary Log, Point L1 0350
Cumberland, RI



for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 41 of 48

ZEBRA EC/MIP Summary Log, Point L1 0300
Cumberland, RI

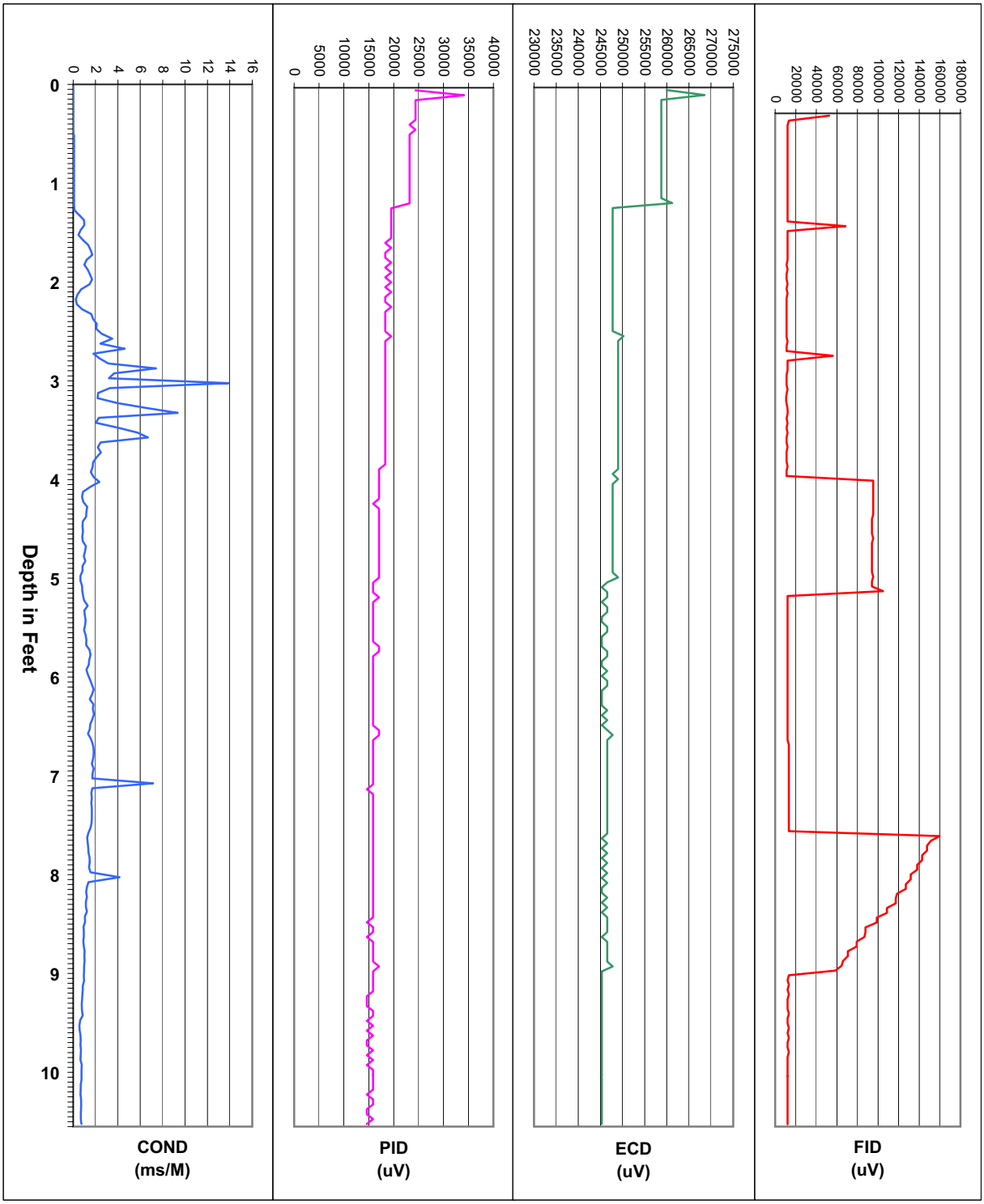


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for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
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Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 42 of 48

ZEBRA EC/MIP Summary Log, Point L1 0250
Cumberland, RI

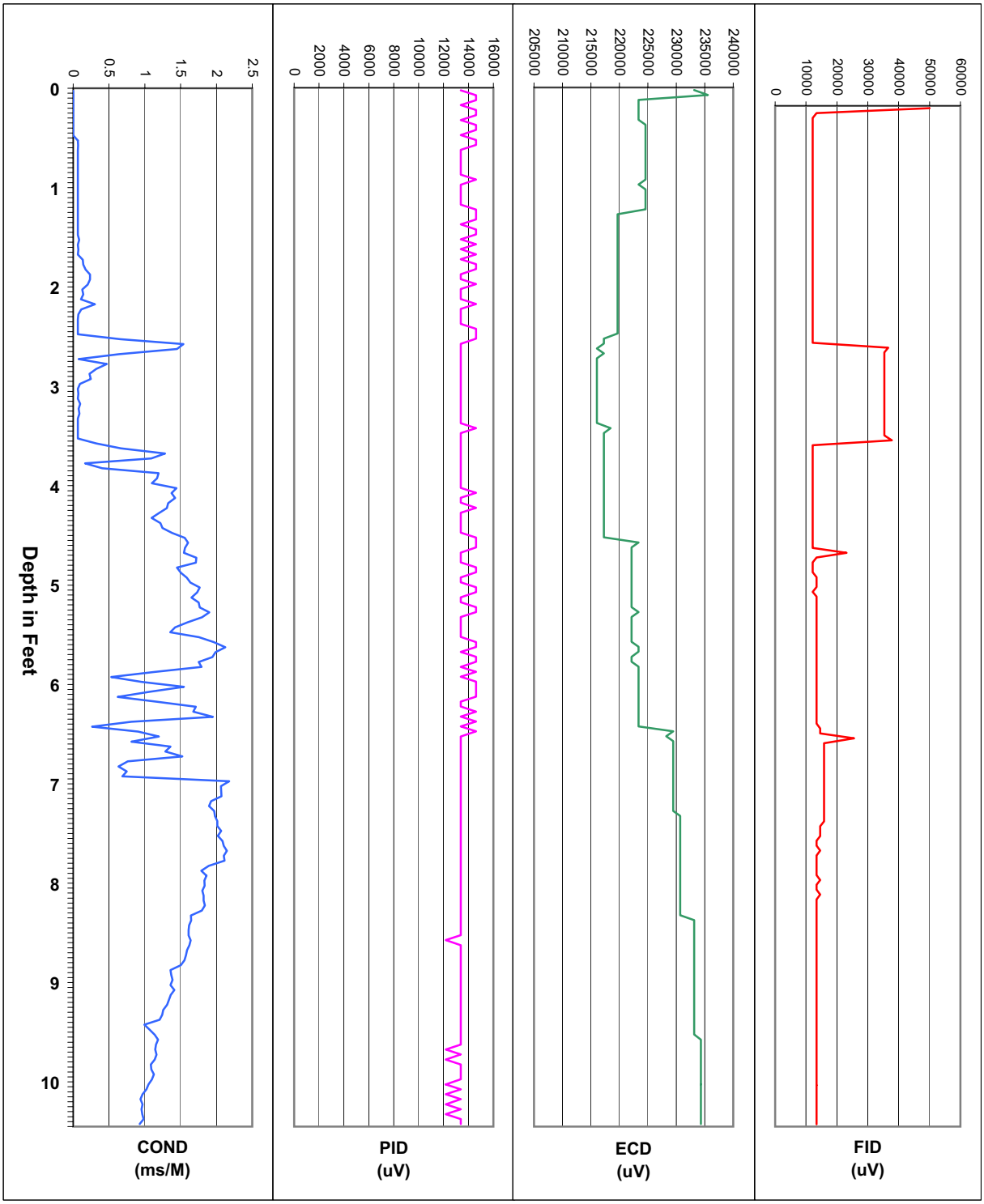


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for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 43 of 48

ZEBRA EC/MIP Summary Log, Point L1 0200
Cumberland, RI

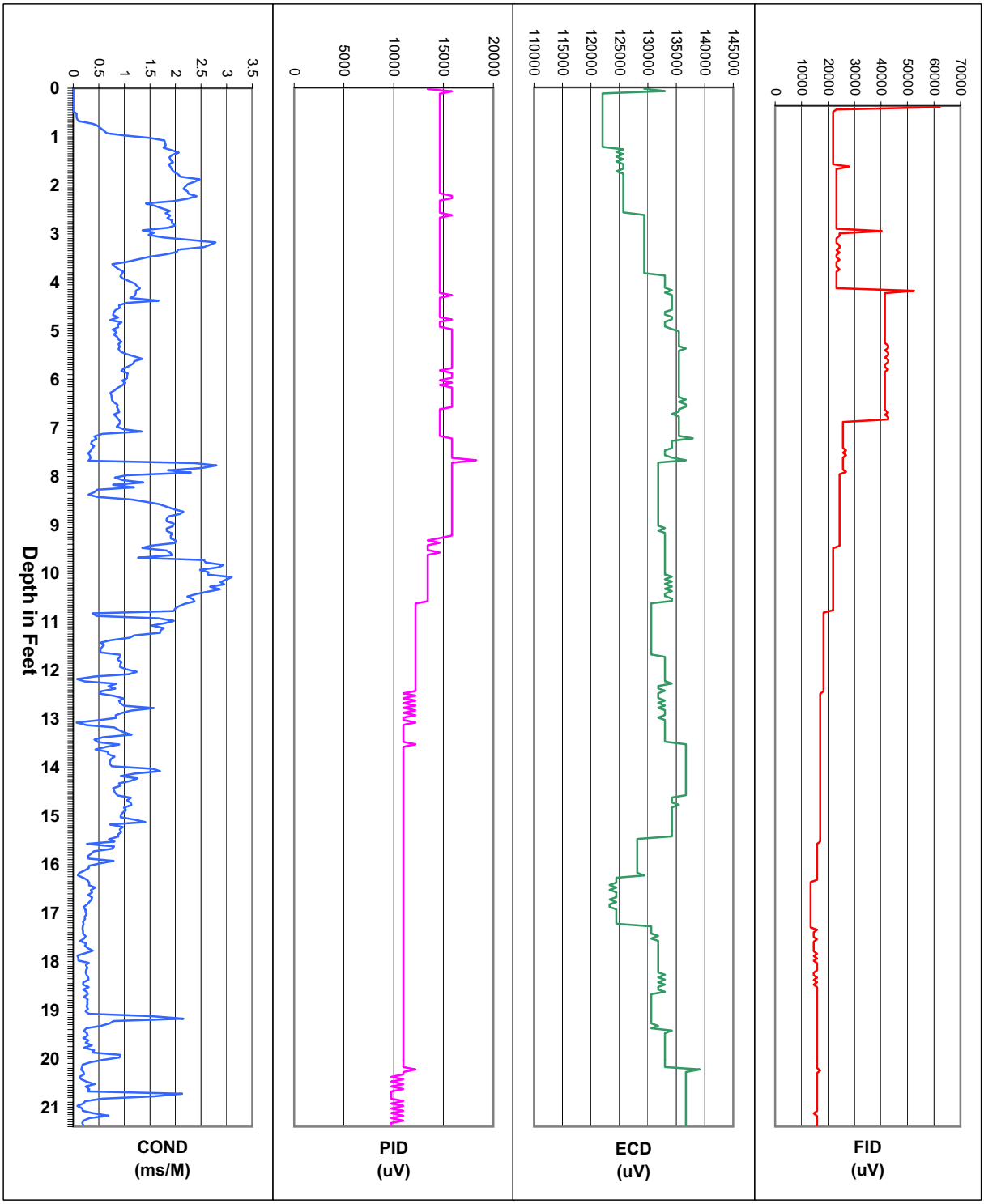


ZEBRA

for: Shield Env.
by: Zebra Environmental
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Date: 8/27/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 44 of 48

ZEBRA EC/MIP Summary Log, Point L1 0150
Cumberland, RI

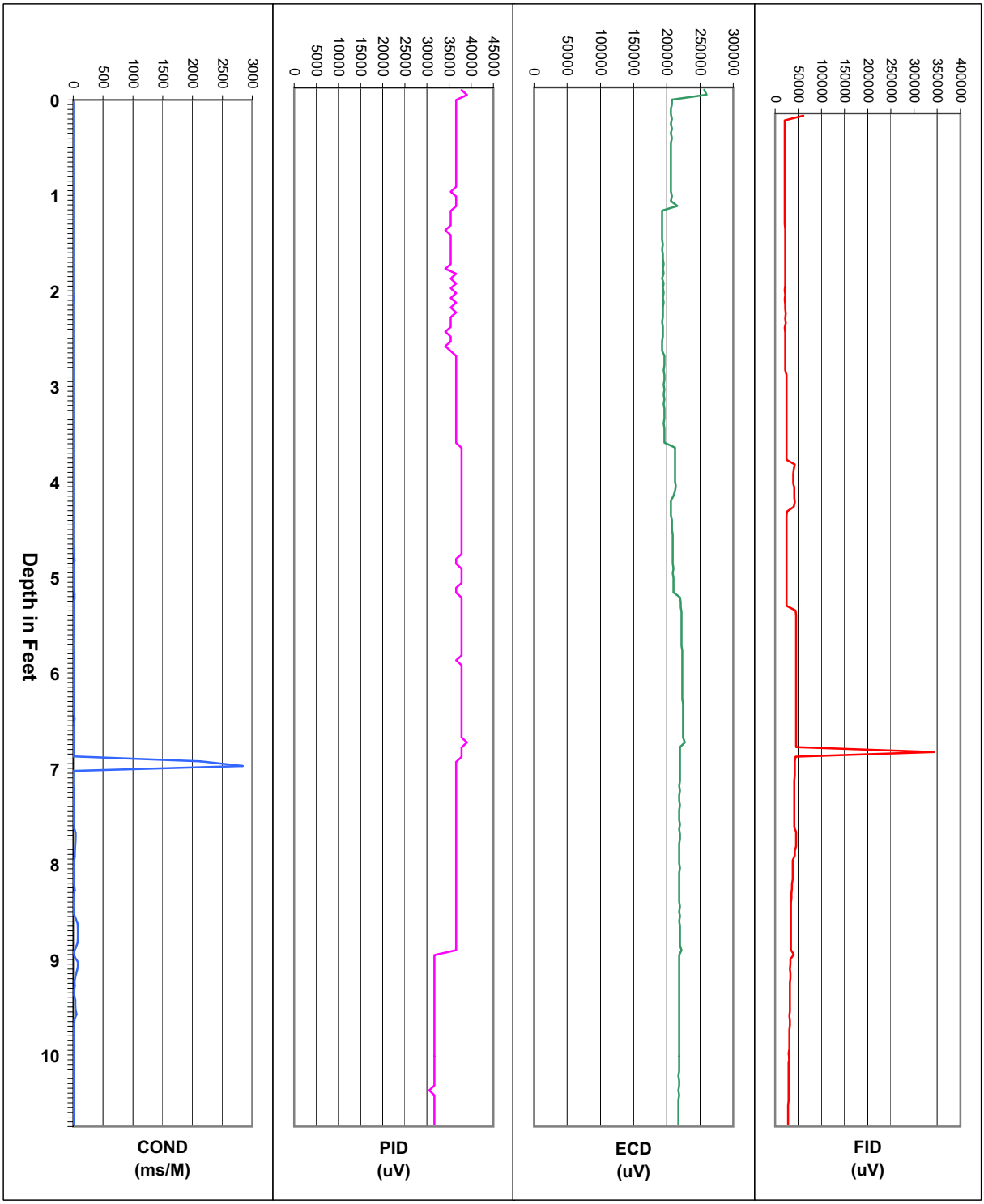


ZEBRA

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by: Zebra Environmental
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Date: 8/28/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 45 of 48

ZEBRA EC/MIP Summary Log, Point L1 0100
Cumberland, RI

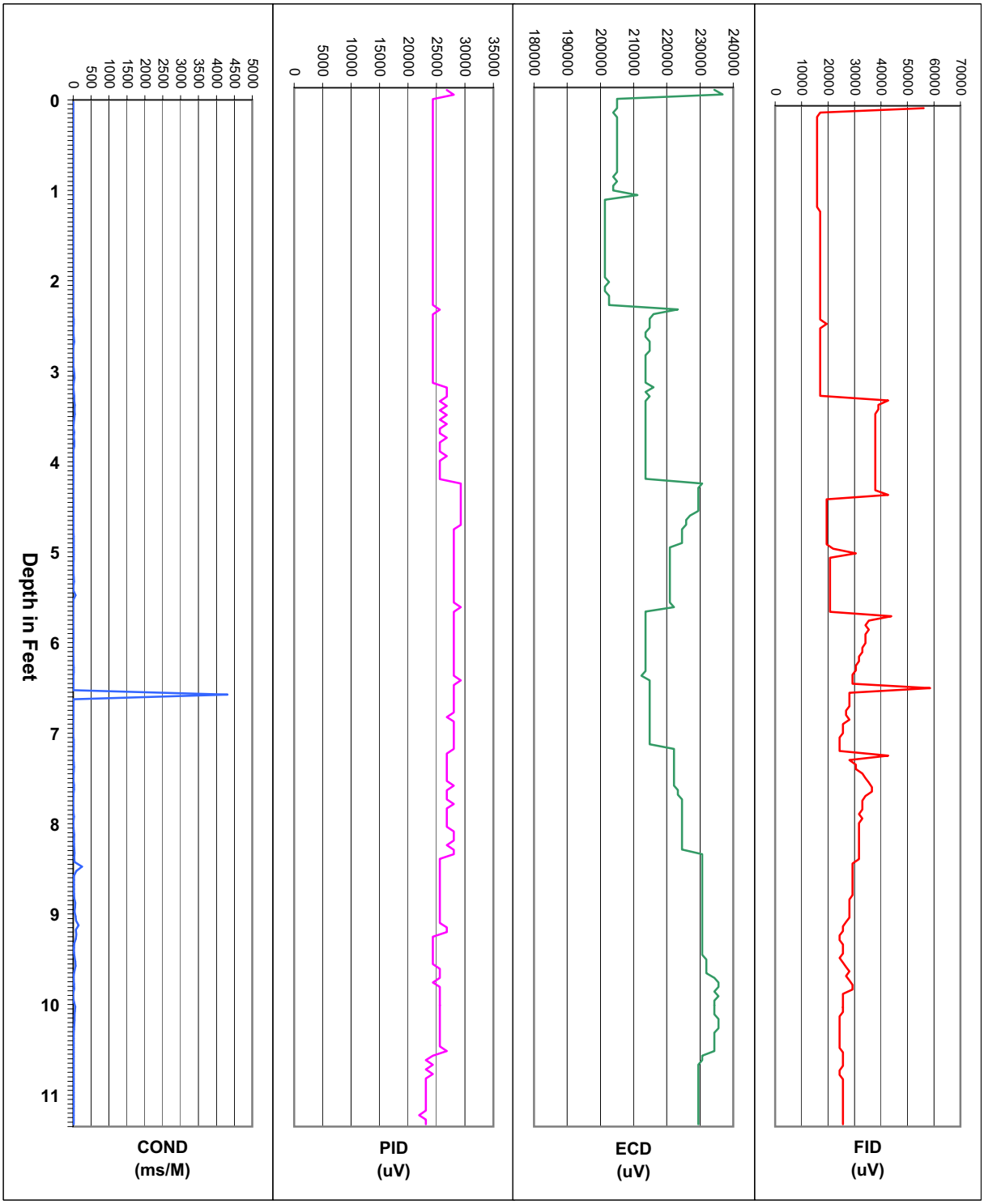


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by: Zebra Environmental
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(516) 596-6300

Date: 8/28/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 46 of 48

ZEBRA EC/MIP Summary Log, Point L1 0050
Cumberland, RI

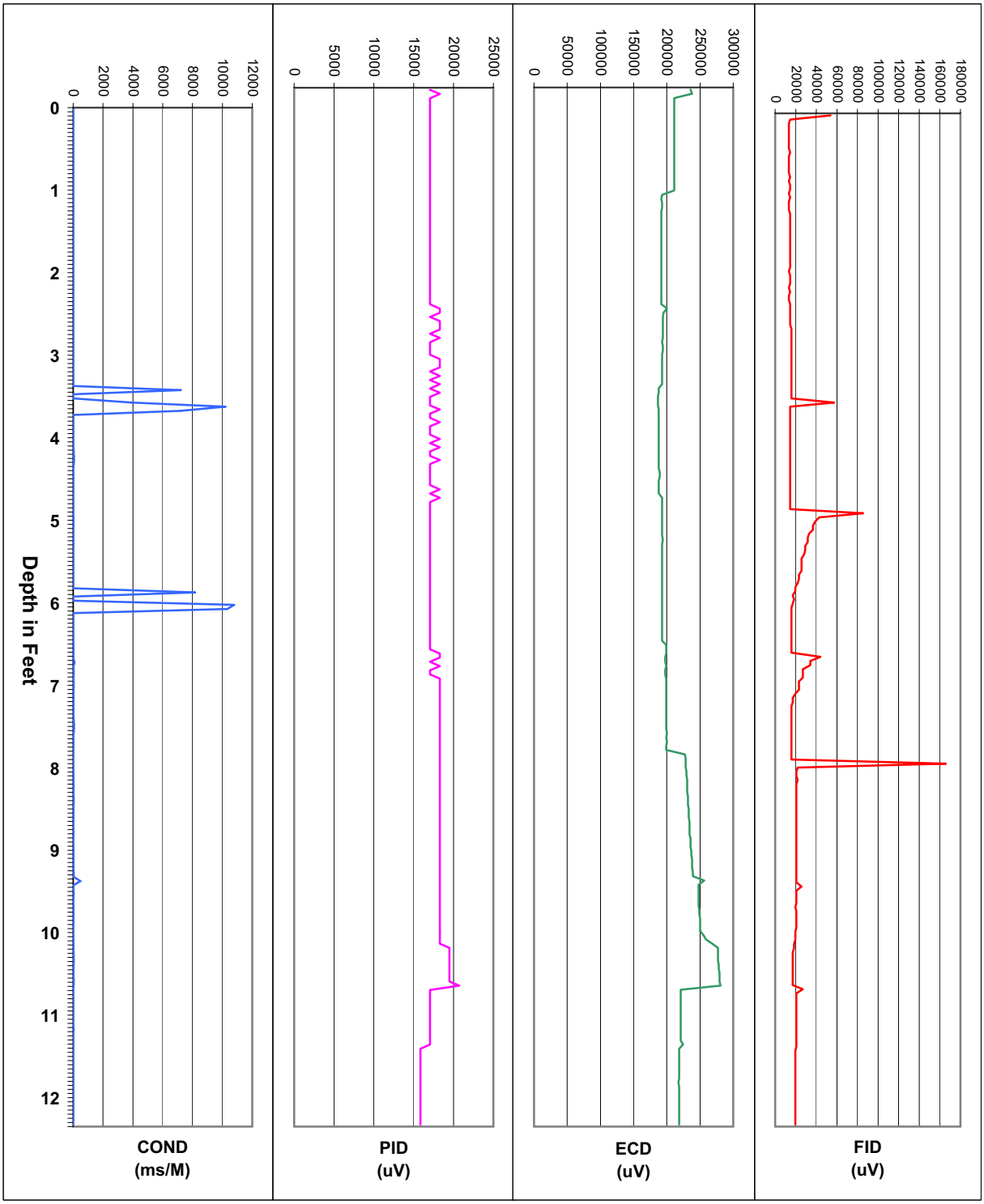


ZEBRA

for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/28/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 47 of 48

ZEBRA EC/MIP Summary Log, Point L1 0000
Cumberland, RI



ZEBRA

for: Shield Env.
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 8/28/2003
Proj. Name: Shield/Cumberland
Proj. #: ZDS07230
Operators: JS
Point 48 of 48

Table D5-1
Wellhead TVOCs, 2002 - 2003
Peterson/Puritan OU2, Cumberland, Rhode Island

Well or Piezometer Number	Date	Wellhead PID Reading (ppm)	Wellhead FID Reading (ppm)
MW-106A	5/6/2002	0	
MW-106A	9/25/2003		0
MW-106B	9/25/2003	---	0
MW-106C	9/25/2003	---	0
MW-108AA	5/3/2002	0.2	
MW-108AA	9/25/2003		1,145
MW-108A	5/3/2002	0	---
MW-108A	9/25/2003		---
MW-108B	5/3/2002	0	
MW-108B	9/25/2003		8.5
MW-108C	5/3/2002	0	
MW-108C	9/25/2003		7.2
MW-109AA	5/3/2002	0.3	
MW-109AA	9/25/2003		0
MW-109A	5/3/2002	0	
MW-109A	9/25/2003		0
MW-109B	5/3/2002	0	
MW-109B	9/25/2003		0
MW-109C	5/3/2002	0	
MW-109C	9/25/2003		0
MW-110A	5/3/2002	0	
MW-110A	9/25/2003		0
MW-110B	5/3/2002	5.3	
MW-110B	9/25/2003		0
MW-110C	5/3/2002	0	
MW-110C	9/25/2003		0

Table D5-1
Wellhead TVOCs, 2002 - 2003
Peterson/Puritan OU2, Cumberland, Rhode Island

Well or Piezometer Number	Date	Wellhead PID Reading (ppm)	Wellhead FID Reading (ppm)
MW-111AA	5/3/2002	0	
MW-111AA	9/25/2003		0
MW-111A	5/3/2002	0	
MW-111A	9/25/2003		0
MW-111B	5/3/2002	0.4	
MW-111B	9/25/2003		0
MW-111C	5/3/2002	0.9	
MW-111C	9/25/2003		0
MW-112AA	5/3/2002	0	
MW-112AA	9/25/2003		2,792
MW-112A	5/3/2002	0	
MW-112A	9/25/2003		0
MW-112B	5/3/2002	0	
MW-112B	9/25/2003		0
MW-112C	5/3/2002	0	
MW-112C	9/25/2003		0
MW-A2	5/6/2002	3.0	
MW-A2	9/25/2003		0
MW-B1	5/3/2002	0	
MW-B1	9/25/2003		0
MW-B2	5/3/2002	0	
MW-B2	9/25/2003		0
MW-C1	5/3/2002	0	
MW-C1	9/25/2003		0
MW-C2	5/3/2002	0	
MW-C2	9/25/2003		0
P-7	5/3/2002	0	
P-7	9/25/2003		0

Table D5-1
Wellhead TVOCs, 2002 - 2003
Peterson/Puritan OU2, Cumberland, Rhode Island

Well or Piezometer Number	Date	Wellhead PID Reading (ppm)	Wellhead FID Reading (ppm)
P-8	5/3/2002	0	
P-8	9/25/2003		0
SEA-601	9/25/2003	---	0
SEA-602A	9/25/2003	---	39
SEA-602B	9/25/2003	---	0
SEA-603	9/25/2003	---	550
SEA-604	9/25/2003	---	112
SEA-605	9/25/2003	---	43
SEA-606	9/25/2003	---	2,901
SEA-607	9/25/2003	---	0
SEA-608	9/25/2003	---	112
PZ-03	9/25/2003	---	55
PZ-05	9/25/2003	---	0
PZ-06	9/25/2003	---	0
PZ-08	9/25/2003	---	0
PZ-09	9/25/2003	---	0
PZ-10	9/25/2003	---	18
PZ-11	9/25/2003	---	16
PZ-12	9/25/2003	---	0
PZ-14	9/25/2003	---	0
PZ-16	9/25/2003	---	0
PZ-17	9/25/2003	---	0
PZ-18	9/25/2003	---	0
PZ-19	9/25/2003	---	0

Notes:
Wellhead PID in May 2002 measured with a Photovac 2020 photoionization detector.
Wellhead FID in September 2003 measured with a MicroFID PV-03 flame ionization detector.
--- Information not available (no reading taken)

Table D5-2
Field Analytical Parameters in Surface Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Station	Field Sample ID	Date	Sample Location Description	Field Parameters					
				Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
Surface Water - Blackstone River Main Channel									
AD-00250	SW-022-BR	9/5/2003	250 ft upstream of Ashton Dam	20.8	394	7.36	137.0	6.25	2.6
AD+02200	NS	8/30/2004	North bank downstream from OC plant	24.6	438	7.42	-362.2	9.07	7.7
AD+03300	NS	8/30/2004	Between OC plant and Roger Williams	24.6	442	7.31	-356.7	8.79	1.3
AD+05550	SW-034-BR	9/10/2003	Downstream of Martin Street	21.1	382	7.84	174.1	3.80	1.3
AD+05600	SW-044-BR	8/30/2004	Just down from AD+05550	24.9	439	7.55	-357.7	10.29	2.1
AD+07200	SW-033-BR	9/10/2003	Near P-5	20.3	376	7.71	152.1	8.95	1.4
AD+07700	NS	5/6/2002	Near P-6	13.7	303	---	---	---	---
AD+08400	SW-032-BR	9/10/2003	Just downstream of North Inlet	18.6	388	7.34	92.1	7.83	3.0
AD+08550	SW-048-BR	8/31/2004	Downstream of North Inlet, off of QW bank	25.7	457	7.33	180.5	8.97	4.3
AD+09850	SW-043-BR	8/30/2004	Near SEA-602A/B, off of LF bank	26.0	443	7.47	167.0	17.23	3.0
AD+10300	SW-031-BR	9/9/2003	Near P-8	21.3	379	7.64	30.3	8.65	1.4
AD+10700	SW-047-BR	8/30/2004	Near SEA-603, off of LF bank	26.3	447	7.15	132.7	14.12	3.2
AD+11050	SW-030-BR	9/9/2003	Near Pond B, off LF bank	20.6	379	7.32	28.1	8.08	1.7
AD+11750A	SW-029-BR	9/9/2003	Near Pond C, off LF bank	20.1	375	7.26	39.1	8.76	1.4
AD+11800A	SW-041-BR	8/30/2004	Near Pond C, off of opposite (UI) bank	24.6	445	7.13	126.5	13.55	3.3
AD+12500A	SW-028-BR	9/8/2003	Near PZ-01, off LF bank	21.7	363	7.40	32.5	8.78	1.2
AD+13100A	NS	5/7/2002	Near MW-111	16.5	336	---	---	---	---
AD+13100A	SW-027-BR	9/8/2003	Near MW-111	21.4	362	7.34	46.6	8.43	1.7
AD+13600A	SW-046-BR	8/30/2004	Between Nunes Inlet and Dam, off of NP bank	26.0	440	7.99	-339.4	10.96	2.4
AD+14200A	SW-026-BR	9/8/2003	Upstream of Pratt Dam, close to PZ-06	20.3	363	7.09	62.1	7.39	1.7
AD+14200A	SW-042-BR	8/31/2004	Upstream of Pratt Dam, close to PZ-06	25.4	463	7.34	-331.4	10.66	1.7
Surface Water - Blackstone River Back Channel									
AD+11550B	SW-072-BR	9/6/2004	Back channel off of canal bank, upstream end	19.9	388	7.11	114.8	5.28	5.6
AD+11700B	SW-025-BR	9/6/2003	Back channel, middle, upstream end	20.3	377	6.65	64.2	6.01	0.4
AD+11950B	SW-071-BR	9/6/2004	Back channel off of canal bank	19.6	382	7.38	61.3	6.88	5.4
AD+12250B	SW-068-BR	9/6/2004	Back channel off of canal bank	19.6	382	7.88	27.5	6.71	9.8
AD+12300B	SW-064-BR	9/2/2004	Middle of back channel off of UI bank	23.2	397	6.92	178.5	9.63	5.7
AD+12550B	SW-067-BR	9/3/2004	Back channel off of canal bank	23.6	396	7.16	132.5	8.50	6.0
AD+12700B	SW-024-BR	9/6/2003	Back channel, off of UI bank	20.5	364	6.81	166.7	5.64	5.7
AD+12850B	SW-066-BR	9/3/2004	Back channel off of canal bank	22.3	393	7.25	67.2	7.35	9.3
AD+13100B	SW-065-BR	9/2/2004	Back channel, donstream end	22.6	395	7.58	167.6	8.88	5.8
AD+13200B	SW-023-BR	9/6/2003	Back channel, downstream end	20.2	364	6.70	113.6	5.30	5.0

Table D5-2
Field Analytical Parameters in Surface Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Station	Field Sample ID	Date	Sample Location Description	Field Parameters					
				Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
Surface Water - North Inlet									
PDN-01-DF	SW-051-DF	8/31/2004	Inlet off of Blackstone River north of LF	24.5	562	6.62	-2.7	2.53	26.9
Surface Water - Nunes Inlet									
---	NS	5/7/2002	Inlet off Blackstone River next to Nunes Prop.	13.7	305	---	---	---	---
PDI-01-NP	SW-021-NP	9/5/2003	Inlet off Blackstone River next to Nunes Prop.	20.8	318	6.38	19.2	4.46	60
PDI-02-NP	SW-069-NP	9/2/2004	Inlet off Blackstone River next to Nunes Prop.	20.8	365	6.35	323.3	2.14	55
Surface Water - Pond F									
PDF-01-BR	SW-008-BR	9/2/2003	Pond F, near-shore	21.0	351	6.76	171.4	5.15	5.8
PDF-02-BR	SW-081-BR	9/7/2004	Pond F, southwest area (deepest part)	22.5	404	6.62	-282.9	5.26	9.6
PDF-03-BR	SW-082-BR	9/6/2004	Pond F, northeast area, near-shore	21.7	387	6.43	-297.2	7.08	6.8
PDF-04-BR	SW-083-BR	9/6/2004	Pond F, northwest area, near-shore	22.7	389	6.34	-299.3	5.60	4.9
Surface Water - Landfill Ponds									
PDC-01-LF	SW-020-LF	9/5/2003	Pond C, close to PZ-02	22.3	825	6.32	51.3	3.38	66
PDC-02-LF	SW-074-LF	9/10/2004	Pond C, northwest of PZ-02	22.9	432	8.27	217.5	8.72	3.3
Surface Water - Unnamed Island Ponds									
PDA-01-UI	SW-002-UI	8/28/2003	Pond A, middle	25.8	462	7.38	182.1	8.65	5.4
PDA-02-UI	SW-003-UI	8/29/2003	Pond A, shore near PZ-09	24.1	485	7.27	206.1	6.47	7.1
PDA-03-UI	SW-005-UI	8/29/2003	Pond A, west shore	25.8	494	7.06	58.4	7.98	7.1
PDA-04-UI	SW-006-UI	8/29/2003	Pond A, southeast shore	25.2	486	7.20	112.0	6.88	6.5
PDA-05-UI	SW-080-UI	9/7/2004	Pond A, middle (west end)	23.6	255	7.86	-273.6	6.77	18
PDA-06-UI	SW-079-UI	9/7/2004	Pond A, middle (deepest part)	22.4	256	6.81	-270.3	9.51	7.1
PDA-07-UI	SW-084-UI	9/7/2004	Pond A, west shore	22.5	249	7.05	109.8	9.57	9.3
PDA-08-UI	SW-085-UI	9/7/2004	Pond A, southwest shore	22.3	248	7.54	178.0	9.65	9.3
PDA-09-UI	SW-086-UI	9/7/2004	Pond A, northeast shore	25.4	254	8.87	142.7	12.94	23
PDA-10-UI	SW-087-UI	9/7/2004	Pond A, east shore	23.9	252	9.04	126.0	13.15	24
PDD-01-UI	SW-007-UI	9/2/2003	Pond D, southeast shore	18.5	207	6.45	51.1	1.19	16
PDD-02-UI	SW-075-UI	9/3/2004	Pond D, middle off south shore	23.5	233	6.07	303.1	4.65	9.6
PDE-01-UI	SW-001-UI	8/28/2003	Pond E, south shore	18.8	710	6.67	94.0	1.96	40
PDE-02-UI	SW-078-UI	9/6/2004	Pond E, north shore	15.8	333	6.42	-336.3	0.82	110
PDP-01-UI	SW-077-UI	9/6/2004	North Pool, NW of Pond A	15.7	287	6.37	-323.3	1.38	18

Table D5-2
Field Analytical Parameters in Surface Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Station	Field Sample ID	Date	Sample Location Description	Field Parameters					
				Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
Surface Water - Wetlands Northeast of Railroad									
WT-A-01	SW-009-WT	9/3/2003	WT-A, shore near PZ-10	18.4	270	6.74	44.4	2.47	3.3
WT-A-02	SW-058-WT	9/1/2004	WT-A, middle, deepest part	25.7	254	6.64	-341.1	5.21	2.1
WT-B-01	SW-010-WT	9/3/2003	WT-B, NE shore, downstream of Panda culvert	16.9	300	6.47	133.6	3.82	7.8
WT-B-06	SW-053-WT	9/9/2004	WT-B, on northeast shore below Panda Culvert	21.6	96	7.60	259.8	6.45	8.4
---	NS	5/7/2002	Wetlands across RR from MW-108	18.3	262	---	---	---	---
WT-B-02	SW-011-WT	9/3/2003	WT-B, mid-pond, southeast end	19.1	194	7.15	292.3	9.64	5.1
WT-B-03	SW-013-WT	9/4/2003	WT-B, southwest shore along RR, near PZ-11	20.2	218	6.80	140.8	5.80	6.7
WT-B-04	SW-057-WT	9/2/2004	WT-B, off-shore, middle	23.9	262	6.46	-308.3	4.55	3.6
WT-B-07	SW-060-WT	9/2/2004	WT-B, northeast shore	17.9	257	6.52	-331.3	2.80	16
WT-B-05	SW-061-WT	9/1/2004	WT-B, off-shore, west of MW-EA-1	30.1	249	7.23	-315.9	8.30	3.3
WT-C-01	SW-012-WT	9/3/2003	WT-C, mid-pond, northeast area, west of MW-EA-1	19.6	272	6.67	59.9	6.60	4.8
WT-C-02	SW-014-WT	9/4/2003	WT-C, north shore near PZ-13	18.3	293	7.09	54.4	7.65	63
WT-C-04	SW-017-WT	9/5/2003	WT-C, southwest shore along RR, near PZ-12	19.0	359	5.70	201.5	5.52	9.9
WT-C-06	SW-062-WT	9/1/2004	WT-C, mid-pond, northeast area	20.2	251	7.15	31.4	6.52	5.8
---	NS	5/8/2002	WT-C, Monastery Brook upstream of wetlands	17.9	226	---	---	---	---
WT-C-03	SW-015-WT	9/4/2003	WT-C, Monastery Brook just downstream of road	17.3	187	7.31	213.8	8.92	1.9
WT-C-08	SW-059-WT	9/1/2004	Mouth of Monastery Brook downstream of road	18.7	219	7.71	80.9	8.77	4.1
---	NS	9/29/2004	Unnamed brook just upstream of PZ-13	16.0	329	7.63	118.8	9.79	---
---	NS	5/7/2002	WT-D outlet at culvert HW-01 just above RR	18.2	468	---	---	---	---
---	NS	9/29/2004	WT-D outlet at culvert HW-01 just above RR	14.8	390	7.48	125.2	9.64	---
WT-D-01	SW-016-WT	9/4/2003	WT-D, north end near PZ-15	18.5	468	6.81	117.5	7.80	8.4
WT-D-02	SW-052-WT	9/1/2004	Ditch draining S&G pit, north of WT-D	19.6	631	7.66	199.2	6.61	17

Notes:

Temperature and specific conductance in May 2002 measured with a Solinst Reelogger mutiparameter data logging system

Temperature, specific conductance, pH, ORP/Eh and dissolved oxygen in August-October 2003 measured with a YSI 6820/650 or 600XL/650 multiparameter sonde and datalogger

Turbidity in August-October 2003 measured with a LaMotte 2020 turbidity meter

--- Information not available (no reading taken).

NS No surface water sample collected for laboratory analysis.

Values in shaded/stippled cells should be disregarded (instrument malfunction).

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
MW-106A	NS	05/06/02	17:25	---	---	---	---	11.8	273	---	---	---	---
MW-106A	GW-009-DF	10/01/03	11:35	75	0.01	240*	---	16.97	491	6.06	194.1	0.58	0.33
MW-106A	GW-009-DF	10/01/03	11:40	80	0.01	---	---	16.97	491	6.05	194.8	0.59	0.10
MW-106A	GW-009-DF	10/01/03	11:45	85	0.01	---	20.0	16.99	491	6.06	195.1	0.54	0.07
MW-106A	GW-074-DF	09/30/04	9:35	60	0.02	190	---	14.98	516	6.19	90.5	0.27	1.45
MW-106A	GW-074-DF	09/30/04	9:40	65	0.03	190	12.0	14.82	514	6.17	85.0	0.26	1.45
MW-106A	GW-074-DF	09/30/04	9:45	70	0.03	190	13.0	14.83	515	6.18	82.4	0.25	1.38
MW-106B	GW-078-DF	09/28/04	8:55	55	0.00	235	---	13.27	582	6.30	273.5	0.67	2.32
MW-106B	GW-078-DF	09/28/04	9:00	60	0.02	235	16.0	13.26	581	6.31	278.2	0.73	0.30
MW-106B	GW-078-DF	09/28/04	9:05	65	0.02	235	17.2	13.25	580	6.31	281.0	0.73	0.22
MW-106C	GW-077-DF	09/28/04	11:15	50	-0.02	155	8.0	14.36	689	6.40	276.9	2.28	0.87
MW-106C	GW-077-DF	09/28/04	11:20	55	-0.02	145	---	14.36	691	6.39	277.6	2.24	0.31
MW-106C	GW-077-DF	09/28/04	11:25	60	---	145	10.0	14.35	692	6.39	280.9	2.43	0.15
MW-108AA	NS	05/07/02	12:30	---	---	---	---	12.3	297	---	---	---	---
MW-108AA	GW-011-LF	10/01/03	19:05	35	0.00	280*	---	19.82	330	6.06	9.3	0.53	0
MW-108AA	GW-011-LF	10/01/03	19:10	40	0.00	---	---	19.80	331	6.06	5.9	0.52	0
MW-108AA	GW-011-LF	10/01/03	19:15	45	0.00	---	19.0	19.79	330	6.06	1.7	0.49	0
MW-108A	NS	05/07/02	12:20	---	---	---	---	9.9	326	---	---	---	---
MW-108A	GW-010-LF	10/01/03	16:35	40	0.04	250*	---	16.76	260	6.13	-49.9	0.33	3.95
MW-108A	GW-010-LF	10/01/03	16:40	45	0.04	---	---	16.74	260	6.13	-51.3	0.32	4.61
MW-108A	GW-010-LF	10/01/03	16:45	50	0.04	---	19.0	16.71	260	6.13	-53.0	0.31	3.81
MW-108A	GW-046-LF	09/22/04	9:25	51	0.04	270	13.4	14.79	288	5.76	-269.5	1.14	0.75
MW-108A	GW-046-LF	09/22/04	9:30	56	0.04	270	14.8	14.79	288	5.77	-276.9	1.14	1.4
MW-108A	GW-046-LF	09/22/04	9:35	61	0.04	270	16.1	14.83	289	5.78	-270.4	1.14	1.3

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
MW-108B	NS	05/07/02	12:00	---	---	---	---	11.1	262	---	---	---	---
MW-108B	GW-043-LF	09/21/04	14:19	67	0.04	113	6.0	17.02	321	5.95	-301.7	3.19	1.6
MW-108B	GW-043-LF	09/21/04	14:24	72	0.04	95	6.5	16.87	321	5.95	-300.9	3.08	1.1
MW-108B	GW-043-LF	09/21/04	14:29	77	0.04	95	7.0	16.87	321	5.95	-301.2	2.95	0.95
MW-108C	NS	05/07/02	11:30	---	---	---	---	11.2	438	---	---	---	---
MW-108C	GW-058-LF	09/22/04	16:55	55	0.06	---	---	13.50	452	6.91	374.6	1.76	0.98
MW-108C	GW-058-LF	09/22/04	17:00	60	0.06	255	14.0	13.44	453	6.92	373.2	1.74	1.2
MW-108C	GW-058-LF	09/22/04	17:05	65	0.06	250	16.0	13.39	452	6.90	377.8	1.72	1.7
MW-109AA	NS	05/06/02	12:00	---	---	---	---	12.0	283	---	---	---	---
MW-109AA	GW-003-LF	09/30/03	9:50	35	0.01	---	---	20.68	256	6.11	-28.0	0.44	0
MW-109AA	GW-003-LF	09/30/03	9:55	40	0.02	220	---	20.77	256	6.11	-30.7	0.42	0
MW-109AA	GW-003-LF	09/30/03	10:00	45	0.02	---	10.0	20.72	256	6.11	-32.5	0.42	0
MW-109AA	GW-048-LF	09/23/04	13:00	55	0.04	300	16.2	21.38	254	6.07	-49.4	0.32	0.4
MW-109AA	GW-048-LF	09/23/04	13:05	60	0.04	300	17.7	21.36	255	6.06	-50.3	0.31	0
MW-109AA	GW-048-LF	09/23/04	13:10	65	0.04	300	19.2	21.34	254	6.05	-51.6	0.31	0.2
MW-109A	NS	05/06/02	13:00	---	---	---	---	12.4	303	---	---	---	---
MW-109A	GW-001-LF	09/29/03	17:47	118	0.19	---	---	15.48	296	6.98	-123.5	4.76	4.2
MW-109A	GW-001-LF	09/29/03	17:52	123	0.19	150	---	15.41	296	6.99	-125.0	4.23	3.9
MW-109A	GW-001-LF	09/29/03	17:57	128	0.19	150	17.6	15.37	296	6.99	-128.8	4.06	3.6
MW-109A	GW-047-LF	09/23/04	16:55	110	0.14	280	26.3	15.86	311	6.73	-112.3	0.21	12
MW-109A	GW-047-LF	09/23/04	17:00	115	0.15	280	27.7	15.76	312	6.75	-115.1	0.21	12
MW-109A	GW-047-LF	09/23/04	17:05	120	0.15	280	29.1	15.71	312	6.75	-114.7	0.21	11

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
MW-109B	NS	05/06/02	13:30	---	---	---	---	12.1	347	---	---	---	---
MW-109B	GW-042-LF	09/21/04	12:55	85	0.08	---	---	15.50	341	6.45	375.9	0.49	0.79
MW-109B	GW-042-LF	09/21/04	13:00	90	0.08	---	16.5	15.47	339	6.44	381.5	0.47	0.74
MW-109B	GW-042-LF	09/21/04	13:05	95	0.08	300	20.0	15.58	341	6.46	382.3	0.46	0.68
MW-109C	NS	05/06/02	14:00	---	---	---	---	12.0	239	---	---	---	---
MW-109C	GW-041-LF	09/21/04	17:50	80	1.69	---	---	15.77	238	7.85	-155.6	0.47	0
MW-109C	GW-041-LF	09/21/04	17:55	85	1.69	---	---	15.78	238	7.88	-157.6	0.47	0
MW-109C	GW-041-LF	09/21/04	18:00	90	1.69	195	17.0	15.79	238	7.90	-162.4	0.46	0
MW-110A	NS	05/07/02	14:30	---	---	---	---	11.1	394	---	---	---	---
MW-110A	GW-004-WT	09/30/03	13:05	50	0.03	300*	---	14.15	412	5.96	187.4	4.15	0.03
MW-110A	GW-004-WT	09/30/03	13:10	55	0.03	---	---	14.30	413	5.96	185.9	4.64	0
MW-110A	GW-004-WT	09/30/03	13:15	60	0.03	---	20.0	14.18	413	5.96	187.1	4.23	0
MW-110A	GW-045-WT	09/22/04	14:30	25	0.01	330	9.8	15.00	426	5.70	-306.0	5.35	0.70
MW-110A	GW-045-WT	09/22/04	14:35	30	0.01	330	11.4	15.03	425	5.70	-304.5	5.15	0.55
MW-110A	GW-045-WT	09/22/04	14:40	35	0.01	330	13.1	15.04	424	5.70	-301.4	5.19	0.55
MW-110B	NS	05/07/02	14:10	---	---	---	---	12.2	515	---	---	---	---
MW-110B	GW-005-WT	09/30/03	15:55	45	0.02	270	---	14.19	457	6.22	185.1	2.26	1.80
MW-110B	GW-005-WT	09/30/03	16:00	50	0.02	---	---	14.15	458	6.22	186.4	2.27	1.90
MW-110B	GW-005-WT	09/30/03	16:05	55	0.02	---	15.0	14.04	456	6.22	187.3	2.27	1.83
MW-110B	GW-044-WT	09/22/04	18:15	107	0.02	320	19.0	13.29	493	6.17	275.8	4.16	0.75
MW-110B	GW-044-WT	09/22/04	18:20	112	0.02	320	20.6	13.23	494	6.18	281.9	4.08	0.88
MW-110B	GW-044-WT	09/22/04	18:25	117	0.02	320	21.2	13.19	494	6.18	285.6	4.03	0.65

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
MW-110C	NS	05/07/02	13:50	---	---	---	---	12.0	677	---	---	---	---
MW-110C	GW-053-WT	09/23/04	11:40	160	0.09	90	---	17.05	498	4.91	560.3	2.08	0.29
MW-110C	GW-053-WT	09/23/04	11:45	165	0.08	105	---	17.18	495	4.87	565.7	2.07	0.26
MW-110C	GW-053-WT	09/23/04	11:50	170	0.09	---	16.6	16.99	496	4.86	569.3	2.06	0.17
MW-111AA	NS	05/07/02	16:15	---	---	---	---	11.2	342	---	---	---	---
MW-111AA	GW-015-WT	10/02/03	9:55	45	0.03	270*	---	15.08	300	5.88	179.2	0.40	0
MW-111AA	GW-015-WT	10/02/03	10:00	50	0.03	---	---	15.10	300	5.88	179.3	0.39	0
MW-111AA	GW-015-WT	10/02/03	10:05	55	0.03	---	19.0	15.10	300	5.88	179.6	0.39	0.09
MW-111AA	GW-052-WT	09/24/04	8:55	47	0.03	260	9.1	14.47	331	5.71	179.9	0.47	3.3
MW-111AA	GW-052-WT	09/24/04	9:00	52	0.03	260	10.4	14.47	331	5.72	179.7	0.47	2.8
MW-111AA	GW-052-WT	09/24/04	9:05	57	0.03	260	11.7	14.49	331	5.73	179.8	0.47	2.1
MW-111A	NS	05/07/02	15:50	---	---	---	---	12.2	479	---	---	---	---
MW-111A	GW-016-WT	10/02/03	13:10	80	0.00	---	---	13.54	411	6.20	194.5	1.30	3.3
MW-111A	GW-016-WT	10/02/03	13:15	85	0.00	250	---	13.41	410	6.20	196.4	1.27	3.3
MW-111A	GW-016-WT	10/02/03	13:20	90	0.00	---	25.0	13.57	410	6.20	194.3	1.26	3.5
MW-111A	GW-051-WT	09/24/04	11:55	69	0.01	300	18.6	13.25	476	6.12	119.1	1.07	3.2
MW-111A	GW-051-WT	09/24/04	12:00	74	0.01	300	20.1	13.26	476	6.11	119.2	1.03	3.2
MW-111A	GW-051-WT	09/24/04	12:05	79	0.01	300	21.6	13.22	476	6.11	120.1	0.99	2.8
MW-111B	NS	05/07/02	15:30	---	---	---	---	12.1	437	---	---	---	---
MW-111B	GW-050-WT	09/24/04	14:58	39	0.00	290	9.5	14.05	405	6.37	84.6	2.31	65
MW-111B	GW-050-WT	09/24/04	15:03	44	0.00	290	11.0	14.11	405	6.36	84.4	2.29	65
MW-111B	GW-050-WT	09/24/04	15:08	49	0.00	290	12.4	14.08	407	6.36	84.8	2.29	65

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
MW-111C	NS	05/07/02	15:10	---	---	---	---	11.9	446	---	---	---	---
MW-111C	GW-057-WT	09/20/04	15:27	50	0.15	---	---	13.64	501	5.94	-262.5	5.89	2.7
MW-111C	GW-057-WT	09/20/04	15:32	55	0.15	290	16.0	13.63	502	5.95	-261.8	5.91	4.3
MW-111C	GW-057-WT	09/20/04	15:37	60	0.15	---	18.0	13.77	502	5.94	-262.7	5.75	4.8
MW-112AA	NS	05/07/02	17:35	---	---	---	---	12.3	234	---	---	---	---
MW-112AA	GW-020-NP	10/03/03	9:30	35	0.00	310*	10.5	19.12	312	6.40	31.3	0.33	0.42
MW-112AA	GW-020-NP	10/03/03	9:35	40	0.00	---	12.0	19.12	311	6.34	30.0	0.33	0
MW-112AA	GW-020-NP	10/03/03	9:40	45	0.00	---	13.5	19.09	311	6.40	30.2	0.30	0.10
MW-112AA	GW-056-NP	09/27/04	9:10	35	0.03	320	7.2	16.05	343	6.10	6.9	0.25	4.6
MW-112AA	GW-056-NP	09/27/04	9:15	40	0.03	320	8.8	16.02	342	6.11	3.6	0.23	2.6
MW-112AA	GW-056-NP	09/27/04	9:20	45	0.03	320	10.4	16.01	342	6.11	1.5	0.24	2.9
MW-112A	NS	05/07/02	17:20	---	---	---	---	12.1	632	---	---	---	---
MW-112A	GW-019-NP	10/02/03	17:15	55	0.01	240*	---	13.07	886	6.05	223.1	0.67	3.8
MW-112A	GW-019-NP	10/02/03	17:20	60	0.01	---	---	13.00	884	6.05	224.9	0.67	3.9
MW-112A	GW-019-NP	10/02/03	17:25	65	0.01	---	19.0	12.94	884	6.05	225.9	0.62	3.7
MW-112A	GW-055-NP	09/27/04	12:55	77	0.02	265	20.2	13.24	704	6.12	80.9	0.28	4.6
MW-112A	GW-055-NP	09/27/04	13:00	82	0.02	265	21.5	13.32	704	6.14	78.7	0.28	3.1
MW-112A	GW-055-NP	09/27/04	13:05	87	0.02	265	22.8	13.32	704	6.13	78.3	0.28	3.7
MW-112B	NS	05/07/02	17:05	---	---	---	---	11.4	655	---	---	---	---
MW-112B	GW-054-NP	09/27/04	16:10	72	0.19	120	6.8	15.39	1773	5.99	99.9	0.60	6.7
MW-112B	GW-054-NP	09/27/04	16:15	77	0.19	120	7.4	15.37	1770	5.99	100.2	0.59	6.6
MW-112B	GW-054-NP	09/27/04	16:20	82	0.18	120	8.0	15.54	1765	5.98	101.8	0.60	6.1

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
MW-112C	NS	05/07/02	16:50	---	---	---	---	11.3	654	---	---	---	---
MW-112C	GW-049-NP	09/22/04	11:05	75	0.05	255	---	12.51	487	6.48	380.1	0.94	0.57
MW-112C	GW-049-NP	09/22/04	11:10	80	0.05	260	---	12.57	488	6.45	384.7	0.93	0.65
MW-112C	GW-049-NP	09/22/04	11:15	85	0.05	265	18.0	12.56	488	6.43	387.8	1.05	0.54
MW-A2	NS	05/07/02	9:00	---	---	---	---	8.7	343	---	---	---	---
MW-A2	GW-012-QW	10/01/03	11:25	20	0.00	80	1.6	14.22	374	5.46	249.1	3.31	0.52
MW-A2	GW-012-QW	10/01/03	11:30	25	0.00	80	2.0	14.29	380	5.50	245.0	3.20	0.56
MW-A2	GW-012-QW	10/01/03	11:35	30	0.00	80	2.4	14.41	382	5.52	246.5	3.15	0.43
MW-A2	GW-080-QW	09/30/04	13:15	35	0.00	145	---	14.53	392	5.90	103.4	3.61	2.19
MW-A2	GW-080-QW	09/30/04	13:20	40	0.01	145	4.0	14.59	392	5.99	101.5	3.51	2.23
MW-A2	GW-080-QW	09/30/04	13:25	45	0.00	---	5.0	14.56	392	5.99	98.9	3.65	2.21
MW-B1	NS	05/06/02	15:30	---	---	---	---	12.4	475	---	---	---	---
MW-B1	GW-008-LF	10/01/03	18:20	45	0.06	76	---	14.26	619	6.31	264.8	1.94	2.08
MW-B1	GW-008-LF	10/01/03	18:25	50	0.07	---	---	14.19	618	6.31	265.1	1.87	2.04
MW-B1	GW-008-LF	10/01/03	18:30	55	0.07	75	4.0	14.16	618	6.30	266.2	1.92	2.24
MW-B1	GW-065-LF	09/24/04	11:25	120	0.82	60	---	15.64	546	6.37	231.5	4.76	119
MW-B1	GW-065-LF	09/24/04	11:30	125	0.82	---	---	15.63	546	6.36	236.0	4.72	114
MW-B1	GW-065-LF	09/24/04	11:35	130	0.83	70	11.0	15.75	546	6.35	241.1	4.65	113
MW-B2	NS	05/06/02	15:40	---	---	---	---	13.6	924	---	---	---	---
MW-B2	GW-002-LF	09/29/03	17:24	41	0.00	110	---	15.54	1,365	6.76	-84.0	0.66	0.60
MW-B2	GW-002-LF	09/29/03	17:30	47	0.00	120	5.0	15.48	1,369	6.75	-86.1	0.62	0.55
MW-B2	GW-002-LF	09/29/03	17:36	53	0.00	---	6.0	15.45	1,370	6.77	-89.4	0.61	0.65
MW-B2	GW-066-LF	09/27/04	9:35	90	0.00	120	---	14.69	838	6.76	-86.3	0.60	0.13
MW-B2	GW-066-LF	09/27/04	9:40	95	0.00	---	---	14.71	837	6.75	-86.2	0.59	0.04
MW-B2	GW-066-LF	09/27/04	9:45	100	0.00	120	13.0	14.73	836	6.76	-86.2	0.64	0.13

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
MW-C1	NS	05/06/02	14:50	---	---	---	---	12.2	273	---	---	---	---
MW-C1	GW-007-LF	09/30/03	19:35	125	---	---	---	12.03	304	6.44	-19.0	0.37	23.2
MW-C1	GW-007-LF	09/30/03	19:39	129	---	---	---	12.01	304	6.44	-18.1	0.36	22.0
MW-C1	GW-007-LF	09/30/03	19:44	134	0.11	130	17.0	12.01	304	6.47	-18.2	0.35	21.6
MW-C1	GW-070-LF	09/28/04	16:35	90	-0.01	125	---	14.70	288	6.00	-5.9	0.29	23.6
MW-C1	GW-070-LF	09/28/04	16:40	95	0.01	125	---	14.71	288	6.01	-7.1	0.27	23.6
MW-C1	GW-070-LF	09/28/04	16:45	100	0.00	---	10.0	14.71	288	6.01	-6.4	0.28	21.2
MW-C2	NS	05/06/02	15:10	---	---	---	---	12.9	483	---	---	---	---
MW-C2	GW-006-LF	09/30/03	12:02	33	---	102	4.0	16.44	833	6.01	-52.1	0.67	0.98
MW-C2	GW-006-LF	09/30/03	12:06	37	0.02	102	---	16.34	842	6.04	-53.6	0.70	1.03
MW-C2	GW-006-LF	09/30/03	12:11	42	0.02	---	5.0	16.44	850	6.01	-59.3	0.70	1.02
MW-C2	GW-071-LF	09/27/04	13:35	20	0.01	130	---	16.41	663	6.11	-55.1	0.72	2.4
MW-C2	GW-071-LF	09/27/04	13:40	25	0.01	---	---	16.35	670	6.11	-55.4	0.72	2.1
MW-C2	GW-071-LF	09/27/04	13:45	30	0.01	125	4.0	16.27	673	6.12	-56.0	0.66	1.7
P-7	NS	05/06/02	17:00	---	---	---	---	11.6	464	---	---	---	---
P-7	GW-014-LF	10/02/03	14:20	50	0.00	310	12.4	12.37	550	5.78	85.9	0.44	0
P-7	GW-014-LF	10/02/03	14:25	55	0.00	---	15.0	12.24	552	5.78	81.7	0.42	0.15
P-7	GW-014-LF	10/02/03	14:30	60	0.00	---	16.6	12.43	552	5.80	80.4	0.41	0
P-7	GW-059-LF	09/28/04	9:20	60	0.02	250	7.0	12.64	490	6.17	44.7	0.37	1.1
P-7	GW-059-LF	09/28/04	9:25	65	0.02	250	8.3	12.66	491	6.16	42.9	0.36	1.1
P-7	GW-059-LF	09/28/04	9:30	70	0.02	250	9.5	12.66	492	6.17	40.1	0.37	0.65

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
P-8	NS	05/06/02	15:55	---	---	---	---	14.3	1,296	---	---	---	---
P-8	GW-018-LF	10/02/03	10:45	45	0.00	---	11.7	14.92	1,196	6.52	-69.9	0.70	1.3
P-8	GW-018-LF	10/02/03	10:50	50	0.00	248	13.0	14.94	1,197	6.50	-69.4	0.68	1.7
P-8	GW-018-LF	10/02/03	10:55	55	0.00	---	14.3	14.95	1,197	6.54	-72.1	0.66	1.2
P-8	GW-063-LF	09/30/04	16:35	43	0.07	310	11.9	14.76	916	6.41	-72.2	0.38	3.0
P-8	GW-063-LF	09/30/04	16:40	48	0.08	310	13.5	14.76	916	6.41	-73.7	0.37	2.8
P-8	GW-063-LF	09/30/04	16:45	53	0.09	310	15.0	14.75	916	6.41	-74.8	0.38	3.0
GZ-4-1	GW-013-QW	10/01/03	14:45	30	0.00	360	8.1	14.09	347	5.43	278.2	3.15	0
GZ-4-1	GW-013-QW	10/01/03	14:50	35	0.00	360	10.0	14.07	347	5.47	280.4	3.15	0.03
GZ-4-1	GW-013-QW	10/01/03	14:55	40	0.00	360	11.8	14.07	347	5.48	283.3	3.14	0
GZ-4-1	GW-079-QW	09/30/04	16:15	68	0.11	---	---	14.03	326	6.66	104.0	3.49	2.3
GZ-4-1	GW-079-QW	09/30/04	16:20	73	0.11	315	---	13.98	326	6.57	103.2	3.42	2.2
GZ-4-1	GW-079-QW	09/30/04	16:25	78	0.11	315	20.0	14.00	326	6.66	104.4	3.49	1.7
SEA-601	GW-017-LF	10/02/03	17:35	50	0.01	325	16.1	11.72	472	6.46	-9.4	0.65	3.1
SEA-601	GW-017-LF	10/02/03	17:40	55	0.01	---	17.8	11.70	472	6.41	-11.9	0.64	3.1
SEA-601	GW-017-LF	10/02/03	17:45	60	0.01	---	19.5	11.66	472	6.45	-13.7	0.68	3.3
SEA-601	GW-060-LF	09/28/04	11:52	50	-0.09	280	10.3	12.59	527	6.12	-25.6	0.27	2.1
SEA-601	GW-060-LF	09/28/04	11:57	55	-0.11	280	11.7	12.71	529	6.12	-28.4	0.27	2.4
SEA-601	GW-060-LF	09/28/04	12:02	60	-0.13	280	13.1	12.48	531	6.12	-30.5	0.28	2.2
SEA-602A	GW-022-LF	10/03/03	14:10	65	0.00	300*	---	14.86	540	6.53	-95.4	0.67	4.5
SEA-602A	GW-022-LF	10/03/03	14:15	70	0.01	---	---	14.81	538	6.53	-95.9	0.67	4.3
SEA-602A	GW-022-LF	10/03/03	14:20	75	---	---	22.5	14.89	543	6.52	-96.2	0.58	4.5
SEA-602A	GW-062-LF	09/28/04	15:31	56	-0.03	340	17.3	14.25	531	6.40	-60.4	0.43	28
SEA-602A	GW-062-LF	09/28/04	15:36	61	-0.04	340	19.0	14.24	533	6.40	-60.6	0.43	27
SEA-602A	GW-062-LF	09/28/04	15:41	66	-0.05	340	20.7	14.22	530	6.40	-61.6	0.43	26

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
SEA-602B	GW-023-LF	10/03/03	17:42	62	---	---	---	12.74	421	6.47	-80.2	0.44	7.0
SEA-602B	GW-023-LF	10/03/03	17:45	65	0.01	---	24.0	12.74	421	6.47	-81.2	0.43	7.1
SEA-602B	GW-023-LF	10/03/03	17:48	68	---	---	---	12.72	421	6.48	-81.7	0.41	6.8
SEA-602B	GW-023-LF	10/03/03	17:50	70	---	260	26.0	12.72	421	6.48	-81.7	0.40	---
SEA-602B	GW-061-LF	10/01/04	12:10	65	0.02	280	14.7	13.60	422	6.40	-44.4	0.45	9.3
SEA-602B	GW-061-LF	10/01/04	12:15	70	0.03	280	16.1	13.75	422	6.39	-44.4	0.45	8.8
SEA-602B	GW-061-LF	10/01/04	12:20	75	0.03	280	17.5	13.78	421	6.39	-44.5	0.45	8.9
SEA-603	GW-021-LF	10/03/03	9:40	70	0.00	250	---	14.90	1500	6.28	-79.7	1.48	2.4
SEA-603	GW-021-LF	10/03/03	9:45	75	0.00	---	---	14.78	1501	6.28	-81.2	1.38	2.5
SEA-603	GW-021-LF	10/03/03	9:50	80	0.00	---	28.0	14.83	1499	6.28	-82.2	1.41	2.3
SEA-603	GW-064-LF	10/01/04	9:25	36	0.00	330	9.2	15.55	1396	6.23	-67.1	0.34	4.3
SEA-603	GW-064-LF	10/01/04	9:30	41	0.00	330	10.9	15.55	1398	6.24	-68.3	0.33	4.2
SEA-603	GW-064-LF	10/01/04	9:35	46	0.01	330	12.5	15.56	1397	6.24	-68.8	0.32	4.8
SEA-604	GW-027-LF	10/04/03	13:00	100	-0.02	---	---	13.50	1072	6.58	-102.0	5.04	4.2
SEA-604	GW-027-LF	10/04/03	13:03	103	0.02	270	---	13.51	1063	6.58	-102.8	4.79	4.4
SEA-604	GW-027-LF	10/04/03	13:07	107	---	---	38.0	13.52	1059	6.58	-103.2	4.74	4.1
SEA-604	GW-067-LF	09/30/04	9:25	76	0.01	310	23.4	13.40	793	6.58	-83.3	0.40	5.9
SEA-604	GW-067-LF	09/30/04	9:30	81	0.01	310	25.0	13.42	795	6.58	-83.1	0.40	5.8
SEA-604	GW-067-LF	09/30/04	9:35	86	0.01	310	26.5	13.42	797	6.58	-83.0	0.40	5.9
SEA-605	GW-028-LF	10/04/03	11:15	85	0.00	310*	26.1	11.05	469	6.40	-27.6	0.43	3.7
SEA-605	GW-028-LF	10/04/03	11:20	90	0.00	---	27.7	11.04	468	6.43	-28.8	0.44	3.2
SEA-605	GW-028-LF	10/04/03	11:25	95	0.00	---	29.3	11.05	470	6.43	-28.6	0.45	2.8
SEA-605	GW-068-LF	09/30/04	11:15	30	0.01	270	6.2	15.29	436	6.20	-34.7	0.65	3.0
SEA-605	GW-068-LF	09/30/04	11:20	35	0.01	270	7.5	15.27	436	6.19	-36.0	0.60	2.5
SEA-605	GW-068-LF	09/30/04	11:25	40	0.02	270	8.9	15.43	434	6.19	-37.4	0.60	2.6

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
SEA-606	GW-024-NP	10/04/03	14:25	55	0.01	275*	16.0	13.22	784	6.44	-35.5	0.53	2.2
SEA-606	GW-024-NP	10/04/03	14:30	60	0.01	---	17.5	13.24	785	6.43	-34.2	0.51	2.3
SEA-606	GW-024-NP	10/04/03	14:35	65	0.01	---	19.0	13.19	783	6.44	-34.0	0.49	2.1
SEA-606	GW-069-NP	09/30/04	14:05	30	-0.02	300	7.1	13.07	690	6.34	-45.0	0.43	2.0
SEA-606	GW-069-NP	09/30/04	14:10	35	-0.01	300	8.6	13.09	690	6.32	-46.4	0.42	1.9
SEA-606	GW-069-NP	09/30/04	14:15	40	-0.01	300	10.1	13.01	691	6.31	-47.6	0.42	1.8
SEA-607	GW-025-UI	10/03/03	13:45	75	0.01	307*	23.2	13.21	403	6.68	7.7	0.41	4.0
SEA-607	GW-025-UI	10/03/03	13:50	80	0.01	---	24.7	13.18	401	6.69	7.2	0.46	3.5
SEA-607	GW-025-UI	10/03/03	13:55	85	0.01	---	26.2	13.16	399	6.70	7.8	0.41	3.2
SEA-607	GW-072-UI	10/01/04	15:10	54	0.01	330	13.8	12.22	319	6.47	-12.9	0.30	5.8
SEA-607	GW-072-UI	10/01/04	15:15	59	0.01	330	15.4	12.20	319	6.47	-14.4	0.30	5.5
SEA-607	GW-072-UI	10/01/04	15:20	64	0.01	330	17.1	12.28	320	6.49	-15.9	0.29	5.6
SEA-608	GW-026-UI	10/03/03	17:25	100	0.00	295*	30.5	13.31	709	6.37	-28.5	0.28	2.9
SEA-608	GW-026-UI	10/03/03	17:30	105	0.00	---	32.2	13.29	706	6.38	-30.0	0.27	2.5
SEA-608	GW-026-UI	10/03/03	17:35	110	0.00	---	33.8	13.28	705	6.38	-31.1	0.26	2.3
SEA-608	GW-073-UI	10/01/04	17:20	48	0.03	290	12.9	13.13	483	6.18	-39.2	0.34	10
SEA-608	GW-073-UI	10/01/04	17:25	53	0.03	290	14.3	13.11	483	6.18	-40.3	0.37	9.9
SEA-608	GW-073-UI	10/01/04	17:30	58	0.04	290	15.8	13.10	484	6.18	-41.2	0.36	9.1
MW-EA-1	GW-075-WT	10/01/04	17:00	50	0.00	190	---	13.24	602	5.85	245.6	7.65	1.4
MW-EA-1	GW-075-WT	10/01/04	17:05	55	0.00	180	---	13.20	600	5.85	250.0	7.76	1.4
MW-EA-1	GW-075-WT	10/01/04	17:10	60	0.00	185	12.0	13.23	602	5.89	252.9	7.60	1.5

Table D5-3
Field Analytical Parameters in Ground Water, 2002 - 2004
Peterson/Puritan OU2, Cumberland, Rhode Island

Well Number	Field Sample ID	Date	Time	Purge Time (mins)	Draw-down (ft)	Pump-ing Rate (mL/min)	Cumulative Volume Purged (L)	Field Parameters					
								Tempe-rature (°C)	Specific Conduct-ance (µS/cm)	pH (S.U.)	ORP/Eh (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
								3%	3%	±0.1 S.U.	±10 mv	10%	10%
MW-EA-3	GW-076-WT	10/01/04	9:55	60	4.91	60	---	16.34	798	6.66	366.1	3.66	1.6
MW-EA-3	GW-076-WT	10/01/04	10:00	65	5.20	60	---	16.41	799	6.67	363.4	3.96	1.7
MW-EA-3	GW-076-WT	10/01/04	10:05	70	5.44	---	5.0	16.44	803	6.63	367.4	3.71	1.8

Notes:

Temperature and specific conductance in May 2002 measured with a Solinst Reelogger mutiparameter data logging system under static conditions.
Temperature, specific conductance, pH, ORP/Eh and dissolved oxygen in Aug-Oct 2003 and Sep-Oct 2004 measured with a YSI 6820/650 or 600XL/650 multiparameter sonde and datalogger. Turbidity in August-October 2003 measured with a LaMotte 2020 turbidity meter. Values shown are the last three sets of readings made during low-flow purging prior to sampling.

* Indicates that pumping rate was measured previously during purging, not during the last three readings.

NS No sample collected for laboratory analysis.

--- Information not available (no reading taken).

Values in the shaded cells are the target stabilization limits for low-flow purging prior to sampling.

Values in shaded/stippled cells should be disregarded (instrument malfunction).

Appendix D

Phase 1B Geophysical Survey Report (Geophysical Applications)

Geophysical Survey
Peterson/Puritan OU2 Site
Cumberland, Rhode Island

Prepared for
BLASLAND, BOUCK & LEE, INC.
February 2006

GEOPHYSICAL
APPLICATIONS
INCORPORATED

February 23, 2006

Mr. Raymond Wagner
BLASLAND, BOUCK & LEE, INC.
6723 Towpath Road
Syracuse, NY 13214

Subject: Geophysical Survey Report
Peterson/Puritan OU2 Site
Cumberland, Rhode Island

Dear Mr. Wagner:

In accordance with your authorization, Geophysical Applications has performed a geophysical survey to help delineate a suspected bedrock valley in the vicinity of the Blackstone River.

The geophysical survey methods used were seismic refraction and microgravity profiling, as described below. A brief seismic reflection profiling test was also performed.

METHODS OF INVESTIGATION

Survey Control

All seismic refraction traverses were marked with labeled stakes, pin flags, or spray paint at each shot point. BBL hired licensed land surveyors to locate the seismic refraction traverses. A base map showing these traverses was provided by BBL.

Ground elevations between seismic refraction shot points and gravity stations were measured with an electronic theodolite. These elevations were referenced to ground surface elevations provided by BBL at wells SEA-607, SEA-608, and MW12AA.

Seismic Refraction Profiling

Refraction data were acquired along approximately 2,000 feet of traverse using an ABEM Terraloc Mark 6 seismograph with 20-foot geophone spacings. Small buried explosive charges were used as the seismic energy source. A licensed explosive-handling contractor obtained the required permits and tamped these charges in 2 to 3 foot deep shot holes driven with a steel bar and sledgehammer. Each shot consisted of a single electric blasting cap and less than one-half pound of dynamite, and was fired using a portable blaster's shot box.

Refraction seismograms were recorded using 0.25 millisecond sampling intervals, with record lengths of 256 milliseconds. Seismograms were reviewed in the field, and stored on the ABEM's internal hard drive and on floppy diskette for backup data storage.

Seismic shot points were located at the ends and at several locations along each 24-channel geophone spread. Additional offset shots were placed approximately 190 to 230 feet beyond each array endpoint, to help profile bedrock near the endpoints, where permitted by site conditions.

215 Hopping Brook Road • Holliston, MA • 01746
508 429-2430 • FAX 508 429-0488

Refraction data analysis was generally performed by measuring first-arrival times with Rimrock Geophysics' ASIPIK module followed by modeling with Rimrock Geophysics' SIPT2 delay-time interpretation software. This software uses a ray-tracing algorithm, in which calculated layer thickness beneath each geophone is varied to obtain good agreement between observed and modeled arrival times. Selected time-distance plots were reviewed and layer depths manually calculated with the crossover-distance technique as a quality assurance check.

Microgravity Profiling

Gravity prospecting is based upon the premise that subsurface density contrasts between natural or man-made structures can be detected using gravimeters at the ground surface. The earth's normal gravity acceleration is approximately 980 gals (a unit honoring the scientist Galileo).

Microgravity data collection requires careful leveling and balancing of a beam within an extremely delicate instrument. Data collection must be performed in a relatively vibration-free environment, to obtain the most reliable measurements.

We utilized the LaCoste & Romberg model G meter, with electronic-level readouts (to speed physical leveling of the instrument case) and model Aliod 100 electronic beam-nulling. This instrument is capable of approximately one microgal resolution, with ten-microgal repeatability in controlled conditions.

The operator recorded raw gravity data observations in a field notebook. The operator also recorded measurements at a reference base station at approximately one-hour intervals during the fieldwork. The purpose of these base station readings was to measure ordinary instrument and tidal drift.

During each "loop", or group of stations occupied between base station readings, one station measured during a prior loop was re-occupied. The meter was zeroed in Lancaster, MA before beginning the survey. The meter is capable of readings up to +50 or –50 milligals from the zero reference, which proved to be adequate for the actual range of data values observed during this survey.

Gravity data reduction steps included the following:

- Adjusting the data values obtained with the instruments, during multiple survey days, to a common reference to account for instrument drift and tidal drift,
- Correcting for variations caused by observation-station latitude,
- "Free-air" corrections, to account for each observation's elevation above or below the reference elevation,
- "Bouguer" corrections, to account for the effect of the earth mass between the observation and reference stations. An assumed earth density of 2.5 grams per cubic centimeter was utilized during these corrections.

Numerous geophysical textbooks (e.g. Telford, et al.) describe these corrections in detail.

Note that these microgravity measurements are all relative to the referenced base station. A survey referenced to a different location would show similar variations, but the actual numbers would be higher or lower than those reported during this survey.

Terrain corrections (to adjust for topographic variations adjacent to an observation station) were not performed during this survey. They require accurate ground elevations at numerous radial distances from each data station. This elevation requirement was well beyond the scope of this project.

Tidal and drift corrections, latitude, free-air, and Bouguer corrections were performed in an Excel spreadsheet. Corrections calculated for selected data stations were computed manually, to check the formulas utilized in each of the correction steps.

The corrected data values are presented using x-y plots, to depict gravity variations versus distance along traverse segments.

The horizontal position of a possible bedrock trough beneath the valley was the objective of this survey and would be represented by locally low gravity values. These gravity lows would be caused by lower density material (soil) within the bedrock trough, compared to higher density material (bedrock) along the valley walls.

"Tares" are gravity survey errors caused by inadvertently jarring a gravimeter (particularly if the internal measurement beam and spring are not locked). Tares can be produced by subtle impacts, e.g. scuffing an instrument's leveling leg on the edge of the base plate or transport case, when moving a meter into or out of the case. Geophysical Applications, Inc.'s field personnel performed tare checks, by re-surveying stations where an abrupt increase or decrease in data values was observed. No tares were detected.

Seismic Reflection Profiling

A brief test of the seismic reflection profiling technique was initially performed, to help determine whether it might be useful in delineating the suspected bedrock valley.

This test consisted of a "walkaway" survey, where geophones are moved out in short distance increments from a fixed shot point. In this case, geophones were placed along seismic Line 2 at 2-foot distance increments, between stations 22 through 164. Seismograms were recorded in groups of 24, i.e. initially between stations 22 through 68. The 24-channel geophone array was then moved 48 feet further from the shot point, and another seismogram recorded using the initial shot point.

Seismic energy during this survey was generated with a 16 pound sledge hammer hitting a strike plate lying on the ground. Seismograms were recorded using the ABEM Terraloc Mark 6 seismograph, with sampling intervals of one millisecond and record lengths of 1,028 milliseconds.

The resulting 24-channel seismograms were collated onto a single page using Kansas Geological Survey's WinSeis software package, for presentation in this report.

Based on the relatively low-frequency signals and lack of confident reflections identified during this initial test, the reflection technique was judged unlikely to produce superior results than the

refraction or microgravity survey methods. Consequently detailed seismic reflection profiling was not performed along Lines 1 or 2.

SURVEY LIMITATIONS

Seismic survey depth calculations are typically accurate within ± 10% (or ± 3 feet, whichever is larger) for cross sections presented in this report.

The seismic refraction method assumes that seismic velocities of subsurface layers increase with depth. If this assumption is not true, then calculated rock depths may be erroneous.

Landfill materials and organic peat contain trapped gases. These gases can absorb seismic energy, preventing that energy from reaching the bedrock surface and returning to the geophones. Therefore refracted seismic signals are not detected, and bedrock depths may not be calculated in areas where peat or landfill materials are present.

Seismic velocity values shown on the cross sections were calculated over 24-channel geophone arrays, and therefore represent averaged subsurface conditions. Localized low-velocity zones (e.g. discrete bedrock joints or fractures) occur naturally and may be present at this site.

Low microgravity anomalies can be caused by both underground and aboveground density variations. For example, low anomalies can be caused by both: a) missing earth mass beneath a gravity station, and b) a large hill adjacent to a gravity station. Gravity interpretations are therefore non-unique, and should be confirmed by other direct means (test borings, etc.).

RESULTS

Figure 1 shows seismic refraction lines and microgravity stations performed during this survey. Seismic refraction survey results are depicted in profile form on Figures 2 and 3. These profiles show calculated depths to the various layers detected as well as their compressional seismic velocity values in units of feet per second (ft/sec). Gravity Simple Bouguer data are shown in profile form on Figure 4. The seismic reflection walkaway test is shown in Figure 5. Note that only the first 300 milliseconds of the recorded signals are displayed, the time period during which rock reflectors were expected.

Line 1

Seismic Lines 1A and 1B were located southeast of the island, on top of landfill materials at a former waste transfer area. Due to the poor seismic data quality caused by the landfill conditions, only seismic Line 1A is shown in profile form; Line 1B could not be reliably interpreted. The water table and bedrock surface are dashed due to uncertainty in the depth computations.

Seismic Line 1A disclosed dry, unsaturated soil or backfill approximately 23 to 30 feet thick. The seismic velocity value calculated for this unconsolidated overburden layer is approximately 1,540 ft/sec.

Below the unsaturated soil is higher-velocity saturated overburden. This layer's calculated average seismic velocity is approximately 5,670 ft/sec. The average seismic velocity value calculated for bedrock is approximately 11,200 ft/sec.

Due to the uncertainty of the seismic refraction interpretations, a bedrock trough was not confidently identified. However, the gravity data shows low values between gravity stations 720 to 840 and a less pronounced gravity low at station 450. These lows may represent bedrock troughs, with the deepest point near gravity station 750 feet.

Line 2

Seismic Lines 2A and 2B were located on the island. These seismic lines were of the best data quality due to shallower saturated layer, and sufficient space for long offset shots to help profile bedrock. These seismic traverses disclosed dry, unsaturated soil or backfill averaging approximately 10 feet thick. The seismic velocity values calculated for this unconsolidated overburden layer range from approximately 800 to 1,140 ft/sec.

Below the unsaturated soil is higher-velocity saturated overburden. This layer's calculated seismic velocity is approximately 5,340 to 5,480 ft/sec.

The seismic velocity values calculated for bedrock range from approximately 15,000 to 17,300 ft/sec. Bedrock velocities above 13,000 ft/sec typically represent relatively competent rock (not highly weathered or fractured). Bedrock beneath these traverses is therefore likely to be competent.

A bedrock trough inferred from the Line 2B seismic data is located approximately between gravity stations 560 to 720. The gravity data indicates the deepest portion of a bedrock trough between stations 760 to 840. Both methods therefore indicate the bedrock trough is towards the northeast side of the island. The bedrock trough may be even slightly further northeast if the gravity low is north of station 840. Note that the gap in gravity measurements between stations -120 to 0 and 820 to 1020 is due to the river.

* * * * *

We appreciate this opportunity to provide geophysical services, and we welcome questions concerning this report. Please call the undersigned at 508/429-2430 if we may provide additional information that would benefit BBL project.

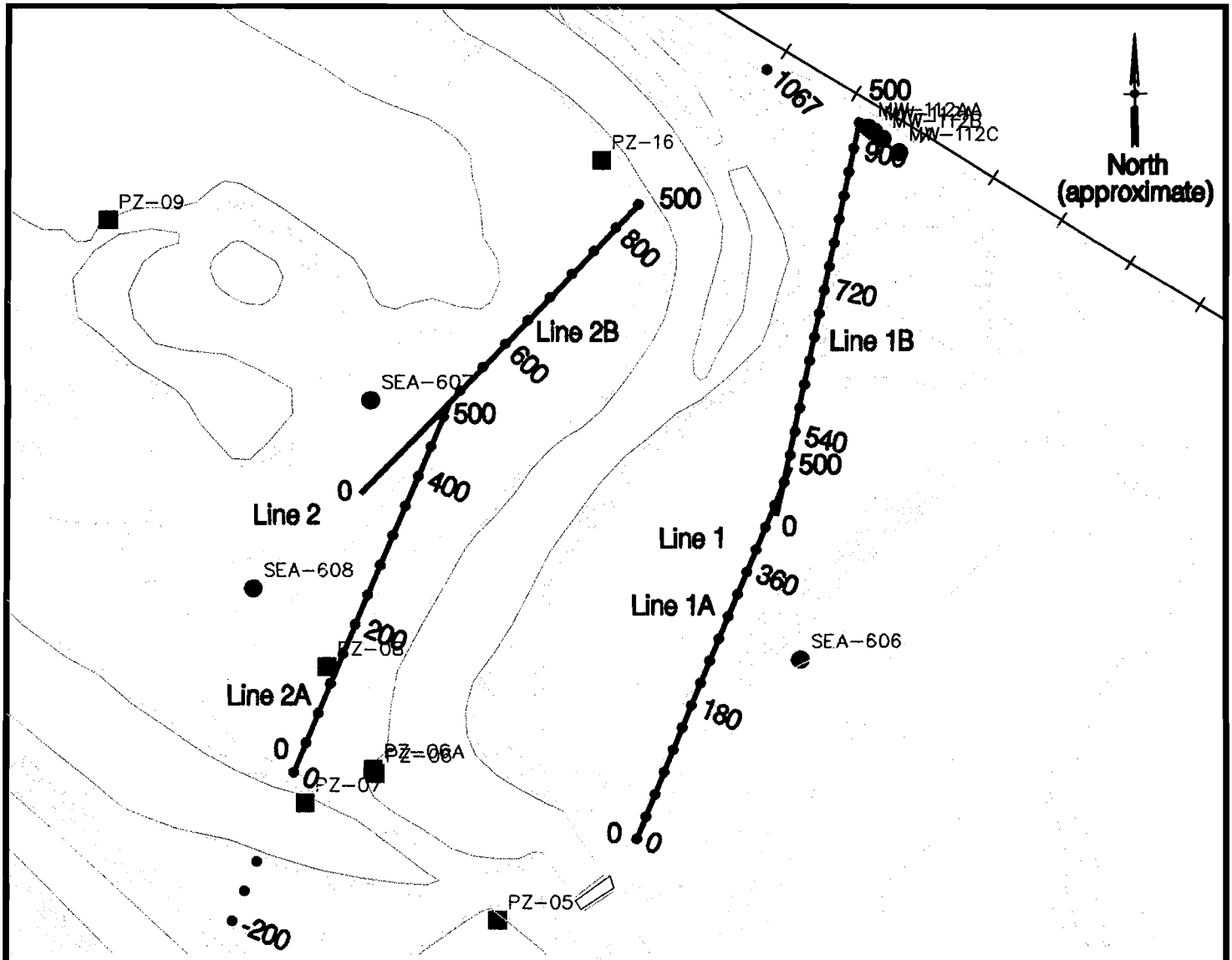
Sincerely,
GEOPHYSICAL APPLICATIONS, INC.

Peter Giger
Geophysicist

Mark E. Blackey
Principal and Geophysicist

105811

Reference: Telford, W.M. et al.; Applied Geophysics, 2nd edition; Cambridge University Press; 1990.



EXPLANATION

- 0 Line 1A — Seismic line (line designation & distance)
- 30 — Gravity station (line designation & distance)
- SEA-605 — Monitoring well
- PZ-16 — Piezometer

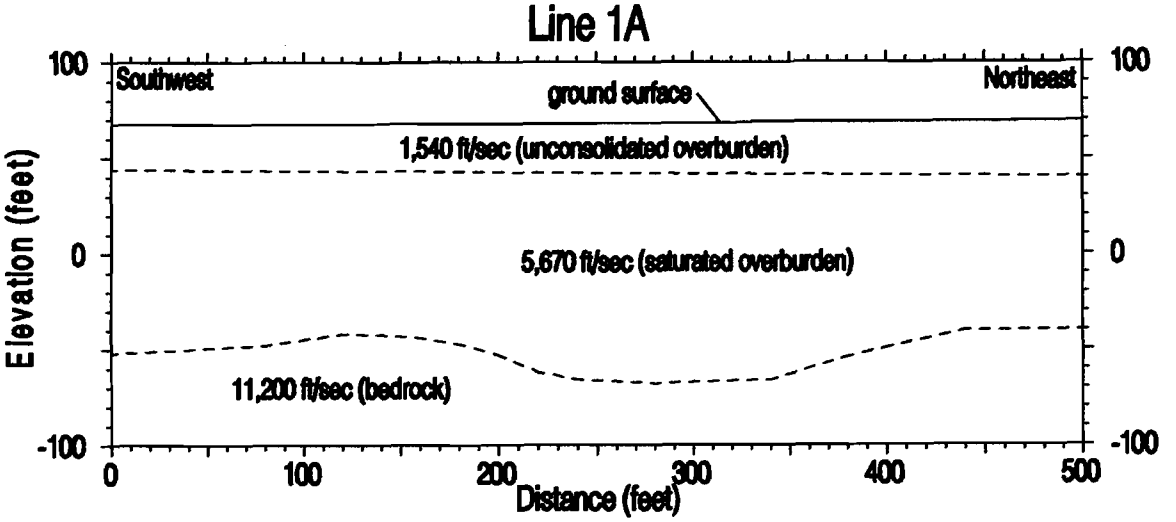
0 100 200
feet

Note: Site plan map supplied by BBL

GEOPHYSICAL APPLICATIONS INCORPORATED

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last modified 02/23/06

Figure 1
Seismic and Gravity Coverage
Peterson/Puritan OU2 Site
Cumberland, Rhode Island
prepared for
BLASLAND, BOUCK & LEE, INC.



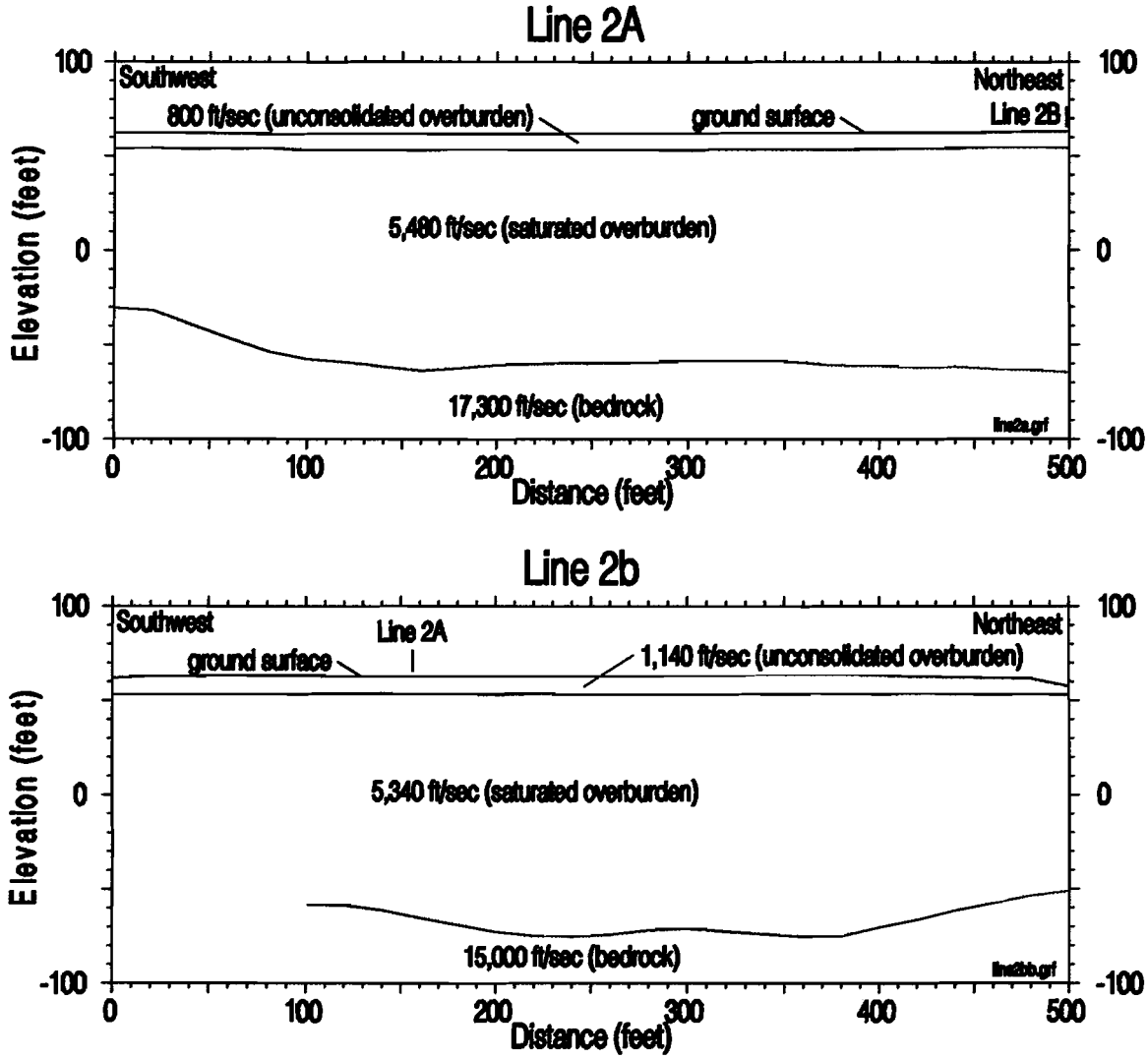
EXPLANATION

1) Seismic velocity values are in units of feet per second (ft/sec)
2) Horizontal scale, 1 inch = 100 feet
   Vertical scale, 1 inch = 100 feet
   Vertical exaggeration 1:1
3) Elevations provided by BBL

105811 - 105811cross1.dwg
last modified 02/23/06

GEOPHYSICAL APPLICATIONS INCORPORATED

Figure 2
Seismic Refraction Profile
Peterson/Puritan OU2 Site
Cumberland, Rhode Island
prepared for
BLASLAND, BOUCK & LEE



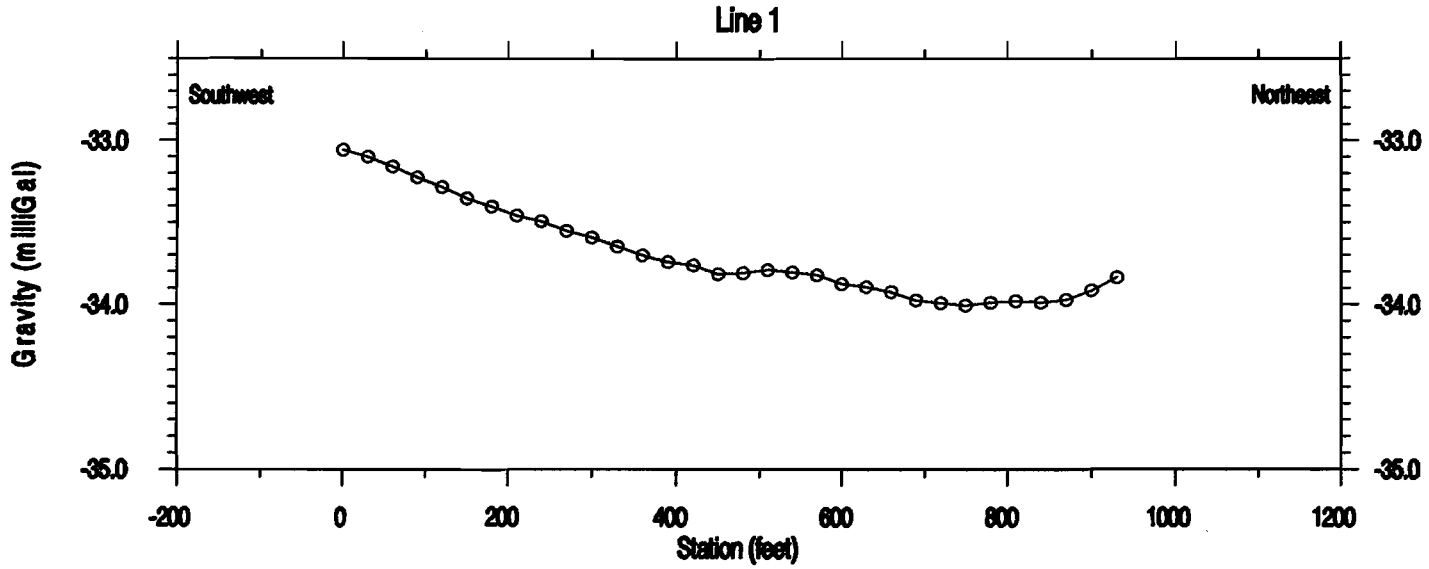
EXPLANATION

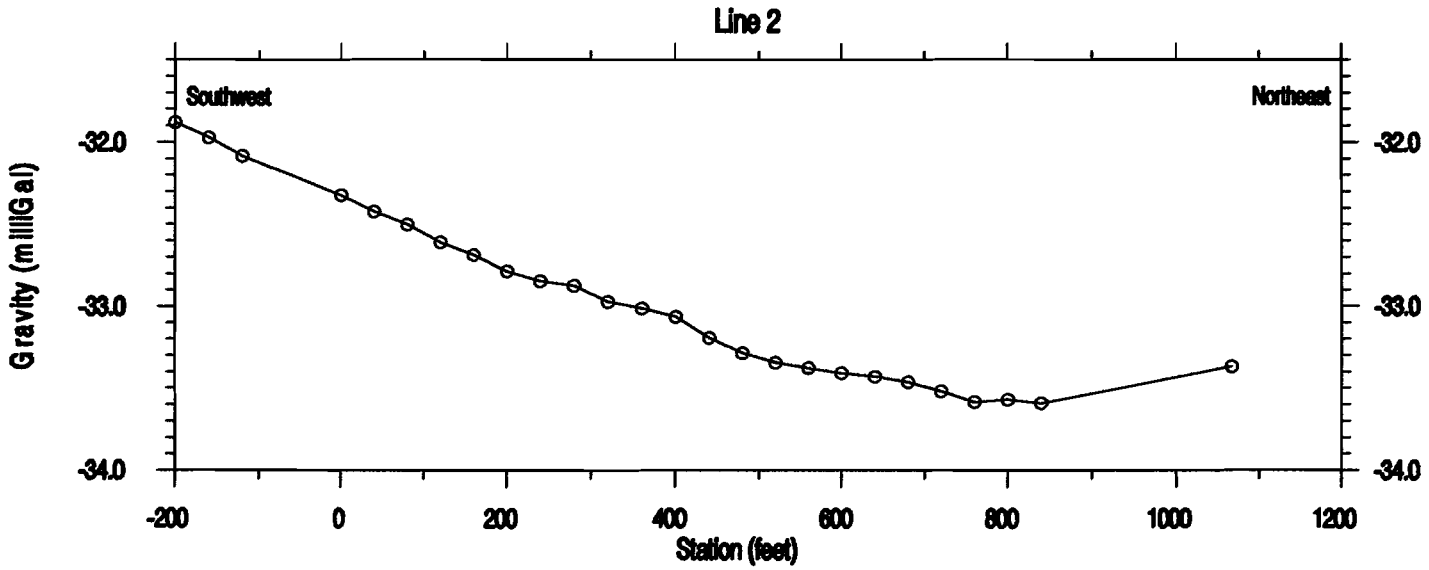
1) Seismic velocity values are in units of feet per second (ft/sec)
2) Horizontal scale, 1 inch = 100 feet
   Vertical scale, 1 inch = 100 feet
   Vertical exaggeration 1:1
3) Elevations provided by BBL

105811 - 105811cross2.dwg
last modified 02/23/06

GEOPHYSICAL APPLICATIONS INCORPORATED

Figure 3
Seismic Refraction Profiles
Peterson/Puritan OU2 Site
Cumberland, Rhode Island
prepared for
BLASLAND, BOUCK & LEE





Explanation

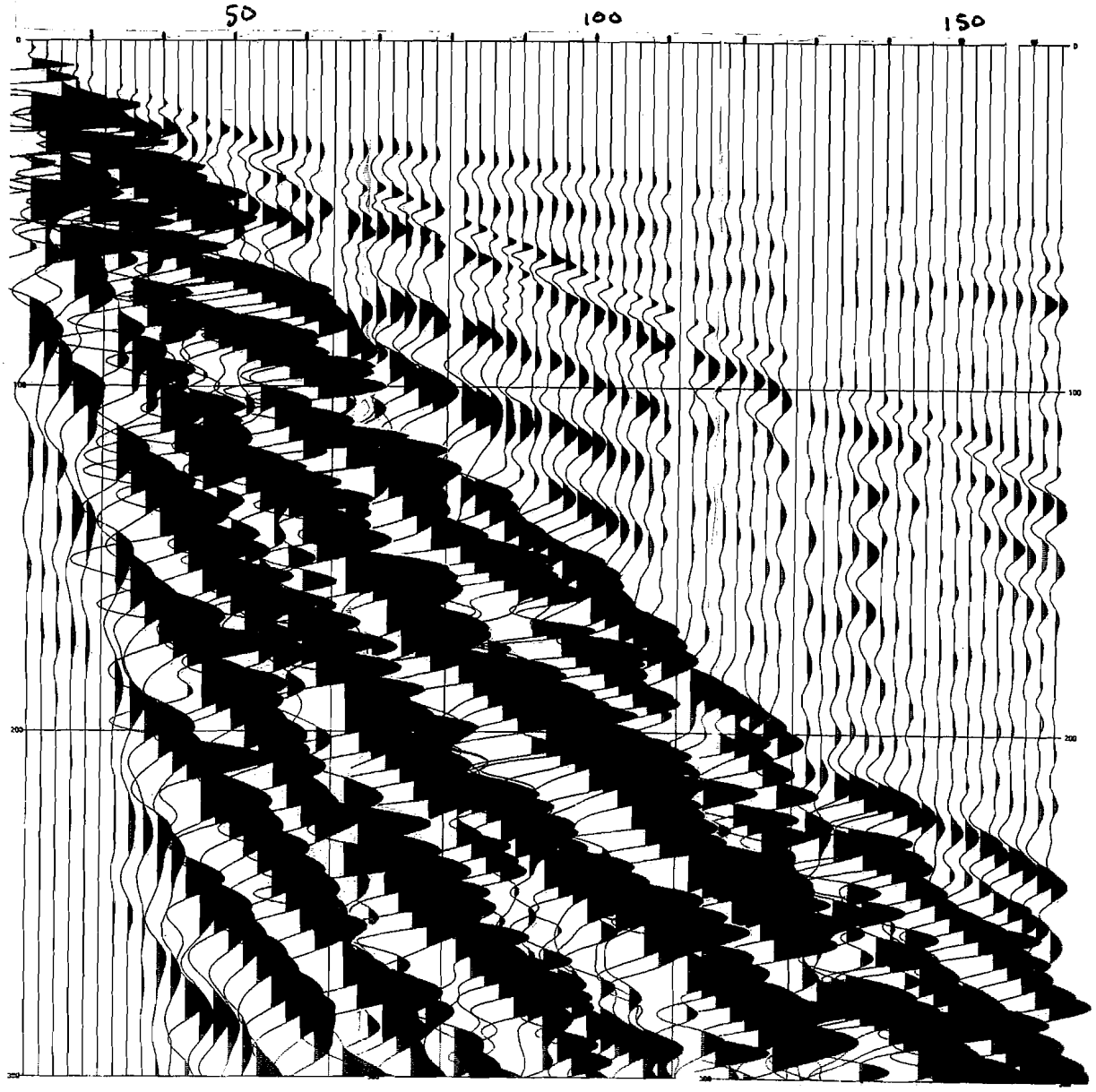
○ Gravity reading

105811 - 105811gra.dwg
last modified 02/23/06

GEOPHYSICAL APPLICATIONS INCORPORATED

Figure 4
Gravity Profiles
Peterson/Puritan OU2 Site
Cumberland, Rhode Island
prepared for
BLASLAND, BOUCK & LEE

Station (feet)



Explaination

Seismic reflection along gravity Line 2

105811 - reflection.dwg
last modified 02/20/06

GEOPHYSICAL APPLICATIONS INCORPORATED

Figure 5
Seismic Reflection Walkaway Test
Peterson/Puritan OU2 Site
Cumberland, Rhode Island
prepared for
BLASLAND, BOUCK & LEE, INC.

ARCADIS

Appendix E

Phase 1A Climate Data

Appendix H

Meteorological and Hydrologic Data

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Table H1-1
Daily Climatic Data, NWS Weather Station in Lincoln, Rhode Island
August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
01-Aug-03	73	61	67	61.4	0.36	1.04	50	3.6	20	9	10.0	97	75	1020.5
02-Aug-03	82	64	73	65.8	0.08	0.08	220	2.2	40	7	7.3	90	69	1018.5
03-Aug-03	84	72	78	68.6		0.00	200	4.0	210	18	7.2	90	65	1020.1
04-Aug-03	81	72	77	68.3	0.02	0.05	200	5.7	170	18	8.5	90	74	1017.0
05-Aug-03	79	70	75	67.8	0.09	0.24	180	3.6	210	9	9.0	90	74	1013.9
06-Aug-03	82	68	75	64.8		0.00	200	4.5	210	25	5.4	87	56	1013.4
07-Aug-03	81	66	74	66.2	0.36	1.33	160	1.3	210	6	5.7	90	65	1014.3
08-Aug-03	81	66	74	66.1	0.89	2.36	210	2.2	70	28	9.1	93	69	1013.8
09-Aug-03	81	70	76	67.8		0.00	180	1.9	220	6	6.5	87	69	1017.9
10-Aug-03	82	73	78	68.3	0.06	0.08	220	6.8	220	22	7.7	90	65	1016.9
11-Aug-03	84	70	77	66.8		0.00	220	4.9	230	16	4.1	81	63	1016.3
12-Aug-03	82	68	75	67.6		0.00	210	2.7	140	8	5.1	87	65	1021.2
13-Aug-03	84	66	75	67.4	0.88	0.88	250	2.6	270	18	5.4	90	67	1024.6
14-Aug-03	84	66	75	64.6		0.00	320	5.1	310	16	0.1	90	51	1023.6
15-Aug-03	86	64	75	63.2		0.00	250	3.5	280	9	0.3	90	49	1019.1
16-Aug-03	84	66	75	65.3	0.04	0.04	240	4.6	260	17	0.8	90	55	1010.2
17-Aug-03	75	63	69	60.8	0.07	0.13	50	3.7	30	8	4.0	90	63	1012.4
18-Aug-03	75	61	68	58.8	0.42	0.57	30	2.9	80	20	2.3	90	62	1018.7
19-Aug-03	82	61	72	60.9		0.00	250	5.7	270	12	0.0	84	47	1020.8
20-Aug-03	84	61	73	61.6		0.00	260	4.9	260	8	0.0	90	51	1019.6
21-Aug-03	86	63	75	62.7		0.00	280	4.6	250	16	0.0	90	51	1016.6
22-Aug-03	88	70	79	67.2		0.00	230	6.3	240	18	0.5	87	55	1010.2
23-Aug-03	79	54	67	51.9		0.00	320	8.3	280	24	0.6	78	32	1010.9
24-Aug-03	72	46	59	40.8		0.00	300	7.5	300	24	0.0	77	30	1015.8
25-Aug-03	79	52	66	52.2		0.00	230	4.6	240	18	2.6	81	47	1014.5
26-Aug-03	81	61	71	58.1		0.00	230	4.6	240	9	0.8	81	47	1012.3
27-Aug-03	82	63	73	58.0		0.00	240	7.1	280	25	0.1	90	38	1010.2
28-Aug-03	73	50	62	48.2		0.00	340	5.8	300	20	0.3	83	38	1018.8
29-Aug-03	79	48	64	56.0		0.00	190	5.3	210	21	3.0	89	50	1019.9
30-Aug-03	81	61	71	61.0		0.00	270	6.6	30	20	5.2	90	51	1018.2
31-Aug-03	68	52	60	46.2		0.00	30	5.9	20	13	1.2	80	45	1026.3
01-Sep-03	66	54	60	53.0	0.07	0.22	220	2.5	210	5	8.0	90	68	1023.9
02-Sep-03	63	54	59	52.6	0.40	1.46	50	6.2	30	10	8.4	90	72	1022.2
03-Sep-03	70	55	63	52.6		0.00	130	6.0	120	16	8.7	90	56	1021.4
04-Sep-03	73	61	67	63.6	0.31	0.99	210	3.6	210	8	9.3	90	79	1011.4
05-Sep-03	75	57	66	57.8		0.00	350	5.6	350	10	3.2	90	53	1013.0

Table H1-1
Daily Climatic Data, NWS Weather Station in Lincoln, Rhode Island
August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
06-Sep-03	73	52	63	51.0		0.00	360	4.0	350	10	0.4	90	46	1017.3
07-Sep-03	77	48	63	52.1		0.00	280	3.8	310	9	0.0	86	47	1015.3
08-Sep-03	72	50	61	50.6		0.00	40	5.6	30	17	1.5	83	49	1019.4
09-Sep-03	64	43	54	44.6		0.00	40	6.1	40	21	2.2	80	48	1026.1
10-Sep-03	72	41	57	43.8		0.00	320	2.4	320	7	0.0	82	43	1023.2
11-Sep-03	73	52	63	50.8		0.00	50	6.9	60	17	0.8	90	43	1025.0
12-Sep-03	70	55	63	50.4		0.00	60	6.5	60	17	3.3	90	42	1027.4
13-Sep-03	73	55	64	57.1		0.00	100	5.6	40	9	9.3	90	68	1026.9
14-Sep-03	79	64	72	63.1	0.02	0.02	150	3.7	130	9	8.0	90	60	1025.5
15-Sep-03	77	64	71	62.6		0.23	150	3.8	140	8	6.8	90	69	1021.0
16-Sep-03	77	59	68	60.7	0.42	1.01	330	5.7	160	20	5.9	90	62	1016.9
17-Sep-03	73	52	63	49.0		0.00	40	5.8	40	10	0.0	80	44	1025.2
18-Sep-03	72	55	64	51.6		0.00	50	9.5	70	25	4.5	83	49	1027.9
19-Sep-03	79	61	70	63.8	0.31	0.91	170	7.9	120	25	10.0	90	62	1021.4
20-Sep-03	81	63	72	62.3		0.00	280	3.9	280	8	4.0	90	54	1019.5
21-Sep-03	73	52	63	50.9		0.00	10	4.3	40	12	3.5	80	46	1023.9
22-Sep-03	72	54	63	50.9	0.42	0.42	120	2.2	20	7	5.0	90	46	1023.0
23-Sep-03	72	55	64	57.0	0.19	0.37	150	7.4	200	30	4.0	90	72	1011.4
24-Sep-03	72	48	60	47.4		0.00	280	4.7	260	10	0.0	89	39	1017.8
25-Sep-03	73	52	63	52.3		0.00	200	4.6	190	20	0.8	90	53	1016.5
26-Sep-03	72	59	66	55.6	0.63	0.63	30	4.3	20	12	8.9	83	63	1018.1
27-Sep-03	75	57	66	58.7		0.00	130	4.6	150	17	7.3	90	62	1017.4
28-Sep-03	70	61	66	61.4	0.01	0.02	150	5.1	110	8	9.0	90	78	1007.9
29-Sep-03	70	46	58	47.2		0.00	290	5.8	300	18	1.5	90	49	1011.0
30-Sep-03	63	41	52	39.3		0.00	280	5.6	260	18	0.0	82	38	1020.4
01-Oct-03	63	39	51	41.7		0.00	250	1.8	220	8	4.9	89	48	1019.8
02-Oct-03	61	39	50	38.2	0.06	0.06	260	5.3	300	26	3.4	89	39	1014.6
03-Oct-03	57	30	44	29.4		0.00	290	4.6	280	10	0.0	89	34	1018.5
04-Oct-03	59	37	48	43.0	0.06	0.09	200	4.3	270	22	6.2	90	66	1011.3
05-Oct-03	57	34	46	34.7		0.00	270	4.8	260	24	1.2	89	39	1012.8
06-Oct-03	57	34	46	32.0		0.00	310	4.2	300	9	0.6	82	45	1018.0
07-Oct-03	61	32	47	33.6		0.00	220	4.0	250	17	0.0	85	36	1021.3
08-Oct-03	70	43	57	49.2		0.00	230	7.1	270	22	0.2	90	49	1021.3
09-Oct-03	73	50	62	50.8		0.00	50	4.1	70	8	0.1	90	49	1022.2
10-Oct-03	64	48	56	47.9		0.00	40	7.7	20	12	5.5	90	67	1023.9
11-Oct-03	64	46	55	45.7		0.00	40	9.3	40	20	3.6	89	52	1021.4

Table H1-1
Daily Climatic Data, NWS Weather Station in Lincoln, Rhode Island
August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
12-Oct-03	57	48	53	48.8	0.04	0.10	10	11.3	20	23	9.7	90	74	1010.4
13-Oct-03	68	48	58	44.1		0.00	330	8.3	340	24	1.2	90	40	1010.2
14-Oct-03	63	39	51	43.2		0.00	140	6.4	120	22	2.1	83	48	1011.2
15-Oct-03	63	46	55	42.8	0.62	2.01	250	14.4	260	39	6.9	90	36	993.6
16-Oct-03	61	39	50	32.3		0.00	260	8.2	270	26	0.7	82	36	1012.5
17-Oct-03	57	36	47	31.7	0.04	0.08	270	3.5	260	17	2.6	82	33	1019.6
18-Oct-03	54	32	43	32.6	0.06	0.10	320	3.6	280	9	3.6	89	39	1015.8
19-Oct-03	45	32	39	29.8	0.06	0.15	20	3.9	10	10	5.4	89	64	1014.8
20-Oct-03	52	27	40	29.0		0.00	180	4.2	260	20	0.0	88	39	1018.6
21-Oct-03	66	41	54	48.4	0.01	0.01	210	9.1	220	30	3.4	89	61	1000.6
22-Oct-03	57	36	47	34.8		0.00	10	8.7	30	13	9.7	89	65	998.6
23-Oct-03	39	30	35	26.0	0.07	0.12	300	8.1	320	24	7.8	82	56	999.9
24-Oct-03	45	27	36	20.4		0.00	260	6.4	290	23	3.5	78	38	1017.5
25-Oct-03	55	25	40	28.6		0.00	200	3.5	220	22	0.7	83	34	1029.6
26-Oct-03	61	45	53	51.1	0.01	0.02	190	7.1	210	30	10.0	90	62	1022.4
27-Oct-03	64	54	59	54.4	0.32	1.52	180	1.7	190	16	9.9	90	73	1009.5
28-Oct-03	63	43	53	39.6	0.01	0.05		0.0		0	3.6	89	42	1012.1
29-Oct-03	66	46	56	49.0	0.51	2.38					9.0	90	63	1004.3
30-Oct-03	57	39	48	33.2	0.29	0.29		0.0		0	0.4	82	38	1020.2
31-Oct-03	66	37	52	40.2		0.00		0.0		0	0.1	89	43	1025.0
01-Nov-03	75	52	64	49.6		0		0.0		0	0.7	74	46	1020.7
02-Nov-03	66	52	59	45.4		0					6.6	74	46	1022.3
03-Nov-03	77*	52	65	50.0		0					5	83	50	1019.1
04-Nov-03	57	39	48	39.9		0					10	89	70	1024.2
05-Nov-03	55	39	47	40.3	0.79	1		0.0		0	10	90	79	1020.2
06-Nov-03	57	46	52	46.6	0.79	0.02		0.0		0	3.9	90	61	1018.0
07-Nov-03	55	41	48	35.4		0					4.5	83	43	1017.4
08-Nov-03	46	25	36	11.0		0					0.3	51	21	1025.5
09-Nov-03	39	21	30	4.8		0					0	68	21	1035.0
10-Nov-03	46	19*	33	14.7	0.98	0.98		0.0		0	0	74	28	1030.4
11-Nov-03	50	25	38	26.7	9.89	14.83		0.0		0	4	89	38	1021.2
12-Nov-03	54	43	49	43.6		0	240	1.8	250	8	7	83	74	1009.7
13-Nov-03	57	37	47	32.4	0.06	0.18	250	5.8	270	33	7	90	34	990.2
14-Nov-03	41	30	36	14.5		0		0.0		0	2	51	26	998.3
15-Nov-03	43	28	36	9.2	9.12	9.12					0	51	22	1010.7
16-Nov-03	46	25	36	20.0		0					1.1	67	35	1021.2

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Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
17-Nov-03	41	34	38	28.6		0						82	53	1024.5
18-Nov-03	54	30	42	31.9		0		0.0		0	0	89	50	1027.3
19-Nov-03	57	37	47	45.0		0					9.2	89	71	1013.5
20-Nov-03	61	43	52	42.1	0.06	0.99					9.8	90	60	999.5
21-Nov-03	54	37	46	35.9	0.05	0.08	360	2.0	20	5	6.7	89	60	1008.5
22-Nov-03	52	36	44	32.2		0	360	5.2	20	16	0	89	46	1018.6
23-Nov-03	48	32	40	24.8	0.92	0.92	360	6.4	10	16	0	82	34	1022.9
24-Nov-03	48	30	39	33.4		0	150	5.2	200	9	4.2	88	63	1016.6
25-Nov-03	48	27	38	25.8	0.08	0.1	310	7.3	320	28	2.6	89	38	1014.9
26-Nov-03	46	25	36	24.4		0	220	3.3	220	20	0.3	78	49	1021.0
27-Nov-03	52	32	42	28.0		0	100	2.4	70	9	1	70	35	1022.5
28-Nov-03	55	41	48	42.0	0.01	0.01	140	3.6	160	20	10	96	70	1012.4
29-Nov-03	54	36	45	22.5		0.1	260	16.5	280	43	5.1	71	38	995.3
30-Nov-03	46	34	40	21.0		0	230	8.7	240	25	2.2	56	40	1009.2
01-Dec-03	48	30	39	21.5		0	270	11.1	290	37	1.2	62	30	1007.0
02-Dec-03	36	14	25	4.5		0	310	15.1	300	38	0.8	60	29	1017.2
03-Dec-03	28	12	20	-0.7		0	310	9.6	310	21	0	56	30	1026.8
04-Dec-03	39	14	27	12.8		0	270	8.2	290	24	3.3	75	44	1026.5
05-Dec-03	30	16	23	11.9	0.53	0.55	30	8.5	50	26	3.5	78	33	1023.7
06-Dec-03	28	19	24	18.0	0.01	0.01	30	19.7	10	40	10	88	68	1009.2
07-Dec-03	28	23	26	17.1		0	340	16.7	350	39	9.3	81	57	1002.1
08-Dec-03	36	19	28	12.8	0.97	0.97	320	8.8	330	22	1.5	68	44	1012.4
09-Dec-03	36	19	28	14.9		0	20	2.9	20	8	4.5	75	44	
10-Dec-03	41	30	36	30.5		0	120	6.4	130	9	9.5	100	70	1018.6
11-Dec-03	54	36	45	41.3	0.46	1.44	110	13.1	290	39	9.7	100	70	1002.3
12-Dec-03	39	28	34	19.3		0	270	13.3	280	44	0.3	72	42	1009.2
13-Dec-03	32	16	24	8.8		0	280	7.5	290	26	0.1	74	31	1025.6
14-Dec-03	36	16	26	14.4	0.24	1.09	40	8.7	70	24	4.1	100	44	1023.2
15-Dec-03	37	27	32	26.4	0.23	0.14	310	16.8	290	43	5.9	100	58	999.2
16-Dec-03	43	19	31	20.1		0	270	4.2	290	17	0	100	38	1017.8
17-Dec-03	54	30	42	42.9	0.34	1.35	160	7.9	160	35	8.5	100	86	1003.6
18-Dec-03	39	30	35	20.7		0	250	13.1	270	32	4.2	92	48	995.8
19-Dec-03	39	27	33	17.4	0.76	0.76	280	5.5	270	18	0.7	68	42	1003.5
20-Dec-03	39	23	31	19.2		0	310	4.9	310	16	3.1	84	48	1010.4
21-Dec-03	34	18	26	13.6		0	240	7.8	240	21	0	70	40	1018.4
22-Dec-03	50	32	41	18.8		0	240	7.4	260	22	0.1	53	29	1016.5

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Daily Climatic Data, NWS Weather Station in Lincoln, Rhode Island
August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
23-Dec-03	46	39	43	32.5		0	220	5.8	200	17	3.9	96	49	1018.3
24-Dec-03	54	45	50	49.0	0.98	1.47	180	7.6	170	25	6	100	83	1012.8
25-Dec-03	54	34	44	39.6	0.02	0.02	250	5.7	280	24	7.2	100	60	1007.8
26-Dec-03	37	30	34	21.7		0	250	10.2	260	30	3.6	81	51	1010.1
27-Dec-03	48	28	38	16.1		0	330	8.7	310	20	0	60	28	1018.0
28-Dec-03	54	27	41	11.2		0	230	3.7	250	7	0	53	13	1025.5
29-Dec-03	55*	32	44	25.8		0	230	8.1	240	20	0	82	35	1018.0
30-Dec-03	54	37	46	33.8		0	280	10.4	300	33	5	89	44	1009.6
31-Dec-03	46	36	41	23.5	0.51	0.51	260	9.7	280	24	0.8	67	37	1018.2
01-Jan-04	43	30	37	20.0		0	300	8.7	280	24	0.5	69	38	1021.6
02-Jan-04	34	25	30	26.4	0.04	0.07	360	2.9	20	8	6.9	96	68	1022.3
03-Jan-04	46	32	39	37.5		0	210	3.2	20	8	8.3	100	85	1014.7
04-Jan-04	48	34	41	38.8	0.01	0.03	300	5.1	20	21	7.6	96	49	1012.9
05-Jan-04	39	30	35	29.1	0.1	0.23	20	5.2	30	10	10	92	78	1011.7
06-Jan-04	34	18	26	19.2		0	280	10.3	300	26	2.9	92	54	1012.7
07-Jan-04	27	14	21	3.9		0	270	10.5	280	25	0	73	45	1016.8
08-Jan-04	19	9	14	0.8		0	300	11.5	300	30	1.1	76	43	1020.5
09-Jan-04	14	0	7	-11.6	8.01	8.01	330	10.4	310	28	0	76	24	1022.8
10-Jan-04	9	-6	2	-17.8		0	330	10.0	340	21	0	58	17	1023.8
11-Jan-04	19	19	19			0	230	7.0	320	12	5.5	32	32	1022.4
12-Jan-04	32	27	30	24.0	0.01	0.01	260	5.8	240	17	6	92	58	1012.0
13-Jan-04	37	9	23	11.7		0	280	11.2	290	40	3.3	92	30	1009.0
14-Jan-04	21	-4	9	-19.6		0	300	9.0	310	30	1.6	100	23	1016.3
15-Jan-04	9	-8	1	-14.1		0	360	11.6	320	26	3.7	100	25	1007.0
16-Jan-04	10	-9*	1	-15.6		0	300	15.2	310	36	0	66	24	1002.8
17-Jan-04	36	9	23	4.8		0	300	10.9	310	28	0.8	73	29	1010.0
18-Jan-04	34	25	30	23.5	0.03	0.1	220	5.1	320	16	9.5	100	46	1000.2
19-Jan-04	23	14	19	4.4		0	300	14.4	300	31	0	61	49	999.6
20-Jan-04	21	10	16	1.8		0	310	12.0	290	30	0	73	41	1006.0
21-Jan-04	27	10	19	2.4		0	320	6.7	320	23	0	73	38	1013.6
22-Jan-04	34	7	21	11.4		0	220	7.3	310	28	4.8	75	45	1005.7
23-Jan-04	28	9	19	-2.8		0	280	12.5	280	33	5.2	66	36	1006.4
24-Jan-04	18	1	10	-6.0		0	290	9.8	320	28	2.8	72	28	1008.6
25-Jan-04	16	-6	5	-12.7		0	310	7.9	310	23	0	64	28	1021.5
26-Jan-04	18	1	10	-6.9		0	10	5.7	10	17	2.7	62	33	1026.4
27-Jan-04	21	10	16	-1.4		0	20	7.7	20	13	7.1	56	39	1015.1

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August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
28-Jan-04	27	18	23	14.6	0.04	0.14	310	9.0	290	23	8.6	96	39	999.1
29-Jan-04	25	14	20	5.5		0	270	15.0	290	41	1.5	74	39	1001.6
30-Jan-04	23	10	17	1.4		0	280	10.4	290	30	0.6	66	38	999.0
31-Jan-04	25	10	18	3.2		0	290	10.0	290	26	1.9	66	38	1006.0
01-Feb-04	30	10	20	6.2		0	320	8.9	320	24	0	66	41	1022.1
02-Feb-04	37	18	28	17.1		0	350	4.1	340	10	0	92	48	1030.5
03-Feb-04	41	21	31	26.4	0.29	0.66	140	5.2	160	25	8.9	100	69	1022.3
04-Feb-04	43	25	34	22.0	0.01	0	270	11.7	280	35	3.5	96	35	1017.2
05-Feb-04	34	21	28	11.2		0	290	7.9	260	21	0.6	68	36	1031.0
06-Feb-04	34	25	30	22.5	0.12	0.86	130	2.9	20	9	8.6	96	46	1020.7
07-Feb-04	41	25	33	25.4	0.03	0.04	360	2.1	20	13	7.4	100	50	1000.8
08-Feb-04	34	14	24	2.4		0		0.0		0	0.7	64	30	1019.4
09-Feb-04	39	19	29	13.8		0		0.0		0	1.3	59	36	1023.9
10-Feb-04	46	30	38	20.4		0		0.0		0	3	75	33	1013.7
11-Feb-04	36	21	29	14.3		0	300	9.5	280	32	1.6	78	33	1014.8
12-Feb-04	36	14	25	12.0		0	240	5.5	300	16	3.3	77	37	1020.2
13-Feb-04	39	27	33	17.9		0	250	8.5	270	28	2	71	39	1012.0
14-Feb-04	43	27	35	17.0		0	260	8.1	250	23	0	66	36	1009.1
15-Feb-04	34	9	22	1.9		0	360	8.1	360	25	1.2	81	25	1020.1
16-Feb-04	28	5*	17	-4.8		0	330	4.9	300	12	0	66	22	1031.1
17-Feb-04	32	10	21	7.7		0	20	4.4	20	9	1.5	81	40	1035.5
18-Feb-04	30	23	27	17.8		0	20	11.2	20	29	6.7	84	42	1019.2
19-Feb-04	41	23	32	13.4		0	320	11.6	340	26	0	60	39	1007.2
20-Feb-04	41	25	33	19.3		0	320	4.9	320	9	1.7	81	39	1012.4
21-Feb-04	39	28	34	30.2		0	290	6.4	290	10	8.4	96	79	1000.8
22-Feb-04	45	28	37	23.0		0	300	11.5	290	26	4.7	85	44	1010.4
23-Feb-04	45	25	35	13.8		0	320	8.7	340	23	0	74	25	1019.1
24-Feb-04	37	21	29	12.3		0	330	5.4	350	21	4.7	69	28	1016.2
25-Feb-04	39	18	29	4.7		0	340	9.2	340	21	0.7	45	25	1016.2
26-Feb-04	43	23	33	5.1		0	340	9.8	10	22	0	54	18	1024.2
27-Feb-04	46*	34	40	0.2		0	350	9.6	340	18	0	21	16	1021.9
28-Feb-04						0								
29-Feb-04						0								
01-Mar-04	61	37	49	27.6		0	190	3.9	170	16	0	70	30	1024.3
02-Mar-04	63	37	50	38.3		0	180	7.6	300	30	1.9	96	52	1015.6
03-Mar-04	54	34	44	28.8		0	300	9.4	280	31	1.1	70	36	1019.5

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Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
04-Mar-04	52	34	43	34.6	0.01	0.02	270	3.9	240	17	6.4	100	65	1021.9
05-Mar-04	46	30	38	37.4		0	150	3.7	150	18	8.9	100	76	1017.8
06-Mar-04	57	37	47	44.0	0.13	0.31	280	10.9	280	37	6.6	96	60	1001.3
07-Mar-04	46	32	39	20.5		0	300	9.0	280	37	1.4	64	32	1010.1
08-Mar-04	32	25	29	26.1		0	50	6.0	40	20	9.4	96	81	1009.7
09-Mar-04	34	23	29	24.7		0	160	0.4	130	5	7.1	96	69	1019.8
10-Mar-04	39	21	30	24.2		0	50	7.7	20	22	2.9	96	56	1026.9
11-Mar-04	45	30	38	17.3		0	10	11.4	10	29	3.2	81	26	1014.1
12-Mar-04	48	28	38	23.2		0	260	8.7	280	47	3.9	78	44	1004.7
13-Mar-04	41	25	33	13.3		0	310	12.7	300	28	0	60	32	1019.0
14-Mar-04	41	18	30	10.9		0	190	5.8	210	16	2.8	75	20	1027.3
15-Mar-04	54	34	44	25.1		0	270	9.0	280	24	2.5	89	27	1019.3
16-Mar-04	41	25	33	19.7	0.03	0.05	60	9.5	50	28	4.8	92	44	1020.6
17-Mar-04	28	21	25	20.5		0	30	12.3	20	28	10	92	74	1014.2
18-Mar-04	30	23	27	22.0		0	30	5.2	60	10	9.9	88	69	1020.6
19-Mar-04	32	19	26	21.9	0.01	0.01	50	7.2	50	24	7	96	58	1025.8
20-Mar-04	43	18	31	22.0	0.01	0.03	200	5.3	200	20	2.7	96	36	1022.7
21-Mar-04	45	28	37	28.1	0.05	0.11	290	9.6	300	30	6	96	44	1003.8
22-Mar-04	36	19	28	4.2		0	310	10.0	310	26	0.4	59	24	1016.8
23-Mar-04	39	12*	26	9.4		0	240	6.5	260	25	0.6	81	28	1026.8
24-Mar-04	54	27	41	25.6		0	160	3.2	170	16	2.1	81	32	1032.1
25-Mar-04	55	37	46	35.1		0	200	5.4	230	26	8.2	79	50	1034.9
26-Mar-04	63	43	53	41.2		0	180	4.0	140	16	5.6	89	51	1030.7
27-Mar-04	63*	46	55	44.6	0.05	0.08	40	7.4	60	23	9.6	96	58	1022.3
28-Mar-04	48	28	38	29.8		0	50	13.2	40	35	7.5	89	64	1030.2
29-Mar-04	46	28	37	24.9		0	40	7.7	30	20	3.2	96	41	1031.6
30-Mar-04	45	28	37	28.2		0	100	3.3	170	8	8.8	92	51	1026.0
31-Mar-04	43	36	40	36.2	0.22	1.36	60	7.5	60	17	10	100	86	1016.4
01-Apr-04	45	37	41	37.7	0.18	0.84	40	12.2	40	28	10	96	86	1008.0
02-Apr-04	41	36	39	35.3		0	30	13.5	20	28	10	96	89	1007.4
03-Apr-04	39	36	38	35.7		0	30	8.8	20	16	10	100	89	1003.0
04-Apr-04	48	36	42	37.4	0.07	0.07	310	3.2	320	24	9.9	100	71	994.7
05-Apr-04	45	28	37	20.0		0	310	14.7	340	32	3.5	88	38	997.1
06-Apr-04	52	27*	40	13.0		0	310	11.3	300	32	0	50	26	1004.0
07-Apr-04	54	34	44	21.1		0	270	8.6	280	25	4.4	67	31	1005.1
08-Apr-04	55	32	44	27.4		0	290	5.0	140	17	2.5	75	31	1005.2

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Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
09-Apr-04	61	37	49	25.8		0	310	8.2	300	28	2.7	70	24	1006.7
10-Apr-04	57	34	46	18.6		0	280	8.8	270	29	0.1	52	22	1013.2
11-Apr-04	54	34	44	25.8		0	340	3.5	240	9	5.2	76	29	1019.2
12-Apr-04	54	37	46	31.2	0.05	0.07	50	8.6	60	20	6	89	35	1024.0
13-Apr-04	59	39	49	40.3	0.46	2.44	50	9.2	200	29	10	100	86	1015.2
14-Apr-04	59	43	51	52.5	0.08	0.27	190	5.8	200	35	9.7	96	89	1005.8
15-Apr-04	54	39	47	29.7		0	10	12.4	360	28	3.4	96	35	1014.0
16-Apr-04	55	32	44	19.5		0	360	8.6	10	24	0.1	64	19	1022.4
17-Apr-04	77	30	54	34.3		0	220	4.5	220	20	2	88	24	1021.6
18-Apr-04	66	46	56	42.4		0	160	7.2	100	18	0.1	76	43	1026.7
19-Apr-04	84	45	65	46.3		0	210	9.2	220	28	2.8	96	24	1015.2
20-Apr-04	70	43	57	38.3		0	320	8.5	300	31	0.6	79	22	1015.6
21-Apr-04	59	37	48	34.3		0	170	4.6	160	22	2.3	96	31	1022.6
22-Apr-04	75	45	60	52.2		0	210	5.9	120	12	4.7	96	51	1016.7
23-Apr-04	66	41	54	42.0	0.11	0.35	60	7.9	70	23	9.7	96	72	1020.2
24-Apr-04	64	39	52	31.0	0.03	0.03	320	9.6	310	33	3.4	92	23	1018.4
25-Apr-04	57	34	46	18.3		0	360	7.0	10	21	3.3	89	18	1026.7
26-Apr-04	54	37	46	45.5	0.21	0.73	160	3.1	180	17	10	100	82	1014.8
27-Apr-04	68	45	57	44.8	0.02	0.01	290	4.9	310	22	5.8	100	31	1004.5
28-Apr-04	55	37	46	27.5		0	300	9.5	310	26	1.9	76	32	1015.2
29-Apr-04	72	37	55	34.8		0	210	7.9	220	24	1.2	67	30	1025.6
30-Apr-04	79	54	67	45.2		0	220	8.5	240	22	0.2	77	30	1023.5
01-May-04	77	50	64	51.4		0	210	9.2	210	24	0.2	87	45	1019.9
02-May-04	70	59	65	58.2	0.01	0.02	200	8.0	210	24	8.3	93	73	1016.0
03-May-04	61	46	54	54.7	0.06	0.41	210	5.1	350	22	10	100	86	1010.6
04-May-04	57	37	47	32.3	0.2	0.05	290	11.6	300	32	3.4	93	32	1011.1
05-May-04	64	32	48	34.3		0	200	5.5	200	26	4.3	89	31	1015.3
06-May-04	70	39	55	43.5		0	220	4.6	130	20	0.7	100	38	1016.5
07-May-04	84	50	67	40.3		0	290	11.1	290	32	0.4	64	12	1015.9
08-May-04	70	41	56	23.7		0	220	8.0	10	25	2.6	70	19	1027.4
09-May-04	57	43	50	41.1	0.05	0.1	220	4.6	240	17	6.4	100	55	1021.9
10-May-04	70	45	58	49.7		0	140	5.1	140	20	2.1	100	56	1020.9
11-May-04	84	54	69	55.5		0	290	7.4	290	24	1.2	96	37	1018.4
12-May-04	88	57	73	56.2		0	240	4.2	240	16	1.3	87	35	1020.9
13-May-04	75	46	61	48.4		0	40	9.0	30	20	2.4	89	47	1025.1
14-May-04	72	46	59	50.0		0	190	2.9	200	8	7	100	63	1024.9

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15-May-04	86	59	73	60.6		0	210	6.9	250	23	1.8	93	46	1019.2
16-May-04	61	54	58	53.0		0	80	5.2	30	12	7.4	90	78	1023.6
17-May-04	59	52	56	51.0		0	180	3.5	160	16	9.9	96	78	1030.0
18-May-04	64	61	63	61.0	0.12	0.14	200	6.0	210	18	9.8	100	90	1020.9
19-May-04					0.02	0	20	5.6	20	17	7.5			1019.5
20-May-04	72	70	71	42.0		0	170	3.8	150	17	5.5	38	33	1023.8
21-May-04	73	73	73	61.0		0	230	4.5	220	8	5	71	66	1017.3
22-May-04	61	46	54	48.2		0	40	5.7	360	16	10	89	72	1015.8
23-May-04	79	52	66	61.0	0.06	0.09	60	4.6	40	16	6.8	93	60	1012.3
24-May-04	63	48	56	51.2	0.01	0	120	5.1	360	28	7.6	93	72	1011.4
25-May-04	48	48	48			0	50	6.5	50	8	10	93	93	1010.1
26-May-04						0								
27-May-04	70	54	62	53.9		0	130	5.3	30	8	6	96	57	1007.6
28-May-04	64	52	58	53.8	0.2	0.47	180	3.5	320	23	8.1	100	81	1003.9
29-May-04	61	43	52	37.3		0	320	10.1	330	28	1.3	90	31	1011.0
30-May-04	70	43	57	36.7		0	290	7.7	310	23	0.1	83	28	1013.6
31-May-04	70	41	56	36.6		0	110	4.0	120	10	3.4	86	29	1010.6
01-Jun-04	57	46	52	44.6	0.12	0.22	50	5.8	80	16	9.9	96	52	1007.3
02-Jun-04	77	48	63	54.1	0.05	0.05	210	4.4	240	17	6.6	100	47	1009.6
03-Jun-04	72	45	59	49.0		0	10	5.2	340	25	4.6	96	38	1015.3
04-Jun-04	72	43	58	45.4		0	230	4.5	290	9	0	96	38	1022.7
05-Jun-04	72	46	59	45.7		0	90	6.0	60	17	2.3	96	42	1022.8
06-Jun-04	61	48	55	46.6	0.02	0.05	40	9.2	40	21	9.2	93	66	1020.2
07-Jun-04	73	48	61	52.6		0	340	5.3	360	16	4.5	93	53	1019.8
08-Jun-04	86	61	74	61.3		0	240	5.2	230	20	1.4	90	49	1020.5
09-Jun-04	90	66	78	65.2	0.02	0.03	250	7.7	350	22	0.9	87	52	1014.0
10-Jun-04	82	54	68	57.5		0	360	6.0	40	17	2.5	93	54	1012.0
11-Jun-04	72	43	58	39.6		0	350	5.8	340	18	0.4	79	30	1013.8
12-Jun-04	72	41	57	39.6		0	360	5.5	320	18	0	82	30	1019.9
13-Jun-04	73	55	64	46.9		0	210	6.5	220	22	0.2	77	38	1023.4
14-Jun-04	70	59	65	60.3		0	210	6.2	210	16	7.8	90	78	1018.1
15-Jun-04	84	64	74	64.3		0	210	6.2	260	17	4.8	97	46	1015.8
16-Jun-04	84	61	73	59.2		0	240	3.6	250	12	0.5	97	33	1019.9
17-Jun-04	84	64	74	63.3	0.09	0.12	180	2.1	180	8	3	93	51	1016.3
18-Jun-04	73	63	68	62.9		0	30	5.4	40	12	9.9	97	76	1013.3
19-Jun-04	79	55	67	56.1	0.08	0.13	290	6.3	280	25	4.6	100	30	1009.3

Table H1-1
Daily Climatic Data, NWS Weather Station in Lincoln, Rhode Island
August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
20-Jun-04	70	48	59	41.5		0	280	7.4	330	20	0.4	89	35	1014.3
21-Jun-04	75	45	60	45.4		0	250	7.9	280	22	0	83	32	1014.2
22-Jun-04	72	57	65	60.4		0	210	5.9	210	17	3.8	93	68	1010.9
23-Jun-04	81	54	68	51.6		0	290	6.3	310	21	0.7	93	28	1012.9
24-Jun-04	81	48	65	52.2		0	180	4.2	200	17	0.7	89	44	1018.7
25-Jun-04	75	59	67	59.7		0	220	4.0	250	9	5.7	93	62	1018.9
26-Jun-04	75	59	67	57.6		0	290	4.4	300	24	3.4	97	51	1011.9
27-Jun-04	73	48	61	45.8		0	280	8.5	310	23	1.4	89	37	1016.3
28-Jun-04	75	48	62	50.7		0	260	4.1	270	20	3.9	93	43	1017.7
29-Jun-04	75	54	65	53.3	0.13	0.13	270	4.8	320	17	3.5	93	45	1016.5
30-Jun-04	79	52	66	53.8		0	240	6.1	290	20	0.8	96	41	1020.0
01-Jul-04	82	54	68	59.3		0	220	4.6	210	18	0.8	97	44	1020.5
02-Jul-04	82	61	72	62.6	0.52	0.52	230	4.4	340	21	3.6	97	57	1016.0
03-Jul-04	81	57	69	55.0		0	340	4.9	330	10	0.5	93	39	1015.9
04-Jul-04	84	54	69	55.6		0	200	3.0	220	16	0.4	96	37	1016.7
05-Jul-04	73	63	68	63.8	0.45	1.1	190	4.9	180	20	7.1	97	78	1013.2
06-Jul-04	79	63	71	63.0		0	310	4.6	300	10	5.8	97	58	1010.2
07-Jul-04	82	61	72	59.6		0	180	2.8	140	9	3.4	97	41	1012.5
08-Jul-04	77	63	70	64.3		0	180	3.3	140	8	8.4	97	76	1011.4
09-Jul-04	75	63	69	58.0		0	300	7.5	290	22	2.7	100	50	1013.0
10-Jul-04	81	57	69	57.7		0	300	5.8	330	16	1.8	90	50	1016.4
11-Jul-04	77	57	67	54.9		0	20	5.9	10	18	2.4	90	38	1020.1
12-Jul-04	73	57	65	56.2		0	180	3.3	200	6	3.7	93	53	1020.6
13-Jul-04	64	59	62	58.2	0.06	0.17	50	7.9	60	17	9.5	93	78	1013.0
14-Jul-04	68	61	65	60.4	0.01	0.01	20	7.9	20	20	9.8	97	84	1005.3
15-Jul-04	79	61	70	61.5		0	210	4.3	210	16	6.4	93	60	1002.2
16-Jul-04	75	61	68	59.9		0	220	5.7	240	20	2.2	90	57	1005.8
17-Jul-04	82	61	72	62.5		0	260	4.9	240	16	0.9	93	53	1010.8
18-Jul-04	81	61	71	63.6	0.02	0.02	120	3.6	130	7	3.9	97	58	1014.0
19-Jul-04	73	66	70	65.6		0	50	3.4	30	8	8.5	93	79	1009.0
20-Jul-04	84	63	74	64.7		0	240	3.8	220	16	2.8	93	55	1012.0
21-Jul-04	84	59	72	62.0		0	310	2.2	330	7	1.3	93	46	1014.5
22-Jul-04	84	61	73	63.4		0	190	3.5	190	8	2.4	93	55	1014.3
23-Jul-04	82	66	74	65.5		0	190	5.8	190	16	6	93	55	1015.0
24-Jul-04	73	61	67	61.7	0.49	0.74	30	7.6	340	22	9.8	97	72	1021.6
25-Jul-04	73	54	64	52.8		0	40	7.0	30	16	5.8	93	52	1025.6

Table H1-1
Daily Climatic Data, NWS Weather Station in Lincoln, Rhode Island
August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
26-Jul-04	75	52	64	51.2		0	40	4.6	20	9	1.4	93	44	1021.9
27-Jul-04	73	54	64	54.5		0	90	3.8	60	8	6.6	93	48	1019.1
28-Jul-04	68	59	64	60.1	0.17	0.2	20	3.5	20	12	10	93	81	1016.5
29-Jul-04	82	63	73	63.7	0.01	0.01	260	2.5	270	9	5.3	100	55	1017.9
30-Jul-04	84	59	72	65.8		0	220	4.0	200	16	3.2	97	55	1020.9
31-Jul-04	84	72	78	69.5		0	210	8.7	220	22	4.9	90	65	1019.4
01-Aug-04	79	70	75	70.1	0.11	0.27	230	5.3	220	18	7	97	79	1017.8
02-Aug-04	84	70	77	67.5		0	250	3.1	130	9	3.5	93	55	1014.9
03-Aug-04	84	66	75	68.0		0	220	3.8	230	8	2.3	97	59	1010.8
04-Aug-04	82	63	73	64.0	0.25	0.5	40	5.5	10	16	5	93	54	1007.2
05-Aug-04	72	57	65	57.7	0.25	0.36	30	4.7	20	14	7.8	93	55	1008.3
06-Aug-04	70	55	63	49.6		0	350	6.9	360	12	5.4	90	42	1010.0
07-Aug-04	72	48	60	49.1		0	310	4.5	280	9	0.7	83	43	1011.1
08-Aug-04	73	54	64	51.2		0	270	6.5	250	23	1.3	90	48	1015.7
09-Aug-04	79	54	67	53.6		0	300	5.9	290	16	0	93	39	1017.7
10-Aug-04	81	55	68	59.7		0	200	6.0	200	20	0.1	93	47	1015.9
11-Aug-04	81	66	74	64.8		0	200	6.9	200	20	4.9	90	65	1014.8
12-Aug-04	81	68	75	66.7	1.16	2.08	180	6.0	160	21	6.1	93	65	1017.3
13-Aug-04	77	70	74	69.0	0.29	0.25	170	3.6	210	9	8.3	97	79	1015.0
14-Aug-04	81	64	73	64.4	0.01	0.04	260	3.4	280	8	2.5	97	60	1019.8
15-Aug-04	72	63	68	61.8	0.37	1.76	40	6.1	50	17	9.8	97	81	1024.0
16-Aug-04	64	61	63	59.8	0.03	0.12	80	1.9	130	13	9.9	93	81	1022.7
17-Aug-04	73	55	64	57.8		0	220	3.2	10	9	5.3	93	55	1019.7
18-Aug-04	77	59	68	60.6		0	210	4.0	210	9	2.8	93	58	1017.4
19-Aug-04	79	66	73	67.8		0	200	5.1	200	21	5.8	93	74	1015.1
20-Aug-04	84	66	75	69.1		0	210	4.3	210	16	3.4	93	67	1015.6
21-Aug-04	77	61	69	66.6	0.26	0.75	200	6.0	260	25	8.6	97	81	1011.0
22-Aug-04	73	54	64	52.5		0	10	4.4	10	10	0	93	43	1016.7
23-Aug-04	79	52	66	57.0		0	230	4.8	250	16	0	96	47	1015.3
24-Aug-04	72	52	62	52.8		0	40	5.3	20	21	0.9	93	43	1021.8
25-Aug-04	75	48	62	50.7		0	180	1.7	200	6	0	96	38	1027.0
26-Aug-04	73	46	60	49.4		0	200	1.9	230	6	0	96	51	1027.1
27-Aug-04						0								
28-Aug-04						0								
29-Aug-04														
30-Aug-04	77	73	75	73.0	0.03	0.03	190	3.0	90	7	8.6	100	88	1015.5

Table H1-1
Daily Climatic Data, NWS Weather Station in Lincoln, Rhode Island
August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
31-Aug-04	81	59	70	68.1	0.12	0.14	350	4.0	20	21	4.8	100	69	1014.3
01-Sep-04	79	57	68	57.5		0	310	4.9	270	10	1.8	100	45	1019.6
02-Sep-04	75	55	65	54.0		0	20	4.3	20	9	1.5	90	48	1024.6
03-Sep-04						0								
04-Sep-04	82	63	73	62.4		0	60	5.6	60	20	2.7	100	53	1020.9
05-Sep-04	70	52	61	50.0		0	80	6.3	80	17	5.3	86	49	1029.6
06-Sep-04	72	54	63	54.7		0	140	2.9	140	9	1.9	100	53	1025.9
07-Sep-04	79	68	74	66.7		0	170	6.2	160	18	5.7	84	69	1020.3
08-Sep-04						0								
09-Sep-04						0								
10-Sep-04														
11-Sep-04														
12-Sep-04														
13-Sep-04														
14-Sep-04														
15-Sep-04														
16-Sep-04														
17-Sep-04														
18-Sep-04														
19-Sep-04														
20-Sep-04														
21-Sep-04														
22-Sep-04														
23-Sep-04														
24-Sep-04														
25-Sep-04														
26-Sep-04														
27-Sep-04														
28-Sep-04														
29-Sep-04														
30-Sep-04														
01-Oct-04														
02-Oct-04														
03-Oct-04														
04-Oct-04														
05-Oct-04	55	55	55	34.0		0	330	8.1	350	8	0	45	45	1023.3

Table H1-1
Daily Climatic Data, NWS Weather Station in Lincoln, Rhode Island
August 2003 - October 2004

Date	Max. Daily Temp. (°F)	Min. Daily Temp. (°F)	Avg. Daily Temp. (°F)	Avg. Daily Dew Pt. (°F)	Max. 1-Hour Precip (in)	Total Daily Precip (in)	Prevail. Wind Direction (°)	Avg. Wind Speed (mph)	Peak Wind Direction (°)	Peak Wind Speed (mph)	Total Sky Cover (10ths)	Max. Relative Humidity (%)	Min. Relative Humidity (%)	Avg. Sea Level Bar. Pressure (mbars)
06-Oct-04	61	43	52	40.4		0					0	93	41	1026.9
07-Oct-04	66	39	53	41.4		0					0	100	47	1027.8
08-Oct-04	73	45	59	48.5		0		0.0		0	0	100	51	1028.8
09-Oct-04						0								
10-Oct-04						0								
11-Oct-04														
12-Oct-04	61	46	54	34.7		0	330	7.8	320	17	0	63	41	1002.9
13-Oct-04	70	41	56	36.2		0	310	4.8	310	9	0	76	30	1004.4
14-Oct-04	55	43	49	50.5	0.03	0.08	40	8.1	40	18	8.4	100	77	1003.1
15-Oct-04	61	54	58	54.8	0.35	0.75	130	5.0	150	20	9.9	100	93	1001.2
16-Oct-04	61	46	54	47.5	0.09	0.08	230	6.2	250	21	5.6	100	55	998.4
17-Oct-04	55	39	47	37.2		0	240	8.1	250	23	2.2	100	40	1007.0
18-Oct-04	55	41	48	36.7		9.09	280	4.0	310	13	0	86	49	1012.0
Minimum	9	-8	1	-19.6	0	0	10	0.0	10	0	0	21	12	990.2
Maximum	90	73	79	73.0	10	15	360	19.7	360	47	10	100	93	1035.5
Average	60	42	51	39.5	0	0	206	6.2	201	19	4	86	49	1016.2

Note: Source for Lincoln data is the National Weather Service (NWS), Taunton, Massachusetts, http://www.erh.noaa.gov/box/dailystns.shtml

Table H1-2
Daily Climatic Data, Onsite Station Compared to NWS Weather Station in Lincoln, Rhode Island

Date	Time	On-site Temp. (°F)	Lincoln Max Daily Temp. (°F)	Lincoln Min Daily Temp. (°F)	Lincoln Avg. Daily Temp. (°F)	On-site Dew Pt. (°F)	Lincoln Avg. Daily Dew Pt. (°F)	Onsite Wind Speed (mph)	Lincoln Avg. Wind Speed (mph)	On-site Pressure (in)	On-site Pressure (mm)	On-site Pressure (mbars)	Lincoln Avg. Sea Level Bar. Pressure (mbars)
25-Aug-03			79	52	66		52.2		4.6				1014.5
26-Aug-03			81	61	71		58.1	0	4.6				1012.3
26-Aug-03	7:30	64.2				48							
26-Aug-03	12:59	82.8				64		0		29.91		1013.9	
26-Aug-03	16:35	80.5				63				29.86		1012.2	
27-Aug-03			82	63	73		58.0		7.1				1010.2
27-Aug-03	6:43	64.9				48				29.79		1009.8	
27-Aug-03	11:38	82.9				64		10		29.83		1011.2	
27-Aug-03	16:30	86.7				68		5		29.82		1010.8	
28-Aug-03			73	50	62		48.2		5.8				1018.8
28-Aug-03	6:49	57.2				41		0		30.05		1018.6	
28-Aug-03	15:00	78.1				61		5		30.09		1020.0	
28-Aug-03	17:49	74.5				57		3		30.10		1020.3	
29-Aug-03			79	48	64		56.0		5.3				1019.9
29-Aug-03	6:47	51.8				37		0		30.20		1023.7	
29-Aug-03	15:34	86.7				68		2		30.09		1020.0	
30-Aug-03			81	61	71		61.0		6.6				1018.2
31-Aug-03			68	52	60		46.2		5.9				1026.3
1-Sep-03			66	54	60		53.0		2.5				1023.9
2-Sep-03			63	54	59		52.6	0	6.2	30.17		1022.7	1022.2
2-Sep-03	7:30	55.2					52.6		6.2				
2-Sep-03	11:14	61.3				45		0		30.19		1023.4	
3-Sep-03			70	55	63		52.6		6.0				1021.4
3-Sep-03	6:57	58.5				41		2		30.25		1025.4	
4-Sep-03			73	61	67		63.6		3.6				1011.4
4-Sep-03	17:12	70.9				54		0		29.82		1010.8	
5-Sep-03			75	57	66		57.8		5.6				1013.0
5-Sep-03	13:02	77.4				59		4		29.92		1014.2	
6-Sep-03			73	52	63		51.0		4.0				1017.3
7-Sep-03			77	48	63		52.1		3.8				1015.3
8-Sep-03			72	50	61		50.6		5.6				1019.4
8-Sep-03	6:40	60.3				43		2		30.15		1022.0	
8-Sep-03	10:07	70.3				52		8		30.20		1023.7	
8-Sep-03	10:49	72.1				54		3		30.18		1023.0	
8-Sep-03	17:25	73.2				55		1		30.17		1022.7	
9-Sep-03			64	43	54		44.6		6.1				1026.1
9-Sep-03	6:56	53.6				37		2		30.32		1027.8	
9-Sep-03	13:30	69.8				50		2		30.36		1029.1	
9-Sep-03	17:06	70.3				50		4		30.33		1028.1	

Table H1-2
Daily Climatic Data, Onsite Station Compared to NWS Weather Station in Lincoln, Rhode Island

Date	Time	On-site Temp. (°F)	Lincoln Max Daily Temp. (°F)	Lincoln Min Daily Temp. (°F)	Lincoln Avg. Daily Temp. (°F)	On-site Dew Pt. (°F)	Lincoln Avg. Daily Dew Pt. (°F)	Onsite Wind Speed (mph)	Lincoln Avg. Wind Speed (mph)	On-site Pressure (in)	On-site Pressure (mm)	On-site Pressure (mbars)	Lincoln Avg. Sea Level Bar. Pressure (mbars)
10-Sep-03			72	41	57		43.8		2.4				1023.2
10-Sep-03	7:34	45.7				30		2		30.29		1026.7	
10-Sep-03	13:30	73.9				54		5		30.21		1024.0	
10-Sep-03	16:18	78.6				59		3		30.15		1022.0	
11-Sep-03			73	52	63		50.8		6.9				1025.0
11-Sep-03	8:00	59.2				41		0		30.25		1025.4	
11-Sep-03	14:30	81.0				61		2		30.33		1028.1	
11-Sep-03	17:30	74.3				54		0		30.34		1028.4	
12-Sep-03			70	55	63		50.4		6.5				1027.4
12-Sep-03	9:16	65.5				48		0		30.44		1031.8	
12-Sep-03	12:45	75.0				55		5		30.40		1030.5	
13-Sep-03			73	55	64		57.1		5.6				1026.9
14-Sep-03			79	64	72		63.1		3.7				1025.5
15-Sep-03		67.1	77	64	71		62.6		3.8				1021.0
15-Sep-03	7:00					48				30.24		1025.0	1021.0
15-Sep-03	16:11	79.7				59		6		30.15		1022.0	
16-Sep-03			77	59	68		60.7		5.7				1016.9
16-Sep-03	6:55	68.9				50		0		30.03		1017.9	
16-Sep-03	16:18	84.0				63		0		30.05		1018.6	
17-Sep-03			73	52	63		49.0		5.8				1025.2
17-Sep-03	6:53	53.4				36		3		30.30		1027.1	
17-Sep-03	17:05	77.4				57					770.9	1028.0	
18-Sep-03			72	55	64		51.6		9.5				1027.9
18-Sep-03	6:44	60.0				41		2			773.4	1031.3	
18-Sep-03	15:16	74.5				54		3			772.9	1030.7	
19-Sep-03			79	61	70		63.8		7.9				1021.4
19-Sep-03	10:06	69.4				52		5			768.3	1024.5	
20-Sep-03			81	63	72		62.3		3.9				1019.5
20-Sep-03	7:48	68.2				48					766.6	1022.3	
21-Sep-03			73	52	63		50.9		4.3				1023.9
22-Sep-03			72	54	63		50.9		2.2				1023.0
23-Sep-03			72	55	64		57.0		7.4				1011.4
24-Sep-03			72	48	60		47.4		4.7				1017.8
25-Sep-03			73	52	63		52.3		4.6				1016.5
26-Sep-03			72	59	66		55.6		4.3				1018.1
27-Sep-03			75	57	66		58.7		4.6				1017.4
28-Sep-03			70	61	66		61.4		5.1				1007.9
29-Sep-03			70	46	58		47.2		5.8				1011.0
29-Sep-03	8:33	56.7				39		4			759.0	1012.1	

Table H1-2
Daily Climatic Data, Onsite Station Compared to NWS Weather Station in Lincoln, Rhode Island

Date	Time	On-site Temp. (°F)	Lincoln Max Daily Temp. (°F)	Lincoln Min Daily Temp. (°F)	Lincoln Avg. Daily Temp. (°F)	On-site Dew Pt. (°F)	Lincoln Avg. Daily Dew Pt. (°F)	Onsite Wind Speed (mph)	Lincoln Avg. Wind Speed (mph)	On-site Pressure (in)	On-site Pressure (mm)	On-site Pressure (mbars)	Lincoln Avg. Sea Level Bar. Pressure (mbars)
30-Sep-03			63	41	52		39.3		5.6				1020.4
30-Sep-03	18:34	53.4				36		0			766.8	1022.5	
1-Oct-03			63	39	51		41.7		1.8				1019.8
1-Oct-03	7:33	44.6				28		0			767.6	1023.6	
2-Oct-03			61	39	50		38.2		5.3				1014.6
2-Oct-03	14:09	62.6				43					760.2	1013.7	
2-Oct-03	19:20	45.7				28		2			762.8	1017.2	
3-Oct-03			57	30	44		29.4		4.6				1018.5
3-Oct-03	7:13	35.8			44	19		0			766.8	1022.5	
4-Oct-03			57	30	48		43.0		4.3				1011.3
4-Oct-03	8:33	50.0				32		0			761.5	1015.5	
5-Oct-03			59	37	46		34.7		4.8				1012.8

Notes: Source for Lincoln data is the National Weather Service (NWS), Taunton, Massachusetts, http://www.erh.noaa.gov/box/dailystns.shtml
On-site data collected by Shield personnel at weather station set up next to field trailer.

Table H2-1
Potentiometric Survey Data - May 6 to 8, 2002
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
GZ-1-1	SH	67.08	05/07/02	7:00	8.45	58.63
L-2	IN	69.94	05/07/02	8:15	11.46	58.48
MW-106A	SH	68.61	05/06/02	17:25	10.71	57.90
MW-107A	SH	81.46	05/07/02	9:40	18.25	63.21
MW-107B	IN	81.53	05/07/02	9:40	19.26	62.27
MW-107C	BR	81.55	05/07/02	9:40	20.07	61.48
MW-108AA	SH	69.19	05/07/02	11:25	9.68	59.51
MW-108A	IN	69.00	05/07/02	11:25	9.66	59.34
MW-108B	DP	69.31	05/07/02	11:25	11.18	58.13
MW-108C	BR	69.26	05/07/02	11:25	11.23	58.03
MW-109AA	SH	67.77	05/06/02	11:45	10.66	57.11
MW-109A	DP	68.64	05/06/02	11:45	10.47	58.17
MW-109B	TL	69.13	05/06/02	11:45	11.21	57.92
MW-109B	TL	69.13	05/07/02	12:00	11.39	57.74
MW-109C	BR	69.30	05/06/02	11:45	11.35	57.95
MW-110A	SH	66.91	05/07/02	13:45	7.70	59.21
MW-110B	TL	67.50	05/07/02	13:45	8.73	58.77
MW-110C	BR	67.93	05/07/02	13:45	8.79	59.14
MW-111AA	SH	64.53	05/07/02	15:00	7.80	56.73
MW-111A	IN	64.13	05/07/02	15:00	7.35	56.78
MW-111B	DP	64.01	05/07/02	15:00	7.22	56.79
MW-111C	BR	64.50	05/07/02	15:00	6.06	58.44
MW-112AA	SH	68.59	05/07/02	16:45	10.48	58.11
MW-112A	IN	68.09	05/07/02	16:45	10.23	57.86
MW-112B	DP	68.20	05/07/02	16:45	11.52	56.68
MW-112C	BR	68.09	05/07/02	16:45	11.31	56.78
MW-A1	DP	64.79	05/07/02	8:45	7.06	57.73
MW-A2	SH	65.20	05/07/02	8:45	7.60	57.60
MW-B1	IN	61.92	05/06/02	15:20	3.92	58.00
MW-B2	SH	62.04	05/06/02	15:20	4.76	57.28
MW-C1	IN	61.06	05/06/02	14:45	3.83	57.23
MW-C2	SH	61.48	05/06/02	14:45	4.70	56.78
P-6	SH	67.83	05/06/02	18:00	8.89	58.94
P-7	SH	71.79	05/06/02	17:00	12.39	59.40
P-8	SH	62.53	05/06/02	15:50	5.22	57.31
P-9	SH	66.07	05/08/02	17:45	8.04	58.03

Table H2-2
Potentiometric Survey Data - August 13 and 14, 2003
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
GZ-1-1	SH	67.08	08/14/03	11:42	8.98	58.10
L-2	IN	69.94	08/14/03	11:20	12.13	57.81
MW-106B	IN	68.55	08/14/03	8:51	11.46	57.09
MW-106C	BR	68.20	08/14/03	9:10	10.98	57.22
MW-107A	SH	81.46	08/14/03	10:38	19.22	62.24
MW-107B	IN	81.53	08/14/03	10:41	19.91	61.62
MW-107C	BR	81.55	08/14/03	10:43	20.65	60.90
MW-108AA	SH	69.19	08/14/03	14:50	10.14	59.05
MW-108A	IN	69.00	08/14/03	14:51	10.10	58.90
MW-108B	DP	69.31	08/14/03	14:52	11.73	57.58
MW-108C	BR	69.26	08/14/03	14:53	11.77	57.49
MW-109AA	SH	67.77	08/14/03	15:17	11.60	56.17
MW-109A	DP	68.64	08/14/03	15:17	11.27	57.37
MW-109B	TL	69.13	08/14/03	15:17	11.98	57.15
MW-109C	BR	69.30	08/14/03	15:17	12.20	57.10
MW-110A	SH	66.91	08/14/03	16:39	8.28	58.63
MW-110B	TL	67.50	08/14/03	16:39	9.32	58.18
MW-110C	BR	67.93	08/14/03	16:39	9.39	58.54
MW-111AA	SH	64.53	08/14/03	15:30	8.29	56.24
MW-111A	IN	64.13	08/14/03	15:30	7.89	56.24
MW-111B	DP	64.01	08/14/03	15:30	7.75	56.26
MW-111C	BR	64.50	08/14/03	15:30	6.62	57.88
MW-112AA	SH	68.59	08/14/03	16:15	11.25	57.34
MW-112A	IN	68.09	08/14/03	16:15	10.78	57.31
MW-112B	DP	68.20	08/14/03	16:15	12.04	56.16
MW-112C	BR	68.09	08/14/03	16:15	11.87	56.22
MW-501A	SH	68.68	08/14/03	12:05	OBSTR @ 9.40	OBSTR @ 59.28
MW-501B	SH	68.46	08/14/03	12:05	10.19	58.27
MW-501C	DP	68.47	08/14/03	12:05	10.15	58.32
MW-502	DP	73.47	08/14/03	11:10	15.56	57.91
MW-A1	DP	64.79	08/14/03	11:30	7.82	56.97
MW-A2	SH	65.20	08/14/03	11:32	8.25	56.95
MW-B1	IN	61.92	08/14/03	13:32	5.15	56.77
MW-B2	SH	62.04	08/14/03	13:32	5.75	56.29
MW-C1	IN	61.06	08/14/03	13:50	4.72	56.34
MW-C2	SH	61.48	08/14/03	13:50	5.61	55.87
P-6	SH	67.83	08/14/03	8:15	9.54	58.29
P-7	SH	71.79	08/14/03	9:27	13.44	58.35
P-8	SH	62.53	08/14/03	13:15	6.22	56.31
PZ-01 inside	SH	59.57	08/13/03	15:05	4.00	55.57
PZ-01 outside	SW	59.57	08/13/03	15:05	4.50	55.07
PZ-02 inside	SH	60.42	08/13/03	14:25	4.56	55.86
PZ-02 outside	SW	60.42	08/13/03	14:25	4.82	55.60
PZ-03 inside	SH	61.11	08/13/03	17:00	4.20	56.91
PZ-03 outside	SW	61.11	08/13/03	17:00	4.72	56.39
PZ-04 inside	SH	55.87	08/13/03	10:45	3.33	52.54
PZ-04 outside	SW	55.87	08/13/03	10:45	3.50	52.37
PZ-05 inside	SH	59.95	08/13/03	16:14	3.44	56.51

Table H2-2
Potentiometric Survey Data - August 13 and 14, 2003
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-05 outside	SW	59.95	08/13/03	16:14	3.44	56.51
PZ-06 inside	SH	59.31	08/13/03	9:55	4.70	54.61
PZ-06 outside	SW	59.31	08/13/03	9:55	4.89	54.42
PZ-07 inside	SH	59.57	08/13/03	16:15	4.54	55.03
PZ-07 outside	SW	59.57	08/13/03	16:15	4.50	55.07
PZ-08 inside	SH	63.26	08/13/03	16:04	8.18	55.08
PZ-09 inside	SH	58.24	08/13/03	16:40	2.14	56.10
PZ-09 outside	SW	58.24	08/13/03	16:40	2.08	56.16
PZ-10 inside	SH	63.70	08/13/03	15:30	3.98	59.72
PZ-10 outside	SW	63.70	08/13/03	15:30	3.98	59.72
PZ-11 inside	SH	63.53	08/13/03	15:40	3.64	59.89
PZ-11 outside	SW	63.53	08/13/03	15:40	3.64	59.89
PZ-12 inside	SH	64.14	08/13/03	17:20	4.21	59.93
PZ-12 outside	SW	64.14	08/13/03	17:20	4.18	59.96
PZ-13 inside	SH	65.11	08/13/03	18:32	3.98	61.13
PZ-13 outside	SW	65.11	08/13/03	18:32	4.27	60.84
PZ-14 inside	SH	61.72	08/13/03	18:40	4.45	57.27
PZ-14 outside	SH	61.72	08/13/03	18:40	4.56	57.16
PZ-15 inside	SH	68.49	08/13/03	18:10	DRY	DRY
PZ-15 outside	SW	68.49	08/13/03	18:10	1.86	66.63
PZ-16 inside	SH	66.08	08/13/03	16:25	11.00	55.08
PZ-17 inside	SH	65.15	08/13/03	14:35	9.52	55.63
PZ-18 inside	SH	65.96	08/13/03	14:45	10.08	55.88

Table H2-3
Potentiometric Survey Data - August 25 to 27, 2003
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
GZ-1-1	SH	67.08	08/25/03	9:40	9.94	57.14
GZ-4-1	SH	63.49	08/25/03	9:13	8.09	55.40
L-2	IN	69.94	08/25/03	9:30	13.27	56.67
MW-106A	SH	68.61	08/25/03	14:40	12.47	56.14
MW-106B	IN	68.55	08/25/03	14:40	12.54	56.01
MW-106C	BR	68.20	08/25/03	14:40	12.00	56.20
MW-107A	SH	81.46	08/25/03	10:00	20.98	60.48
MW-107B	IN	81.53	08/25/03	10:00	21.53	60.00
MW-107C	BR	81.55	08/25/03	10:00	22.17	59.38
MW-108AA	SH	69.19	08/25/03	11:05	11.78	57.41
MW-108A	IN	69.00	08/25/03	11:05	11.73	57.27
MW-108B	DP	69.31	08/25/03	11:05	13.16	56.15
MW-108C	BR	69.26	08/25/03	11:05	13.18	56.08
MW-109AA	SH	67.77	08/25/03	12:15	12.88	54.89
MW-109A	DP	68.64	08/25/03	12:15	12.64	56.00
MW-109B	TL	69.13	08/25/03	12:15	13.32	55.81
MW-109C	BR	69.30	08/25/03	12:15	13.56	55.74
MW-110A	SH	66.91	08/25/03	13:27	9.56	57.35
MW-110B	TL	67.50	08/25/03	13:27	10.64	56.86
MW-110C	BR	67.93	08/25/03	13:27	10.59	57.34
MW-111AA	SH	64.53	08/25/03	12:58	9.59	54.94
MW-111A	IN	64.13	08/25/03	12:58	9.18	54.95
MW-111B	DP	64.01	08/25/03	12:58	9.03	54.98
MW-111C	BR	64.50	08/25/03	12:58	7.86	56.64
MW-112AA	SH	68.59	08/25/03	13:10	12.64	55.95
MW-112A	IN	68.09	08/25/03	13:10	12.34	55.75
MW-112B	DP	68.20	08/25/03	13:10	13.37	54.83
MW-112C	BR	68.09	08/25/03	13:10	13.21	54.88
MW-501A	SH	68.68	08/25/03	10:15	OBSTR @ 9.76	OBSTR @ 58.92
MW-501B	SH	68.46	08/25/03	10:15	11.10	57.36
MW-501C	DP	68.47	08/25/03	10:15	11.08	57.39
MW-502	DP	73.47	08/25/03	9:35	16.68	56.79
MW-A1	DP	64.79	08/25/03	9:20	9.13	55.66
MW-A2	SH	65.20	08/25/03	9:25	9.60	55.60
MW-B1	IN	61.92	08/25/03	11:50	6.54	55.38
MW-B2	SH	62.04	08/25/03	11:50	7.06	54.98
MW-C1	IN	61.06	08/25/03	12:00	6.02	55.04
MW-C2	SH	61.48	08/25/03	12:00	6.82	54.66
P-6	SH	67.83	08/25/03	10:20	10.48	57.35
P-7	SH	71.79	08/25/03	14:50	14.89	56.90
P-8	SH	62.53	08/25/03	11:37	7.56	54.97
P-9	SH	66.07	08/25/03	14:10	10.01	56.06
PZ-01 inside	SH	59.57	08/25/03	11:10	5.24	54.33
PZ-01 inside	SH	59.57	08/27/03	15:25	5.40	54.17
PZ-01 outside	SW	59.57	08/25/03	11:10	5.63	53.94
PZ-01 outside	SW	59.57	08/27/03	15:25	5.79	53.78
PZ-02 inside	SH	60.42	08/25/03	11:57	5.73	54.69
PZ-02 outside	SW	60.42	08/25/03	11:57	DRY @ 5.14	DRY @ 55.28

Table H2-3
Potentiometric Survey Data - August 25 to 27, 2003
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-03 inside	SH	61.11	08/25/03	11:45	6.87	54.24
PZ-03 outside	SW	61.11	08/25/03	11:45	DRY @ 4.79	DRY @ 56.32
PZ-04 inside	SH	55.87	08/25/03	10:41	4.03	51.84
PZ-04 outside	SW	55.87	08/25/03	10:41	4.03	51.84
PZ-05 inside	SH	59.95	08/25/03	8:40	5.73	54.22
PZ-05 outside	SW	59.95	08/25/03	8:40	5.67	54.28
PZ-06 inside	SH	59.31	08/25/03	8:47	DRY @ 4.84	DRY @ 54.47
PZ-06 outside	SW	59.31	08/25/03	8:47	DRY @ 4.94	DRY @ 54.37
PZ-07 inside	SH	59.57	08/25/03	10:20	5.57	54.00
PZ-07 outside	SW	59.57	08/25/03	10:20	5.37	54.20
PZ-08 inside	SH	63.26	08/25/03	9:00	9.35	53.91
PZ-08 outside	SH	63.26	08/25/03	9:00	GS @ 3.89	GS @ 59.37
PZ-09 inside	SH	58.24	08/25/03	9:45	3.86	54.38
PZ-09 outside	SW	58.24	08/25/03	9:45	3.84	54.40
PZ-10 inside	SH	63.70	08/25/03	11:21	5.46	58.24
PZ-10 outside	SW	63.70	08/25/03	11:21	5.45	58.25
PZ-11 inside	SH	63.53	08/25/03	11:20	5.27	58.26
PZ-11 inside	SH	63.53	08/27/03	16:15	5.67	57.86
PZ-11 outside	SW	63.53	08/25/03	11:20	5.06	58.47
PZ-11 outside	SW	63.53	08/27/03	16:15	DRY	DRY
PZ-12 inside	SH	64.14	08/25/03	12:25	6.07	58.07
PZ-12 inside	SH	64.14	08/27/03	16:00	6.46	57.68
PZ-12 outside	SW	64.14	08/25/03	12:25	DRY @ 5.00	DRY @ 59.14
PZ-12 outside	SW	64.14	08/27/03	16:00	DRY	DRY
PZ-13 inside	SH	65.11	08/25/03	11:43	4.04	61.07
PZ-13 outside	SW	65.11	08/25/03	11:43	4.43	60.68
PZ-14 inside	SH	61.72	08/25/03	12:05	4.63	57.09
PZ-14 outside	SH	61.72	08/25/03	12:05	5.03	56.69
PZ-15 inside	SH	68.49	08/25/03	12:00	DRY @ 6.03	DRY @ 62.46
PZ-15 outside	SW	68.49	08/25/03	12:00	1.87	66.62
PZ-16 inside	SH	66.08	08/25/03	9:12	12.17	53.91
PZ-16 outside	GS	66.08	08/25/03	9:12	GS @ 3.36	GS @ 62.72
PZ-17 inside	SH	65.15	08/25/03	9:19	10.87	54.28
PZ-17 outside	GS	65.15	08/25/03	9:19	GS @ 3.31	GS @ 61.84
PZ-18 inside	SH	65.96	08/25/03	9:25	11.25	54.71
PZ-18 outside	GS	65.96	08/25/03	9:25	GS @ 3.67	GS @ 62.29
PZ-19 inside	SH	69.69	08/27/03	15:45	12.44	57.25
HW-01	SW	69.64	08/25/03	15:00	3.43	66.21

Table H2-4
Potentiometric Survey Data - September 25, 2003
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
GZ-1-1	SH	67.08	09/25/03	7:55	9.14	57.94
L-2	IN	69.94	09/25/03	7:50	12.50	57.44
MW-106A	SH	68.61	09/25/03	9:08	11.65	56.96
MW-106B	IN	68.55	09/25/03	9:02	11.53	57.02
MW-106C	BR	68.20	09/25/03	9:04	11.08	57.12
MW-107A	SH	81.46	09/25/03	8:15	22.56	58.90
MW-107B	IN	81.53	09/25/03	8:20	22.71	58.82
MW-107C	BR	81.55	09/25/03	8:26	23.00	58.55
MW-108AA	SH	69.19	09/25/03	15:07	11.47	57.72
MW-108A	IN	69.00	09/25/03	15:10	11.33	57.67
MW-108B	DP	69.31	09/25/03	15:12	12.89	56.42
MW-108C	BR	69.26	09/25/03	15:14	12.89	56.37
MW-109AA	SH	67.77	09/25/03	10:26	12.28	55.49
MW-109A	DP	68.64	09/25/03	10:29	12.92	55.72
MW-109B	TL	69.13	09/25/03	10:30	13.53	55.60
MW-109C	BR	69.30	09/25/03	10:32	13.65	55.65
MW-110A	SH	66.91	09/25/03	14:30	11.69	55.22
MW-110B	TL	67.50	09/25/03	14:28	12.38	55.12
MW-110C	BR	67.93	09/25/03	14:25	11.97	55.96
MW-111AA	SH	64.53	09/25/03	10:35	9.65	54.88
MW-111A	IN	64.13	09/25/03	10:37	9.44	54.69
MW-111B	DP	64.01	09/25/03	10:40	9.30	54.71
MW-111C	BR	64.50	09/25/03	10:43	8.74	55.76
MW-112AA	SH	68.59	09/25/03	10:47	14.20	54.39
MW-112A	IN	68.09	09/25/03	10:50	13.77	54.32
MW-112B	DP	68.20	09/25/03	10:51	13.94	54.26
MW-112C	BR	68.09	09/25/03	10:55	13.74	54.35
MW-501A	SH	68.68	09/25/03	16:22	OBSTR @ 10.41	OBSTR @ 58.27
MW-501B	SH	68.46	09/25/03	16:25	10.38	58.08
MW-501C	DP	68.47	09/25/03	16:28	10.37	58.10
MW-502	DP	73.47	09/25/03	8:00	15.90	57.57
MW-A1	DP	64.79	09/25/03	7:45	7.91	56.88
MW-A2	SH	65.20	09/25/03	7:45	8.38	56.82
MW-B1	IN	61.92	09/25/03	9:59	5.50	56.42
MW-B2	SH	62.04	09/25/03	9:58	5.82	56.22
MW-C1	IN	61.06	09/25/03	10:15	5.12	55.94
MW-C2	SH	61.48	09/25/03	10:13	5.69	55.79
MW-EA-1	SH	92.24	09/25/03	15:52	30.23	62.01
MW-EA-2	BR	78.32	09/25/03	16:05	15.21	63.11
MW-EA-3	BR	78.76	09/25/03	17:17	20.46	58.30
MW-EA-4	BR	79.75	09/25/03	17:25	17.03	62.72
P-6	SH	67.83	09/25/03	16:34	9.71	58.12
P-7	SH	71.79	09/25/03	8:50	13.61	58.18
P-8	SH	62.53	09/25/03	9:48	6.04	56.49
P-9	SH	66.07	09/25/03	14:51	10.47	55.60
PZ-01 inside	SH	59.57	09/25/03	10:23	4.19	55.38
PZ-01 outside	SW	59.57	09/25/03	10:23	4.29	55.28
PZ-02 inside	SH	60.42	09/25/03	10:10	4.60	55.82

Table H2-4
Potentiometric Survey Data - September 25, 2003
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-02 outside	SW	60.42	09/25/03	10:10	4.68	55.74
PZ-03 inside	SH	61.11	09/25/03	10:02	4.85	56.26
PZ-03 outside	SW	61.11	09/25/03	10:02	DRY @ 4.72	DRY @ 56.39
PZ-04 inside	SH	55.87	09/25/03	12:18	3.43	52.44
PZ-04 outside	SW	55.87	09/25/03	12:18	3.31	52.56
PZ-05 inside	SH	59.95	09/25/03	12:07	6.33	53.62
PZ-05 outside	SW	59.95	09/25/03	12:07	DRY @ 6.16	DRY @ 53.79
PZ-06 inside	SH	59.31	09/25/03	12:01	DRY @ 4.88	DRY @ 54.43
PZ-06 outside	SW	59.31	09/25/03	12:01	4.83	54.48
PZ-07 inside	SH	59.57	09/25/03	12:04	4.97	54.60
PZ-07 outside	SW	59.57	09/25/03	12:04	4.95	54.62
PZ-08 inside	SH	63.26	09/25/03	11:56	8.71	54.55
PZ-09 inside	SH	58.24	09/25/03	11:36	3.66	54.58
PZ-09 outside	SW	58.24	09/25/03	11:36	3.64	54.60
PZ-10 inside	SH	63.70	09/25/03	14:54	7.31	56.39
PZ-10 outside	SW	63.70	09/25/03	14:54	DRY @ 5.58	DRY @ 58.12
PZ-11 inside	SH	63.53	09/25/03	15:00	7.49	56.04
PZ-11 outside	SW	63.53	09/25/03	15:00	DRY @ 5.36	DRY @ 58.17
PZ-12 inside	SH	64.14	09/25/03	15:25	6.58	57.56
PZ-12 outside	SW	64.14	09/25/03	15:25	DRY @ 4.88	DRY @ 59.26
PZ-13 inside	SH	65.11	09/25/03	17:31	4.22	60.89
PZ-13 outside	SW	65.11	09/25/03	17:31	4.64	60.47
PZ-14 inside	SH	61.72	09/25/03	9:14	4.57	57.15
PZ-14 outside	SW	61.72	09/25/03	9:14	4.61	57.11
PZ-15 inside	SH	68.49	09/25/03	16:50	5.80	62.69
PZ-15 outside	SW	68.49	09/25/03	16:50	1.75	66.74
PZ-16 inside	SH	66.08	09/25/03	11:45	11.24	54.84
PZ-17 inside	SH	65.15	09/25/03	11:22	9.98	55.17
PZ-18 inside	SH	65.96	09/25/03	11:15	10.29	55.67
PZ-19 inside	SH	69.69	09/25/03	15:22	12.38	57.31
SEA-601	SH	63.47	09/25/03	9:31	6.96	56.51
SEA-602A	SH	62.51	09/25/03	9:40	6.00	56.51
SEA-602B	IN	61.99	09/25/03	9:43	5.46	56.53
SEA-603	SH	61.97	09/25/03	9:51	5.61	56.36
SEA-604	SH	65.34	09/25/03	10:06	9.38	55.96
SEA-605	SH	65.20	09/25/03	10:19	9.74	55.46
SEA-606	SH	64.43	09/25/03	12:30	11.29	53.14
SEA-607	SH	65.82	09/25/03	11:40	11.31	54.51
SEA-608	SH	67.02	09/25/03	11:52	12.47	54.55
HW-01	SW	69.64	09/25/03	9:19	DRY @ 3.32	DRY @ 66.32
HW-02	SW	59.37	09/25/03	14:35	2.57	56.80

Table H2- 5
Potentiometric Survey Data - August 27, 2004
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
GZ-1-1	SH	67.08	8/27/04	15:50	9.92	57.16
GZ-4-1	SH	63.49	8/27/04	16:11	8.05	55.44
L-2	IN	69.94	8/27/04	15:56	13.27	56.67
MW-106A	SH	68.61	8/27/04	8:43	12.62	55.99
MW-106B	IN	68.55	8/27/04	8:38	12.46	56.09
MW-106C	BR	68.20	8/27/04	8:47	11.95	56.25
MW-107A	SH	81.46	8/27/04	14:39	21.72	59.74
MW-107B	IN	81.53	8/27/04	14:37	22.07	59.46
MW-107C	BR	81.55	8/27/04	14:41	22.59	58.96
MW-108AA	SH	69.19	8/27/04	10:20	12.22	56.97
MW-108A	IN	69.00	8/27/04	10:16	12.16	56.84
MW-108B	DP	69.31	8/27/04	10:22	13.38	55.93
MW-108C	BR	69.26	8/27/04	10:24	13.39	55.87
MW-109AA	SH	67.77	8/27/04	10:38	12.93	54.84
MW-109A	DP	68.64	8/27/04	10:40	12.91	55.73
MW-109B	TL	69.13	8/27/04	10:42	13.62	55.51
MW-109C	BR	69.30	8/27/04	10:43	13.81	55.49
MW-110A	SH	66.91	8/27/04	14:18	11.02	55.89
MW-110B	TL	67.50	8/27/04	14:15	11.99	55.51
MW-110C	BR	67.93	8/27/04	14:12	11.77	56.16
MW-111AA	SH	64.53	8/27/04	13:08	10.01	54.52
MW-111A	IN	64.13	8/27/04	13:06	9.64	54.49
MW-111B	DP	64.01	8/27/04	13:04	9.51	54.50
MW-111C	BR	64.50	8/27/04	13:02	8.71	55.79
MW-112AA	SH	68.59	8/27/04	13:13	13.89	54.70
MW-112A	SH	68.09	8/27/04	13:16	13.64	54.45
MW-112B	DP	68.20	8/27/04	13:18	14.12	54.08
MW-112C	BR	68.09	8/27/04	13:20	13.89	54.20
MW-501A	SH	68.68	8/27/04	9:35	11.28	57.40
MW-501B	SH	68.46	8/27/04	9:24	11.04	57.42
MW-501C	DP	68.47	8/27/04	9:38	10.99	57.48
MW-502	DP	73.47	8/27/04	15:38	16.68	56.79
MW-A1	DP	64.79	8/27/04	16:03	9.08	55.71
MW-A2	SH	65.20	8/27/04	16:07	9.57	55.63
MW-B1	IN	61.92	8/27/04	11:25	6.64	55.28
MW-B2	SH	62.04	8/27/04	11:26	7.01	55.03
MW-C1	IN	61.06	8/27/04	11:38	6.03	55.03
MW-C2	SH	61.48	8/27/04	11:37	6.79	54.69
MW-EA-1	SH	92.24	8/27/04	15:20	30.22	62.02
MW-EA-2	BR	78.32	8/27/04	15:12	14.96	63.36
MW-EA-3	BR	78.76	8/27/04	14:44	20.36	58.40
MW-EA-4	BR	79.75	8/27/04	14:37	15.48	64.27
P-6	SH	67.83	8/27/04	9:46	10.42	57.41
P-7	SH	71.79	8/27/04	10:48	14.84	56.95
P-8	SH	62.53	8/27/04	11:10	7.45	55.08
PZ-01 inside	SH	59.71	8/27/04	10:48	5.24	54.47
PZ-01 outside	SW	59.71	8/27/04	10:48	5.59	54.12
PZ-02 inside	SH	60.39	8/27/04	16:59	5.66	54.73

Table H2- 5
Potentiometric Survey Data - August 27, 2004
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-02 outside	SW	60.39	8/27/04	16:59	DRY @ 4.95	DRY @ 55.44
PZ-03 inside	SH	61.14	8/27/04	17:06	5.79	55.35
PZ-03 outside	SW	61.14	8/27/04	17:06	DRY @ 4.55	DRY @ 56.59
PZ-04A inside	SH	53.99	8/27/04	11:20	2.28	51.71
PZ-04A outside	SW	53.99	8/27/04	11:20	2.29	51.70
PZ-05 inside	SH	59.93	8/27/04	12:01	6.37	53.56
PZ-05 outside	SW	59.93	8/27/04	12:01	DRY @ 5.95	DRY @ 53.98
PZ-06 inside	SH	58.89	8/27/04	12:07	5.31	53.58
PZ-06A inside	SH	56.60	8/27/04	12:10	2.98	53.62
PZ-06 outside	SW	58.89	8/27/04	12:07	DRY @ 5.00	DRY @ 53.89
PZ-06A outside	SW	56.60	8/27/04	12:10	3.19	53.41
PZ-07 inside	SH	59.60	8/27/04	12:15	5.60	54.00
PZ-07 outside	SW	59.60	8/27/04	12:15	5.40	54.20
PZ-09 inside	SH	57.75	8/27/04	13:23	3.25	54.50
PZ-09 outside	SW	57.75	8/27/04	13:23	3.22	54.53
PZ-10 inside	SH	63.70	8/27/04	10:19	5.79	57.91
PZ-10 outside	SW	63.70	8/27/04	10:19	DRY @ 5.40	DRY @ 58.30
PZ-11 inside	SH	63.55	8/27/04	10:08	5.84	57.71
PZ-11 outside	SW	63.55	8/27/04	10:08	DRY @ 5.37	DRY @ 58.18
PZ-12 inside	SH	64.14	8/27/04	9:45	6.45	57.69
PZ-12 outside	SW	64.14	8/27/04	9:45	DRY @ 4.82	DRY @ 59.32
PZ-13 inside	SH	65.11	8/27/04	15:00	4.05	61.06
PZ-13 outside	SW	65.11	8/27/04	15:00	4.69	60.42
PZ-14 inside	SH	61.68	8/27/04	8:39	5.08	56.60
PZ-14 outside	SW	61.68	8/27/04	8:39	DRY @ 4.62	DRY @ 57.06
PZ-15 inside	SH	68.49	8/27/04	8:53	DRY @ 5.98	DRY @ 62.51
PZ-15A inside	SH	69.12	8/27/04	9:18	7.10	62.02
PZ-15 outside	SW	68.49	8/27/04	8:53	1.94	66.55
PZ-15A outside	SW	69.12	8/27/04	9:18	2.60	66.52
PZ-16 inside	SH	66.08	8/27/04	12:50	12.17	53.91
PZ-17 inside	SH	65.15	8/27/04	13:03	10.81	54.34
PZ-18 inside	SH	65.97	8/27/04	13:12	11.20	54.77
PZ-19 inside	SH	69.69	8/27/04	9:51	12.42	57.27
PZ-19 outside	GS	69.69	8/27/04	9:51	GS @ 2.85	GS @ 66.84
PZ-20 inside	SH	59.11	8/27/04	8:45	3.14	55.97
PZ-20 outside	SW	59.11	8/27/04	8:45	3.22	55.89
SEA-601	SH	63.47	8/27/04	10:55	8.67	54.80
SEA-602A	SH	62.51	8/27/04	11:02	7.53	54.98
SEA-602B	IN	61.99	8/27/04	11:00	6.71	55.28
SEA-603	SH	61.97	8/27/04	11:16	6.94	55.03
SEA-604	SH	65.34	8/27/04	11:32	10.38	54.96
SEA-605	SH	65.20	8/27/04	11:43	10.76	54.44
SEA-606	SH	64.43	8/27/04	13:40	11.70	52.73
SEA-607	SH	65.82	8/27/04	12:45	11.77	54.05
SEA-608	SH	67.02	8/27/04	12:40	12.96	54.06
HW-01	SW	69.64	8/27/04	8:47	ALMOST DRY	ALMOST DRY
HW-02	SW	59.37	8/27/04	16:32	1.36	58.01

Table H2-6
Potentiometric Survey Data - September 20, 2004
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
GZ-1-1	SH	67.08	9/20/04	11:16	7.84	59.24
GZ-4-1	SH	63.49	9/20/04	11:30	5.12	58.37
L-2	IN	69.94	9/20/04	11:21	11.08	58.86
MW-106A	SH	68.61	9/20/04	15:00	10.28	58.33
MW-106B	IN	68.55	9/20/04	15:02	10.21	58.34
MW-106C	BR	68.20	9/20/04	15:04	10.78	57.42
MW-107A	SH	81.46	9/20/04	14:08	21.73	59.73
MW-107B	IN	81.53	9/20/04	14:11	21.80	59.73
MW-107C	BR	81.55	9/20/04	14:10	21.99	59.56
MW-108AA	SH	69.19	9/20/04	15:33	11.15	58.04
MW-108A	IN	69.00	9/20/04	15:34	10.98	58.02
MW-108B	DP	69.31	9/20/04	15:36	11.50	57.81
MW-108C	BR	69.26	9/20/04	15:37	11.49	57.77
MW-109AA	SH	67.77	9/20/04	8:05	10.46	57.31
MW-109AA	SH	67.77	9/20/04	8:06	10.42	57.35
MW-109A	DP	68.64	9/20/04	8:07	11.48	57.16
MW-109A	DP	68.64	9/20/04	8:08	11.47	57.17
MW-109B	TL	69.13	9/20/04	8:09	12.17	56.96
MW-109B	TL	69.13	9/20/04	8:10	12.15	56.98
MW-109C	BR	69.30	9/20/04	8:11	12.15	57.15
MW-109C	BR	69.30	9/20/04	8:12	12.16	57.14
MW-110A	SH	66.91	9/20/04	13:50	10.62	56.29
MW-110B	TL	67.50	9/20/04	13:52	11.75	55.75
MW-110C	BR	67.93	9/20/04	13:52	11.39	56.54
MW-111AA	SH	64.53	9/20/04	9:20	8.24	56.29
MW-111A	IN	64.13	9/20/04	9:20	8.19	55.94
MW-111B	DP	64.01	9/20/04	9:21	8.05	55.96
MW-111C	BR	64.50	9/20/04	9:22	7.96	56.54
MW-112AA	SH	68.59	9/20/04	9:46	12.77	55.82
MW-112A	IN	68.09	9/20/04	9:45	12.54	55.55
MW-112B	DP	68.20	9/20/04	9:41	12.65	55.55
MW-112C	BR	68.09	9/20/04	9:38	10.51	57.58
MW-501A	SH	68.68	9/20/04	14:37	9.46	59.22
MW-501B	SH	68.46	9/20/04	14:39	9.24	59.22
MW-501C	DP	68.47	9/20/04	14:41	9.20	59.27
MW-502	DP	73.47	9/20/04	11:13	14.56	58.91
MW-A1	DP	64.79	9/20/04	11:25	6.26	58.53
MW-A2	SH	65.20	9/20/04	11:26	6.73	58.47
MW-B1	IN	61.92	9/20/04	8:46	3.71	58.21
MW-B2	SH	62.04	9/20/04	8:45	4.10	57.94
MW-C1	IN	61.06	9/20/04	9:00	3.39	57.67
MW-C2	SH	61.48	9/20/04	9:02	3.99	57.49
MW-EA-1	SH	92.24	9/20/04	13:43	30.36	61.88
MW-EA-2	BR	78.32	9/20/04	13:30	14.35	63.97
MW-EA-3	BR	78.76	9/20/04	13:02	19.27	59.49
MW-EA-4	BR	79.75	9/20/04	12:59	15.61	64.14
P-6	SH	67.83	9/20/04	14:33	8.59	59.24
P-7	SH	71.79	9/20/04	8:23	11.75	60.04

Table H2-6
Potentiometric Survey Data - September 20, 2004
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
P-8	SH	62.53	9/20/04	8:36	4.32	58.21
PZ-01 inside	SH	59.71	9/20/04	9:13	2.46	57.25
PZ-01 outside	SW	59.71	9/20/04	9:13	2.59	57.12
PZ-02 inside	SH	60.39	9/20/04	9:03	2.82	57.57
PZ-02 outside	SW	60.39	9/20/04	9:03	2.98	57.41
PZ-03 inside	SH	61.14	9/20/04	8:52	3.07	58.07
PZ-03 outside	SW	61.14	9/20/04	8:52	3.06	58.08
PZ-04A inside	SH	53.99	9/20/04	10:47	0.85	53.14
PZ-04A outside	SW	53.99	9/20/04	10:47	0.82	53.17
PZ-05 inside	SH	59.93	9/20/04	9:53	1.81	58.12
PZ-05 outside	SW	59.93	9/20/04	9:53	1.84	58.09
PZ-06 inside	SH	58.89	9/20/04	10:01	2.31	56.58
PZ-06A inside	SH	56.60	9/20/04	10:02	0.50	56.10
PZ-06 outside	SW	58.89	9/20/04	10:01	2.50	56.39
PZ-06A outside	SW	56.60	9/20/04	10:03	0.22	56.38
PZ-07 inside	SH	59.60	9/20/04	9:58	2.10	57.50
PZ-07 outside	SW	59.60	9/20/04	9:58	1.70	57.90
PZ-09 inside	SH	57.75	9/20/04	10:17	2.17	55.58
PZ-09 outside	SW	57.75	9/20/04	10:17	2.18	55.57
PZ-10 inside	SH	63.70	9/20/04	15:43	5.79	57.91
PZ-10 outside	SW	63.70	9/20/04	15:44	DRY @ 5.45	DRY @ 58.25
PZ-11 inside	SH	63.55	9/20/04	15:52	5.22	58.33
PZ-11 outside	SW	63.55	9/20/04	15:52	5.15	58.40
PZ-12 inside	SH	64.14	9/20/04	15:20	5.57	58.57
PZ-12 outside	SW	64.14	9/20/04	15:21	DRY @ 4.85	DRY @ 59.29
PZ-13 inside	SH	65.11	9/20/04	13:22	3.91	61.20
PZ-13 outside	SW	65.11	9/20/04	13:36	4.51	60.60
PZ-14 inside	SH	61.68	9/20/04	14:49	3.37	58.31
PZ-14 outside	SW	61.68	9/20/04	14:50	3.44	58.24
PZ-15 inside	SH	68.49	9/20/04	14:52	DRY @ 5.95	DRY @ 62.54
PZ-15A inside	SH	69.12	9/20/04	14:54	7.27	61.85
PZ-15 outside	SW	68.49	9/20/04	14:53	1.94	66.55
PZ-15A outside	SW	69.12	9/20/04	14:54	2.59	66.53
PZ-16 inside	SH	66.08	9/20/04	10:12	9.57	56.51
PZ-17 inside	SH	65.15	9/20/04	10:31	8.49	56.66
PZ-18 inside	SH	65.97	9/20/04	10:28	8.44	57.53
PZ-19 inside	SH	69.69	9/20/04	15:25	11.47	58.22
PZ-20 inside	SH	59.11	9/20/04	15:07	1.07	58.04
PZ-20 outside	SW	59.11	9/20/04	15:08	1.15	57.96
SEA-601	SH	63.47	9/20/04	8:28	5.22	58.25
SEA-602A	SH	62.51	9/20/04	8:31	4.34	58.17
SEA-602B	IN	61.99	9/20/04	8:34	3.73	58.26
SEA-603	SH	61.97	9/20/04	8:40	3.86	58.11
SEA-604	SH	65.34	9/20/04	8:56	7.62	57.72
SEA-605	SH	65.20	9/20/04	9:09	8.08	57.12
SEA-606	SH	64.43	9/20/04	10:54	10.12	54.31
SEA-607	SH	65.82	9/20/04	10:09	9.93	55.89
SEA-608	SH	67.02	9/20/04	10:06	10.37	56.65

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
MW-106A	SH	68.61	05/06/02	17:25	10.71	57.90
MW-109A	DP	68.64	05/06/02	11:45	10.47	58.17
MW-109AA	SH	67.77	05/06/02	11:45	10.66	57.11
MW-109B	TL	69.13	05/06/02	11:45	11.21	57.92
MW-109C	BR	69.30	05/06/02	11:45	11.35	57.95
MW-B1	IN	61.92	05/06/02	15:20	3.92	58.00
MW-B2	SH	62.04	05/06/02	15:20	4.76	57.28
MW-C1	IN	61.06	05/06/02	14:45	3.83	57.23
MW-C2	SH	61.48	05/06/02	14:45	4.70	56.78
P-6	SH	67.83	05/06/02	18:00	8.89	58.94
P-7	SH	71.79	05/06/02	17:00	12.39	59.40
P-8	SH	62.53	05/06/02	15:50	5.22	57.31
GZ-1-1	SH	67.08	05/07/02	7:00	8.45	58.63
L-2	IN	69.94	05/07/02	8:15	11.46	58.48
MW-107A	SH	81.46	05/07/02	9:40	18.25	63.21
MW-107B	IN	81.53	05/07/02	9:40	19.26	62.27
MW-107C	BR	81.55	05/07/02	9:40	20.07	61.48
MW-108A	IN	69.00	05/07/02	11:25	9.66	59.34
MW-108AA	SH	69.19	05/07/02	11:25	9.68	59.51
MW-108B	DP	69.31	05/07/02	11:25	11.18	58.13
MW-108C	BR	69.26	05/07/02	11:25	11.23	58.03
MW-109B	TL	69.13	05/07/02	12:00	11.39	57.74
MW-110A	SH	66.91	05/07/02	13:45	7.70	59.21
MW-110B	TL	67.50	05/07/02	13:45	8.73	58.77
MW-110C	BR	67.93	05/07/02	13:45	8.79	59.14
MW-111A	IN	64.13	05/07/02	15:00	7.35	56.78
MW-111AA	SH	64.53	05/07/02	15:00	7.80	56.73
MW-111B	DP	64.01	05/07/02	15:00	7.22	56.79
MW-111C	BR	64.50	05/07/02	15:00	6.06	58.44
MW-112A	IN	68.09	05/07/02	16:45	10.23	57.86
MW-112AA	SH	68.59	05/07/02	16:45	10.48	58.11
MW-112B	DP	68.20	05/07/02	16:45	11.52	56.68
MW-112C	BR	68.09	05/07/02	16:45	11.31	56.78
MW-A1	DP	64.79	05/07/02	8:45	7.06	57.73
MW-A2	SH	65.20	05/07/02	8:45	7.60	57.60
P-9	SH	66.07	05/08/02	17:45	8.04	58.03
PZ-01 inside	SH	59.57	08/13/03	15:05	4.00	55.57
PZ-01 outside	SW	59.57	08/13/03	15:05	4.50	55.07
PZ-02 inside	SH	60.42	08/13/03	14:25	4.56	55.86
PZ-02 outside	SW	60.42	08/13/03	14:25	4.82	55.60
PZ-03 inside	SH	61.11	08/13/03	17:00	4.20	56.91
PZ-03 outside	SW	61.11	08/13/03	17:00	4.72	56.39
PZ-04 inside	SH	55.87	08/13/03	10:45	3.33	52.54
PZ-04 outside	SW	55.87	08/13/03	10:45	3.50	52.37
PZ-05 inside	SH	59.95	08/13/03	16:14	3.44	56.51
PZ-05 outside	SW	59.95	08/13/03	16:14	3.44	56.51
PZ-06 inside	SH	59.31	08/13/03	9:55	4.70	54.61

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-06 outside	SW	59.31	08/13/03	9:55	4.89	54.42
PZ-07 inside	SH	59.57	08/13/03	16:15	4.54	55.03
PZ-07 outside	SW	59.57	08/13/03	16:15	4.50	55.07
PZ-08 inside	SH	63.26	08/13/03	16:04	8.18	55.08
PZ-09 inside	SH	58.24	08/13/03	16:40	2.14	56.10
PZ-09 outside	SW	58.24	08/13/03	16:40	2.08	56.16
PZ-10 inside	SH	63.70	08/13/03	15:30	3.98	59.72
PZ-10 outside	SW	63.70	08/13/03	15:30	3.98	59.72
PZ-11 inside	SH	63.53	08/13/03	15:40	3.64	59.89
PZ-11 outside	SW	63.53	08/13/03	15:40	3.64	59.89
PZ-12 inside	SH	64.14	08/13/03	17:20	4.21	59.93
PZ-12 outside	SW	64.14	08/13/03	17:20	4.18	59.96
PZ-13 inside	SH	65.11	08/13/03	18:32	3.98	61.13
PZ-13 outside	SW	65.11	08/13/03	18:32	4.27	60.84
PZ-14 inside	SH	61.72	08/13/03	18:40	4.45	57.27
PZ-14 outside	SH	61.72	08/13/03	18:40	4.56	57.16
PZ-15 inside	SH	68.49	08/13/03	18:10	DRY	DRY
PZ-15 outside	SW	68.49	08/13/03	18:10	1.86	66.63
PZ-16 inside	SH	66.08	08/13/03	16:25	11.00	55.08
PZ-17 inside	SH	65.15	08/13/03	14:35	9.52	55.63
PZ-18 inside	SH	65.96	08/13/03	14:45	10.08	55.88
GZ-1-1	SH	67.08	08/14/03	11:42	8.98	58.10
L-2	IN	69.94	08/14/03	11:20	12.13	57.81
MW-106B	IN	68.55	08/14/03	8:51	11.46	57.09
MW-106C	BR	68.20	08/14/03	9:10	10.98	57.22
MW-107A	SH	81.46	08/14/03	10:38	19.22	62.24
MW-107B	IN	81.53	08/14/03	10:41	19.91	61.62
MW-107C	BR	81.55	08/14/03	10:43	20.65	60.90
MW-108A	IN	69.00	08/14/03	14:51	10.10	58.90
MW-108AA	SH	69.19	08/14/03	14:50	10.14	59.05
MW-108B	DP	69.31	08/14/03	14:52	11.73	57.58
MW-108C	BR	69.26	08/14/03	14:53	11.77	57.49
MW-109A	DP	68.64	08/14/03	15:17	11.27	57.37
MW-109AA	SH	67.77	08/14/03	15:17	11.60	56.17
MW-109B	TL	69.13	08/14/03	15:17	11.98	57.15
MW-109C	BR	69.30	08/14/03	15:17	12.20	57.10
MW-110A	SH	66.91	08/14/03	16:39	8.28	58.63
MW-110B	TL	67.50	08/14/03	16:39	9.32	58.18
MW-110C	BR	67.93	08/14/03	16:39	9.39	58.54
MW-111A	IN	64.13	08/14/03	15:30	7.89	56.24
MW-111AA	SH	64.53	08/14/03	15:30	8.29	56.24
MW-111B	DP	64.01	08/14/03	15:30	7.75	56.26
MW-111C	BR	64.50	08/14/03	15:30	6.62	57.88
MW-112A	IN	68.09	08/14/03	16:15	10.78	57.31
MW-112AA	SH	68.59	08/14/03	16:15	11.25	57.34
MW-112B	DP	68.20	08/14/03	16:15	12.04	56.16
MW-112C	BR	68.09	08/14/03	16:15	11.87	56.22

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
MW-501A	SH	68.68	08/14/03	12:05	OBSTR @ 9.40	OBSTR @ 59.28
MW-501B	SH	68.46	08/14/03	12:05	10.19	58.27
MW-501C	DP	68.47	08/14/03	12:05	10.15	58.32
MW-502	DP	73.47	08/14/03	11:10	15.56	57.91
MW-A1	DP	64.79	08/14/03	11:30	7.82	56.97
MW-A2	SH	65.20	08/14/03	11:32	8.25	56.95
MW-B1	IN	61.92	08/14/03	13:32	5.15	56.77
MW-B2	SH	62.04	08/14/03	13:32	5.75	56.29
MW-C1	IN	61.06	08/14/03	13:50	4.72	56.34
MW-C2	SH	61.48	08/14/03	13:50	5.61	55.87
P-6	SH	67.83	08/14/03	8:15	9.54	58.29
P-7	SH	71.79	08/14/03	9:27	13.44	58.35
P-8	SH	62.53	08/14/03	13:15	6.22	56.31
GZ-1-1	SH	67.08	08/25/03	9:40	9.94	57.14
GZ-4-1	SH	63.49	08/25/03	9:13	8.09	55.40
HW-01	SW	69.64	08/25/03	15:00	3.43	66.21
L-2	IN	69.94	08/25/03	9:30	13.27	56.67
MW-106A	SH	68.61	08/25/03	14:40	12.47	56.14
MW-106B	IN	68.55	08/25/03	14:40	12.54	56.01
MW-106C	BR	68.20	08/25/03	14:40	12.00	56.20
MW-107A	SH	81.46	08/25/03	10:00	20.98	60.48
MW-107B	IN	81.53	08/25/03	10:00	21.53	60.00
MW-107C	BR	81.55	08/25/03	10:00	22.17	59.38
MW-108A	IN	69.00	08/25/03	11:05	11.73	57.27
MW-108AA	SH	69.19	08/25/03	11:05	11.78	57.41
MW-108B	DP	69.31	08/25/03	11:05	13.16	56.15
MW-108C	BR	69.26	08/25/03	11:05	13.18	56.08
MW-109A	DP	68.64	08/25/03	12:15	12.64	56.00
MW-109AA	SH	67.77	08/25/03	12:15	12.88	54.89
MW-109B	TL	69.13	08/25/03	12:15	13.32	55.81
MW-109C	BR	69.30	08/25/03	12:15	13.56	55.74
MW-110A	SH	66.91	08/25/03	13:27	9.56	57.35
MW-110B	TL	67.50	08/25/03	13:27	10.64	56.86
MW-110C	BR	67.93	08/25/03	13:27	10.59	57.34
MW-111A	IN	64.13	08/25/03	12:58	9.18	54.95
MW-111AA	SH	64.53	08/25/03	12:58	9.59	54.94
MW-111B	DP	64.01	08/25/03	12:58	9.03	54.98
MW-111C	BR	64.50	08/25/03	12:58	7.86	56.64
MW-112A	IN	68.09	08/25/03	13:10	12.34	55.75
MW-112AA	SH	68.59	08/25/03	13:10	12.64	55.95
MW-112B	DP	68.20	08/25/03	13:10	13.37	54.83
MW-112C	BR	68.09	08/25/03	13:10	13.21	54.88
MW-501A	SH	68.68	08/25/03	10:15	OBSTR @ 9.76	OBSTR @ 58.92
MW-501B	SH	68.46	08/25/03	10:15	11.10	57.36
MW-501C	DP	68.47	08/25/03	10:15	11.08	57.39
MW-502	DP	73.47	08/25/03	9:35	16.68	56.79
MW-A1	DP	64.79	08/25/03	9:20	9.13	55.66

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
MW-A2	SH	65.20	08/25/03	9:25	9.60	55.60
MW-B1	IN	61.92	08/25/03	11:50	6.54	55.38
MW-B2	SH	62.04	08/25/03	11:50	7.06	54.98
MW-C1	IN	61.06	08/25/03	12:00	6.02	55.04
MW-C2	SH	61.48	08/25/03	12:00	6.82	54.66
P-6	SH	67.83	08/25/03	10:20	10.48	57.35
P-7	SH	71.79	08/25/03	14:50	14.89	56.90
P-8	SH	62.53	08/25/03	11:37	7.56	54.97
P-9	SH	66.07	08/25/03	14:10	10.01	56.06
PZ-01 inside	SH	59.57	08/25/03	11:10	5.24	54.33
PZ-01 outside	SW	59.57	08/25/03	11:10	5.63	53.94
PZ-02 inside	SH	60.42	08/25/03	11:57	5.73	54.69
PZ-02 outside	SW	60.42	08/25/03	11:57	DRY @ 5.14	DRY @ 55.28
PZ-03 inside	SH	61.11	08/25/03	11:45	6.87	54.24
PZ-03 outside	SW	61.11	08/25/03	11:45	DRY @ 4.79	DRY @ 56.32
PZ-04 inside	SH	55.87	08/25/03	10:41	4.03	51.84
PZ-04 outside	SW	55.87	08/25/03	10:41	4.03	51.84
PZ-05 inside	SH	59.95	08/25/03	8:40	5.73	54.22
PZ-05 outside	SW	59.95	08/25/03	8:40	5.67	54.28
PZ-06 inside	SH	59.31	08/25/03	8:47	DRY @ 4.84	DRY @ 54.47
PZ-06 outside	SW	59.31	08/25/03	8:47	DRY @ 4.94	DRY @ 54.37
PZ-07 inside	SH	59.57	08/25/03	10:20	5.57	54.00
PZ-07 outside	SW	59.57	08/25/03	10:20	5.37	54.20
PZ-08 inside	SH	63.26	08/25/03	9:00	9.35	53.91
PZ-08 outside	SH	63.26	08/25/03	9:00	GS @ 3.89	GS @ 59.37
PZ-09 inside	SH	58.24	08/25/03	9:45	3.86	54.38
PZ-09 outside	SW	58.24	08/25/03	9:45	3.84	54.40
PZ-10 inside	SH	63.70	08/25/03	11:21	5.46	58.24
PZ-10 outside	SW	63.70	08/25/03	11:21	5.45	58.25
PZ-11 inside	SH	63.53	08/25/03	11:20	5.27	58.26
PZ-11 outside	SW	63.53	08/25/03	11:20	5.06	58.47
PZ-12 inside	SH	64.14	08/25/03	12:25	6.07	58.07
PZ-12 outside	SW	64.14	08/25/03	12:25	DRY @ 5.00	DRY @ 59.14
PZ-13 inside	SH	65.11	08/25/03	11:43	4.04	61.07
PZ-13 outside	SW	65.11	08/25/03	11:43	4.43	60.68
PZ-14 inside	SH	61.72	08/25/03	12:05	4.63	57.09
PZ-14 outside	SH	61.72	08/25/03	12:05	5.03	56.69
PZ-15 inside	SH	68.49	08/25/03	12:00	DRY @ 6.03	DRY @ 62.46
PZ-15 outside	SW	68.49	08/25/03	12:00	1.87	66.62
PZ-16 inside	SH	66.08	08/25/03	9:12	12.17	53.91
PZ-16 outside	GS	66.08	08/25/03	9:12	GS @ 3.36	GS @ 62.72
PZ-17 inside	SH	65.15	08/25/03	9:19	10.87	54.28
PZ-17 outside	GS	65.15	08/25/03	9:19	GS @ 3.31	GS @ 61.84
PZ-18 inside	SH	65.96	08/25/03	9:25	11.25	54.71
PZ-18 outside	GS	65.96	08/25/03	9:25	GS @ 3.67	GS @ 62.29
PZ-01 inside	SH	59.57	08/27/03	15:25	5.40	54.17
PZ-01 outside	SW	59.57	08/27/03	15:25	5.79	53.78

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-11 inside	SH	63.53	08/27/03	16:15	5.67	57.86
PZ-11 outside	SW	63.53	08/27/03	16:15	DRY	DRY
PZ-12 inside	SH	64.14	08/27/03	16:00	6.46	57.68
PZ-12 outside	SW	64.14	08/27/03	16:00	DRY	DRY
PZ-19 inside	SH	69.69	08/27/03	15:45	12.44	57.25
PZ-01 inside	SH	59.57	08/28/03	17:00	5.45	54.12
PZ-01 outside	SW	59.57	08/28/03	17:00	5.85	53.72
PZ-01 inside	SH	59.57	08/29/03	15:50	5.57	54.00
PZ-01 outside	SW	59.57	08/29/03	15:50	5.91	53.66
PZ-01 inside	SH	59.57	09/02/03	9:55	4.81	54.76
PZ-01 outside	SW	59.57	09/02/03	9:55	4.99	54.58
PZ-01 inside	SH	59.57	09/03/03	17:40	4.57	55.00
PZ-01 outside	SW	59.57	09/03/03	17:40	4.83	54.74
PZ-01 inside	SH	59.57	09/04/03	16:50	4.62	54.95
PZ-01 outside	SW	59.57	09/04/03	16:50	4.91	54.66
PZ-01 inside	SH	59.57	09/08/03	16:40	5.23	54.34
PZ-01 outside	SW	59.57	09/08/03	16:40	5.40	54.17
PZ-01 inside	SH	59.57	09/09/03	15:10	5.32	54.25
PZ-01 outside	SW	59.57	09/09/03	15:10	5.56	54.01
PZ-01 inside	SH	59.57	09/10/03	16:22	5.47	54.10
PZ-01 outside	SW	59.57	09/10/03	16:22	5.78	53.79
PZ-01 inside	SH	59.57	09/11/03	17:15	5.60	53.97
PZ-01 outside	SW	59.57	09/11/03	17:15	5.78	53.79
PZ-01 inside	SH	59.57	09/12/03	15:00	5.61	53.96
PZ-01 outside	SW	59.57	09/12/03	15:00	5.77	53.80
PZ-01 inside	SH	59.57	09/15/03	16:27	5.75	53.82
PZ-01 outside	SW	59.57	09/15/03	16:27	DRY @ 5.97	DRY @ 53.60
PZ-01 inside	SH	59.57	09/16/03	16:00	4.56	55.01
PZ-01 outside	SW	59.57	09/16/03	16:00	4.66	54.91
PZ-01 inside	SH	59.57	09/17/03	16:30	4.58	54.99
PZ-01 outside	SW	59.57	09/17/03	16:30	4.69	54.88
PZ-01 inside	SH	59.57	09/18/03	15:00	4.84	54.73
PZ-01 outside	SW	59.57	09/18/03	15:00	4.96	54.61
PZ-01 inside	SH	59.57	09/19/03	16:00	4.64	54.93
PZ-01 outside	SW	59.57	09/19/03	16:00	4.68	54.89
PZ-01 inside	SH	59.57	09/20/03	11:50	4.58	54.99
PZ-01 outside	SW	59.57	09/20/03	11:50	4.70	54.87
PZ-01 inside	SH	59.57	09/21/03	15:00	5.00	54.57
PZ-01 outside	SW	59.57	09/21/03	15:00	5.07	54.50
PZ-01 inside	SH	59.57	09/22/03	15:05	5.27	54.30
PZ-01 outside	SW	59.57	09/22/03	15:05	5.34	54.23
PZ-01 inside	SH	59.57	09/24/03	8:40	4.66	54.91
PZ-01 outside	SW	59.57	09/24/03	8:40	4.76	54.81
GZ-1-1	SH	67.08	09/25/03	7:55	9.14	57.94
HW-01	SW	69.64	09/25/03	9:19	DRY @ 3.32	DRY @ 66.32
HW-02	SW	59.37	09/25/03	14:35	2.57	56.80
L-2	IN	69.94	09/25/03	7:50	12.50	57.44

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
MW-106A	SH	68.61	09/25/03	9:08	11.65	56.96
MW-106B	IN	68.55	09/25/03	9:02	11.53	57.02
MW-106C	BR	68.20	09/25/03	9:04	11.08	57.12
MW-107A	SH	81.46	09/25/03	8:15	22.56	58.90
MW-107B	IN	81.53	09/25/03	8:20	22.71	58.82
MW-107C	BR	81.55	09/25/03	8:26	23.00	58.55
MW-108A	IN	69.00	09/25/03	15:10	11.33	57.67
MW-108AA	SH	69.19	09/25/03	15:07	11.47	57.72
MW-108B	DP	69.31	09/25/03	15:12	12.89	56.42
MW-108C	BR	69.26	09/25/03	15:14	12.89	56.37
MW-109A	DP	68.64	09/25/03	10:29	12.92	55.72
MW-109AA	SH	67.77	09/25/03	10:26	12.28	55.49
MW-109B	TL	69.13	09/25/03	10:30	13.53	55.60
MW-109C	BR	69.30	09/25/03	10:32	13.65	55.65
MW-110A	SH	66.91	09/25/03	14:30	11.69	55.22
MW-110B	TL	67.50	09/25/03	14:28	12.38	55.12
MW-110C	BR	67.93	09/25/03	14:25	11.97	55.96
MW-111A	IN	64.13	09/25/03	10:37	9.44	54.69
MW-111AA	SH	64.53	09/25/03	10:35	9.65	54.88
MW-111B	DP	64.01	09/25/03	10:40	9.30	54.71
MW-111C	BR	64.50	09/25/03	10:43	8.74	55.76
MW-112A	IN	68.09	09/25/03	10:50	13.77	54.32
MW-112AA	SH	68.59	09/25/03	10:47	14.20	54.39
MW-112B	DP	68.20	09/25/03	10:51	13.94	54.26
MW-112C	BR	68.09	09/25/03	10:55	13.74	54.35
MW-501A	SH	68.68	09/25/03	16:22	OBSTR @ 10.41	OBSTR @ 58.27
MW-501B	SH	68.46	09/25/03	16:25	10.38	58.08
MW-501C	DP	68.47	09/25/03	16:28	10.37	58.10
MW-502	DP	73.47	09/25/03	8:00	15.90	57.57
MW-A1	DP	64.79	09/25/03	7:45	7.91	56.88
MW-A2	SH	65.20	09/25/03	7:45	8.38	56.82
MW-B1	IN	61.92	09/25/03	9:59	5.50	56.42
MW-B2	SH	62.04	09/25/03	9:58	5.82	56.22
MW-C1	IN	61.06	09/25/03	10:15	5.12	55.94
MW-C2	SH	61.48	09/25/03	10:13	5.69	55.79
MW-EA-1	SH	92.24	09/25/03	15:52	30.23	62.01
MW-EA-2	BR	78.32	09/25/03	16:05	15.21	63.11
MW-EA-3	BR	78.76	09/25/03	17:17	20.46	58.30
MW-EA-4	BR	79.75	09/25/03	17:25	17.03	62.72
P-6	SH	67.83	09/25/03	16:34	9.71	58.12
P-7	SH	71.79	09/25/03	8:50	13.61	58.18
P-8	SH	62.53	09/25/03	9:48	6.04	56.49
P-9	SH	66.07	09/25/03	14:51	10.47	55.60
PZ-01 inside	SH	59.57	09/25/03	10:23	4.19	55.38
PZ-01 outside	SW	59.57	09/25/03	10:23	4.29	55.28
PZ-02 inside	SH	60.42	09/25/03	10:10	4.60	55.82
PZ-02 outside	SW	60.42	09/25/03	10:10	4.68	55.74

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-03 inside	SH	61.11	09/25/03	10:02	4.85	56.26
PZ-03 outside	SW	61.11	09/25/03	10:02	DRY @ 4.72	DRY @ 56.39
PZ-04 inside	SH	55.87	09/25/03	12:18	3.43	52.44
PZ-04 outside	SW	55.87	09/25/03	12:18	3.31	52.56
PZ-05 inside	SH	59.95	09/25/03	12:07	6.33	53.62
PZ-05 outside	SW	59.95	09/25/03	12:07	DRY @ 6.16	DRY @ 53.79
PZ-06 inside	SH	59.31	09/25/03	12:01	DRY @ 4.88	DRY @ 54.43
PZ-06 outside	SW	59.31	09/25/03	12:01	4.83	54.48
PZ-07 inside	SH	59.57	09/25/03	12:04	4.97	54.60
PZ-07 outside	SW	59.57	09/25/03	12:04	4.95	54.62
PZ-08 inside	SH	63.26	09/25/03	11:56	8.71	54.55
PZ-09 inside	SH	58.24	09/25/03	11:36	3.66	54.58
PZ-09 outside	SW	58.24	09/25/03	11:36	3.64	54.60
PZ-10 inside	SH	63.70	09/25/03	14:54	7.31	56.39
PZ-10 outside	SW	63.70	09/25/03	14:54	DRY @ 5.58	DRY @ 58.12
PZ-11 inside	SH	63.53	09/25/03	15:00	7.49	56.04
PZ-11 outside	SW	63.53	09/25/03	15:00	DRY @ 5.36	DRY @ 58.17
PZ-12 inside	SH	64.14	09/25/03	15:25	6.58	57.56
PZ-12 outside	SW	64.14	09/25/03	15:25	DRY @ 4.88	DRY @ 59.26
PZ-13 inside	SH	65.11	09/25/03	17:31	4.22	60.89
PZ-13 outside	SW	65.11	09/25/03	17:31	4.64	60.47
PZ-14 inside	SH	61.72	09/25/03	9:14	4.57	57.15
PZ-14 outside	SW	61.72	09/25/03	9:14	4.61	57.11
PZ-15 inside	SH	68.49	09/25/03	16:50	5.80	62.69
PZ-15 outside	SW	68.49	09/25/03	16:50	1.75	66.74
PZ-16 inside	SH	66.08	09/25/03	11:45	11.24	54.84
PZ-17 inside	SH	65.15	09/25/03	11:22	9.98	55.17
PZ-18 inside	SH	65.96	09/25/03	11:15	10.29	55.67
PZ-19 inside	SH	69.69	09/25/03	15:22	12.38	57.31
SEA-601	SH	63.47	09/25/03	9:31	6.96	56.51
SEA-602A	SH	62.51	09/25/03	9:40	6.00	56.51
SEA-602B	IN	61.99	09/25/03	9:43	5.46	56.53
SEA-603	SH	61.97	09/25/03	9:51	5.61	56.36
SEA-604	SH	65.34	09/25/03	10:06	9.38	55.96
SEA-605	SH	65.20	09/25/03	10:19	9.74	55.46
SEA-606	SH	64.43	09/25/03	12:30	11.29	53.14
SEA-607	SH	65.82	09/25/03	11:40	11.31	54.51
SEA-608	SH	67.02	09/25/03	11:52	12.47	54.55
PZ-01 inside	SH	59.57	09/26/03	13:15	4.73	54.84
PZ-01 outside	SW	59.57	09/26/03	13:15	4.88	54.69
PZ-01 inside	SH	59.57	09/27/03	10:50	4.99	54.58
PZ-01 outside	SW	59.57	09/27/03	10:50	5.12	54.45
PZ-01 inside	SH	59.57	09/29/03	15:33	5.21	54.36
PZ-01 outside	SW	59.57	09/29/03	15:33	5.36	54.21
PZ-01 inside	SH	59.57	09/30/03	13:47	5.30	54.27
PZ-01 outside	SW	59.57	09/30/03	13:47	5.45	54.12
PZ-01 inside	SH	59.57	10/01/03	14:55	5.38	54.19

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-01 outside	SW	59.57	10/01/03	14:55	5.55	54.02
PZ-01 inside	SH	59.57	10/03/03	8:50	5.54	54.03
PZ-01 outside	SW	59.57	10/03/03	8:50	5.70	53.87
PZ-01 inside	SH	59.57	10/04/03	14:26	5.51	54.06
PZ-01 outside	SW	59.57	10/04/03	14:26	5.64	53.93
PZ-01 inside	SH	59.57	10/06/03	11:53	5.67	53.90
PZ-01 outside	SW	59.57	10/06/03	11:53	5.79	53.78
PZ-01 inside	SH	59.57	10/07/03	12:25	5.68	53.89
PZ-01 outside	SW	59.57	10/07/03	12:25	5.80	53.77
PZ-01 inside	SH	59.57	10/08/03	15:05	5.67	53.90
PZ-01 outside	SW	59.57	10/08/03	15:05	5.77	53.80
MW-109A	DP	68.64	8/24/04	14:00	12.47	56.17
MW-109AA	SH	67.77	8/24/04	13:58	12.36	55.41
MW-109B	TL	69.13	8/24/04	14:02	13.18	55.95
MW-109C	BR	69.30	8/24/04	14:04	13.30	56.00
PZ-01 inside	SH	59.71	8/24/04	13:55	4.64	55.07
PZ-01 outside	SW	59.71	8/24/04	13:55	4.96	54.75
PZ-11 inside	SH	63.55	8/24/04	14:23	5.48	58.07
PZ-11 outside	SW	63.55	8/24/04	14:23	5.24	58.31
MW-109A	DP	68.64	8/25/04	9:27	12.62	56.02
MW-109AA	SH	67.77	8/25/04	9:25	12.60	55.17
MW-109B	TL	69.13	8/25/04	9:28	13.33	55.80
MW-109C	BR	69.30	8/25/04	9:30	13.50	55.80
PZ-01 inside	SH	59.71	8/25/04	9:15	4.90	54.81
PZ-01 outside	SW	59.71	8/25/04	9:15	5.25	54.46
PZ-11 inside	SH	63.55	8/25/04	9:40	5.60	57.95
PZ-11 outside	SW	63.55	8/25/04	9:40	5.35	58.20
MW-109A	DP	68.64	8/26/04	16:04	12.80	55.84
MW-109AA	SH	67.77	8/26/04	16:02	12.82	54.95
MW-109B	TL	69.13	8/26/04	16:06	13.51	55.62
MW-109C	BR	69.30	8/26/04	16:08	13.64	55.66
PZ-01 inside	SH	59.71	8/26/04	15:59	5.12	54.59
PZ-01 outside	SW	59.71	8/26/04	15:59	5.49	54.22
PZ-11 inside	SH	63.55	8/26/04	16:12	5.76	57.79
PZ-11 outside	SW	63.55	8/26/04	16:12	DRY @ 5.36	DRY @ 58.19
GZ-1-1	SH	67.08	8/27/04	15:50	9.92	57.16
GZ-4-1	SH	63.49	8/27/04	16:11	8.05	55.44
HW-01	SW	69.64	8/27/04	8:47	ALMOST DRY	ALMOST DRY
HW-02	SW	59.37	8/27/04	16:32	1.36	58.01
L-2	IN	69.94	8/27/04	15:56	13.27	56.67
MW-106A	SH	68.61	8/27/04	8:43	12.62	55.99
MW-106B	IN	68.55	8/27/04	8:38	12.46	56.09
MW-106C	BR	68.20	8/27/04	8:47	11.95	56.25
MW-107A	SH	81.46	8/27/04	14:39	21.72	59.74
MW-107B	IN	81.53	8/27/04	14:37	22.07	59.46
MW-107C	BR	81.55	8/27/04	14:41	22.59	58.96
MW-108A	IN	69.00	8/27/04	10:16	12.16	56.84

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
MW-108AA	SH	69.19	8/27/04	10:20	12.22	56.97
MW-108B	DP	69.31	8/27/04	10:22	13.38	55.93
MW-108C	BR	69.26	8/27/04	10:24	13.39	55.87
MW-109AA	SH	67.77	8/27/04	10:38	12.93	54.84
MW-109A	DP	68.64	8/27/04	10:40	12.91	55.73
MW-109B	TL	69.13	8/27/04	10:42	13.62	55.51
MW-109C	BR	69.30	8/27/04	10:43	13.81	55.49
MW-110A	SH	66.91	8/27/04	14:18	11.02	55.89
MW-110B	TL	67.50	8/27/04	14:15	11.99	55.51
MW-110C	BR	67.93	8/27/04	14:12	11.77	56.16
MW-111AA	SH	64.53	8/27/04	13:08	10.01	54.52
MW-111A	IN	64.13	8/27/04	13:06	9.64	54.49
MW-111B	DP	64.01	8/27/04	13:04	9.51	54.50
MW-111C	BR	64.50	8/27/04	13:02	8.71	55.79
MW-112AA	SH	68.59	8/27/04	13:13	13.89	54.70
MW-112A	SH	68.09	8/27/04	13:16	13.64	54.45
MW-112B	DP	68.20	8/27/04	13:18	14.12	54.08
MW-112C	BR	68.09	8/27/04	13:20	13.89	54.20
MW-501A	SH	68.68	8/27/04	9:35	11.28	57.40
MW-501B	SH	68.46	8/27/04	9:24	11.04	57.42
MW-501C	DP	68.47	8/27/04	9:38	10.99	57.48
MW-502	DP	73.47	8/27/04	15:38	16.68	56.79
MW-A1	DP	64.79	8/27/04	16:03	9.08	55.71
MW-A2	SH	65.20	8/27/04	16:07	9.57	55.63
MW-B1	IN	61.92	8/27/04	11:25	6.64	55.28
MW-B2	SH	62.04	8/27/04	11:26	7.01	55.03
MW-C1	IN	61.06	8/27/04	11:38	6.03	55.03
MW-C2	SH	61.48	8/27/04	11:37	6.79	54.69
MW-EA-1	SH	92.24	8/27/04	15:20	30.22	62.02
MW-EA-2	BR	78.32	8/27/04	15:12	14.96	63.36
MW-EA-3	BR	78.76	8/27/04	14:44	20.36	58.40
MW-EA-4	BR	79.75	8/27/04	14:37	15.48	64.27
P-6	SH	67.83	8/27/04	9:46	10.42	57.41
P-7	SH	71.79	8/27/04	10:48	14.84	56.95
P-8	SH	62.53	8/27/04	11:10	7.45	55.08
PZ-01 inside	SH	59.71	8/27/04	10:48	5.24	54.47
PZ-01 outside	SW	59.71	8/27/04	10:48	5.59	54.12
PZ-02 inside	SH	60.39	8/27/04	16:59	5.66	54.73
PZ-02 outside	SW	60.39	8/27/04	16:59	DRY @ 4.95	DRY @ 55.44
PZ-03 inside	SH	61.14	8/27/04	17:06	5.79	55.35
PZ-03 outside	SW	61.14	8/27/04	17:06	DRY @ 4.55	DRY @ 56.59
PZ-04A inside	SH	53.99	8/27/04	11:20	2.28	51.71
PZ-04A outside	SW	53.99	8/27/04	11:20	2.29	51.70
PZ-05 inside	SH	59.93	8/27/04	12:01	6.37	53.56
PZ-05 outside	SW	59.93	8/27/04	12:01	DRY @ 5.95	DRY @ 53.98
PZ-06 inside	SH	58.89	8/27/04	12:07	5.31	53.58
PZ-06 outside	SW	58.89	8/27/04	12:07	DRY @ 5.00	DRY @ 53.89

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-06A inside	SH	56.60	8/27/04	12:10	2.98	53.62
PZ-06A outside	SW	56.60	8/27/04	12:10	3.19	53.41
PZ-07 inside	SH	59.60	8/27/04	12:15	5.60	54.00
PZ-07 outside	SW	59.60	8/27/04	12:15	5.40	54.20
PZ-09 inside	SH	57.75	8/27/04	13:23	3.25	54.50
PZ-09 outside	SW	57.75	8/27/04	13:23	3.22	54.53
PZ-10 inside	SH	63.70	8/27/04	10:19	5.79	57.91
PZ-10 outside	SW	63.70	8/27/04	10:19	DRY @ 5.40	DRY @ 58.30
PZ-11 inside	SH	63.55	8/27/04	10:08	5.84	57.71
PZ-11 outside	SW	63.55	8/27/04	10:08	DRY @ 5.37	DRY @ 58.18
PZ-12 inside	SH	64.14	8/27/04	9:45	6.45	57.69
PZ-12 outside	SW	64.14	8/27/04	9:45	DRY @ 4.82	DRY @ 59.32
PZ-13 inside	SH	65.11	8/27/04	15:00	4.05	61.06
PZ-13 outside	SW	65.11	8/27/04	15:00	4.69	60.42
PZ-14 inside	SH	61.68	8/27/04	8:39	5.08	56.60
PZ-14 outside	SW	61.68	8/27/04	8:39	DRY @ 4.62	DRY @ 57.06
PZ-15 inside	SH	68.49	8/27/04	8:53	DRY @ 5.98	DRY @ 62.51
PZ-15 outside	SW	68.49	8/27/04	8:53	1.94	66.55
PZ-15A inside	SH	69.12	8/27/04	9:18	7.10	62.02
PZ-15A outside	SW	69.12	8/27/04	9:18	2.60	66.52
PZ-16 inside	SH	66.08	8/27/04	12:50	12.17	53.91
PZ-17 inside	SH	65.15	8/27/04	13:03	10.81	54.34
PZ-18 inside	SH	65.97	8/27/04	13:12	11.20	54.77
PZ-19 inside	SH	69.69	8/27/04	9:51	12.42	57.27
PZ-19 outside	GS	69.69	8/27/04	9:51	GS @ 2.85	GS @ 66.84
PZ-20 inside	SH	59.11	8/27/04	8:45	3.14	55.97
PZ-20 outside	SW	59.11	8/27/04	8:45	3.22	55.89
SEA-601	SH	63.47	8/27/04	10:55	8.67	54.80
SEA-602A	SH	62.51	8/27/04	11:02	7.53	54.98
SEA-602B	IN	61.99	8/27/04	11:00	6.71	55.28
SEA-603	SH	61.97	8/27/04	11:16	6.94	55.03
SEA-604	SH	65.34	8/27/04	11:32	10.38	54.96
SEA-605	SH	65.20	8/27/04	11:43	10.76	54.44
SEA-606	SH	64.43	8/27/04	13:40	11.70	52.73
SEA-607	SH	65.82	8/27/04	12:45	11.77	54.05
SEA-608	SH	67.02	8/27/04	12:40	12.96	54.06
MW-109A	DP	68.64	8/30/04	17:56	13.29	55.35
MW-109AA	SH	67.77	8/30/04	17:52	13.22	54.55
MW-109B	TL	69.13	8/30/04	17:59	13.97	55.16
MW-109C	BR	69.30	8/30/04	18:01	14.09	55.21
PZ-01 inside	SH	59.71	8/30/04	17:44	5.48	54.23
PZ-01 outside	SW	59.71	8/30/04	17:44	5.82	53.89
PZ-11 inside	SH	63.55	8/30/04	18:08	6.31	57.24
PZ-11 outside	SW	63.55	8/30/04	18:08	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	8/31/04	17:59	13.26	55.38
MW-109AA	SH	67.77	8/31/04	17:57	13.05	54.72
MW-109B	TL	69.13	8/31/04	18:01	13.95	55.18

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
MW-109C	BR	69.30	8/31/04	18:03	14.10	55.20
PZ-01 inside	SH	59.71	8/31/04	17:55	5.26	54.45
PZ-01 outside	SW	59.71	8/31/04	17:55	5.54	54.17
PZ-11 inside	SH	63.55	8/31/04	18:09	6.38	57.17
PZ-11 outside	SW	63.55	8/31/04	18:09	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	9/2/04	17:17	13.48	55.16
MW-109AA	SH	67.77	9/2/04	17:15	13.34	54.43
MW-109B	TL	69.13	9/2/04	17:19	14.15	54.98
MW-109C	BR	69.30	9/2/04	17:22	14.31	54.99
PZ-01 inside	SH	59.71	9/2/04	17:28	5.54	54.17
PZ-01 outside	SW	59.71	9/2/04	17:28	5.83	53.88
PZ-11 inside	SH	63.55	9/2/04	17:33	6.98	56.57
PZ-11 outside	SW	63.55	9/2/04	17:33	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	9/3/04	16:20	13.60	55.04
MW-109AA	SH	67.77	9/3/04	16:18	13.46	54.31
MW-109B	TL	69.13	9/3/04	16:22	14.26	54.87
MW-109C	BR	69.30	9/3/04	16:23	14.42	54.88
PZ-01 inside	SH	59.71	9/3/04	16:25	5.65	54.06
PZ-01 outside	SW	59.71	9/3/04	16:25	DRY @ 5.85	DRY @ 53.86
PZ-11 inside	SH	63.55	9/3/04	16:30	7.36	56.19
PZ-11 outside	SW	63.55	9/3/04	16:30	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	9/6/04	16:48	13.99	54.65
MW-109AA	SH	67.77	9/6/04	16:47	13.91	53.86
MW-109B	TL	69.13	9/6/04	16:49	14.59	54.54
MW-109C	BR	69.30	9/6/04	16:50	14.73	54.57
PZ-01 inside	SH	59.71	9/6/04	16:45	6.05	53.66
PZ-01 outside	SW	59.71	9/6/04	16:45	DRY @ 5.85	DRY @ 53.86
PZ-05 inside	SH	59.93	9/6/04	13:26	DRY @ 6.65	DRY @ 53.28
PZ-05 outside	SW	59.93	9/6/04	13:26	DRY @ 6.10	DRY @ 53.83
PZ-06 inside	SH	58.89	9/6/04	13:32	5.78	53.11
PZ-06 outside	SW	58.89	9/6/04	13:32	DRY @ 5.15	DRY @ 53.74
PZ-06A inside	SH	56.60	9/6/04	13:36	3.41	53.19
PZ-06A outside	SW	56.60	9/6/04	13:36	3.70	52.90
PZ-07 inside	SH	59.60	9/6/04	13:40	5.86	53.74
PZ-07 outside	SW	59.60	9/6/04	13:40	5.49	54.11
PZ-11 inside	SH	63.55	9/6/04	16:55	DRY @ 7.57	DRY @ 55.98
PZ-11 outside	SW	63.55	9/6/04	16:55	DRY @ 5.36	DRY @ 58.19
PZ-16 inside	SH	66.08	9/6/04	14:21	12.77	53.31
PZ-17 inside	SH	65.15	9/6/04	14:12	11.32	53.83
PZ-18 inside	SH	65.97	9/6/04	14:00	11.71	54.26
SEA-607	SH	65.82	9/6/04	14:23	12.31	53.51
SEA-608	SH	67.02	9/6/04	14:32	13.31	53.71
MW-109A	DP	68.64	9/7/04	16:42	14.04	54.60
MW-109AA	SH	67.77	9/7/04	16:41	13.86	53.91
MW-109B	TL	69.13	9/7/04	16:44	14.63	54.50
MW-109C	BR	69.30	9/7/04	16:46	14.78	54.52
PZ-01 inside	SH	59.71	9/7/04	16:50	5.90	53.81

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-01 outside	SW	59.71	9/7/04	16:50	DRY @ 5.85	DRY @ 53.86
PZ-11 inside	SH	63.55	9/7/04	16:58	DRY @ 7.56	DRY @ 55.99
PZ-11 outside	SW	63.55	9/7/04	16:58	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	9/8/04	16:14	13.96	54.68
MW-109AA	SH	67.77	9/8/04	16:12	13.74	54.03
MW-109B	TL	69.13	9/8/04	16:15	14.56	54.57
MW-109C	BR	69.30	9/8/04	16:16	14.69	54.61
PZ-01 inside	SH	59.71	9/8/04	16:20	5.76	53.95
PZ-01 outside	SW	59.71	9/8/04	16:20	DRY @ 5.85	DRY @ 53.86
PZ-11 inside	SH	63.55	9/8/04	16:28	DRY @ 7.56	DRY @ 55.99
PZ-11 outside	SW	63.55	9/8/04	16:28	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	9/9/04	14:45	13.56	55.08
MW-109AA	SH	67.77	9/9/04	14:43	13.11	54.66
MW-109B	TL	69.13	9/9/04	14:47	14.19	54.94
MW-109C	BR	69.30	9/9/04	14:48	14.32	54.98
PZ-01 inside	SH	59.71	9/9/04	14:52	5.13	54.58
PZ-01 outside	SW	59.71	9/9/04	14:52	5.28	54.43
PZ-11 inside	SH	63.55	9/9/04	14:57	DRY @ 7.56	DRY @ 55.99
PZ-11 outside	SW	63.55	9/9/04	14:57	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	9/10/04	16:37	13.21	55.43
MW-109AA	SH	67.77	9/10/04	16:36	12.46	55.31
MW-109B	TL	69.13	9/10/04	16:38	13.86	55.27
MW-109C	BR	69.30	9/10/04	16:39	13.95	55.35
PZ-01 inside	SH	59.71	9/10/04	16:41	4.41	55.30
PZ-01 outside	SW	59.71	9/10/04	16:41	4.52	55.19
PZ-06 inside	SH	58.89	9/10/04	15:19	4.59	54.30
PZ-06 outside	SW	58.89	9/10/04	15:19	4.50	54.39
PZ-07 inside	SH	59.60	9/10/04	15:16	5.29	54.31
PZ-07 outside	SW	59.60	9/10/04	15:16	5.17	54.43
PZ-08 inside	SH	63.26	9/10/04	16:11	10.26	53.00
PZ-09 inside	SH	57.75	9/10/04	15:33	3.58	54.17
PZ-09 outside	SW	57.75	9/10/04	15:33	3.64	54.11
PZ-11 inside	SH	63.55	9/10/04	16:45	7.53	56.02
PZ-11 outside	SW	63.55	9/10/04	16:45	DRY @ 5.36	DRY @ 58.19
PZ-16 inside	SH	66.08	9/10/04	15:28	11.48	54.60
PZ-18 inside	SH	65.97	9/10/04	15:55	10.54	55.43
SEA-607	SH	65.82	9/10/04	15:26	11.69	54.13
SEA-608	SH	67.02	9/10/04	15:22	12.76	54.26
MW-109A	DP	68.64	9/13/04	15:29	13.67	54.97
MW-109AA	SH	67.77	9/13/04	15:28	13.44	54.33
MW-109B	TL	69.13	9/13/04	15:30	14.29	54.84
MW-109C	BR	69.30	9/13/04	15:31	14.37	54.93
PZ-01 inside	SH	59.71	9/13/04	15:33	5.52	54.19
PZ-01 outside	SW	59.71	9/13/04	15:34	5.72	53.99
PZ-11 inside	SH	63.55	9/13/04	15:36	DRY	DRY
PZ-11 outside	SW	63.55	9/13/04	15:36	DRY	DRY
MW-109A	DP	68.64	9/14/04	15:53	13.77	54.87

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
MW-109AA	SH	67.77	9/14/04	15:52	13.51	54.26
MW-109B	TL	69.13	9/14/04	15:55	14.38	54.75
MW-109C	BR	69.30	9/14/04	15:56	14.46	54.84
PZ-01 inside	SH	59.71	9/14/04	15:57	5.57	54.14
PZ-01 outside	SW	59.71	9/14/04	16:00	5.69	54.02
PZ-11 inside	SH	63.55	9/14/04	16:04	DRY @ 7.61	DRY @ 55.94
PZ-11 outside	SW	63.55	9/14/04	16:04	DRY	DRY
MW-109A	DP	68.64	9/15/04	15:53	13.89	54.75
MW-109AA	SH	67.77	9/15/04	15:52	13.64	54.13
MW-109B	TL	69.13	9/15/04	15:54	14.48	54.65
MW-109C	BR	69.30	9/15/04	15:55	14.57	54.73
North Pool	SW		9/15/04			54.22
Pond D	SW		9/15/04			54.11
Pond E	SW		9/15/04			54.04
PZ-01 inside	SH	59.71	9/15/04	15:57	5.68	54.03
PZ-01 outside	SW	59.71	9/15/04	15:57	5.77	53.94
PZ-11 inside	SH	63.55	9/15/04	16:01	DRY @ 7.60	DRY @ 55.95
PZ-11 outside	SW	63.55	9/15/04	16:01	DRY	DRY
MW-109A	DP	68.64	9/16/04	15:30	13.93	54.71
MW-109AA	SH	67.77	9/16/04	15:30	13.68	54.09
MW-109B	TL	69.13	9/16/04	15:31	14.52	54.61
MW-109C	BR	69.30	9/16/04	15:31	14.63	54.67
PZ-01 inside	SH	59.71	9/16/04	15:36	5.71	54.00
PZ-01 outside	SW	59.71	9/16/04	15:37	5.85	53.86
PZ-11 inside	SH	63.55	9/16/04	15:45	DRY	DRY
PZ-11 outside	SW	63.55	9/16/04	15:45	DRY	DRY
MW-109A	DP	68.64	9/17/04	14:05	13.96	54.68
MW-109AA	SH	67.77	9/17/04	14:05	13.70	54.07
MW-109B	TL	69.13	9/17/04	14:06	14.56	54.57
MW-109C	BR	69.30	9/17/04	14:06	14.69	54.61
PZ-01 inside	SH	59.71	9/17/04	14:10	5.72	53.99
PZ-01 outside	SW	59.71	9/17/04	14:10	5.82	53.89
PZ-05 inside	SH	59.93	9/17/04	8:15	6.65	53.28
PZ-05 outside	SW	59.93	9/17/04	8:15	DRY	DRY
PZ-06 inside	SH	58.89	9/17/04	8:22	5.55	53.34
PZ-06 outside	SW	58.89	9/17/04	8:22	DRY	DRY
PZ-07 inside	SH	59.60	9/17/04	8:18	5.61	53.99
PZ-07 outside	SW	59.60	9/17/04	8:19	5.31	54.29
PZ-09 inside	SH	57.75	9/17/04	8:49	3.65	54.10
PZ-09 outside	SW	57.75	9/17/04	8:49	3.67	54.08
PZ-11 inside	SH	63.55	9/17/04	14:13	DRY @ 7.56	DRY @ 55.99
PZ-11 outside	SW	63.55	9/17/04	14:13	DRY @ 5.36	DRY @ 58.19
PZ-16 inside	SH	66.08	9/17/04	8:32	12.52	53.56
PZ-17 inside	SH	65.15	9/17/04	8:37	11.12	54.03
PZ-18 inside	SH	65.97	9/17/04	8:42	11.52	54.45
SEA-607	SH	67.02	9/17/04	8:28	13.17	53.85
SEA-608	SH	65.82	9/17/04	8:26	12.12	53.70

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
GZ-1-1	SH	67.08	9/20/04	11:16	7.84	59.24
GZ-4-1	SH	63.49	9/20/04	11:30	5.12	58.37
L-2	IN	69.94	9/20/04	11:21	11.08	58.86
MW-106A	SH	68.61	9/20/04	15:00	10.28	58.33
MW-106B	IN	68.55	9/20/04	15:02	10.21	58.34
MW-106C	BR	68.20	9/20/04	15:04	10.78	57.42
MW-107A	SH	81.46	9/20/04	14:08	21.73	59.73
MW-107B	IN	81.53	9/20/04	14:11	21.80	59.73
MW-107C	BR	81.55	9/20/04	14:10	21.99	59.56
MW-108A	IN	69.00	9/20/04	15:34	10.98	58.02
MW-108AA	SH	69.19	9/20/04	15:33	11.15	58.04
MW-108B	DP	69.31	9/20/04	15:36	11.50	57.81
MW-108C	BR	69.26	9/20/04	15:37	11.49	57.77
MW-109A	DP	68.64	9/20/04	8:07	11.48	57.16
MW-109A	DP	68.64	9/20/04	8:08	11.47	57.17
MW-109AA	SH	67.77	9/20/04	8:05	10.46	57.31
MW-109AA	SH	67.77	9/20/04	8:06	10.42	57.35
MW-109B	TL	69.13	9/20/04	8:09	12.17	56.96
MW-109B	TL	69.13	9/20/04	8:10	12.15	56.98
MW-109C	BR	69.30	9/20/04	8:11	12.15	57.15
MW-109C	BR	69.30	9/20/04	8:12	12.16	57.14
MW-110A	SH	66.91	9/20/04	13:50	10.62	56.29
MW-110B	TL	67.50	9/20/04	13:52	11.75	55.75
MW-110C	BR	67.93	9/20/04	13:52	11.39	56.54
MW-111A	IN	64.13	9/20/04	9:20	8.19	55.94
MW-111AA	SH	64.53	9/20/04	9:20	8.24	56.29
MW-111B	DP	64.01	9/20/04	9:21	8.05	55.96
MW-111C	BR	64.50	9/20/04	9:22	7.96	56.54
MW-112A	IN	68.09	9/20/04	9:45	12.54	55.55
MW-112AA	SH	68.59	9/20/04	9:46	12.77	55.82
MW-112B	DP	68.20	9/20/04	9:41	12.65	55.55
MW-112C	BR	68.09	9/20/04	9:38	10.51	57.58
MW-501A	SH	68.68	9/20/04	14:37	9.46	59.22
MW-501B	SH	68.46	9/20/04	14:39	9.24	59.22
MW-501C	DP	68.47	9/20/04	14:41	9.20	59.27
MW-502	DP	73.47	9/20/04	11:13	14.56	58.91
MW-A1	DP	64.79	9/20/04	11:25	6.26	58.53
MW-A2	SH	65.20	9/20/04	11:26	6.73	58.47
MW-B1	IN	61.92	9/20/04	8:46	3.71	58.21
MW-B2	SH	62.04	9/20/04	8:45	4.10	57.94
MW-C1	IN	61.06	9/20/04	9:00	3.39	57.67
MW-C2	SH	61.48	9/20/04	9:02	3.99	57.49
MW-EA-1	SH	92.24	9/20/04	13:43	30.36	61.88
MW-EA-2	BR	78.32	9/20/04	13:30	14.35	63.97
MW-EA-3	BR	78.76	9/20/04	13:02	19.27	59.49
MW-EA-4	BR	79.75	9/20/04	12:59	15.61	64.14
P-6	SH	67.83	9/20/04	14:33	8.59	59.24

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
P-7	SH	71.79	9/20/04	8:23	11.75	60.04
P-8	SH	62.53	9/20/04	8:36	4.32	58.21
PZ-01 inside	SH	59.71	9/20/04	9:13	2.46	57.25
PZ-01 outside	SW	59.71	9/20/04	9:13	2.59	57.12
PZ-02 inside	SH	60.39	9/20/04	9:03	2.82	57.57
PZ-02 outside	SW	60.39	9/20/04	9:03	2.98	57.41
PZ-03 inside	SH	61.14	9/20/04	8:52	3.07	58.07
PZ-03 outside	SW	61.14	9/20/04	8:52	3.06	58.08
PZ-04A inside	SH	53.99	9/20/04	10:47	0.85	53.14
PZ-04A outside	SW	53.99	9/20/04	10:47	0.82	53.17
PZ-05 inside	SH	59.93	9/20/04	9:53	1.81	58.12
PZ-05 outside	SW	59.93	9/20/04	9:53	1.84	58.09
PZ-06 inside	SH	58.89	9/20/04	10:01	2.31	56.58
PZ-06 outside	SW	58.89	9/20/04	10:01	2.50	56.39
PZ-06A inside	SH	56.60	9/20/04	10:02	0.50	56.10
PZ-06A outside	SW	56.60	9/20/04	10:03	0.22	56.38
PZ-07 inside	SH	59.60	9/20/04	9:58	2.10	57.50
PZ-07 outside	SW	59.60	9/20/04	9:58	1.70	57.90
PZ-09 inside	SH	57.75	9/20/04	10:17	2.17	55.58
PZ-09 outside	SW	57.75	9/20/04	10:17	2.18	55.57
PZ-10 inside	SH	63.70	9/20/04	15:43	5.79	57.91
PZ-10 outside	SW	63.70	9/20/04	15:44	DRY @ 5.45	DRY @ 58.25
PZ-11 inside	SH	63.55	9/20/04	15:52	5.22	58.33
PZ-11 outside	SW	63.55	9/20/04	15:52	5.15	58.40
PZ-12 inside	SH	64.14	9/20/04	15:20	5.57	58.57
PZ-12 outside	SW	64.14	9/20/04	15:21	DRY @ 4.85	DRY @ 59.29
PZ-13 inside	SH	65.11	9/20/04	13:22	3.91	61.20
PZ-13 outside	SW	65.11	9/20/04	13:36	4.51	60.60
PZ-14 inside	SH	61.68	9/20/04	14:49	3.37	58.31
PZ-14 outside	SW	61.68	9/20/04	14:50	3.44	58.24
PZ-15 inside	SH	68.49	9/20/04	14:52	DRY @ 5.95	DRY @ 62.54
PZ-15 outside	SW	68.49	9/20/04	14:53	1.94	66.55
PZ-15A inside	SH	69.12	9/20/04	14:54	7.27	61.85
PZ-15A outside	SW	69.12	9/20/04	14:54	2.59	66.53
PZ-16 inside	SH	66.08	9/20/04	10:12	9.57	56.51
PZ-17 inside	SH	65.15	9/20/04	10:31	8.49	56.66
PZ-18 inside	SH	65.97	9/20/04	10:28	8.44	57.53
PZ-19 inside	SH	69.69	9/20/04	15:25	11.47	58.22
PZ-20 inside	SH	59.11	9/20/04	15:07	1.07	58.04
PZ-20 outside	SW	59.11	9/20/04	15:08	1.15	57.96
SEA-601	SH	63.47	9/20/04	8:28	5.22	58.25
SEA-602A	SH	62.51	9/20/04	8:31	4.34	58.17
SEA-602B	IN	61.99	9/20/04	8:34	3.73	58.26
SEA-603	SH	61.97	9/20/04	8:40	3.86	58.11
SEA-604	SH	65.34	9/20/04	8:56	7.62	57.72
SEA-605	SH	65.20	9/20/04	9:09	8.08	57.12
SEA-606	SH	64.43	9/20/04	10:54	10.12	54.31

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
SEA-607	SH	65.82	9/20/04	10:09	9.93	55.89
SEA-608	SH	67.02	9/20/04	10:06	10.37	56.65
MW-109A	DP	68.64	9/22/04	8:04	11.97	56.67
MW-109AA	SH	67.77	9/22/04	8:02	11.70	56.07
MW-109B	TL	69.13	9/22/04	8:03	12.67	56.46
MW-109C	BR	69.30	9/22/04	8:05	12.78	56.52
PZ-01 inside	SH	59.71	9/22/04	8:22	3.93	55.78
PZ-01 outside	SW	59.71	9/22/04	8:22	4.21	55.50
PZ-11 inside	SH	63.55	9/22/04	8:29	5.31	58.24
PZ-11 outside	SW	63.55	9/22/04	8:29	5.12	58.43
MW-109A	DP	68.64	9/23/04	8:48	12.20	56.44
MW-109AA	SH	67.77	9/23/04	8:47	12.08	55.69
MW-109B	TL	69.13	9/23/04	8:49	12.90	56.23
MW-109C	BR	69.30	9/23/04	8:50	13.04	56.26
PZ-01 inside	SH	59.71	9/23/04	8:51	4.31	55.40
PZ-01 outside	SW	59.71	9/23/04	8:51	4.65	55.06
PZ-05 inside	SH	59.93	9/23/04	15:38	4.35	55.58
PZ-05 outside	SW	59.93	9/23/04	15:38	4.33	55.60
PZ-06 inside	SH	58.89	9/23/04	15:58	4.61	54.28
PZ-06 outside	SW	58.89	9/23/04	15:58	4.75	54.14
PZ-06A inside	SH	56.60	9/23/04	16:00	2.32	54.28
PZ-06A outside	SW	56.60	9/23/04	16:00	2.46	54.14
PZ-07 inside	SH	59.60	9/23/04	15:42	5.12	54.48
PZ-07 outside	SW	59.60	9/23/04	15:42	5.12	54.48
PZ-09 inside	SH	57.75	9/23/04	16:04	2.19	55.56
PZ-09 outside	SW	57.75	9/23/04	16:04	2.16	55.59
PZ-11 inside	SH	63.55	9/23/04	8:55	5.42	58.13
PZ-11 outside	SW	63.55	9/23/04	8:55	5.18	58.37
PZ-16 inside	SH	66.08	9/23/04	16:22	11.31	54.77
PZ-17 inside	SH	65.15	9/23/04	16:42	10.86	54.29
PZ-18 inside	SH	65.97	9/23/04	16:36	10.38	55.59
SEA-607	SH	65.82	9/23/04	16:29	10.83	54.99
SEA-608	SH	67.02	9/23/04	16:31	12.23	54.79
MW-109A	DP	68.64	9/24/04	8:08	12.37	56.27
MW-109AA	SH	67.77	9/24/04	8:07	12.32	55.45
MW-109B	TL	69.13	9/24/04	8:09	13.07	56.06
MW-109C	BR	69.30	9/24/04	8:10	13.25	56.05
PZ-01 inside	SH	59.71	9/24/04	8:14	4.60	55.11
PZ-01 outside	SW	59.71	9/24/04	8:14	4.94	54.77
PZ-11 inside	SH	63.55	9/24/04	8:17	5.50	58.05
PZ-11 outside	SW	63.55	9/24/04	8:17	5.24	58.31
MW-109A	DP	68.64	9/27/04	7:56	12.78	55.86
MW-109AA	SH	67.77	9/27/04	7:55	12.79	54.98
MW-109B	TL	69.13	9/27/04	7:59	13.49	55.64
MW-109C	BR	69.30	9/27/04	7:58	13.65	55.65
PZ-01 inside	SH	59.71	9/27/04	8:00	5.06	54.65
PZ-01 outside	SW	59.71	9/27/04	8:00	5.40	54.31

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
PZ-11 inside	SH	63.55	9/27/04	8:04	5.77	57.78
PZ-11 outside	SW	63.55	9/27/04	8:04	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	9/28/04	16:26	12.71	55.93
MW-109AA	SH	67.77	9/28/04	16:25	12.46	55.31
MW-109B	TL	69.13	9/28/04	16:28	13.43	55.70
MW-109C	BR	69.30	9/28/04	16:30	13.56	55.74
PZ-01 inside	SH	59.71	9/28/04	16:35	4.68	55.03
PZ-01 outside	SW	59.71	9/28/04	16:35	4.90	54.81
PZ-11 inside	SH	63.55	9/28/04	16:37	5.79	57.76
PZ-11 outside	SW	63.55	9/28/04	16:37	DRY @ 5.36	DRY @ 58.19
MW-109A	DP	68.64	9/29/04	13:27	10.99	57.65
MW-109AA	SH	67.77	9/29/04	13:26	9.20	58.57
MW-109B	TL	69.13	9/29/04	13:28	11.71	57.42
MW-109C	BR	69.30	9/29/04	13:29	11.82	57.48
PZ-01 inside	SH	59.71	9/29/04	13:24	HIGH	HIGH
PZ-01 outside	SW	59.71	9/29/04	13:24	1.00	58.71
PZ-11 inside	SH	63.55	9/29/04	13:35	4.84	58.71
PZ-11 outside	SW	63.55	9/29/04	13:35	4.74	58.81
MW-109A	DP	68.64	9/30/04	17:54	10.34	58.30
MW-109AA	SH	67.77	9/30/04	17:53	9.07	58.70
MW-109B	TL	69.13	9/30/04	17:55	10.99	58.14
MW-109C	BR	69.30	9/30/04	17:56	10.96	58.34
PZ-01 inside	SH	59.71	9/30/04	17:58	HIGH	HIGH
PZ-01 outside	SW	59.71	9/30/04	17:58	1.10	58.61
PZ-11 inside	SH	63.55	9/30/04	17:50	4.53	59.02
PZ-11 outside	SW	63.55	9/30/04	17:50	4.50	59.05
MW-109A	DP	68.64	10/2/04	9:40	10.69	57.95
MW-109AA	SH	67.77	10/2/04	9:39	10.36	57.41
MW-109B	TL	69.13	10/2/04	9:41	11.37	57.76
MW-109C	BR	69.30	10/2/04	9:42	11.41	57.89
PZ-01 inside	SH	59.71	10/2/04	9:47	2.52	57.19
PZ-01 outside	SW	59.71	10/2/04	9:47	2.80	56.91
PZ-05 inside	SH	59.93	10/2/04	11:38	2.03	57.90
PZ-05 outside	SW	59.93	10/2/04	11:38	2.09	57.84
PZ-06 inside	SH	58.89	10/2/04	10:45	2.43	56.46
PZ-06 outside	SW	58.89	10/2/04	10:45	2.71	56.18
PZ-07 inside	SH	59.60	10/2/04	10:41	2.17	57.43
PZ-07 outside	SW	59.60	10/2/04	10:41	1.79	57.81
PZ-09 inside	SH	57.75	10/2/04	11:05	0.62	57.13
PZ-09 outside	SW	57.75	10/2/04	11:05	0.63	57.12
PZ-11 inside	SH	63.55	10/2/04	9:55	4.23	59.32
PZ-11 outside	SW	63.55	10/2/04	9:55	4.09	59.46
PZ-16 inside	SH	66.08	10/2/04	10:57	9.40	56.68
PZ-17 inside	SH	65.15	10/2/04	11:20	8.05	57.10
PZ-18 inside	SH	65.97	10/2/04	11:15	8.34	57.63
SEA-607	SH	65.82	10/2/04	10:52	9.02	56.80
SEA-608	SH	67.02	10/2/04	10:50	9.88	57.14

Table H2-7
Combined 2002-2004 Potentiometric Data
Peterson/Puritan OU2

Measuring Point (MP)	FM	MP Elevation (ft NGVD29)	Date	Time	DTW Reading (ft)	Water Level Elevation (ft NGVD29)
Pond D	SW	---	10/6/04	---	---	56.10
PZ-09 Pond A	SW	---	10/6/04	---	---	56.10

Table H3-1
Historic Records, Blackstone River at Woonsocket, Rhode Island

General Information:
USGS 01112500 BLACKSTONE RIVER AT WOONSOCKET, RI

source: http://waterdata.usgs.gov/ri/nwis/uv?01112500

LOCATION.--Lat 42° 00'22", long 71° 30'13", Providence County, Hydrologic Unit 01090003, on right bank 50 ft upstream from Peters River pressure conduit at Woonsocket. Records include flow of Peters River.
DRAINAGE AREA.--416 mi^2.
PERIOD OF RECORD.--Discharge: February 1929 to current year.
Water-quality records: Water years 1952–53, 1957–58, 1962–67.
REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1931(M). WSP 871: 1938. WSP 1051: 1931.
GAGE.--Water-stage recorder. Datum of gage is 107.42 ft above sea level.
REMARKS.--Records good. Flow regulated by powerplants, by West Hill Reservoir since May 1961, and by other reservoirs upstream. Extremes and figures of daily discharge include flow diverted from Nashua River basin and, at times since January 1966, from Quabbin Reservoir for supply of Worcester, MA, and, prior to July 1964, flow diverted around station in Hamlet Trench. Telephone and satellite gage-height telemeters at station.
COOPERATION BY.-- Ocean State Power.

Table H3-1
Historic Records, Blackstone River at Woonsocket, Rhode Island

YEAR	Monthly mean streamflow, in cfs											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1929			1,480	1,729	1,204	397	234	190	195	207	224	296
1930	529	624	792	625	303	181	136	129	130	136	224	218
1931	298	494	1,759	1,190	824	1,514	405	318	240	128	127	193
1932	580	555	740	1,179	436	250	147	182	533	838	1,719	674
1933	717	868	1,827	2,520	598	394	191	192	625	455	353	499
1934	1,114	426	1,539	1,923	1,040	501	240	224	403	659	557	754
1935	1,532	879	1,492	1,497	711	831	419	244	296	165	245	364
1936	946	499	4,063	1,622	700	280	171	201	367	423	414	1,824
1937	1,608	1,048	991	1,096	845	472	276	283	368	328	1,113	1,360
1938	1,405	1,176	952	831	681	1,030	2,453	933	1,427	885	747	1,288
1939	765	1,089	1,643	1,850	593	363	193	229	252	190	433	413
1940	487	458	1,190	2,518	978	817	412	197	209	211	530	619
1941	608	975	792	714	487	376	243	167	143	137	200	269
1942	439	707	1,955	802	477	379	356	250	163	226	439	1,175
1943	842	1,095	1,547	890	1,249	484	246	192	121	225	436	280
1944	236	384	816	1,223	574	426	213	154	405	269	511	1,039
1945	910	795	1,882	855	1,364	939	482	291	232	235	555	1,380
1946	1,395	1,095	1,479	707	937	1,032	253	486	308	401	268	404
1947	688	799	1,132	1,026	940	620	321	247	307	174	496	394
1948	408	873	2,198	1,242	1,135	1,322	675	305	166	208	495	450
1949	843	1,077	1,003	988	631	263	129	142	199	142	195	284
1950	478	691	1,276	1,139	736	439	211	229	192	203	527	820
1951	979	1,763	1,301	1,409	811	599	253	321	236	342	1,574	1,267
1952	1,476	1,196	1,573	1,199	1,019	889	219	270	193	185	222	413
1953	1,026	1,472	2,034	2,387	1,206	319	196	158	138	193	473	1,089
1954	650	789	1,081	1,187	1,462	453	205	255	1,980	692	1,317	1,810
1955	1,066	925	1,435	967	666	383	213	2,703	857	2,007	2,233	677
1956	1,341	1,369	1,584	2,646	841	568	279	169	228	257	352	816
1957	814	782	982	1,330	490	213	125	121	113	140	203	573
1958	1,529	1,063	2,144	2,268	1,318	387	271	262	393	508	625	749
1959	656	754	1,615	1,685	669	462	857	310	327	550	900	1,501
1960	1,209	1,734	1,154	1,986	1,001	509	340	289	504	452	782	737
1961	748	1,097	1,830	1,967	1,112	538	248	204	549	515	536	593
1962	1,354	694	1,839	1,738	829	514	217	202	228	980	1,168	1,046

Table H3-1
Historic Records, Blackstone River at Woonsocket, Rhode Island

YEAR	Monthly mean streamflow, in cfs											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1963	851	765	1,842	993	713	369	233	158	206	184	591	687
1964	1,269	1,084	1,514	1,472	478	216	179	136	156	169	203	513
1965	356	832	971	706	373	257	132	151	128	167	153	186
1966	203	580	1,099	479	525	328	152	111	172	214	401	319
1967	553	549	1,027	1,822	1,756	901	447	346	249	301	384	841
1968	697	830	2,764	934	646	1,181	500	193	192	169	460	830
1969	588	514	1,559	2,211	948	354	228	249	326	293	924	1,474
1970	927	2,493	1,058	1,844	744	491	195	191	172	188	387	419
1971	425	934	1,847	1,070	1,084	374	183	161	199	222	310	782
1972	859	967	3,078	1,443	1,779	1,847	687	280	362	510	1,767	2,265
1973	1,544	1,580	1,069	1,567	1,095	620	722	334	311	296	463	1,792
1974	1,514	1,455	1,467	1,578	943	446	235	165	474	636	536	1,066
1975	1,481	1,166	1,307	1,109	493	369	166	165	397	1,011	1,506	1,402
1976	1,971	1,822	1,214	832	698	253	171	376	224	361	257	344
1977	427	502	2,141	1,510	1,056	369	206	168	324	974	1,001	1,550
1978	2,041	995	1,727	1,706	1,142	493	216	649	209	282	249	564
1979	3,167	1,287	1,669	1,177	1,217	634	346	520	400	675	1,039	576
1980	455	262	1,468	1,637	857	381	345	300	170	301	390	358
1981	183	1,285	928	767	731	350	376	165	276	442	725	1,260
1982	1,691	1,633	1,212	1,321	582	2,826	436	257	201	338	524	459
1983	892	1,502	2,973	2,924	1,227	738	203	207	189	303	814	1,804
1984	817	1,773	1,959	2,355	1,230	1,787	723	235	193	312	430	564
1985	430	643	729	490	551	342	239	446	487	489	1,214	910
1986	945	1,014	1,481	697	416	1,274	411	511	203	247	810	1,932
1987	1,143	637	1,364	3,643	1,258	412	257	172	325	460	483	691
1988	492	1,244	1,120	886	1,050	346	527	221	195	245	1,033	584
1989	415	568	653	1,428	1,465	1,039	510	803	607	1,382	1,642	645
1990	938	1,555	1,003	1,306	1,477	592	330	928	283	1,331	945	1,187
1991	947	1,108	1,404	1,025	862	289	179	533	545	595	1,167	1,071
1992	994	740	1,061	1,089	623	719	245	423	256	271	647	1,540
1993	1,433	902	1,596	2,359	641	274	152	101	204	253	475	1,283
1994	1,010	973	2,410	1,472	892	303	201	395	363	308	575	1,279
1995	1,424	828	1,126	644	514	241	144	127	106	507	1,091	535
1996	1,706	1,723	1,385	1,792	1,221	456	561	294	568	1,354	954	2,371

Table H3-1
Historic Records, Blackstone River at Woonsocket, Rhode Island

YEAR	Monthly mean streamflow, in cfs											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997	1,319	1,156	1,058	2,111	932	295	126	124	104	123	431	346
1998	1,278	1,627	2,245	1,191	1,423	1,714	860	217	155	466	336	300
1999	1,398	1,501	1,625	628	477	137	120	71.5	433	470	461	601
2000	694	932	1,374	1,733	1,028	1,076	313	272	188	240	394	694
2001	416	648	2,323	1,920	443	1,015	404	239	150	149	157	222
2002	270	345	622	675	1,117	699	153	102	131	277	627	1,148
2003	892	772	1,876	1,739	924	1,634	420	437	311			
Mean of monthly stream-	956	1,000	1,513	1,429	887	634	334	306	322	421	651	860

Source: http://nwis.waterdata.usgs.gov/ri/nwis/monthly/?site_no=01112500&agency_cd=USGS

Table H3-1
Historic Records, Blackstone River at Woonsocket, Rhode Island

Day of month	Mean of daily mean values for this day for 75 years of record[1], in cfs											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	798	898	1088	1746	1056	835	473	270	276	338	469	780
2	877	898	1079	1738	1012	817	420	265	261	335	504	790
3	880	1048	1143	1726	990	836	372	252	244	333	550	803
4	891	1125	1229	1704	1051	752	330	246	243	337	587	779
5	910	1035	1257	1711	1028	733	325	247	230	329	580	805
6	865	943	1319	1749	961	802	347	237	223	338	582	834
7	887	924	1384	1691	929	865	339	252	228	387	561	925
8	940	992	1326	1591	909	779	335	323	232	385	588	889
9	954	934	1416	1481	908	710	304	315	229	374	615	850
10	1025	866	1442	1454	932	754	305	306	234	376	638	871
11	941	879	1363	1458	992	729	306	301	258	364	663	862
12	882	921	1440	1424	992	660	294	337	334	337	682	884
13	828	915	1470	1457	970	665	293	329	333	341	684	885
14	846	932	1436	1441	949	702	327	327	297	392	703	872
15	857	954	1471	1384	918	663	320	297	305	394	697	911
16	892	998	1492	1366	902	594	302	265	314	451	663	885
17	860	991	1567	1462	879	602	290	266	383	485	661	865
18	794	983	1736	1449	852	637	282	283	399	485	637	910
19	803	1008	1844	1394	850	600	267	429	384	483	607	919
20	865	1021	1759	1385	838	584	290	639	420	502	606	926
21	911	1018	1688	1308	840	546	319	445	430	580	673	931
22	973	1044	1863	1283	830	507	372	351	443	536	704	1003
23	942	1043	1901	1259	773	514	379	312	410	473	690	914
24	994	1042	1729	1205	751	483	477	305	381	487	659	823
25	1206	1126	1656	1240	784	458	436	297	359	504	660	789
26	1343	1177	1618	1183	838	445	357	288	366	484	721	823
27	1291	1128	1629	1166	824	427	319	265	365	459	771	862
28	1271	1089	1647	1156	778	442	296	265	370	446	725	835
29	1139	1080	1589	1158	724	449	293	263	360	447	807	814
30	1014		1627	1118	688	442	311	262	358	438	834	813
31	950		1689		738		282	264		441		820

1 -- Available period of record may be less than value shown for certain days of the year.

Source: http://nwis.waterdata.usgs.gov/ri/nwis/dvstat/?site_no=01112500&agency_cd=USGS

Table H3-2
Daily Streamflow, 2003-2004
Blackstone River at Woonsocket, RI
2003 and 2004

Date	75-Year Mean of Daily Mean Discharge (cfs)	2003 Daily Mean Discharge (cfs)	2004 Daily Mean Discharge (cfs)
1-Jan	798	1,510	1,190
2-Jan	877	1,880	1,130
3-Jan	880	1,780	1,140
4-Jan	891	1,660	1,200
5-Jan	910	1,490	1,480
6-Jan	865	1,370	1,580
7-Jan	887	1,280	1,390
8-Jan	940	1,210	1,180
9-Jan	954	1,160	1,040
10-Jan	1025	1,140	972
11-Jan	941	1,110	907
12-Jan	882	1,010	793
13-Jan	828	900	750
14-Jan	846	790	725
15-Jan	857	733	700
16-Jan	892	699	658
17-Jan	860	662	745
18-Jan	794	621	642
19-Jan	803	598	628
20-Jan	865	591	674
21-Jan	911	616	631
22-Jan	973	584	568
23-Jan	942	596	582
24-Jan	994	498	596
25-Jan	1206	462	578
26-Jan	1343	443	502
27-Jan	1291	460	458
28-Jan	1271	503	449
29-Jan	1139	443	464
30-Jan	1014	429	485
31-Jan	950	421	462
1-Feb	898	434	443
2-Feb	898	510	422
3-Feb	1048	551	418
4-Feb	1125	594	563
5-Feb	1035	728	564
6-Feb	943	665	589
7-Feb	924	616	1,060
8-Feb	992	577	1,080
9-Feb	934	536	839
10-Feb	866	511	705
11-Feb	879	500	665
12-Feb	921	472	603
13-Feb	915	441	562
14-Feb	932	430	571
15-Feb	954	403	536
16-Feb	998	393	490

Table H3-2
Daily Streamflow, 2003-2004
Blackstone River at Woonsocket, RI
2003 and 2004

Date	75-Year Mean of Daily Mean Discharge (cfs)	2003 Daily Mean Discharge (cfs)	2004 Daily Mean Discharge (cfs)
17-Feb	991	491	422
18-Feb	983	1,130	415
19-Feb	1008	606	393
20-Feb	1021	483	379
21-Feb	1018	518	381
22-Feb	1044	658	391
23-Feb	1043	1,620	431
24-Feb	1042	2,190	425
25-Feb	1126	1,830	407
26-Feb	1177	1,480	392
27-Feb	1128	1,200	383
28-Feb	1089	1,040	389
29-Feb	1080		414
1-Mar	1088	904	468
2-Mar	1079	1,070	582
3-Mar	1143	1,870	739
4-Mar	1229	1,630	801
5-Mar	1257	1,390	779
6-Mar	1319	1,360	874
7-Mar	1384	1,220	1,030
8-Mar	1326	1,130	930
9-Mar	1416	1,170	806
10-Mar	1442	1,260	707
11-Mar	1363	1,120	671
12-Mar	1440	1,040	645
13-Mar	1470	1,090	612
14-Mar	1436	1,030	562
15-Mar	1471	1,000	537
16-Mar	1492	1,030	541
17-Mar	1567	1,410	567
18-Mar	1736	2,230	539
19-Mar	1844	2,620	541
20-Mar	1759	2,320	529
21-Mar	1688	2,960	808
22-Mar	1863	3,920	1,110
23-Mar	1901	3,550	950
24-Mar	1729	2,940	816
25-Mar	1656	2,460	768
26-Mar	1618	2,190	753
27-Mar	1629	2,120	789
28-Mar	1647	1,980	794
29-Mar	1589	1,690	775
30-Mar	1627	2,790	662
31-Mar	1689	3,670	753
1-Apr	1746	2,790	2,870
2-Apr	1738	2,240	4,820
3-Apr	1726	1,990	4,050

Table H3-2
Daily Streamflow, 2003-2004
Blackstone River at Woonsocket, RI
2003 and 2004

Date	75-Year Mean of Daily Mean Discharge (cfs)	2003 Daily Mean Discharge (cfs)	2004 Daily Mean Discharge (cfs)
4-Apr	1704	2,050	2,880
5-Apr	1711	2,030	2,380
6-Apr	1749	2,020	1,930
7-Apr	1691	1,770	1,610
8-Apr	1591	1,620	1,430
9-Apr	1481	1,600	1,290
10-Apr	1454	1,860	1,190
11-Apr	1458	2,110	1,070
12-Apr	1424	3,090	969
13-Apr	1457	2,920	1,430
14-Apr	1441	2,360	5,760
15-Apr	1384	2,060	5,220
16-Apr	1366	1,880	3,920
17-Apr	1462	1,690	3,050
18-Apr	1449	1,330	2,480
19-Apr	1394	1,140	2,060
20-Apr	1385	1,060	1,690
21-Apr	1308	1,010	1,510
22-Apr	1283	1,060	1,350
23-Apr	1259	1,260	1,540
24-Apr	1205	1,150	1,990
25-Apr	1240	1,000	1,710
26-Apr	1183	1,090	1,740
27-Apr	1166	1,840	2,700
28-Apr	1156	1,670	2,580
29-Apr	1158	1,360	2,020
30-Apr	1118	1,160	1,670
1-May	1056	1,040	1,510
2-May	1012	1,000	1,360
3-May	990	922	1,380
4-May	1051	858	1,920
5-May	1028	795	2,010
6-May	961	751	1,700
7-May	929	725	1,450
8-May	909	699	1,200
9-May	908	713	1,160
10-May	932	656	1,200
11-May	992	666	1,130
12-May	992	642	1,020
13-May	970	692	884
14-May	949	658	799
15-May	918	620	733
16-May	902	582	678
17-May	879	538	626
18-May	852	504	596
19-May	850	472	788
20-May	838	443	782

Table H3-2
Daily Streamflow, 2003-2004
Blackstone River at Woonsocket, RI
2003 and 2004

Date	75-Year Mean of Daily Mean Discharge (cfs)	2003 Daily Mean Discharge (cfs)	2004 Daily Mean Discharge (cfs)
21-May	840	421	687
22-May	830	423	636
23-May	773	463	598
24-May	751	484	704
25-May	784	561	770
26-May	838	1,010	740
27-May	824	3,260	844
28-May	778	2,710	1,020
29-May	724	2,200	1,250
30-May	688	1,750	1,060
31-May	738	1,380	868
1-Jun	835	1,610	778
2-Jun	817	2,550	756
3-Jun	836	2,080	802
4-Jun	752	1,560	713
5-Jun	733	1,460	587
6-Jun	802	1,430	539
7-Jun	865	1,290	551
8-Jun	779	1,860	503
9-Jun	710	1,760	434
10-Jun	754	1,470	459
11-Jun	729	1,200	437
12-Jun	660	1,120	373
13-Jun	665	1,280	329
14-Jun	702	1,700	300
15-Jun	663	1,550	287
16-Jun	594	1,240	270
17-Jun	602	1,050	247
18-Jun	637	967	243
19-Jun	600	1,030	300
20-Jun	584	905	267
21-Jun	546	792	227
22-Jun	507	1,690	209
23-Jun	514	4,100	202
24-Jun	483	3,930	187
25-Jun	458	2,800	173
26-Jun	445	2,070	271
27-Jun	427	1,510	257
28-Jun	442	1,190	213
29-Jun	449	985	201
30-Jun	442	840	187
1-Jul	473	722	171
2-Jul	420	635	239
3-Jul	372	558	276
4-Jul	330	510	210
5-Jul	325	467	360
6-Jul	347	420	458

Table H3-2
Daily Streamflow, 2003-2004
Blackstone River at Woonsocket, RI
2003 and 2004

Date	75-Year Mean of Daily Mean Discharge (cfs)	2003 Daily Mean Discharge (cfs)	2004 Daily Mean Discharge (cfs)
7-Jul	339	379	339
8-Jul	335	349	261
9-Jul	304	337	249
10-Jul	305	349	212
11-Jul	306	341	192
12-Jul	294	400	176
13-Jul	293	375	180
14-Jul	327	328	220
15-Jul	320	295	212
16-Jul	302	278	194
17-Jul	290	271	177
18-Jul	282	277	162
19-Jul	267	353	160
20-Jul	290	395	163
21-Jul	319	304	152
22-Jul	372	296	143
23-Jul	379	824	132
24-Jul	477	931	278
25-Jul	436	662	747
26-Jul	357	494	507
27-Jul	319	393	345
28-Jul	296	325	309
29-Jul	293	272	351
30-Jul	311	253	271
31-Jul	282	239	230
1-Aug	270	270	219
2-Aug	265	381	196
3-Aug	252	423	185
4-Aug	246	420	162
5-Aug	247	675	253
6-Aug	237	620	300
7-Aug	252	521	229
8-Aug	323	1,280	189
9-Aug	315	1,330	164
10-Aug	306	958	150
11-Aug	301	759	143
12-Aug	337	598	152
13-Aug	329	529	290
14-Aug	327	512	193
15-Aug	297	419	385
16-Aug	265	372	482
17-Aug	266	313	404
18-Aug	283	311	329
19-Aug	429	314	256
20-Aug	639	314	218
21-Aug	445	270	352
22-Aug	351	237	647

Table H3-2
Daily Streamflow, 2003-2004
Blackstone River at Woonsocket, RI
2003 and 2004

Date	75-Year Mean of Daily Mean Discharge (cfs)	2003 Daily Mean Discharge (cfs)	2004 Daily Mean Discharge (cfs)
23-Aug	312	267	552
24-Aug	305	245	370
25-Aug	297	210	285
26-Aug	288	199	237
27-Aug	265	176	209
28-Aug	265	176	189
29-Aug	263	158	177
30-Aug	262	156	162
31-Aug	264	149	208
1-Sep	276	143	184
2-Sep	261	298	160
3-Sep	244	419	147
4-Sep	243	388	138
5-Sep	230	381	130
6-Sep	223	315	112
7-Sep	228	244	125
8-Sep	232	227	154
9-Sep	229	196	294
10-Sep	234	178	518
11-Sep	258	164	363
12-Sep	334	161	251
13-Sep	333	150	208
14-Sep	297	150	182
15-Sep	305	156	166
16-Sep	314	423	162
17-Sep	383	476	162
18-Sep	399	380	584
19-Sep	384	376	1,640
20-Sep	420	425	1,120
21-Sep	430	312	809
22-Sep	443	252	608
23-Sep	410	322	477
24-Sep	381	661	380
25-Sep	359	571	315
26-Sep	366	409	281
27-Sep	365	322	272
28-Sep	370	293	427
29-Sep	360	287	1,820
30-Sep	358	259	2,000
1-Oct	338	225	1,420
2-Oct	335	215	1,110
3-Oct	333	197	856
4-Oct	337	206	691
5-Oct	329	197	576
6-Oct	338	198	494
7-Oct	387	192	479
8-Oct	385	201	431

Table H3-2
Daily Streamflow, 2003-2004
Blackstone River at Woonsocket, RI
2003 and 2004

Date	75-Year Mean of Daily Mean Discharge (cfs)	2003 Daily Mean Discharge (cfs)	2004 Daily Mean Discharge (cfs)
9-Oct	374	204	402
10-Oct	376	207	382
11-Oct	364	201	358
12-Oct	337	207	359
13-Oct	341	240	387
14-Oct	392	242	414
15-Oct	394	575	418
16-Oct	451	791	665
17-Oct	485	594	795
18-Oct	485	515	643
19-Oct	483	473	644
20-Oct	502	451	784
21-Oct	580	458	709
22-Oct	536	467	609
23-Oct	473	392	556
24-Oct	487	377	555
25-Oct	504	389	527
26-Oct	484	353	491
27-Oct	459	560	443
28-Oct	446	908	423
29-Oct	447	1,910	420
30-Oct	438	2,950	429
31-Oct	441	1,920	463
1-Nov	469	1,410	438
2-Nov	504	1,150	413
3-Nov	550	988	398
4-Nov	587	817	419
5-Nov	580	751	700
6-Nov	582	879	750
7-Nov	561	925	590
8-Nov	588	839	538
9-Nov	615	757	489
10-Nov	638	714	438
11-Nov	663	684	426
12-Nov	682	716	434
13-Nov	684	734	479
14-Nov	703	758	451
15-Nov	697	690	448
16-Nov	663	655	443
17-Nov	661	616	449
18-Nov	637	583	462
19-Nov	607	559	464
20-Nov	606	596	450
21-Nov	673	708	542
22-Nov	704	668	560
23-Nov	690	627	497
24-Nov	659	583	478

Table H3-2
Daily Streamflow, 2003-2004
Blackstone River at Woonsocket, RI
2003 and 2004

Date	75-Year Mean of Daily Mean Discharge (cfs)	2003 Daily Mean Discharge (cfs)	2004 Daily Mean Discharge (cfs)
25-Nov	660	577	665
26-Nov	721	568	803
27-Nov	771	533	692
28-Nov	725	530	772
29-Nov	807	677	1,880
30-Nov	834	686	1,710
1-Dec	780	612	1,590
2-Dec	790	555	2,050
3-Dec	803	497	1,710
4-Dec	779	439	1,380
5-Dec	805	400	1,170
6-Dec	834	426	1,060
7-Dec	925	434	1,120
8-Dec	889	416	1,680
9-Dec	850	428	1,690
10-Dec	871	416	1,490
11-Dec	862	898	1,940
12-Dec	884	2,420	2,000
13-Dec	885	1,880	1,640
14-Dec	872	1,360	1,430
15-Dec	911	1,700	1,260
16-Dec	885	1,800	1,120
17-Dec	865	1,680	1,050
18-Dec	910	3,920	1,010
19-Dec	919	3,700	941
20-Dec	926	2,510	943
21-Dec	931	1,950	856
22-Dec	1003	1,600	841
23-Dec	914	1,480	929
24-Dec	823	1,510	1,940
25-Dec	789	2,340	2,020
26-Dec	823	2,260	1,560
27-Dec	862	1,830	1,310
28-Dec	835	1,590	1,240
29-Dec	814	1,410	1,090
30-Dec	813	1,330	1,010
31-Dec	820	1,260	976

Source: http://waterdata.usgs.gov/ri/nwis/dv?format=html&period=50&site_no=1112500

Figure H3-1
Daily Streamflow on Blackstone River
at Woonsocket, RI, 2003-2004

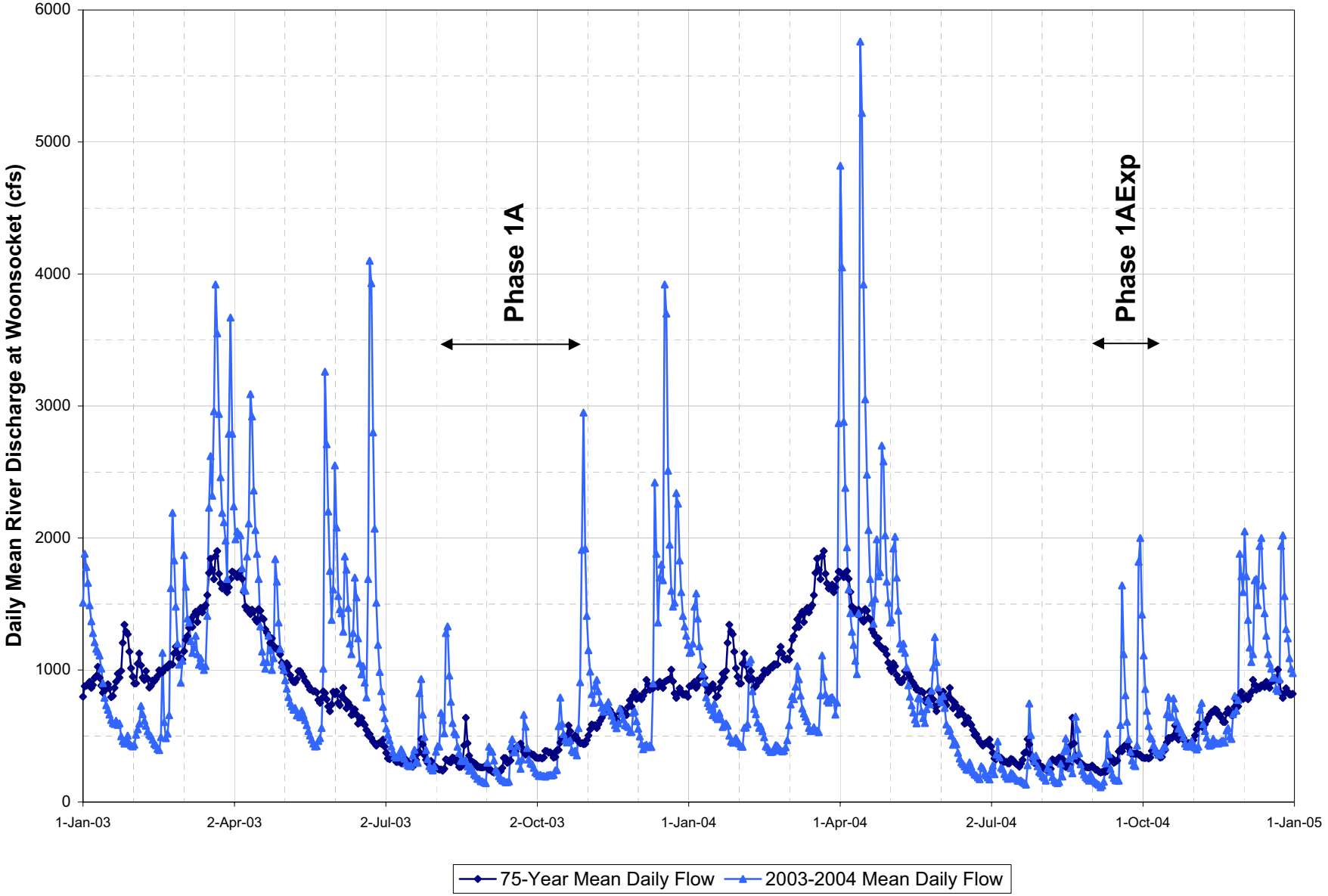


Figure H3-2
Daily Streamflow on Blackstone River
at Woonsocket, RI, August-October 2003

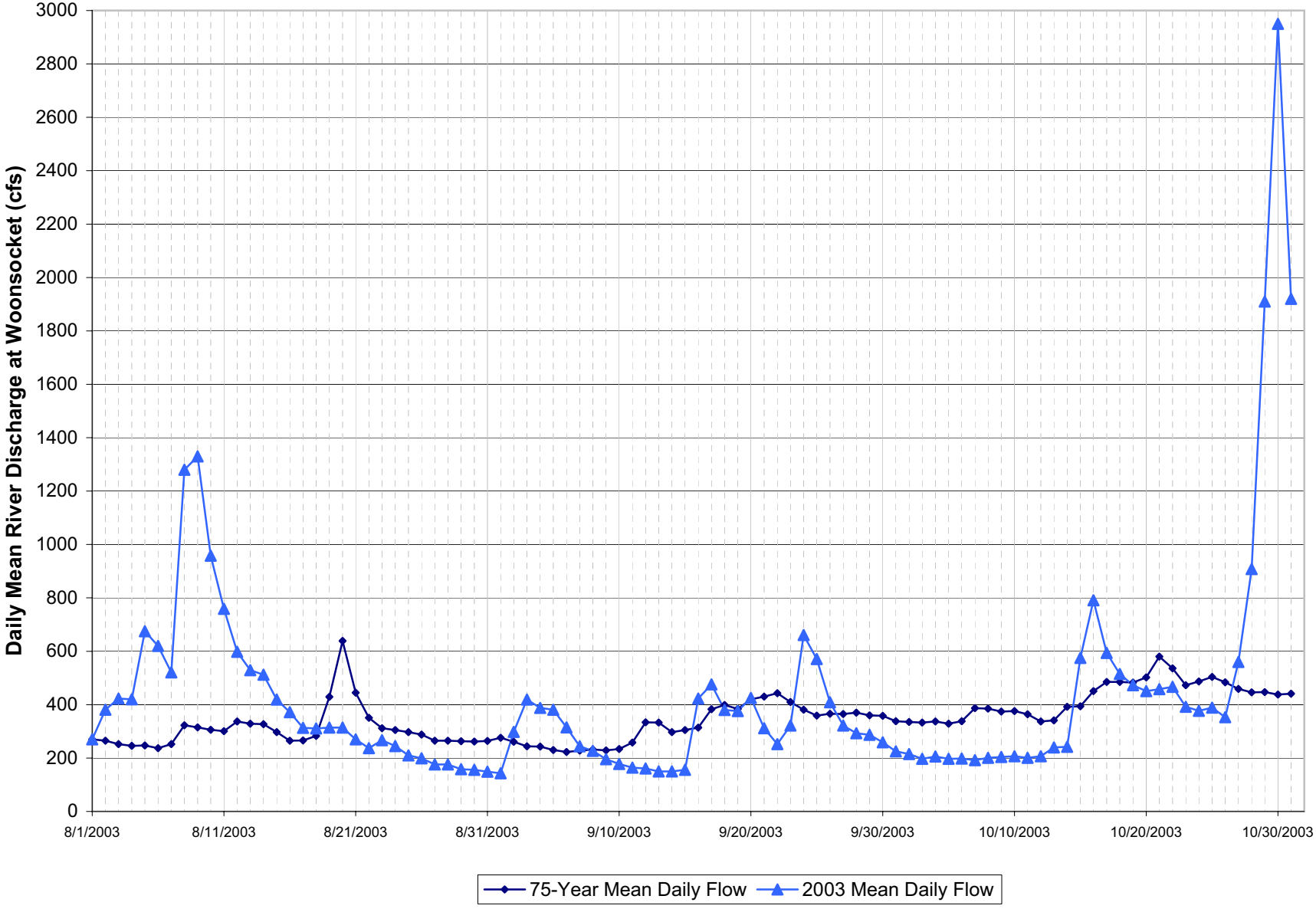


Figure H3-3
Daily Streamflow on Blackstone River
at Woonsocket, RI, August-October 2004

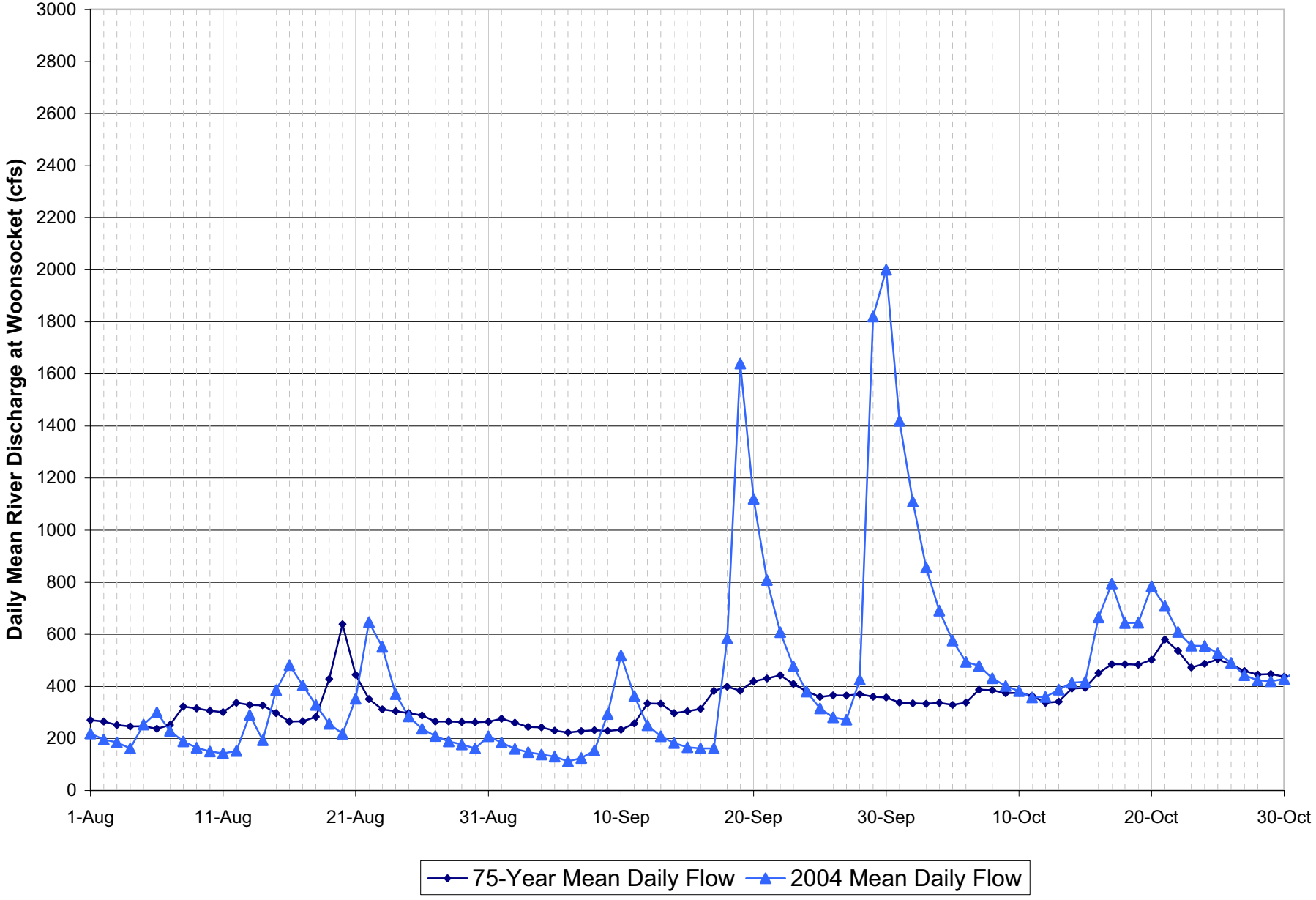
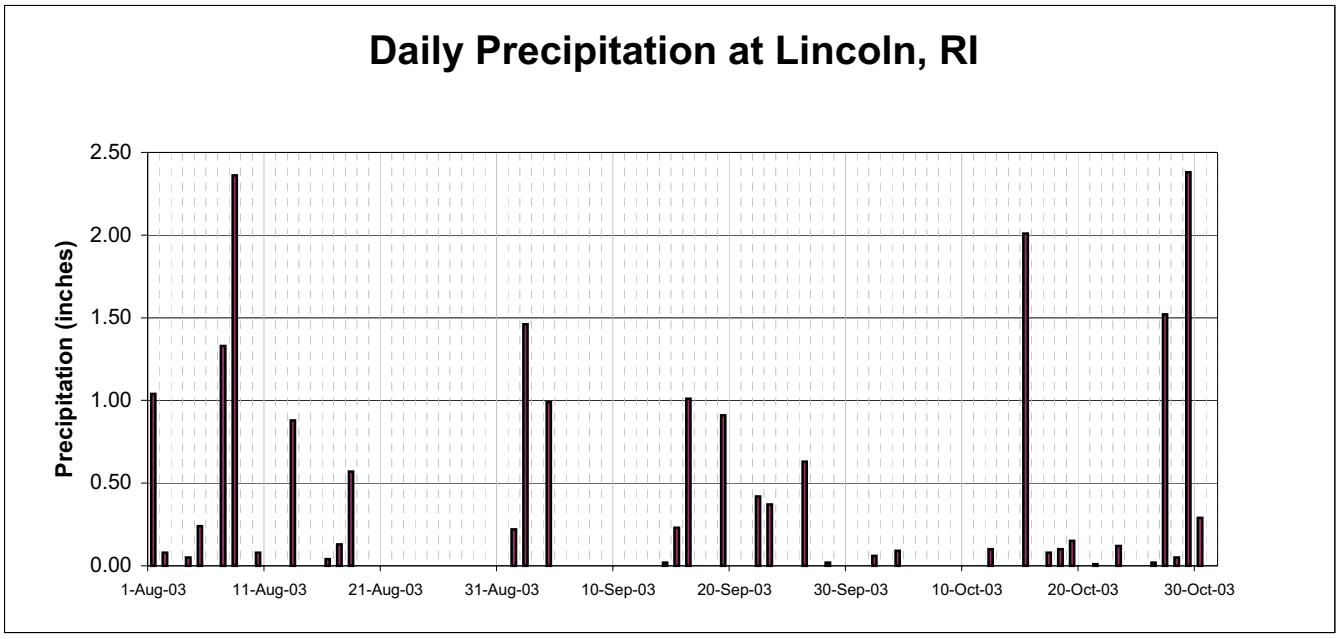


Figure H4-1
Peterson/Puritan OU2 (2003)



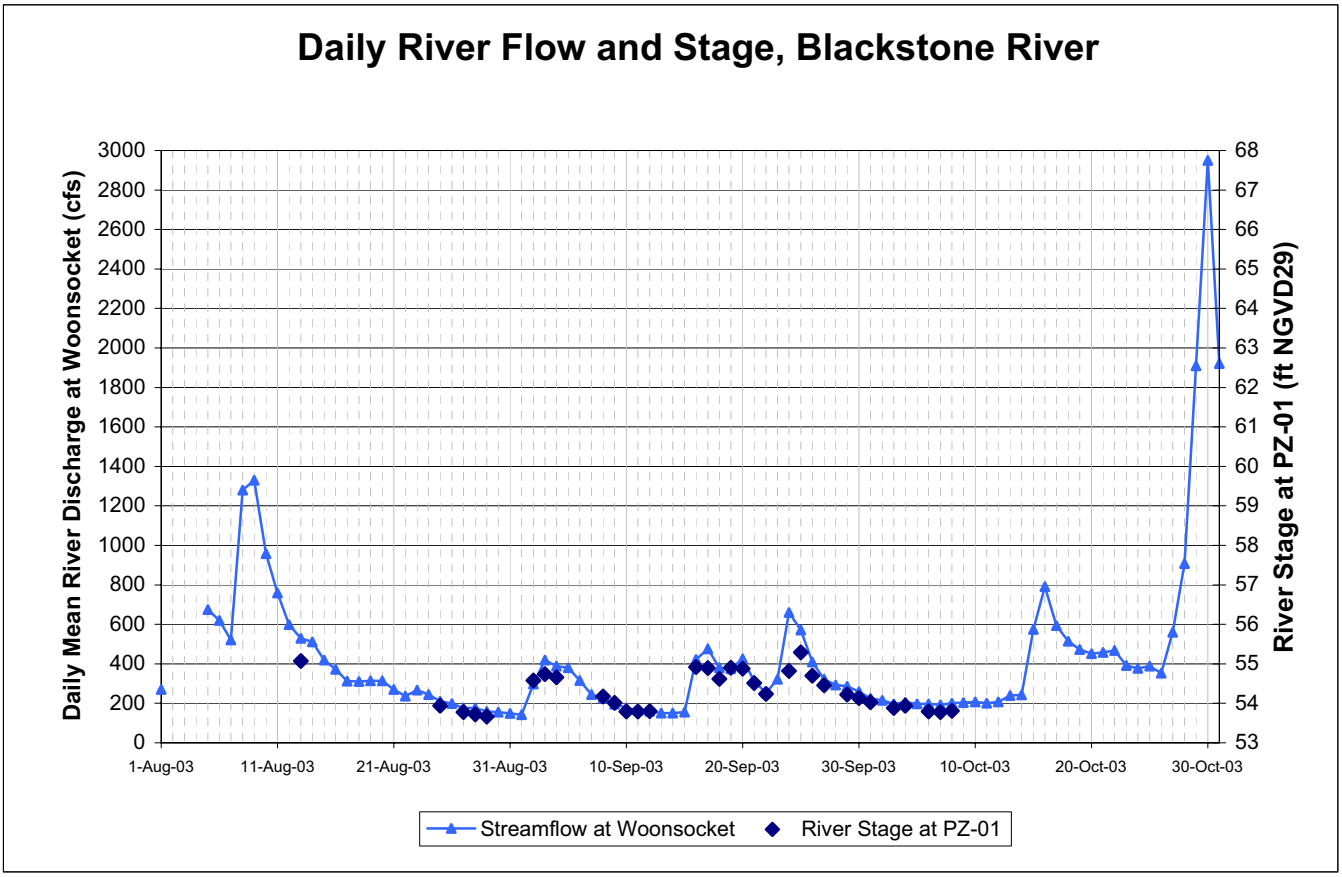
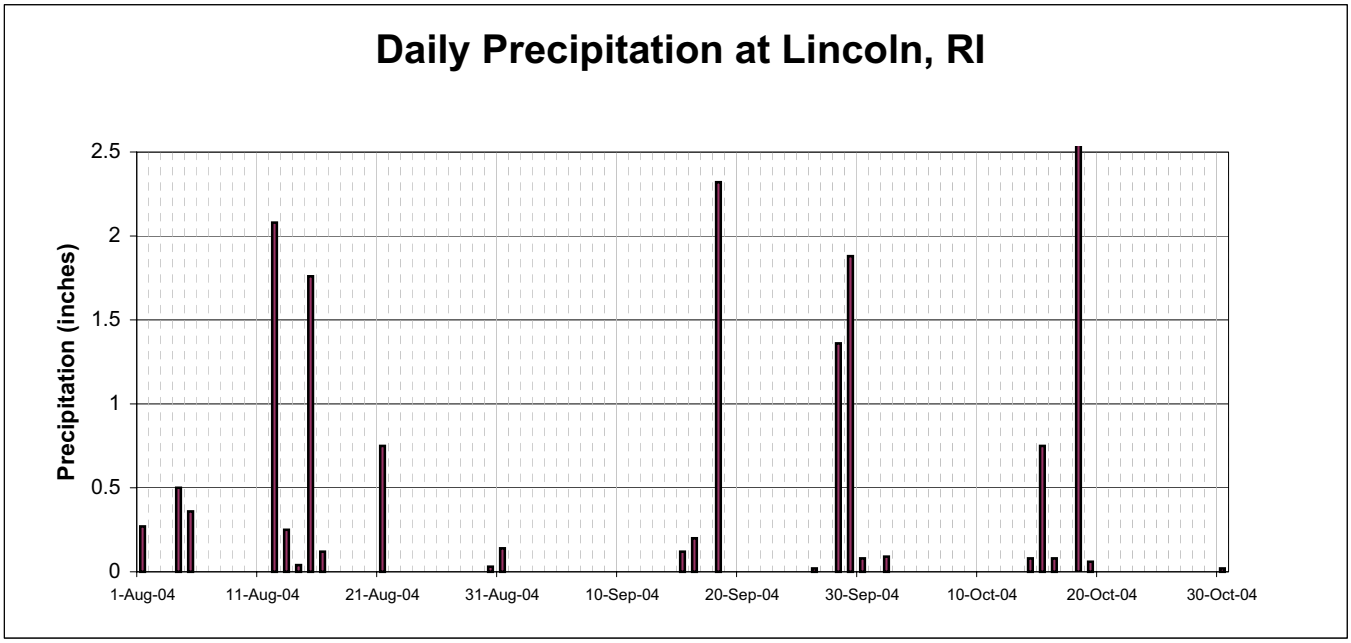


Figure H4-2
Peterson/Puritan OU2 (2004)



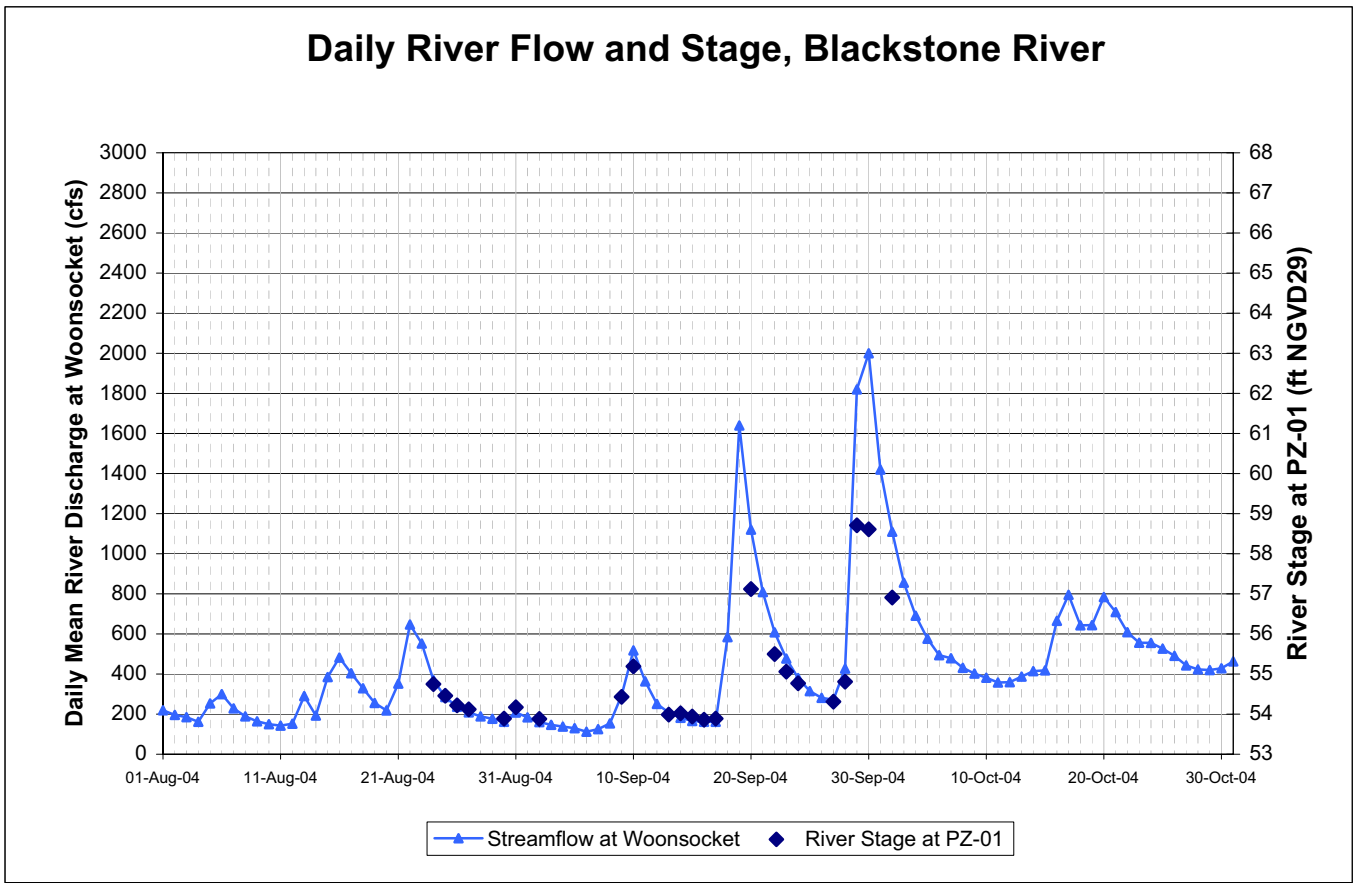


Figure H4-3
Correlation Between Flow and Stage, Blackstone River

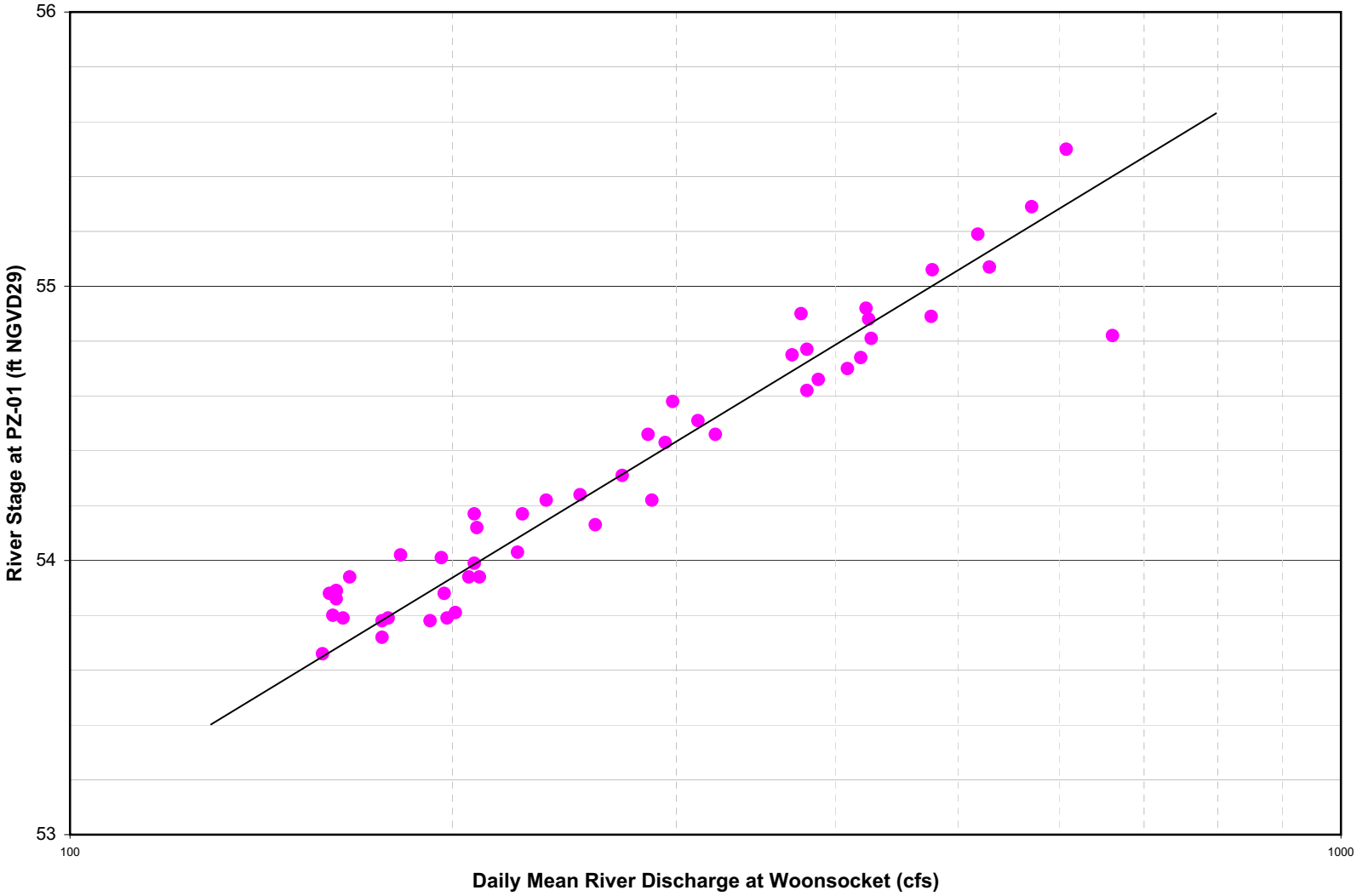


Table H5-1
Surface Water Flow Measurements - Blackstone River, 2003
Peterson/Puritan OU2

Summary

Location	Gauging Station	Date	Time	Flow Rate (cfs)
OU2	BRF-01	8/15/2003	10:00 to 13:00	215.9*
OU2	BRF-02	8/15/2003	14:00 to 16:00	376.2
OU2	BRF-02	8/15/2003	16:00 to 17:00	411.6
OU2		8/15/2003	Best Estimate	**394**
Woonsocket	USGS	8/15/2003	Daily Mean	**419**
			Percent Difference	**-6.0%**
OU2	BRF-01	9/26/2003	11:00 to 12:30	513.9
OU2		9/26/2003	Best Estimate	**514**
Woonsocket	USGS	9/26/2003	Daily Mean	**409**
			Percent Difference	**25.7%**
OU2	BRF-01	9/27/2003	13:30 to 14:30	393.3
OU2	BRF-03	9/27/2003	10:00 to 11:00	383.9
OU2	BRF-05	9/27/2003	12:00 to 13:00	452.2*
OU2		9/26/2003	Best Estimate	**389**
Woonsocket	USGS	9/27/2003	Daily Mean	**322**
			Percent Difference	**20.8%**

Note: * value not considered representative, not included in best estimate

Location: **Blackstone River**
Station: **BRF-01**
Date: **8/15/2003**
Time: **10:00 to 13:00**

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow Rate (cfs)
A	3	0.4	0.00	0.0
B	2	0.5	0.37	0.4
C	2	0.9	0.75	1.4
D	2	1.0	0.77	1.5
E	2	0.6	0.67	0.8
F	2	0.9	0.95	1.7
G	2	0.9	0.86	1.5
H	2	0.9	0.82	1.5
I	2	0.8	0.83	1.3
J	2	1.0	1.07	2.1
K	2	0.9	1.06	1.9
L	2	0.8	0.96	1.5
M	2	1.1	1.01	2.2
N	2	0.9	0.90	1.6

Table H5-1
Surface Water Flow Measurements - Blackstone River, 2003
Peterson/Puritan OU2

O	2	1.6	1.11	3.6
P	2	0.9	0.97	1.7
Q	2	1.0	0.82	1.6
R	2	1.0	0.82	1.6
S	2	1.0	0.97	1.9
T	2	1.0	1.01	2.0
U	2	1.0	1.09	2.1
V	2	1.0	0.95	1.9
W	2	1.1	0.97	2.1
X	2	1.1	1.05	2.2
Y	2	1.1	1.05	2.2
Z	2	1.2	1.09	2.7
AA	2	1.3	0.98	2.6
AB	2	1.4	1.20	3.4
AC	2	1.5	1.14	3.3
AD	2	1.4	1.32	3.6
AE	2	1.5	1.26	3.7
AF	2	1.6	1.14	3.6
AG	2	1.6	1.36	4.5
AH	2	1.7	1.40	4.8
AI	2	1.9	1.28	4.8
AJ	2	2.1	1.23	5.1
AK	2	2.2	3.29	14.3
AL	2	2.3	1.19	5.4
AM	2	2.5	2.21	11.0
AN	2	2.5	1.11	5.6
AO	2	2.6	1.09	5.7
AP	2	2.8	1.61	9.1
AQ	2	3.2	1.62	10.4
AR	2	2.9	1.37	7.9
AS	2	2.9	1.00	5.8
AT	2	3.1	1.09	6.8
AU	2	3.3	0.95	6.3
AV	2	3.4	1.32	9.0
AW	2	3.7	1.19	8.8
AX	21	1.3	0.95	25.5
Totals:	**120**			**215.9**

Table H5-1
Surface Water Flow Measurements - Blackstone River, 2003
Peterson/Puritan OU2

Location: Blackstone River
Station: BRF-02
Date: 8/15/2003
Time: 14:00 to 16:00

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow Rate (cfs)
A	3	0.1	0.00	0.0
B	12	3.5	2.11	88.6
C	10	3.5	2.44	85.4
D	10	1.6	1.58	25.3
E	10	1.5	2.03	30.5
F	10	1.5	1.98	29.7
G	10	1.4	2.03	28.4
H	10	2.0	2.16	43.2
I	10	2.6	1.42	36.9
J	10	1.6	0.51	8.2
Totals:	**95**			**376.2**

Location: Blackstone River
Station: BRF-02
Date: 8/15/2003
Time: 16:00 to 17:00

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow Rate (cfs)
A	3	0.1	0.00	0.0
B	12	3.5	2.06	86.5
C	10	3.5	2.26	79.1
D	10	1.6	1.90	30.4
E	10	1.5	2.30	34.5
F	10	1.5	2.66	39.9
G	10	1.4	2.03	28.4
H	10	2.0	2.42	48.4
I	10	2.6	2.13	55.4
J	10	1.6	0.56	9.0
Totals:	**95**			**411.6**

Table H5-1
Surface Water Flow Measurements - Blackstone River, 2003
Peterson/Puritan OU2

Location: Blackstone River
Station: BRF-01
Date: 9/26/2003
Time: 11:00 to 12:30

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow Rate (cfs)
A	35	2.0	0.69	48.3
B	35	3.0	1.63	171.2
C	21	3.9	2.04	167.1
D	14	4.4	1.42	87.5
E	21	2.5	0.76	39.9
Totals:	**126**			**513.9**

Location: Blackstone River
Station: BRF-01
Date: 9/27/2003
Time: 13:30 to 14:30

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow Rate (cfs)
A	23	1.8	0.33	13.7
B	25	2.5	1.08	67.5
C	25	3.2	1.80	144.0
D	25	3.7	1.71	158.2
E	25	2.5	0.16	10.0
Totals:	**123**			**393.3**

Location: Blackstone River
Station: BRF-03
Date: 9/27/2003
Time: 10:00 to 11:00

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow Rate (cfs)
A	15	2.1	2.49	78.4
B	15	3.7	2.86	158.7
C	15	3.7	2.16	119.9
D	14	1.6	1.20	26.9
Totals:	**59**			**383.9**

Table H5-1
Surface Water Flow Measurements - Blackstone River, 2003
Peterson/Puritan OU2

Location: **Blackstone River**
Station: **BRF-05**
Date: **9/27/2003**
Time: **12:00 to 13:00**

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow Rate (cfs)
01-A	16	1.0	3.52	56.3
01-B	15.5	1.1	3.32	56.6
02-A	18	1.0	2.47	44.5
02-B	20	2.0	5.26	210.4
02-C	18	1.2	3.91	84.5
Totals:	**88**			**452.2**

Table H5-2
Surface Water Flow Measurements - Other Streams, 2004
Peterson/Puritan OU2

Location: **Inflow to Wetlands from Panda Culvert (measured in two subchannels downstream of culvert)**
Station: **SWF-01**
Date: **9/29/2004**
Time: **7:45 to 9:30**

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow rate (cfs)
01-A	0.295	0.2	0.405	0.0239
01-B	0.25	0.2	0.15	0.0075
01-C	0.25	0.2	0.067	0.0034
01-D	0.25	0.2	0.067	0.0034
01-E	0.25	0.2	0.287	0.0144
01-F	0.25	0.2	0.427	0.0214
01-G	0.25	0.21	0.46	0.0242
01-H	0.25	0.22	0.757	0.0416
01-I	0.25	0.18	1.07	0.0482
01-K	0.25	0.18	0.76	0.0342
01-L	0.455	0.15	0.12	0.0082
02-A	0.75	0.15	0.77	0.0866
02-B	0.5	0.3	0.94	0.1410
02-C	0.5	0.4	1.25	0.2500
02-D	0.5	0.4	1.42	0.2840
02-E	0.5	0.6	1.175	0.3525
02-F	0.5	0.7	0.95	0.3325
02-G	0.5	0.5	0.61	0.1525
02-H	0.75	0.5	0.365	0.1369
Totals:	**7.50**			**1.97**

Location: **Monastery Brook (upstream of culvert under road)**
Station: **SWF-02**
Date: **9/29/2004**
Time: **9:45 to 10:30**

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow rate (cfs)
A	1.5	0.15	0.16	0.04
B	1.0	0.35	1.16	0.41
C	1.0	0.4	2.84	1.14
D	1.0	0.5	3.57	1.79
E	1.0	0.6	4.46	2.68
F	2.0	0.7	5.18	7.25
Totals:	**7.50**			**13.3**

Table H5-2
Surface Water Flow Measurements - Other Streams, 2004
Peterson/Puritan OU2

Location: Unnamed Brook (flow across road)
Station: SWF-03
Date: 9/29/2004
Time: 10:45 to 11:15

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow rate (cfs)
A	0.625	0.15	2.70	0.25
B	0.25	0.2	4.16	0.21
C	0.25	0.25	5.56	0.35
D	0.25	0.3	2.35	0.18
E	0.25	0.3	2.01	0.15
F	0.25	0.3	1.04	0.08
G	0.25	0.3	0.76	0.06
H	0.25	0.3	1.01	0.08
I	0.25	0.2	2.02	0.10
J	0.25	0.15	1.66	0.06
K	0.25	0.15	1.73	0.06
L	0.625	0.15	1.47	0.14
Totals:	**3.75**			**1.71**

Location: Flow Through Culvert HW-01 (upstream of culvert)
Station: SWF-05
Date: 9/29/2004
Time: 11:30 to 11:50

Measurements by Channel Segment

Channel Segment	Width (ft)	Average Depth (ft)	Average Velocity (fps)	Flow rate (cfs)
A	0.285	0.15	1.31	0.06
B	0.25	0.15	2.30	0.09
C	0.25	0.15	2.20	0.08
D	0.25	0.15	2.30	0.09
E	0.625	0.15	1.74	0.16
Totals:	**1.66**			**0.47**

Appendix F

Phase 1B Test Pit Logs (Nunes Parcel)

Appendix F
Available XRF Data (in mg/Kg) from Nunes Parcel Investigation Test Pits
October 2006
Peterson Puritan OU2 Site

	Reading	Date	Time	LiveTime Mode Pass Fail St Pass/Fail Match1 MN1 LE LE +/- LE LE +/-	Mode	Pass Fail Status	Pass/ Fail	Tl	Tl +/-	Cr	Cr =+/-	Mn	Mn +/-	Fe	Fe +/-	Co	Co +/-
Calibration	1	1-Nov-06	7:45:18	54.03	Standardiza	PASS	-0.0268										
TP-7	2	1-Nov-06	7:52:20	46.62	Soil			1694.9	365.0	-87.4	70.1	268.1	48.0	16207.0	209.4	8.7	55.6
Calibration	3	1-Nov-06	9:34:47	0.96	Standardiza		0										
Calibration	4	1-Nov-06	9:35:12	53.74	Standardiza	PASS	-0.0252										
TP-8	5	1-Nov-06	9:36:57	45.89	Soil			1862.9	370.2	-180	70.2	1082.3	66.4	30175.7	318.3	104.8	72.6
Calibration	1	3-Nov-06	9:15:07	55.95	Standardiza	PASS	-0.0226										
TP-20	2	3-Nov-06	9:17:06	46.48	Soil			2168.4	373.9	158.4	72.2	238.4	44.2	9601.5	144.4	146.0	44.6
TP-21	3	3-Nov-06	10:09:18	45.96	Soil			1703.2	372.7	1.2	69.7	340.7	47.7	14823.0	189.2	12.1	51.4
TP-22	4	3-Nov-06	11:55:34	47.41	Soil			2360.3	449.7	27.5	81.7	406.9	56.3	18968.0	242.9	201.9	64.2

Notes:

- All available XRF data obtained from the Nunes parcel investigation are presented.
- All metals results, including the estimated deviation concentrations, are in mg/kg.

Appendix F
Available XRF Data (in mg/Kg) from Nunes Parcel Investigation Test Pits
October 2006
Peterson Puritan OU2 Site

	Reading	Date	Time	Ni	Ni +/-	Cu	Cu +/-	Zn	Zn +/-	As	As +/-	Se	Se +/-	Rb	Rb +/-	Sr	Sr +/-	Zr	Zr +/-
Calibration	1	1-Nov-06	7:45:18																
TP-7	2	1-Nov-06	7:52:20	14.5	14.4	53.7	10.4	115.2	8.9	12.7	4.5	-1.6	1.8	54.0	2.6	96.2	3.1	119.0	3.4
Calibration	3	1-Nov-06	9:34:47																
Calibration	4	1-Nov-06	9:35:12																
TP-8	5	1-Nov-06	9:36:57	-46.49	14.7	158.6	12.7	265.9	11.8	19.8	5.5	-2.76	1.7	42.2	2.3	95.4	3.0	183.0	3.9
Calibration	1	3-Nov-06	9:15:07																
TP-20	2	3-Nov-06	9:17:06	55.9	14.5	32.3	9.4	204.5	10.5	4.7	3.3	0.7	1.8	74.6	2.8	97.4	3.1	146.3	3.6
TP-21	3	3-Nov-06	10:09:18	55.9	14.8	74.1	10.5	377.4	13.5	7.4	4.4	-2.83	1.7	43.2	2.3	84.0	2.9	130.1	3.4
TP-22	4	3-Nov-06	11:55:34	53.9	17.4	54.4	11.2	220.0	11.8	40.2	7.6	2.4	2.2	60.4	2.8	133.5	3.8	124.7	3.7

Notes:

- All available XRF data obtained from the Nunes parcel investigation are presented.
- All metals results, including the estimated deviation concentrations, are in mg/kg.

Appendix F
Available XRF Data (in mg/Kg) from Nunes Parcel Investigation Test Pits
October 2006
Peterson Puritan OU2 Site

	Reading	Date	Time	Mo	Mo +/-	Ag	Ag +/-	Cd	Cd +/-	Sn	Sn +/-	Sb	Sb +/-	Ba	Ba +/-	Hg	Hg +/-	Pb	Pb +/-
Calibration	1	1-Nov-06	7:45:18																
TP-7	2	1-Nov-06	7:52:20	-7.3	3.0	-8.4	17.1	25.2	28.2	-37.4	49.7	-58.4	58.1	0	0	14.2	7.1	107.5	6.6
Calibration	3	1-Nov-06	9:34:47																
Calibration	4	1-Nov-06	9:35:12																
TP-8	5	1-Nov-06	9:36:57	-2.75	3.0	-191.02	15.9	13.5	25.8	-68.2	43.9	-41.97	50.0	0	0	-14.19	6.0	199.5	8.0
Calibration	1	3-Nov-06	9:15:07																
TP-20	2	3-Nov-06	9:17:06	5.3	3.0	31.5	16.7	52.6	27.4	-13.7	47.7	-28.9	56.1	0	0	29.2	7.4	39.8	4.8
TP-21	3	3-Nov-06	10:09:18	3.0	2.9	-10.46	16.4	27.2	27.4	10.9	47.3	-134.63	54.6	0	0	17.6	7.0	113.2	6.4
TP-22	4	3-Nov-06	11:55:34	2.0	3.2	115.1	18.4	21.6	30.4	59.3	53.4	-75.22	62.5	0	0	26.6	8.3	340.9	11.0

Notes:

- All available XRF data obtained from the Nunes parcel investigation are presented.
- All metals results, including the estimated deviation concentrations, are in mg/kg.

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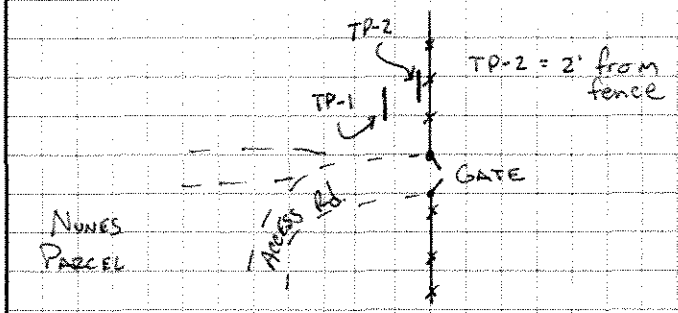
Test Pit Log

Test Pit ID: TP-1

Client:	Peterson Puritan	**Date/Day:**	10/31/06
Project:	Nunes Parcel	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's A.M., Low 70's P.M.
Project #:	37902	**Wind:**	Light
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View



Test Pit Dimensions:	12' L x 10' D x 3' W	**Total Depth:**	10'	**Depth to Water:**	N/A

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0 - 0.5		Br. VF-M Sand, some f-SR Gravel, trace rootlets, dry. Surface debris in vicinity of TP (Steel Scrap, old metal drum).	N/A
0.5 - 3.0	0.0	Drk. Br. Soil mixed w/ wood chips, little metal scrap.	
3.0 - 10.0'	N/A	Drk Br. to Br. VF-M SAND mixed w/ rubber matting, foam, cloth/fabric.	
		12" Diam Concrete culvert encountered Running 11 to TP. Pipe filled in at least 3/4 of sediment although some H_2O did come out of pipe when it was inadvertantly disconnected. Possible old Stormwater pipe which is inactive.	
		* Hard to tell if H_2O coming in TP is from GW or the Gravel around the PVC pipe. - will confirm @ TP-5	

Notes:

① Debris appeared to be at least as deep as the 12" pipe encountered. Could not see definite bottom since TP filled in w/ H_2O

Photograph Summary:

#1	#1 Concrete Pipe (12")
#2	
#3	#3 Rubber, foam
#4	#4 Debris Around 8-10' bgs

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Test Pit Log

Test Pit ID: TP-2

Client:	Peterson Puritan	**Date/Day:**	10/31/06
Project:	Nunes Parcel	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's A.M. / 70's P.M.
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
See TP-1 Plan View	

Test Pit Dimensions:	12'L x 10'D x 3'W	**Total Depth:**	10'	**Depth to Water:**	N/A

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-3.0'	0.0	Top Soil: Trace debris in 0-3' depth (woodchips w/ some fabric) Primarily Surficial debris.	N/A
3-7.5'	0.0	Lt. Br. VF-m SAND, trace C-Sand & f-SR Gravel, dry	
7.5-10'	0.0	Brown VF-Sand, trace Clay, moist.	

Notes:

- TP used as Step-out from TP-1 were debris was encountered at greater depth and quantities.

Photograph Summary:

#1	#5 Trace debris in Top 3'
#2	#6 TP-2 facing N-NE
#3	#7 Spoil Pile on Plastic Sheeting
#4	#8 After Backfilling TP-1 & TP-2

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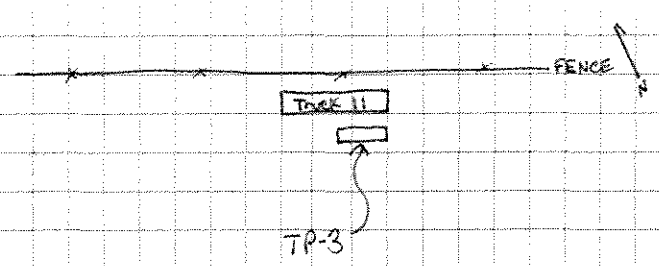
Test Pit Log

Test Pit ID: TP-3

Client:	PETERSON PURITAN	**Date/Day:**	10/31/06
Project:	NUNES PARCEL	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's A.M. / 70S P.M.
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE SURVEY DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View



Profile View

Test Pit Dimensions:	12' L X 13' D X 3'	**Total Depth:**	13'	**Depth to Water:**	57.4' AMSL

8.5' Ft. bgs

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-1.5	0.0	Top Soil: Brown FF-M sand, trace f-SA Gravel, dry	SO-102-NP (0-1') @ 1035
1.5-1.9		Layer of wood Chips.	
1.9-8.5	0.2	Bk. to drk. Br. f-M SAND, some Gravel, mixed with (partially burnt wood, metal Sheeting Scrap pipe. Debris encountered to interface w/ water	SO-102-NP (2-8.5') @ 1110
8.5-13'	0.0	Fine to Coarse SR-R Gravel, some m-c Sand, wet.	

Notes:

#9 TP-3 Location of Surface Sample
#10 TP-3

Photograph Summary:

#1	#11
#2	#12 TP-3
#3	#13 Debris @ TP-3 (3.5-8.5')
#4	#14 Gravel/Cobbles @ TP-3

#15 TP-3 before backfilling - north side

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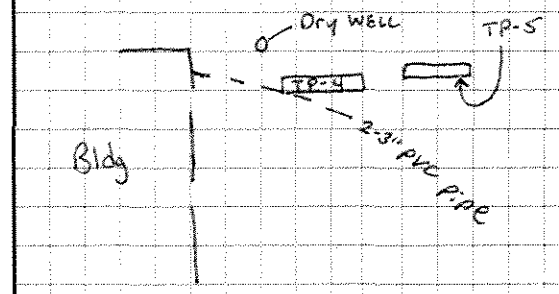
Test Pit Log

Test Pit ID: TP-4

Client:	Peterson Puritan	**Date/Day:**	10/31/06
Project:	Nunes Parcel	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's AM. / 70's P.M.
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View



Profile View

Test Pit Dimensions:	10'L x 7'D x 6'W	**Total Depth:**	10'	**Depth to Water:**	

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-1'		Topsoil: Dark Brown f-m Sand, little f-Sc-Ang Gravel, dry	N/A
1-2'	0.0	Drk Brown VF-m SAND, Some f-c Angular Gravel, dry	
2-4'	2.4	Drk Gray to Drk Br. Silt & Angular Gravel, petroleum	
		like odor, however no Sheen observed when mixed w/ H_2O	
4-7'	0.3	Mix of Angular 2" Gravel and rounded Gravel, WET. unable to see sides of TP at this depth due to H_2O filling in TP.	

Notes:

Photograph Summary:

#1	#16 3-4" PVC Pipe (sewer)
#2	#17 TP-4 Facing N(W ↓ (H_2O filling in)
#3	#18 Gravel
#4	#19 Soil w/ petroleum like odor

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Test Pit Log

Test Pit ID: TP-5

Client:	Peterson Puritan	**Date/Day:**	10/31/06
Project:	Nunes Parcel	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's am. / 70's pm.
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
(See TP-4 Log)	

Test Pit Dimensions:	9'L x 6'D x 3'W	**Total Depth:**	6'	**Depth to Water:**	5'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-1		TopSoil: Br. to Drk. Brown VF-m sand, dry.	N/A
1-4'	0.1	Dark Br. F-C SAND & rounded Gravel, Some brick & Concrete fragments, little wood, dark gray Silt & VF-m SAND, moist	
4-6	0.0	SAND & Rounded f-C Gravel, Some Cobbles, wet. Appears to be native material.	
		TP terminated due to GW coming in Excavation.	

Notes:

- No odors observed here.
- Step out for TP-4

Photograph Summary:

#1	#20 Excavating @ TP-5
#2	#21 Water in TP-5
#3	#22 " "
#4	#23 Spoil Pile @ TP-5

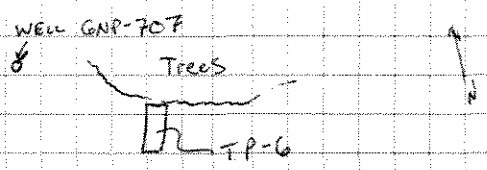
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Test Pit Log

Test Pit ID: TP-6

Client:	PETERSON PURITAN	**Date/Day:**	10/31/06
Project:	NUNES PARCEL	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's AM / 70's P.M.
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE Survey DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
	

Test Pit Dimensions:	12'L x 11'D x 3'W	**Total Depth:**	11'	**Depth to Water:**	n/a

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-6		Lt. Br f-m SAND, occassional cobble & Boulder, dry [FILL]	n/a
5-6'		Trace debris (wood, bricks, plastic) Very thin layer of debris	
6-11'		Brown f-m SAND, trace Silt & f-c SR Gravel, dry (Appears Native)	

Notes:

Photograph Summary:

#1	#24 Fine layer of debris @ TP-6
#2	#25 TP-6 looking North
#3	#26 TP-6 looking N-NW
#4	#27 Spoil pile @ TP-6

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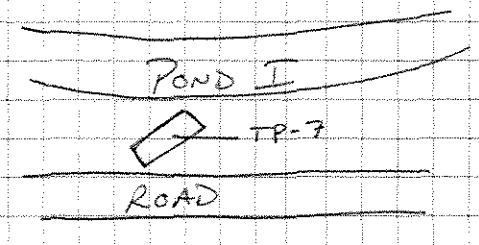
Test Pit Log

Test Pit ID:

Client:	PETERSON PURITAN	**Date/Day:**	TP-7
Project:	NUNES PARCEL	**Weather:**	11/1/06
Location:	Cumberland, RI	**Temperature:**	50's cloudy
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View



Test Pit Dimensions:	10'L x 11.5'D x 4'W	**Total Depth:**	11.5	**Depth to Water:**	10'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-2'		Debris (concrete, bricks) observed on surface. Dark Brown Silt & VF-F sand, dry.	N/A
2-8'	0.0	Brown f-m SAND, little Silt mixed w/ Concrete, bricks, Green Garden hose, steel wire & strapping, dry (majority of debris is between 2-4' bgs)	
8-11.5'	0.0	Dark Br. Silt, some clay, trace f-m SAND, moist. Wet @ 10' bgs. Material Appears to be native.	

Notes:

H_2O Coming in @ 10' bgs

Photograph Summary:

#1	#28 Debris found at TP-7
#2	#29 Rubber Hose
#3	#30 TP-7
#4	#31 TP-7
	#32 TP-7
	#33 After Backfill

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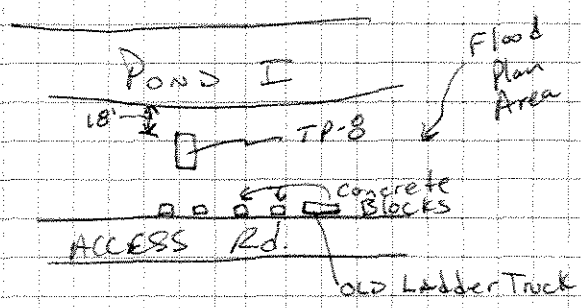
Test Pit Log

Test Pit ID: TP-8

Client:	PETERSON PURITAN	**Date/Day:**	11/1/06
Project:	NUNES PARCEL	**Weather:**	Sunny 60's
Location:	Cumberland, RI	**Temperature:**	60's
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE Survey DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View



Test Pit Dimensions:	9'L x 5'D x 3'W	**Total Depth:**	5'	**Depth to Water:**	4'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-4'	0.0	Brown f-M Sand & Silt, rootlets, moist	N/A
4-5'	0.0	Brown f-C Gravel & M-C Sand, wet.	

Notes:

- Did not Encounter Debris

Photograph Summary:

#1	#34: TP-8
#2	#35: Sidewall of TP-8
#3	#36: View of TP-8 w/ Pond I in Background
#4	#37: View of Excavator @ TP-8

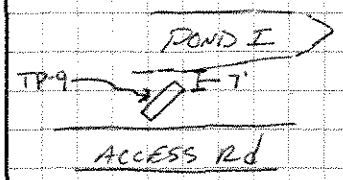
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Test Pit Log

Test Pit ID: TP-9

Client:	PETERSON PURITAN	**Date/Day:**	11/1/06
Project:	NUNES PARCEL	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	70's
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE SURVEY DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
	

Test Pit Dimensions:	12'L x 8'D x 3'W	**Total Depth:**	8'	**Depth to Water:**	7'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-7'	0.0	Brown f-m sand, little silt, trace c-sand & f-sz Gravel, rootlets, moist.	SO-100-NP (2-7') @ 1015
7-8'	0.1	Brown f-c Gravel, some m-c sand, wet. [Appears to be Native Material]	MS/MSD also collected.

Notes:

Approx 7' from H2O's Edge @ Pond I
No Debris Encountered.

Photograph Summary:

#1	#38 TP-9
#2	#39 " "
#3	#40 " "
#4	#41 Spoil Pile @ TP-9

#42 View of TP-9 w/ Pond I in Background.

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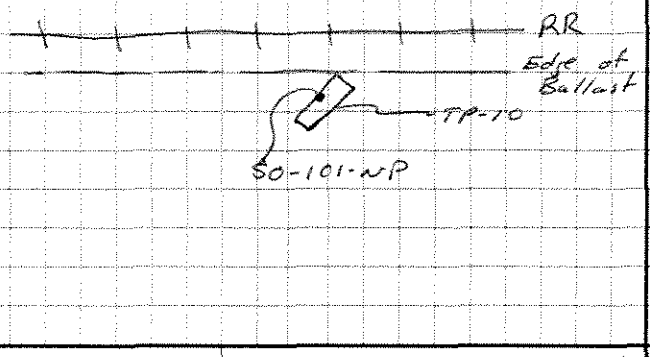
Test Pit Log

Test Pit ID: TP-10

Client:	Peterson Puritan	**Date/Day:**	11/1/06
Project:	Nunes Parcel	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	70's
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View



Test Pit Dimensions:	16' L x 10.5' D x 3' W	**Total Depth:**	10.5	**Depth to Water:**	10.0'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0 - 9.5'		Brown f-m SAND, som c-sand, little f-Rounded Gravel, dry. one old tire found at 0.5' bgs	SO-101-NP(0-1') @ 1100
9.5 - 10		Dark gray Silt, little vf sand, trace Clay, moist to wet.	
10 - 10.5		Brown f-c sand & f-m Rounded Gravel, wet.	
			SO-101-NP(2-9') @ 1125
			(Just Above W.T.)

Notes:

No Debris found in Subsurface.

Photograph Summary:

#1	#43 Sidewall of TP-10
#2	#44 H_2O seeping in @ TP-10
#3	#45 TP-10 w/ RR tracks in bkgrd.
#4	#46 Turtle

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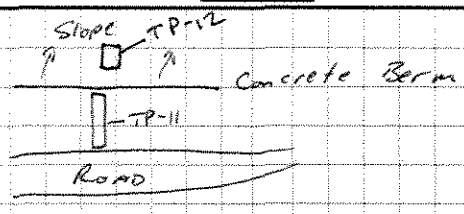
Test Pit Log

Test Pit ID: TP-11

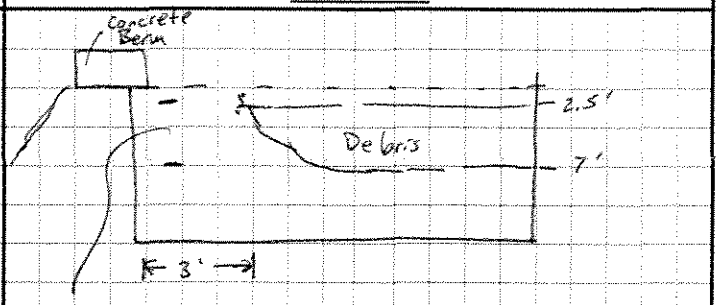
Client:	Peterson Puritan	**Date/Day:**	11/1/00
Project:	Nunes Parcel	**Weather:**	Cloudy
Location:	Cumberland, RI	**Temperature:**	70's
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View



Profile View



Test Pit Dimensions:	13'L x 11'D x 3'W	**Total Depth:**	11'	**Depth to Water:**	N/A

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-2.5	0.0	Brown f-m sand, some silt, little f-m SR to Rounded Gravel, dry	
2.5-7'	0.4	Dark Brown f-m sand f-SR-SA Gravel mixed with Plastic Bags, tires, glass bottles, wire, wood that tappers off as you go towards concrete berm.	SO-103-NP(2-7') @ 1330
			↓
7-11'	0.0	Dark Br. to gray vf-f sand, some silt, trace f- Rounded gravel, dry	Approx 2' from concrete berm and 2' from debris.

Notes:

Debris Appears to stop ~ 3' From Concrete berm. TP-12 Excavated to confirm edge of debris.

Photograph Summary:

#1	#47 Debris Spoil Pile @ TP-11
#2	#49 " "
#3	#49 " "
#4	#50 TP-11

#51 Debris Tappering off @ TP-11
#52 Looking back towards Rd @ debris
#53 debris Tappering off @ wall

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Test Pit Log

Test Pit ID: TP-12

Client:	PETERSON PURITAN	**Date/Day:**	11/1/00
Project:	NUNES PARCEL	**Weather:**	Cloudy
Location:	Cumberland, RI	**Temperature:**	70's
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE Survey DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
See TP-11 Plan View	

Test Pit Dimensions:	7'L x 4'D x 3'W	**Total Depth:**	4'	**Depth to Water:**	

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-3'	N/A	Brown to Dr. Brown VF-F Sand, some Silt, trace Rounded Gravel, dry.	N/A
		Little Debris on Surface to 1' bgs. Appears to be primarily from debris going over Concrete Berm.	
3-4'	0.0	Dark Brown Silt & VF Sand, moist (Appears Native)	

Notes:

Approx. 6' from wall

Photograph Summary:

#1	#54
#2	#55
#3	
#4	

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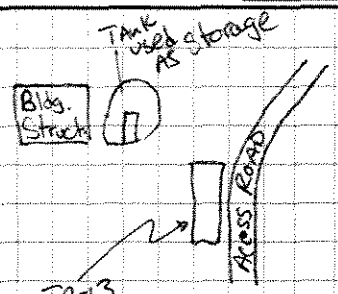
Test Pit Log

Test Pit ID: TP-13

Client:	Peterson Puritan	**Date/Day:**	11/1/06
Project:	Nunes Parcel	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	70's
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View



Test Pit Dimensions:	12'L x 16'D x 4'W	**Total Depth:**	16'	**Depth to Water:**	10.1'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-0.4	-	Asphalt (Right on Edge of Road) Asphalt Covered w/ some soil	N/A
0.4-2.5	0.2	Brown f-m SAND, some f-m Rounded Gravel, dry (cover)	
2.5-16'	0.5	Dark Brown f-m Sandy, some to little cobbles mixed w/ debris	
	↓	Debris included: Large wooden spool ends, wood,	
	Sniffed around debris pile and did not observe any elevated PID Readings.	rubber belts, plastic sheeting & bags, fabric (both intact and Shredded), brick, wire, metal screens, glass bottles, cans, gas oven burner plate,	
		Newspaper (1977), phone book, pop cans, few tires, (6) metal drum lids (30 gal?) w/ what looks like red paint residue on inside of lids.	
	-	Reached full Extent of Excavators Reach. Did not encounter Bottom of waste.	

Notes:

#62	Drum Lids
#63	TP-13
#64	TP-13
#65	TP-13
#66	Debris Pile

Photograph Summary:

#1	#56 Excavating @ TP-13
#2	#57 White Sand layer @ TP-13
#3	#58 Debris Pile
#4	#59 Newspaper
	#60 Debris Pile
	#61 Debris Pile

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Test Pit Log

Test Pit ID: TP-14

Client:	PETERSON PURITAN	**Date/Day:**	11/1/06
Project:	NUNES PARCEL	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	70's
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE Survey DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
SEE Survey Data.	

Test Pit Dimensions:	10'L x 13'D x 4'W	**Total Depth:**	13'	**Depth to Water:**	

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0 - 4'	0.0	Brown f-m Sand, little f-m Subrounded Gravel, trace Silt, dry.	N/A
4 - 10		Debris: Copper cable, electrical conduit, wood, cobbles, little plastic	
		Water Seep @ 8' bgs	
10 - 13		Brown f-m SAND, little Silt, trace f-c SR Gravel, moist to wet.	

Notes:

Photograph Summary:

#1	Photos 67 - 72
#2	
#3	
#4	

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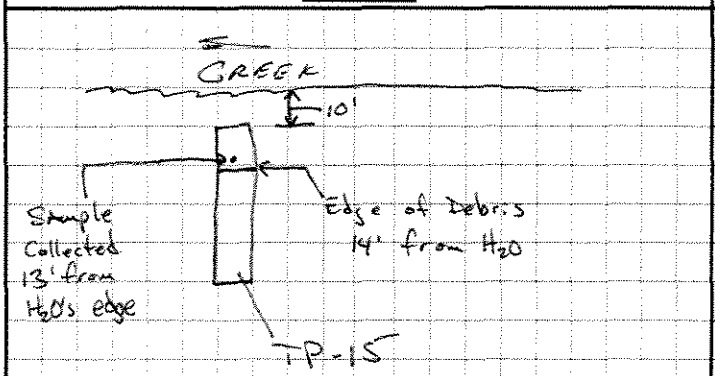
Test Pit Log

Test Pit ID: TP-15

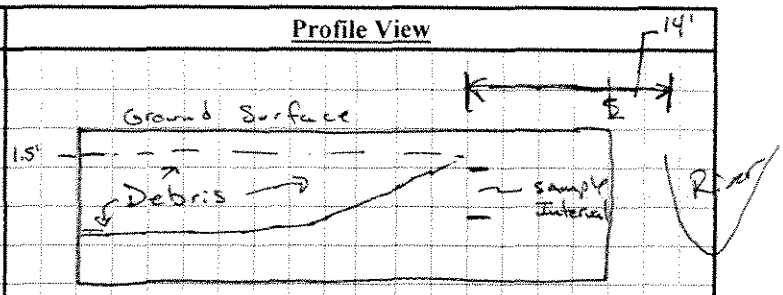
Client:	Peterson Puritan	**Date/Day:**	11/2/06
Project:	Nunes Parcel	**Weather:**	Cloudy, Rain
Location:	Cumberland, RI	**Temperature:**	50's
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View



Profile View



Debris is much thicker towards northern most 5' of test pit.

Test Pit Dimensions:	10'L x 7'D x 3'W	**Total Depth:**	7'	**Depth to Water:**	6'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-1.5	0.0	Some surface debris on surface (Bricks, old tires) Dark Brown Silt & VF-M Sand, roots, moist	
1.5-6	0.0	Br. f-m Sand, some f-m SR Gravel mixed w/ Debris: Rubber fire hose, plastic netting, 2-3 tires, possible old rusty steel drum remenant (30gal), shredded fabric, cobbles, Bricks, concrete fragments,	SO-106-NP(2-5') @ 0915 ⇓ Sample Collected
		plastic sheeting and bags.	in interval above W.T.
6-7'	0.0	Brown f-c Gravel, Some f-c sand, wet.	
Debris Did not appear to go Below W.T., however was right at the Interface.			

Notes:

#79 TP-15
#80 Possible Drum Remenant @ TP-15?

Photograph Summary:

#1	#73 TP-15
#2	#74 TP-15
#3	#75 Clean Sidewall @ TP-15
#4	#76 TP-15 w/ creek

#77 TP-15 Spoil pile
#78 Looking North @ TP-15

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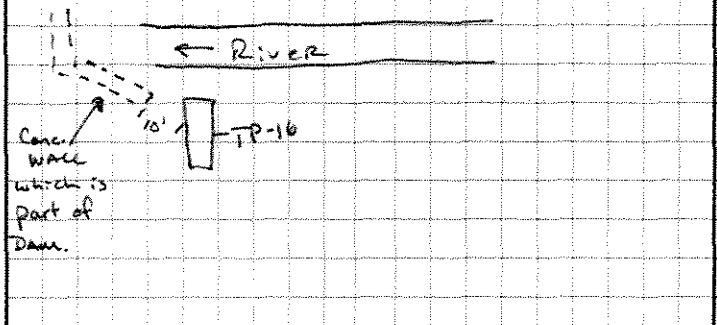
Test Pit Log

Test Pit ID: TP-16

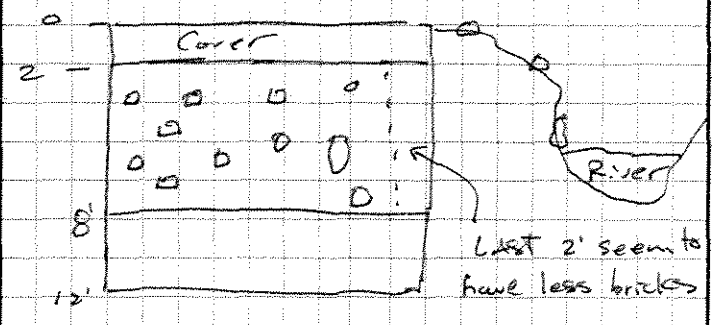
Client:	Peterson Puritan	**Date/Day:**	11/2/06
Project:	Nunes Parcel	**Weather:**	Rain
Location:	Cumberland, RI	**Temperature:**	50's
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View



Profile View



Test Pit Dimensions:	11'L x 12'D x 6'W	**Total Depth:**	12'D	**Depth to Water:**	N/A

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
		- Concrete Blocks on Surface.	
0-2'	0.0	Brown Silt & VF-f Sand, trace f-SR Gravel, dry.	SO-108-NP(3-8') @ 0940
2-8'	0.0	Brown f-m Sand mixed w/ a lot of Bricks, and concrete ~~chunks~~ pieces fragments. Test pit walls hard to keep open due to all of the bricks, etc.	
8-12'	0.0	Dark Brown to Brown Silt & VF-F sand, moist	Only interval that could be composited due to sidewalls collapsing.

Notes:

Also collected duplicate sample FD-110206 here.

Photograph Summary:

#1	Photos 81-87 - TP-16
#2	
#3	
#4	

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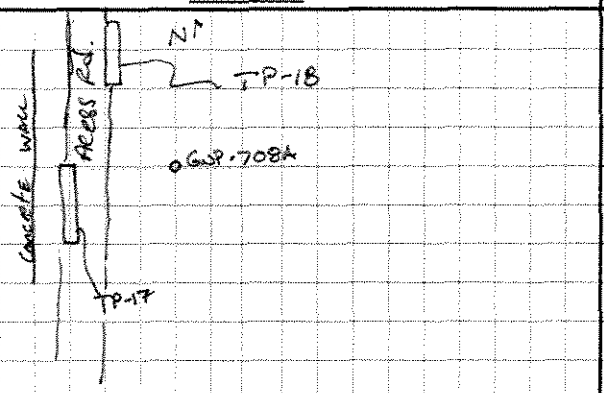
Test Pit Log

Test Pit ID: TP-17

Client:	PETERSON PURITAN	**Date/Day:**	11/2/06
Project:	NUNES PARCEL	**Weather:**	cloudy
Location:	Cumberland, RI	**Temperature:**	50's
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE Survey DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View



Test Pit Dimensions:		**Total Depth:**	11.5'	**Depth to Water:**	N/A

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-3.4'	0.0	Brown VF-F sand, little M-SAND, trace C-Sand, dry.	SO-107-NP (0-1') @1230
0.0-0.2'	0.1	Dark Gray Silt & VF SAND, dry, trace f-SR Gravel. w/ Elevated Pb.	
		Checked SEVERAL Locations within the first 0-1' → sample collected from location w/in Test pit w/ highest Pb level.	
3.4-6'	0.0	Lt. Brown VF-M SAND, dry	SO-107-NP (2-10') @1300
6-11.5'	0.0	Brown VF-M SAND, some C-sand, dry to moist	
Test Pit was moved from original location since the proposed location was located outside of the fenced in Area. An Effort was made to make sure Test Pit was not located within the RIDEM Excavation area.			

Notes:

0-1'	Pb =	1,731 ppm
1-2'	Pb =	1,264 ppm
2-10'	Pb =	33 ppm
11-11.5	Pb =	17 ppm

Photograph Summary:

#1	#88	TP-17
#2	#89	" "
#3	#90	" "
#4	#91	" "
	#92	" "

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Test Pit Log

Test Pit ID: TP-18

Client:	Peterson Puritan	**Date/Day:**	11/2/06
Project:	Nunes Parcel	**Weather:**	Cloudy
Location:	Cumberland, RI	**Temperature:**	50's
Project #:	37902	**Wind:**	Slight
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
See TP-17 Plan View	

Test Pit Dimensions:	9'L x 11'D x 3'W	**Total Depth:**	11.0'	**Depth to Water:**	N/A

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-3'	0.0	Brown VF-F sand, little m-sand, trace C-Sand, dry	N/A
3-6'	0.0	Lt. Brown to tan VF-m SAND, dry (Appears to be native)	
6-11	0.0	Brown VF-m SAND, some C-SAND, dry to moist (Appears to be native)	

Notes:

- Additional TP to attempt to locate debris edge moving North of TP-17.

Photograph Summary:

#1	Photos 93-95 = TP-18
#2	
#3	
#4	

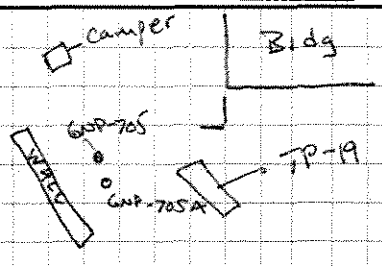
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Test Pit Log

Test Pit ID: TP-19

Client:	PETERSON PURITAN	**Date/Day:**	11/2/06
Project:	NUNES PARCEL	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	mid 50's
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE Survey DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
	

Test Pit Dimensions:	12'L x 15'D x 5'W	**Total Depth:**	15'	**Depth to Water:**	n/a

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-1'	N/A	Dark Brown Silt, sand, trace f-m SR Gravel, dry.	N/A
1-10'	0.0	Lt. Brown to Gray f-m SAND, little silt some f-m Rounded Gravel, dry [Fill]	
10-15'	0.1	Debris: wood, tires, plastic sheeting, plastic bags, rubber Strapping, U.S. Customs Information Exchange Document (March 16, 1959)	
		Total Depth = 15' bgs - Could not get to bottom of the waste due to test pit collapse and TP too large.	
-TP Excavated to give better delineation between NE/north of TP-7 and TP-13.			

Notes:

Extra TP outside of Shield define debris Area.

Photograph Summary:

#1	#96 TP-19 @ 11' deep - Start of waste
#2	97 Spoil pile
#3	98 " "
#4	99 TP-19

100 " "
101 Paper Document

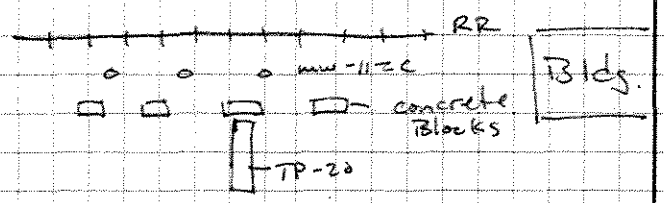
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Test Pit Log

Test Pit ID: TP-20

Client:	PETERSON PURITAN	**Date/Day:**	11/3/06
Project:	NUNES PARCEL	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's
Project #:	37902	**Wind:**	—
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE SURVEY DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
	

Test Pit Dimensions:	10'L x 11.5'D x 3'W	**Total Depth:**	11.5	**Depth to Water:**	11'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0 - 1.5'	0.0	Brown f-m SAND, little C-Sand, trace f. SA Gravel, dry.	N/A
1.5 - 8.5'	7.5	Debris: Rubber strapping, Steel scrap, plastic, piano-like wire, pizza Box, plastic bags, light B/B, bricks, blue tarp. Primarily Industrial-like debris w/ Some debris being characteristic of municipal-like.	
8.5 - 11.5	1.0	Dark Brown to gray f-m SAND, some f-c Sand & Rounded Gravel, little Silt, trace cobbles, moist wet @ 11.0' bgs.	

Notes:

Photograph Summary:

#1	Photos 102 - 106
#2	
#3	
#4	

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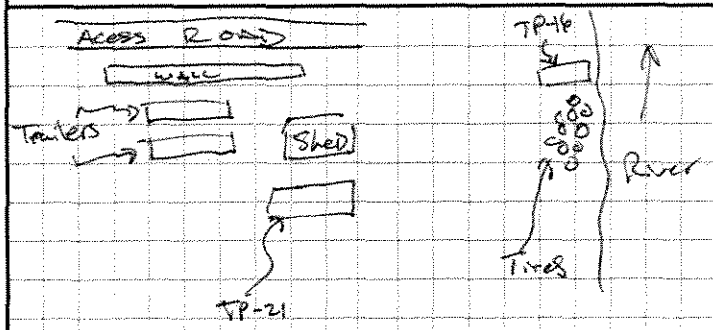
Test Pit Log

Test Pit ID: TP-21

Client:	PETERSON PURITAN	**Date/Day:**	11/3/06
Project:	NUNES PARCEL	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's
Project #:	37902	**Wind:**	Slight
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View



Profile View

Test Pit Dimensions:	10'LX12'D x 5'W	**Total Depth:**	12'
Depth to Water:	N/A		

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-3.8'	N/A	Dark Brown to Brown VF-M SAND, some f-SA to SR Gravel, roots, dry	N/A
3.8-6'	0.1	Dark Brown Silt & VF sand, mixed w/ wood & Ash like material (Burnt wood like)	
6-12'	0.0	Brown Silt & VF sand, Appears to have some wood debris and trace bricks on side wall, but difficult to determine if it is from collapse from upper portion of TP.	
		Red Bricks, some partially Burnt wood, cobbles, trace steel mesh	

Notes:

Step in location for TP-16 since nothing other than Bricks & concrete was found @ ~~TP-~~ TP-16. M&E ~~suggested~~ location.

Photograph Summary:

#1	Photos 107 - 111 = TP-21
#2	
#3	
#4	

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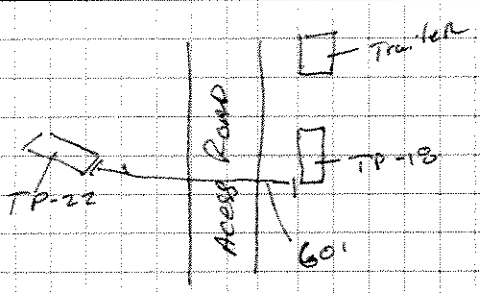
Test Pit Log

Test Pit ID: TP-22

Client:	Peterson Puritan	**Date/Day:**	11/3/06
Project:	Nunes Parcel	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	40's
Project #:	37902	**Wind:**	—
Logged By:	Shawn Wolf	**Subcontractor:**	MARCOR
Coordinates:	See Survey Data	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View



Test Pit Dimensions:	12'L x 19'D x 3'W	**Total Depth:**	19	**Depth to Water:**	18'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-2	0.0	Dark Brown vf-f Sand, some f-c SR Gravel, dry	N/A
2-17.5	N/A	Red Bricks, wood, steel Scrap, plastic mold pieces that look similar to model car pieces, tree Stump, pineapple juice can steel pipe.	
17.5-19'	N/A	Brown f-c Rounded Gravel, some f-c sand, wet.	

Notes:

Photo of Transite wrapped in plastic under Trailer 4.

212.22m Pb (web)

Photograph Summary:

#1	Photos: 112 - 121
#2	
#3	
#4	

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Test Pit Log

Test Pit ID: TP-23

Client:	PETERSON PURITAN	**Date/Day:**	11/3/06
Project:	NUNES PARCEL	**Weather:**	Sunny
Location:	Cumberland, RI	**Temperature:**	High 40's
Project #:	37902	**Wind:**	—
Logged By:	SHAWN WOLF	**Subcontractor:**	MARCOR
Coordinates:	SEE SURVEY DATA	**Equipment:**	John Deere 200C Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
Reference Survey Data	

Test Pit Dimensions:	12'L x 16'D x 3'W	**Total Depth:**	16'	**Depth to Water:**	15.5'

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0-4'		Dark Brown VF-F SAND, some M-C SAND, little f-m SR Gravel, dry	N/A
4-13'		Debris: Steel scrap, plastic string like material, fiberglass fragments, cobbles, one crushed drum, metal wire mixed w/ dark Brown to gray f-m Sand, trace C-Sand, little f-m SR Gravel.	
13-16'		Dark Brown to gray f-m SAND, little C-Sand, moist. wet @ 15.5'	

Notes:

Photograph Summary:

#1	Photos 122-124
#2	
#3	
#4	

Appendix F
Available XRF Data from Nunes Parcel Investigation Test Pits
October 2006
Peterson Puritan OU2 Site

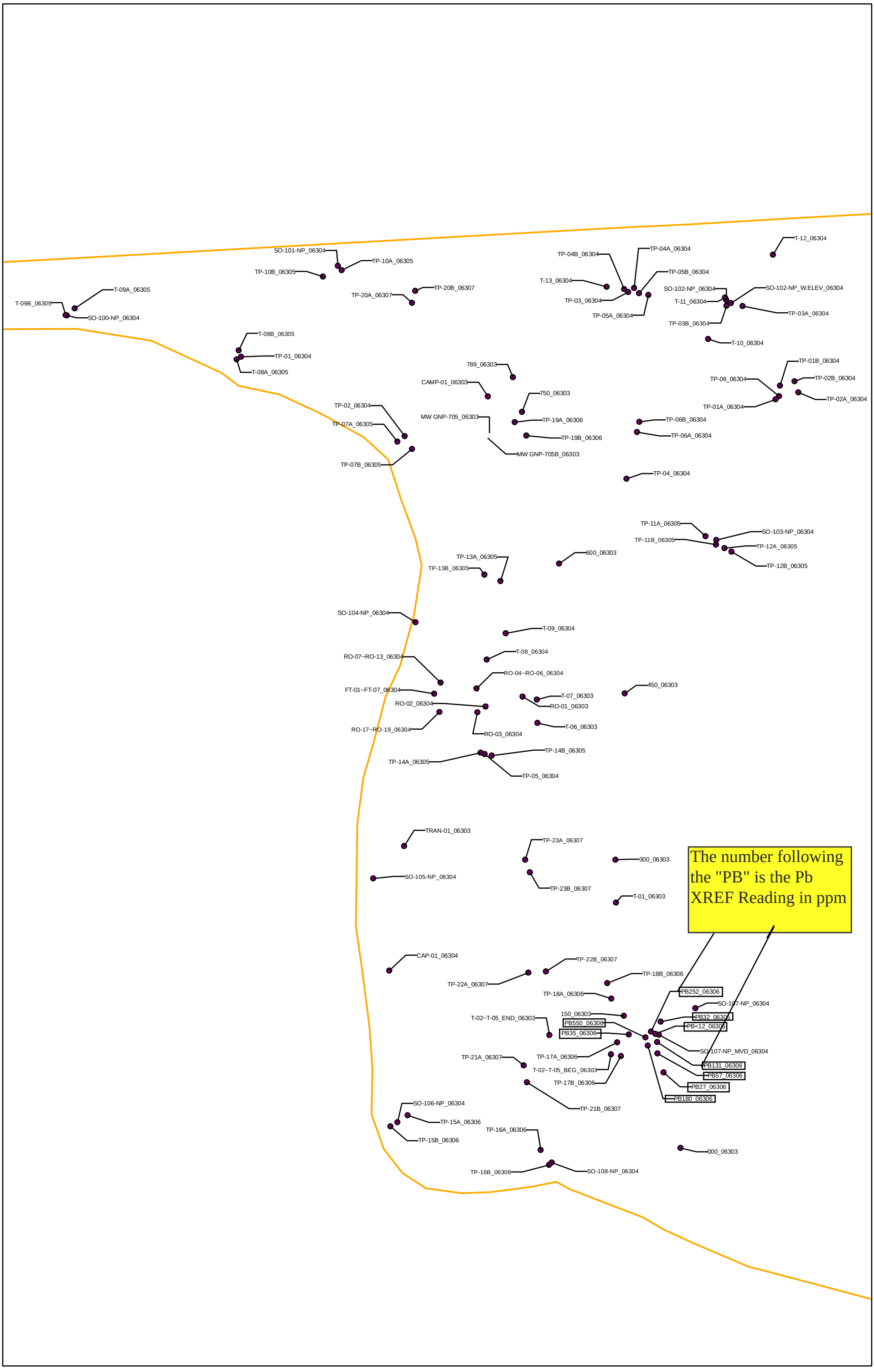
	Reading	Date	Time	LiveTime Mode Pass Fail St Pass/Fail Match1 MN1 LE LE +/- LE LE +/-	Mode	Pass Fail St	Pass/Fail	Match 1	MN1	TI	TI +/-	Cr	Cr =?-	Mn	Mn +/-	Fe	Fe +/-	Co	Co +/-
Calibration	1	1-Nov-06	7:45:18	54.03	Standardiza	PASS	-0.0268	0.0197	207										
TP-7	2	1-Nov-06	7:52:20	46.62	Soil					1694.94	364.97	-87.44	70.09	268.08	47.96	16206.99	209.39	8.65	55.59
Calibration	3	1-Nov-06	9:34:47	0.96	Standardiza		0	0	0										
Calibration	4	1-Nov-06	9:35:12	53.74	Standardiza	PASS	-0.0252	0.0197	210										
TP-8	5	1-Nov-06	9:36:57	45.89	Soil					1862.89	370.23	-180	70.21	1082.31	66.39	30175.65	318.3	104.82	72.56
Calibration	1	3-Nov-06	9:15:07	55.95	Standardiza	PASS	-0.0226	0.0197	214										
TP-20	2	3-Nov-06	9:17:06	46.48	Soil					2168.42	373.89	158.39	72.21	238.38	44.15	9601.51	144.44	146.03	44.63
TP-21	3	3-Nov-06	10:09:18	45.96	Soil					1703.21	372.68	1.2	69.66	340.71	47.72	14822.99	189.23	12.14	51.39
TP-22	4	3-Nov-06	11:55:34	47.41	Soil					2360.28	449.74	27.53	81.68	406.88	56.27	18968.03	242.9	201.88	64.24

Appendix F
Available XRF Data from Nunes Parcel Investigation Test Pits
October 2006
Peterson Puritan OU2 Site

	Reading	Date	Time	NI	NI +/-	Cu	Cu +/-	Zn	Zn +/-	As	As +/-	Se	Se +/-	Rb	RB +/-	Sr	Sr +/-	Zr	Zr +/-	Mo
Calibration	1	1-Nov-06	7:45:18																	
TP-7	2	1-Nov-06	7:52:20	14.45	14.38	53.73	10.35	115.2	8.92	12.68	4.54	-1.61	1.77	54	2.57	96.24	3.13	118.95	3.42	-7.25
Calibration	3	1-Nov-06	9:34:47																	
Calibration	4	1-Nov-06	9:35:12																	
TP-8	5	1-Nov-06	9:36:57	-46.49	14.72	158.56	12.72	265.88	11.84	19.81	5.5	-2.76	1.73	42.2	2.29	95.44	3.02	182.95	3.87	-2.75
Calibration	1	3-Nov-06	9:15:07																	
TP-20	2	3-Nov-06	9:17:06	55.92	14.46	32.26	9.36	204.52	10.51	4.72	3.3	0.65	1.77	74.57	2.81	97.35	3.05	146.32	3.55	5.34
TP-21	3	3-Nov-06	10:09:18	55.92	14.78	74.05	10.54	377.36	13.5	7.38	4.35	-2.83	1.65	43.24	2.29	84.04	2.85	130.13	3.37	2.99
TP-22	4	3-Nov-06	11:55:34	53.86	17.37	54.44	11.2	220.03	11.75	40.23	7.58	2.44	2.21	60.43	2.81	133.53	3.76	124.68	3.67	1.95

Appendix F
Available XRF Data from Nunes Parcel Investigation Test Pits
October 2006
Peterson Puritan OU2 Site

	Reading	Date	Time	Mo +/-	Ag	Ag +/-	Cd	Cd +/-	Sn	Sn +/-	Sb	Sb +/-	Ba	Ba +/-	Hg	Hg +/-	Pb	Pb +/-
Calibration	1	1-Nov-06	7:45:18															
TP-7	2	1-Nov-06	7:52:20	2.98	-8.4	17.1	25.16	28.21	-37.39	49.65	-58.41	58.12	0	0	14.24	7.12	107.5	6.57
Calibration	3	1-Nov-06	9:34:47															
Calibration	4	1-Nov-06	9:35:12															
TP-8	5	1-Nov-06	9:36:57	2.97	-191.02	15.92	13.54	25.81	-68.2	43.85	-41.97	50.02	0	0	-14.19	6	199.47	8.04
Calibration	1	3-Nov-06	9:15:07															
TP-20	2	3-Nov-06	9:17:06	3	31.48	16.66	52.6	27.44	-13.7	47.68	-28.9	56.07	0	0	29.15	7.37	39.79	4.84
TP-21	3	3-Nov-06	10:09:18	2.94	-10.46	16.39	27.2	27.4	10.94	47.29	-134.63	54.59	0	0	17.6	7.04	113.18	6.4
TP-22	4	3-Nov-06	11:55:34	3.18	115.06	18.39	21.61	30.39	59.31	53.42	-75.22	62.5	0	0	26.62	8.26	340.91	11.01


SO-101-NP_06304
TP-10A_06305
TP-10B_06305
T-09A_06305
T-09B_06305
SO-100-NP_06304
TP-20A_06307
TP-20B_06307
T-08B_06305
TP-01_06304
T-08A_06305
TP-02_06304
TP-07A_06305
TP-07B_06305
789_06303
CAMP-01_06303
750_06303
MW GNP-705_06303
TP-19A_06306
TP-19B_06306
MW GNP-705B_06303
TP-04B_06304
TP-04A_06304
TP-05B_06304
T-13_06304
TP-03_06304
TP-05A_06304
T-12_06304
SO-102-NP_06304
SO-102-NP_W.ELEV_06304
T-11_06304
TP-03A_06304
TP-03B_06304
T-10_06304
TP-01B_06304
TP-06_06304
TP-02B_06304
TP-02A_06304
TP-01A_06304
TP-06B_06304
TP-06A_06304
TP-04_06304
TP-11A_06305
SO-103-NP_06304
TP-11B_06305
TP-12A_06305
TP-12B_06305
600_06303
TP-13A_06305
TP-13B_06305
SO-104-NP_06304
T-09_06304
T-08_06304
RO-07~RO-13_06304
RO-04~RO-06_06304
FT-01~FT-07_06304
450_06303
T-07_06303
RO-01_06303
RO-02_06304
T-06_06303
RO-17~RO-19_06304
RO-03_06304
TP-14B_06305
TP-14A_06305
TP-05_06304
TRAN-01_06303
TP-23A_06307
300_06303
SO-105-NP_06304
TP-23B_06307
T-01_06303
The number following the "PB" is the Pb XREF Reading in ppm
CAP-01_06304
TP-22B_06307
TP-18B_06306
TP-22A_06307
TP-18A_06306
PB252_06306
SO-107-NP_06304
150_06303
PB32_06306
T-02~T-05_END_06303
PB550_06306
PB<12_06306
PB35_06306
SO-107-NP_MVD_06304
TP-21A_06307
TP-17A_06306
PB131_06306
T-02~T-05_BEG_06303
PB57_06306
TP-17B_06306
PB27_06306
PB180_06306
TP-21B_06307
SO-106-NP_06304
TP-15A_06306
TP-16A_06306
TP-15B_06306
000_06303
TP-16B_06306
SO-108-NP_06304

ARCADIS

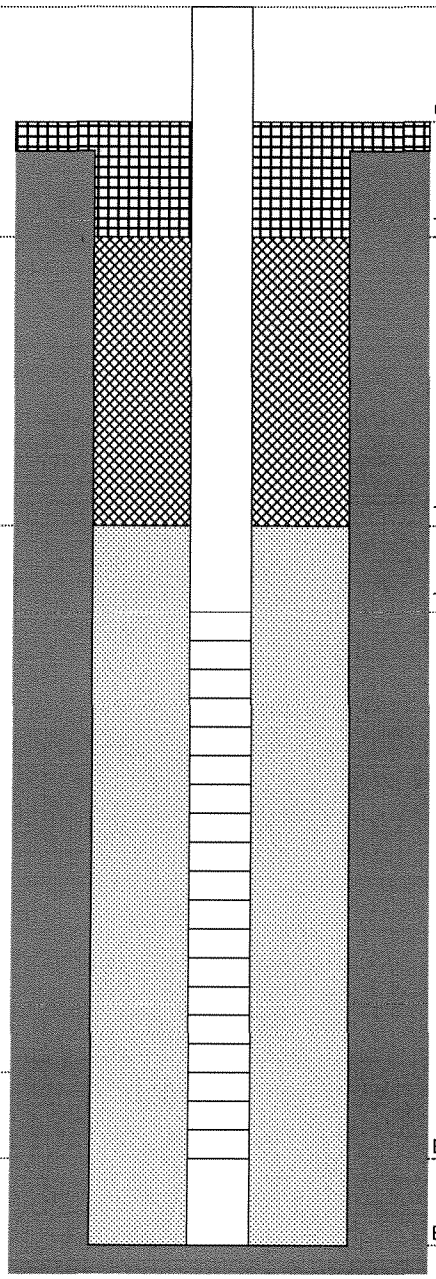
Appendix G

Phases 1A/1AExp Monitoring Well Logs

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-601

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/15/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	60.41 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	63.47 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.5 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-3.1	63.47
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	60.41
		Top of Seal	1.5	58.9
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips				
		Top of Sandpack	3.5	56.9
Filter Pack: #2 Quartz Filter Sand				
		Top of Screen	10.2	50.2
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.2	40.2
Borehole Diameter: 8.5 Inches		Bottom of Well	20.4	40.0

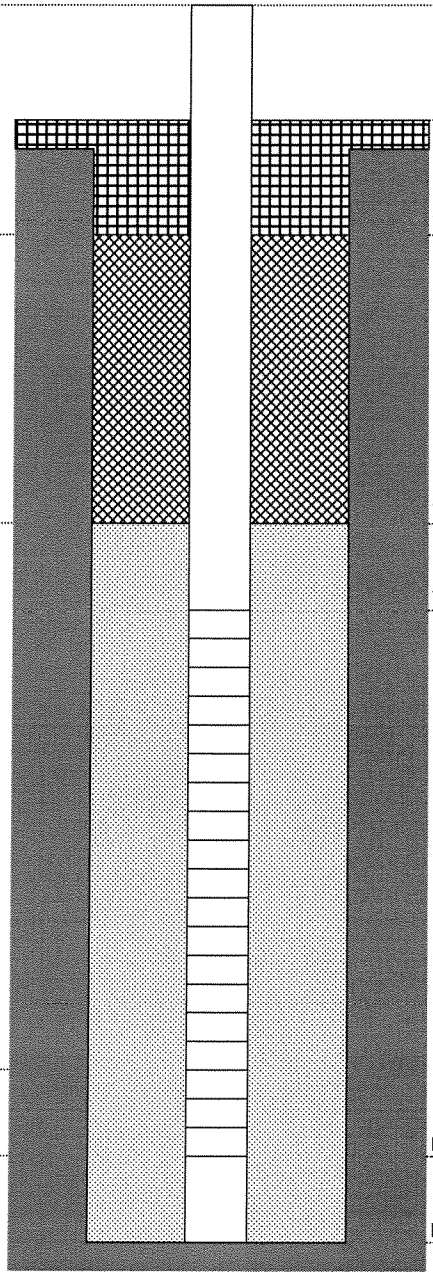
Comments:
Well developed on 9/22/03 by surging and pumping 60 gallons of water.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-602A

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/17/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	59.75 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	62.51 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.21 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.7	62.51
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	59.75
		Top of Seal	2.5	57.3
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	7.0	52.8
Filter Pack: #2 Quartz Filter Sand		Top of Screen	10.3	49.5
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.3	39.5
Borehole Diameter: 8.5 Inches		Bottom of Well	20.5	39.3



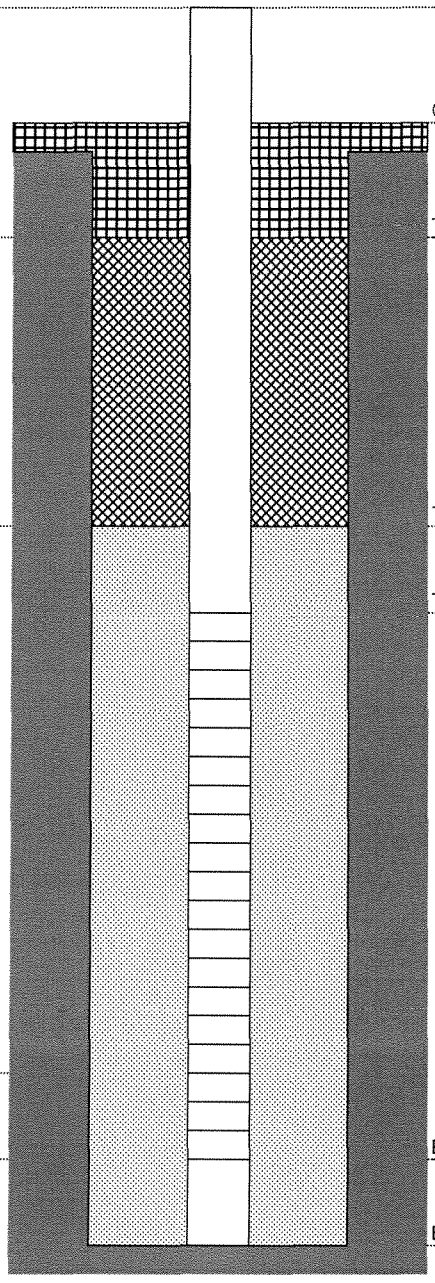
Comments:
Well developed on 9/22/03 by surging and pumping 65 gallons of water.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-605

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/18/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	62.32 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	65.20 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.2 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.9	65.20
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	62.32
		Top of Seal	3.6	58.7
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	6.5	55.8
Filter Pack: #2 Quartz Filter Sand		Top of Screen	10.1	52.3
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.1	42.3
Borehole Diameter: 8.5 Inches		Bottom of Well	20.3	42.1

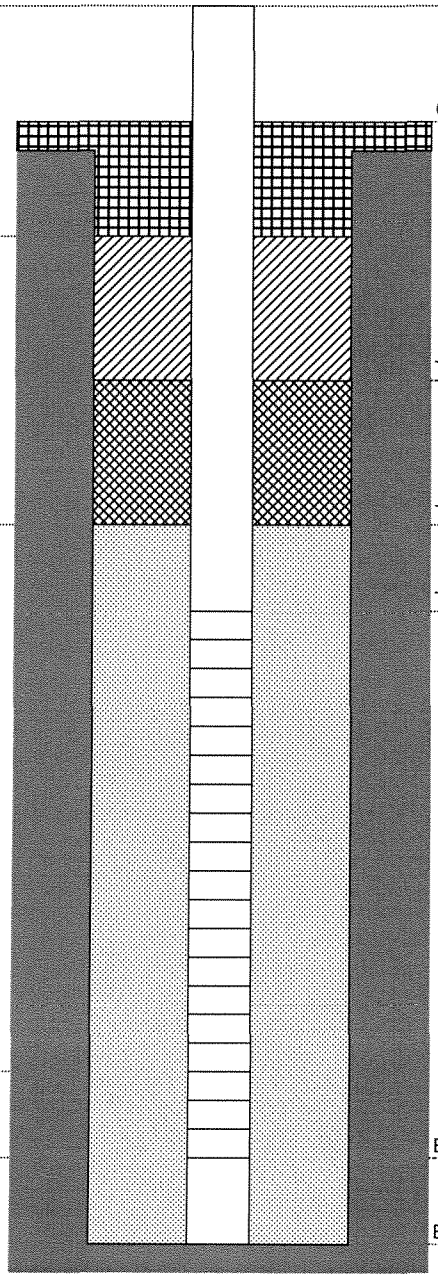


Comments:
Well developed on 9/23/03 by surging and pumping approximately 60 gallons of water using an electric submersible pump.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-602B

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/17/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	59.75 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	61.99 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	63.7 feet

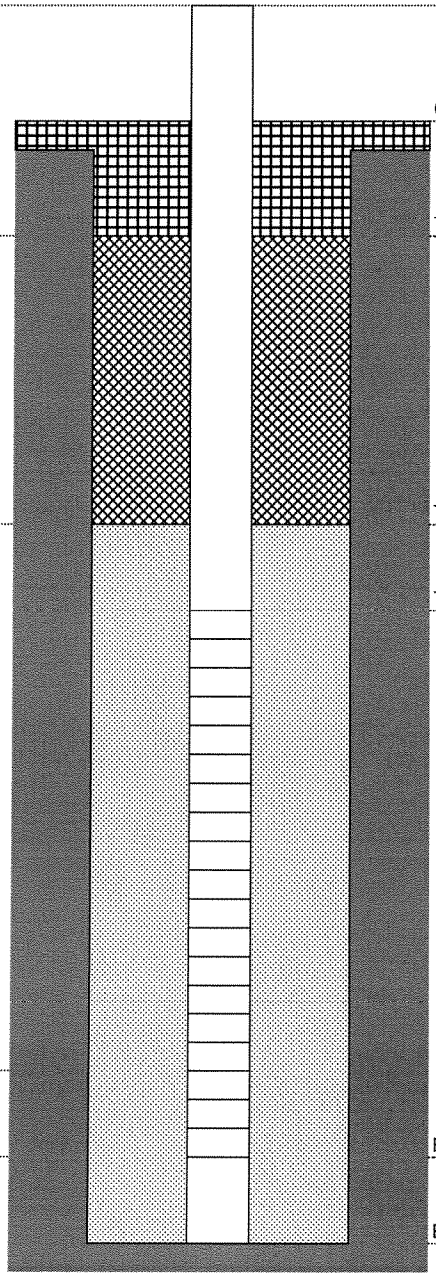
Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.2	61.99
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	59.75
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Seal	43.0	16.8
		Top of Sandpack	48.2	11.6
Filter Pack: #2 Quartz Filter Sand		Top of Screen	51.3	8.5
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	61.3	-1.6
Borehole Diameter: 8.5 Inches		Bottom of Well	61.5	-1.8

Comments:
Well developed on 9/22/03 by surging and pumping 65 gallons of water.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-603

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/21/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	Geologic/Tim Tucker
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Track mounted CMD55; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	59.23 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	61.97 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	22.7 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.7	61.97
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	59.23
		Top of Seal	2.0	57.2
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	8.1	51.1
Filter Pack: #2 Quartz Filter Sand		Top of Screen	9.8	49.4
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	19.8	39.4
Borehole Diameter: 8.5 Inches		Bottom of Well	20.0	39.2

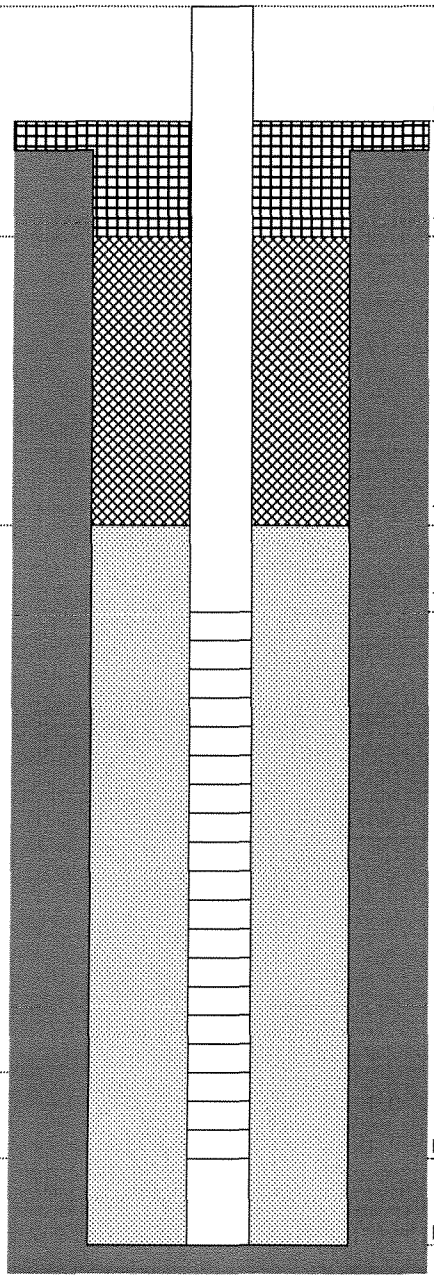
Comments:
Well developed on 9/23/03 by surging and pumping approximately 55 gallons of water using an electric submersible pump.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-604

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/18/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	62.45 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	65.34 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.24 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-3.0	65.34
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	62.45
		Top of Seal	3.5	59.0
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	6.8	55.7
Filter Pack: #2 Quartz Filter Sand		Top of Screen	10.0	52.5
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.0	42.5
Borehole Diameter: 8.5 Inches		Bottom of Well	20.2	42.3

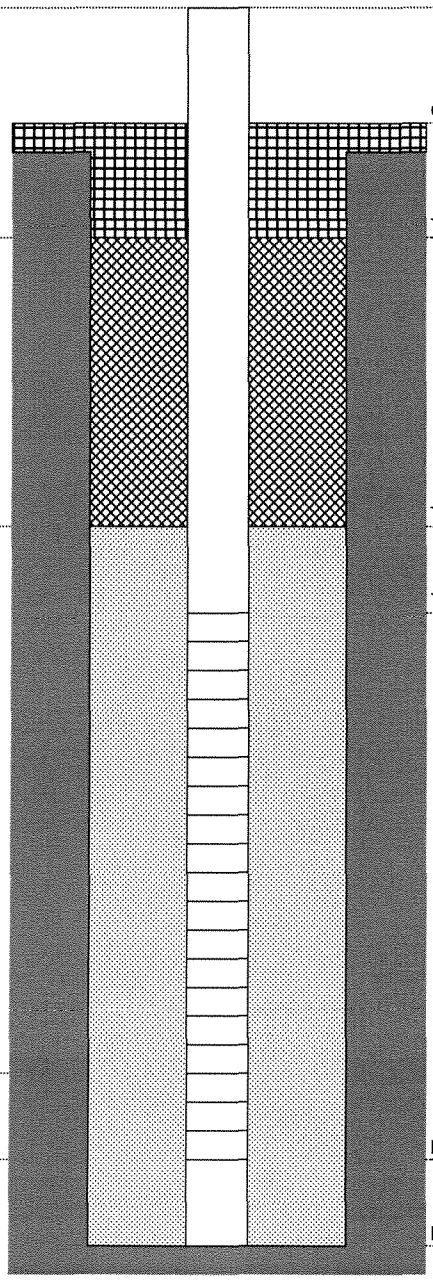


Comments:
Well developed on 9/22/03 by surging and pumping 65 gallons of water.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-606

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/21/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	Geologic/Tim Tucker
SITE NAME/LOCATION:	Nunes Property	RIG TYPE/METHOD:	Track mounted CMD55; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	61.46 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	64.43 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.2 feet

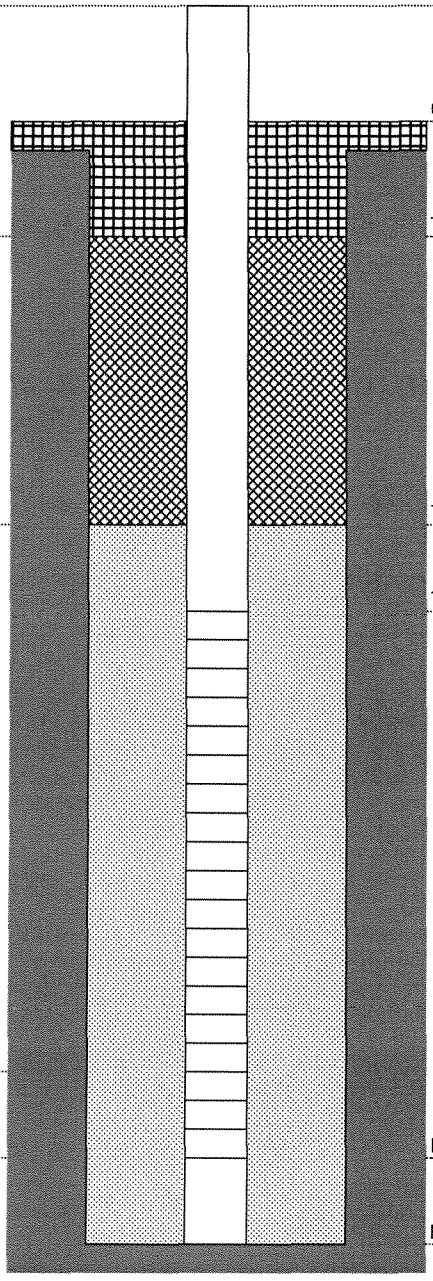
Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-3.0	64.43
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	61.46
		Top of Seal	2.0	59.5
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips				
		Top of Sandpack	6.5	55.0
Filter Pack: #2 Quartz Filter Sand				
		Top of Screen	10.0	51.5
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.0	41.5
Borehole Diameter: 8.5 Inches		Bottom of Well	20.2	41.3

Comments:
Well developed on 9/23/03 by surging and pumping approximately 55 gallons of water using an electric submersible pump.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-607

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/19/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	Geologic/Tim Tucker
SITE NAME/LOCATION:	Unnamed Island	RIG TYPE/METHOD:	Track mounted CMD55; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	62.97 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	65.82 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.1 feet

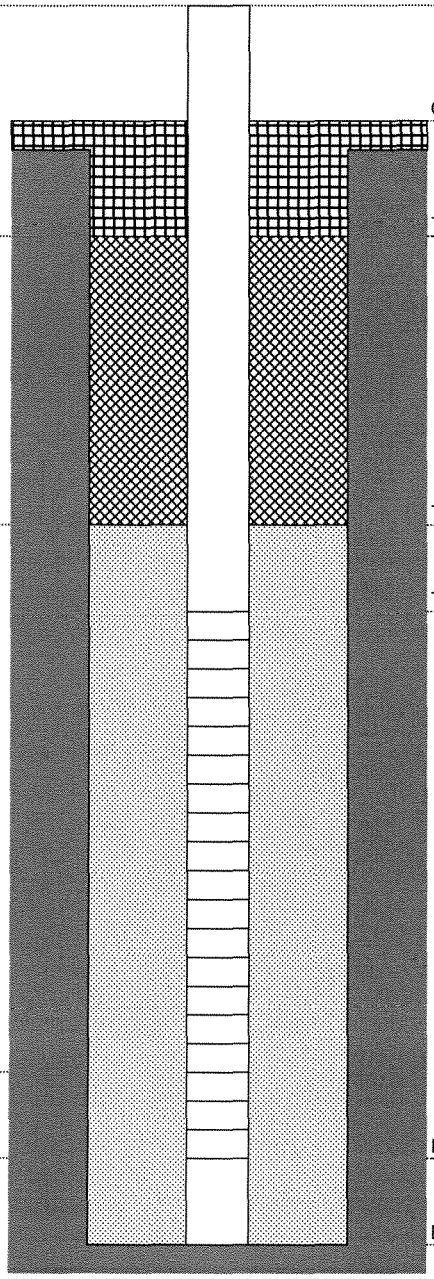
Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.8	65.82
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	62.97
		Top of Seal	1.3	61.7
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	7.8	55.2
Filter Pack: #2 Quartz Filter Sand		Top of Screen	10.1	52.9
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.1	42.9
Borehole Diameter: 8.5 Inches		Bottom of Well	20.3	42.7

Comments:
Well developed on 9/24/03 by surging and pumping approximately 60 gallons of water using an electric submersible pump.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

WELL INSTALLATION LOG
MONITORING WELL SEA-608

PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/19/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	Geologic/Tim Tucker
SITE NAME/LOCATION:	Unnamed Island	RIG TYPE/METHOD:	Track mounted CMD55; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	64.51 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	67.02 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	22.7 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.5	67.02
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	64.51
		Top of Seal	2.0	62.5
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	8.0	56.5
Filter Pack: #2 Quartz Filter Sand		Top of Screen	10.0	54.5
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.0	44.5
Borehole Diameter: 8.5 Inches		Bottom of Well	20.2	44.3

Comments:
Well developed on 9/23/03 by surging and pumping approximately 60 gallons of water using an electric submersible pump.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-601

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/15/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geosearch**
SITE NAME/LOCATN:	**J.M. Mills Landfill**	RIG OPERATOR:	**Dave Crawford**
BORING LOCATION	**SEA-601**	RIG TYPE/METHOD:	**Mobile B59**
LOGGED BY:	**Mike Morris/Steve Scheidt**	SAMPLER DIAMETER:	**2"** TOC Elevation: 63.47 feet
SIGNATURE:		TOTAL BORING DEPTH:	**20'** GS ELEV. 60.41 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion
0		SM	**0'-20' Alluvium** 0-2' Very dark grayish brown (10YR 3/2) SILT and medium sorted, fine SAND, very loose, dry, no staining or odors.	0-2'	0	50	1 1 1 2	
2		SW	2-4' Yellowish brown (10YR 5/6) poorly sorted, medium to fine SAND with some Gravel, subrounded, medium dense, dry, no staining or odors.	2-4'	0	40	12 22 27 33	
4		SM	4-6' Yellowish brown (10YR 5/4) poorly sorted fine to coarse SAND with some Gravel subrounded, medium dense, dry, no staining or odors.	**4-6' SSO-SPT1-5-LF**	0	40	15 17 20 24	
6			6-8' Brown (10YR 4/3), poorly sorted, fine to coarse SAND with some Gravel, loose, wet, no staining or odors	6-8'	1.4	15	15 15 10 7	
8			8-14' Dark gray (2.5YR 4/1) poorly sorted, fine to coarse SAND with little Gravel, loose, wet, no staining or odors	**8-10' SSO-SPT1-10-LF**	0	20	4 6 5 5	
10				10-12'	1.8	40	3 4 4 6	
12			Same as above with some coarse grained Gravel.	12-14'	0	70	8 12 12 12	
14		SW	14-16' Gray (10YR 5/1) medium sorted SAND with trace of coarse Gravel, loose, wet, no staining or odors.	**14-16' SSO-SPT1-15-LF**	2.1	80	2 3 6 12	
16			16-20' Same as above with fine SAND.	16-18'	0.7	80	8 12 13 16	
18			(15-20' - Composite Sample collected for grain size, soil classification, specific gravity, dry unit weight and porosity analyses)	NS	NS	NS	NS	
20			Boring terminated at 20' (no refusal)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. Bottom 5 feet (15'-20') submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity. **NS** - No lithologic samples collected in this interval.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-602B

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/15-9/16/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geosearch**
SITE NAME/LOCATN:	**J. M. Mills Landfill**	RIG OPERATOR:	**Dave Crawford**
BORING LOCATION	**SEA-602B**	RIG TYPE/METHOD:	**Mobile B59**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 61.99 feet
SIGNATURE:		TOTAL BORING DEPTH:	**60'** GS ELEV. 59.75 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion
0		SM	**0-60' Alluvium** 0-4' Dark grayish brown (2.5YR 4/2) poorly sorted fine to medium grained SAND with some Gravel, loose, dry, no staining or odors.	0-2'		30	1 1 1 3	
2			2-4' Same as above with some coarse grained gravel, medium dense.	2-4' **SS0-SPT5-5-LF**		30	8 12 15 15	
4	NS		4-8' No Sample Recovery Composite sample collected for grain size from 2-4' and 8-10'. (SSO-SPT_-5-LF)	NS		NS	NS	
6				NS		NS	NS	
8		SW	8-10' Black (5Y 2.5/1) medium sorted, medium to coase SAND subangular, loose, wet, no staining or odors.	8-10'		5	12 11 5 5	
10			10-12' Black (5Y 2.5/1) poorly sorted, fine to coase SAND with little Gravel, subangular, loose, wet, no staining or odors.	10-12' **SSO-SPT5-10-LF**		50	8 8 10 12	
12		GW	12-14' Black (5Y 2.5/1) medium sorted, coarse GRAVEL subangular, medium dense, wet, no staining or odors.	12-14'		5	12 12 18 18	
14		SW	14-16' Black (5Y 2.5/1) poorly sorted, fine to coarse SAND with some Gravel subangular, loose, wet no staining, slight odor.	14-16' **SSO-SPT5-15-LF**		50	15 10 8 8	
16		GM	16-18' Light gray (5Y 6/1) well sorted, fine SAND and GRAVEL, angular grains, loose, wet, no staining or odors.	16-18'		10	10 9 10 10	
18			18-20' Olive gray (5Y 5/2), same as above, layers of SAND and GRAVEL.	18-20' **SSO-SPT5-20-LF**		70	9 7 6 7	
20			(continued on next page)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 30'-35' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses.
NS - No lithologic samples collected in this interval. PID readings not collected because of equipment failure due to excessive moisture.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-602B

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/15-9/16/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geosearch**
SITE NAME/LOCATN:	**J. M. Mills Landfill**	RIG OPERATOR:	**Dave Crawford**
BORING LOCATION	**SEA-602B**	RIG TYPE/METHOD:	**Mobile B59**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 61.99 feet
SIGNATURE:		TOTAL BORING DEPTH:	**60'** GS ELEV. 59.75 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec-overy	Blow Counts	Well Completion
20		SM	20-22' Dark greenish gray (5BG 4/1) SILT and very poorly sorted SAND with little gravel, sand and gravel are coarse and angular, slight plasticity, soft, moist, no staining or odors.	20-22'		35	10 12 12 16	
22		GW	22-24' Gray (5Y 6/1) poorly sorted, fine to coarse SAND medium dense, wet, no staining or odors.	22-24'		15	14 14 16 11	
24			24-26' Gray (5Y 6/1) medium sorted, fine to coarse SAND with trace Gravel, loose, wet , no staining or odors.	24-26' **SSO-SPT5-25-LF**		40	7 6 5 8	
26			26-30' No sample recovery	26-28'		0	8 6 6 7	
28	NS			28-30'		0	1 2 3 2	
30		GW	30-36' Gray (5Y 6/1) medium sorted, fine to medium SAND loose, wet , no staining or odors. Sample collected from 30-34' for TOC, TCO, due to low recovery from 30'-32'.	30-32' **SSO-SPT5-LF-30**		10	4 5 4 4	
32				32-34' **SSO-SPT5-LF-35**		50	7 7 8 7	
34				34-36'		10	6 3 4 7	
36			36-38' Same as above with trace of coarse gravel, medium dense.	36-38'		15	7 10 12 12	
38			38-40' Same as above with trace of coarse gravel, loose.	38-40'		15	4 4 6 6	
40								

(continued on next page)

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 30'-35' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. PID readings not collected because of equipment failure due to excessive moisture.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-602B

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/15-9/16/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geosearch**
SITE NAME/LOCATN:	**J.M. Mills Landfill**	RIG OPERATOR:	**Dave Crawford**
BORING LOCATION	**SEA-602B**	RIG TYPE/METHOD:	**Mobile B59**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 61.99 feet
SIGNATURE:		TOTAL BORING DEPTH:	**60'** GS ELEV. 59.75 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec-overy	Blow Counts	Well Completion
40		SW	40-46' Same as above with trace of gravel, loose.	40-42'		20	2 4 4 6	
42				42-44'		10	4 7 8 8	
44				44-46'		20	3 4 4 3	
46	NS		46 - 47.3' No sample recovery Blow count of 100 for 0.3'.	46 - 47.3'		0	22 27,100*	
48		SW	47.3'- 48.8' Gray (5Y 6/1) poorly sorted SAND with trace coarse gravel (rounded pebbles 0.5 - 1" diameter), loose, wet, no staining or odors.	47.3'-49.3'		10	6 8 10 15	
		SW	48.8-49.3' Same as above with some coarse gravel.					
50		SW	49.3 - 54' Gray (10BG 6/1) poorly sorted, fine to coarse SAND with some Gravel, subrounded, medium dense, wet, no staining or odors.	49.3' - 51.3'		0	3 3 6 10	
52				51.3' - 54'		25	12 13 15 15	
54		SW	54-60' Same as above, fine to coarse grained SAND with no gravel.	54-56'		0	5 11 11 17	
56				56-58'		5	16 19 30 33	
58			(55-60' - Composite Sample collected for Grain Size)	58-60'		NS	NS	
60			Boring terminated at 60' (no refusal)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 30'-35' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. PID readings not collected because of equipment failure due to excessive moisture.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-603

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/21/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geologic**
SITE NAME/LOCATN:	**J. M. Mills Landfill**	RIG OPERATOR:	**Tim Tucker**
BORING LOCATION	**SEA-603**	RIG TYPE/METHOD:	**CMD55**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 61.97 feet
SIGNATURE:		TOTAL BORING DEPTH:	**20'** GS ELEV. 59.23 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion
0		SM	**0-20' Alluvium** 0-2' Gray (10YR 7/1) and light yellowish brown (10YR 6/4) SILT and medium sorted SAND, loose, dry, no staining or odors.	0-2'	0	90	3 4 7 13	
2		GM	2-4' Gray (10YR 7/1) and yellowish brown (10YR 5/6) poorly sorted SAND and GRAVEL with some silt, medium dense, dry no staining or odors. (Cobbles also present)	2-4'	0	100	16 22 18 16	
4			4-6' Yellowish brown (10YR 5/6), same as above, wet.	4-6' **SSO-SPT2-5-LF**	N/A	30	16 14 13 16	
6			6-10' Dark gray (10YR 4/1), same as above, no silt.	6-8'	0	100	15 8 14 12	
8				8-10' **SSO-SPT2-10-LF**	0	100	27 24 11 10	
10			10-14' Very dark gray (10YR 3/1) poorly sorted SAND and GRAVEL with trace of silt, poorly sorted, fine to coarse grained, loose, wet, no staining or odors.	10-12'	0	100	3 5 5 6	
12				12-14'	0	100	7 6 6 6	
14			14-16' Same as above, no silt, very dense, medium to coarse grained.	14-16' **SSO-SPT2-15-LF**	0	100	6 14 77 70	
16			16-20' Split spoon sampling stopped because of dense sub-surface conditions.	NS		NS		
18				NS		NS		
20			(15-20' - Composite Sample collected for grain size, soil classification, specific gravity, dry unit weight and porosity analyses)					
			Boring terminated at 20' (no refusal)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses.
NS - No lithologic samples collected in this interval. **NA** - Not Applicable

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-604

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/18/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geosearch**
SITE NAME/LOCATN:	**J.M. Mills Landfill**	RIG OPERATOR:	**Dave Crawford**
BORING LOCATION	**SEA-604**	RIG TYPE/METHOD:	**Mobile B59**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 65.34 feet
SIGNATURE:		TOTAL BORING DEPTH:	**20'** GS ELEV. 62.45 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion
0		SM	**0-20' Alluvium** 0-4' Very dark grayish brown (10YR 3/2) SILT and poorly sorted, fine to coarse SAND with trace of Gravel, loose, dry, no staining or odors.	0-2'	2.6	10	4 4 9 6	
2				2-4'	2.2	10	NA	
4		SW	4-6' Yellowish brown (10YR 5/4) poorly sorted, fine to medium SAND with some Gravel, medium dense, no staining or odors.	4-6' **SSO-SPT3-5-LF**	0.4	50	11 11 10 13	
6			6-8' Same as above, slightly moist, subangular gravel.	6-8'	1.6	30	20 19 17 13	
8	NS		8-10' no recovery. *Sample (SSO-SPT-10-LF) collected from 6-8' and 10-12' split spoon samples.*	8-10' **SSO-SPT3-10-LF**	NA	NA		
10		SP	10-12' Light gray (10 YR 7/1) well sorted, fine SAND, very loose, wet, no staining or odor.	10-12'	0.2	70	2 1 2 2	
12		ML	12-14.75' Light gray (10YR 7/1) well sorted, fine SAND with some Silt, soft, low plasticity, wet, no staining or odors.	12-14'	0	80	2 2 3 4	
14			14.75-15.5' Light brownish gray (10YR 6/4) well sorted, fine SAND with some SILT, soft, low plasticity, wet 15.5-16' Light gray (10YR 7/1) well sorted, fine SAND with some Silt, soft, low plasticity, wet, no staining or odors.	14-16' **SSO-SPT3-15-LF**	1.1	50	4 6 5 5	
16		SP	16-18' Light grey (10YR 7/1) medium sorted fine to medium SAND loose, wet, no staining or odors.	16-18'	0	100	4 5 5 6	
18				18-20'	NA	NA		
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses) Boring terminated at 20' (no refusal)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. **NA** - Not Applicable.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-605

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/18/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geosearch**
SITE NAME/LOCATN:	**J.M. Mills Landfill**	RIG OPERATOR:	**Dave Crawford**
BORING LOCATION	**SEA-605**	RIG TYPE/METHOD:	**Mobile B59**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 65.20 feet
SIGNATURE:		TOTAL BORING DEPTH:	**20'** GS ELEV. 62.32 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion
0		ML	**0-9' Fill Material** 0-2' Light reddish brown (5YR 6/4) SILT with some poorly sorted Sand and Gravel, subrounded, very loose, dry, no staining or odors. Plastic encountered at 2'.	0-2'	0	50	2 2 2 15	
2	NS		2-5' No sample recovery due to large cobbles and debris in the sub-surface. Cobbles came to surface during augering.	NA	NA	0		
4								
6		SW	5-9' Light reddish brown (5YR 6/4) poorly sorted, fine to coarse SAND and GRAVEL with trace Silt, sub-rounded gravel, loose, dry, no staining or odors. (High blow counts are likely the result of debris and cobbles in the subsurface. (Rubber tire is suspected of interfering with the split spoon sampling).	5-7' **SSO-SPT4-5-LF**	0	50	25 37 13 10	
8				7-9'	0	5	10 10 9 11	
10			**9'-20' Alluvium** 9-19' Very dark gray (10YR 3/1) poorly sorted, medium to coarse SAND and GRAVEL with trace Silt, subrounded, medium dense, wet, no staining, mild odor.	9-11' **SSO-SPT4-10-LF**	0	60	10 10 16 19	
12				11-13'	0	100	19 17 10 10	
14			Same as above, consistency becoming loose to very loose	13-15'	0	40	3 5 3 5	
16				15-17' **SSO-SPT4-15-LF**	0.4	40	2 2 4 5	
18				17-19'	0	60	6 4 6 6	
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses)	NS		0		
			Boring terminated at 20' (no refusal)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. **NA** - Not Applicable

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-606

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/21/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geologic**
SITE NAME/LOCATN:	**Nunes/Elias Property**	RIG OPERATOR:	**Tim Tucker**
BORING LOCATION	**SEA-606**	RIG TYPE/METHOD:	**CMD55**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 64.43 feet
SIGNATURE:		TOTAL BORING DEPTH:	**20'** GS ELEV. 61.46 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion
0		SW	**0'-20' Alluvium** 0-2' Brown (7.5YR 4/2) poorly sorted, fine to coarse SAND with some Gravel and trace of Silt, medium dense, rounded gravel, dry, no staining or odors.	0-2'	0	50	2 11 20 21	
2			2-7' Same as above becoming black (7.5YR 2.5/1)	2-4'	0	60	23 13 20 12	
4			4-6' sample collected is wet.	**4-6' SSO-SPT8-5-LF**	0	40	4 2 3 2	
6				6-8'	0	20	1 2 3 6	
8		GW	7-8' Gray (7.5YR 5/1) poorly sorted SAND and GRAVEL with some cobbles, loose, wet, no staining or odors. 8-12' Dark gray (7.5 YR 4/1) poorly sorted, medium to coarse SAND and GRAVEL with some cobbles, medium dense, wet, no staining or odors.	8-10' **SSO-SPT8-10-LF**	0	70	17 14 13 13	
10				10-12'	0	20	6 15 14 16	
12			12-14' Very dark gray (7.5 3/1)	12-14'	0	100	18 7 5 6	
14		SW	Dark gray (7.5YR 4/1) poorly sorted, fine to coarse SAND with trace Gravel, subrounded, loose, wet, no staining or odors.	14-16' **SSO-SPT8-15-LF**	0	80	2 2 2 4	
16				16-18'	0	100	5 7 6 12	
18				NS		0		
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses)					
			Boring terminated at 20' (no refusal)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. **NA** - Not Applicable

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-607

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/19/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geologic**
SITE NAME/LOCATN:	**Unnamed Island**	RIG OPERATOR:	**Tim Tucker**
BORING LOCATION	**SEA-607**	RIG TYPE/METHOD:	**CMD55**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 65.82 feet
SIGNATURE:		TOTAL BORING DEPTH:	**20'** GS ELEV. 62.97 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec-overy	Blow Counts	Well Completion
0		GW	**0-20' Alluvium** 0-4' Brown (10YR 5/3) poorly sorted, fine to coarse SAND and GRAVEL with trace Silt, medium dense, dry, no staining or odors.	0-2'	0	60	4 23 24 34	
2				2-4'	0	100	34 26 58 23	
4		SM	4-8' Olive brown (2.5Y 5/4) poorly sorted, fine to medium SAND with some Gravel and trace Silt, loose, dry no staining or odors. (No sufficient recovery for PID screening)	4-6' **SSO-SPT6-5-LF**	NA	40	6 7 7 6	
6				6-8'	0	20	8 7 4 3	
8			8-10' Dark olive brown (2.5Y 3/3) poorly sorted, fine to medium SAND with some SILT and trace of coarse sand, loose, wet, no staining or odors.	8-10'	0	20	3 4 4 6	
10		SW	10-12' Dark gray (2.5Y 4/1) poorly sorted SAND with some medium to coarse Gravel, loose, wet, no staining or odors	10-12' **SSO-SPT6-10-LF**	0	50	1 4 7 11	
12		GW	12-18' Dark grayish brown (2.5Y 5/2) poorly sorted, fine to to coarse SAND and GRAVEL, medium dense, wet, no staining or odors. (Last 6" dense).	12-14'	0	100	12 19 27 53	
14			14'-18' Same as above, consistency changing to loose	14-16' **SSO-SPT6-15-LF**	0	30	4 5 6 6	
16				16-18'	0	60	6 10 11 9	
18				NS	NA	0		
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses) Boring terminated at 20' (no refusal)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. **NA** - Not Applicable

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD WELL LOG
MONITORING WELL SEA-608

PROJECT/CLIENT:	**Peterson/Puritan OU2**	DATE/TIME DRILLED:	**9/19/2003**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geologic**
SITE NAME/LOCATN:	**Unnamed Island**	RIG OPERATOR:	**Tim Tucker**
BORING LOCATION	**SEA-608**	RIG TYPE/METHOD:	**CMD55**
LOGGED BY:	**Steve Scheidt/Mike Morris**	SAMPLER DIAMETER:	**2"** TOC Elevation: 67.02 feet
SIGNATURE:		TOTAL BORING DEPTH:	**20'** GS ELEV. 64.51 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion
0		SW	**0-20' Alluvium** 0-6' Light olive brown (2.5Y 5/3) poorly sorted, fine to medium SAND with some Silt and trace of Gravel, loose, dry, no staining or odors. *SSO-SPT_-5-LF sampled from 2-6' since recovery from 4-6' was only 5%.*	0-2'	0	50	10 11 11 9	
2				2-4'	0	30	10 10 16 14	
4				4-6' **SSO-SPT7-5-LF**	NS	5	5 10 2 2	
6		ML	6-8' Very dark grayish brown (10YR 3/2) SILT with some medium sorted Sand, soft, non-plastic, dry, no staining or odors.	6-8'	0	60	2 3 3 6	
8		SM	8-10' Very dark grayish brown (10YR 3/1) well sorted, fine SAND with some SILT, loose, wet at 9', no staining or odors	8-10' **SSO-SPT7-10-LF**	0	100	NA	
10		ML	10-12' Very dark grayish brown (10YR 3/2) SILT, very soft, slight plasticity, wet, no staining or odors. Last 6" has little Sand.	10-12'	0	95	0.5 0.5 1 2	
12		SM	12-13' Same as above with some well sorted, fine Sand.	12-14'	0	100	12 21 29 33	
14		GW	13-18' Dark grayish brown (10YR 4/2) poorly sorted, fine to coarse SAND and GRAVEL with little Silt, medium dense, subrounded, wet, no staining or odors.	14-16' **SSO-SPT7-15-LF**	0	50	15 23 24 19	
16				16-18'	0	40	14 10 7 6	
18				NS		0	NA	
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses) Boring terminated at 20' (no refusal)					

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. **NA** - Not Applicable

ARCADIS

Appendix H

Phases 1A/1AExp Test Trench and Boring Logs and Phase 1B Well Logs

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD TEST TRENCH LOGS

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/21/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-01

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Lower tier of landfill; Large pieces of concrete debris on surface	
0 - 2		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
2 - 15		Grayish brown Silty Sand and Gravel, loose, dry, no odor. Debris: concrete, bricks, scrap metal, glass bottles, paper, insulation, wood, plastic garbage bags.	
> 15		Grayish brown poorly sorted Sand and Gravel, loose, wet.	

Note: Final dimensions: 30' long x 4' wide x 16' deep. Northeast edge of test trench is within the lower tier of the landfill north of SEA-601. Waste found in first tier and ends at edge of the slope. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelly.
* No waste or leachate samples collected from LF-TT-01

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/21/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-02

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Lower tier of landfill; brush, scattered surface debris	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor (cover material).	**GW-LE03-LF**
1 - >15		Buried waste including: Hose, wood, plastic bags, plastic strips. Waste buried to > 15 feet - Excavator could not reach to bottom of waste.	

Note: Final dimensions: 36' long x 4' wide x 16' deep. Northeast edge of test trench is within the lower tier of the landfill between SEA-601 and SEA-602. Waste found in first tier and ends at edge of the slope. Photo-documented by Mike Morris. Ground water leachate (GW-LE03-LF) sample collected from LF-TT-02. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/21/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-03

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Lower tier of landfill; Scattered surface debris	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
2 - 13		Buried waste including: blue plastic strips, dried paint, tires, hose, plastic jugs, and piping/conduits. Water encountered within the buried waste at a depth of approximately 6 feet below the ground surface.	

Note: Trench 3 split in two parts on the north and south sides of the haul road in the vicinity of monitoring well P-8. Final dimensions: North side: 12 feet x 4 feet x 13 feet deep. South side: 12 feet x 4 feet x 13 feet deep. Edge of waste encountered at south end of trench. No waste or leachate samples collected from test trench. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD TEST TRENCH LOGS

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/21/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-04

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Northern edge of Pond B; Overgrowth, brush and scattered miscellaneous surface debris such as tires and scrap metal	
0 - 3		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 8		Buried waste including: plastic, brick, and scrap metal on north end of test trench. Poorly sorted sand and gravel encountered within Pond B on south side of test trench. Water was encountered at a depth of approximately 4 feet from the surface.	

Note: Final Dimensions: 30' long x 4' wide x 8' deep. Waste encountered on north side of test trench adjacent to Pond B. Waste was not encountered within Pond B. Photo-documented by Mike Morris. Air monitoring concucted by Chad Kelley.
* No waste or leachate samples collected for analysis from LF-TT-04

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/21/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-05

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		South side of haul road near retaining wall; scattered debris invicinity (tires, scrap metal, etc)	
0 - 2		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 9		Section 1: Buried waste including: plastic, nylon strips, hose, plastic bags. Section 2: Buried waste consisting predominantly of buried concrete. Water was encountered at a depth of approximately 6 feet from the surface.	
9-12		Grayish brown poorly sorted Silt and Sand, loose, wet.	NA

Note: Final Dimensions: Section 1 (north side) 10' long x 4' wide x 12' deep. Section 2 (south side) 15' long x 4' wide x 12' deep. Industrial/municipal wastes encountered in Section 1; Concrete (demolition debris) encountered in Section 2. Photo-documented by Mike Morris. Air monitoring concucted by Chad Kelley.
* No waste or leachatate samples collected from LF-TT-05.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/21/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-06

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Adjacent to haul road in the vicinity of MW-C1 and MW-C2 - Scattered debris on surface (tires, scrap metal)	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 9		Section 1: Buried waste including: plastic bags, glass containers, plastic bottles, tires. Section 2: Buried waste consisting predominantly of plastic bags, glass and plastic bottles; syringes found in Section 2 on south side of haul road near MW-C1. Water was encountered at a depth of approximately 8 feet from the surface.	

Note: Final Dimensions: Section 1 (north side of haul road) 70' long x 4' wide x 9' deep. Section 2 (south side of haul road) 10' long x 4' wide x 9' deep. Industrial/municipal wastes encountered in Section 1; Industrial/municipal wastes including medical waste encountered in Section 2. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-07

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Adjacent to haul road in the vicinity of SEA-605 - Scattered debris on surface (tires, scrap metal, USTs). Located within the area of Debris Field 4.	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	**GW-LE05-LF**
3 - 12		Buried waste including blue plastic/nylon strips, hose, and wood. Depth to water approximately 10 feet below the ground surface. Depth of waste approximately 11-12 feet below ground surface. Waste extends to river side of haul road.	
> 12		Poorly sorted Sand and Gravel, loose, wet, mild odor	

Note: Final Dimensions: 14' long x 4' wide x approximately 14' deep. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-08

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Adjacent to haul road near the south gate and in the vicinity of MW-109 - Scattered debris on surface (railroad ties, scrap metal, USTs).	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - >15		Buried waste including plastic bags, wood, plastic food containers. Depth of waste greater than 15 feet below ground surface. Waste extends to river side of haul road near MW-109.	

Note: Final Dimensions: 100' long x 4' wide x approximately 15' deep. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-09

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Located on the north side of the landfill near MW-108. Vegetation and surface debris (railroad ties).	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	**GW-LE06-LF**
3 - 12		Buried waste including plastic bags, hose, tires, carpeting, cable, bottles, wood, cardboard. Depth of waste greater than 10 feet below ground surface. Ground water encountered at approximately 10 feet below the ground surface. Waste extends to fence line.	

Note: Final Dimensions: 12' long x 4' wide x approximately 12' deep. Ground water leachate sample collected from trench with trackhoe bucket. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-10

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Located on the north side of the landfill near PZ-19. Vegetation and surface debris (railroad ties).	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 10		Buried waste including plastic bags, hose, tires, bottles, wood. Depth of waste greater than 10 feet below ground surface. Ground water encountered at approximately 10 feet below the ground surface. Waste extends to fence line.	

Note: Final Dimensions: 8' long x 4' wide x approximately 10' deep. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- LF-TT-11

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Located on the north side of the landfill at the north gate. Large concrete slabs in the vicinity of Trench 11	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 5		Buried waste including plastic bags, bottles, and wood.	

Note: Final Dimensions: 8' long x 4' wide x approximately 5' deep. Ground water leachate sample collected from trench with trackhoe bucket. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Pit- LF-TP-01

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Vegetation and large concrete slabs on surface.	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 5		Buried waste including plastic bags, bottles, and wood.	

Note: Final Dimensions: 5' long x 4' wide x approximately 5' deep. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Pit- LF-TP-02

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Vegetation and large concrete slabs on surface.	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 5		Buried waste including plastic bags, bottles, and wood.	

Note: Final Dimensions: 5' long x 4' wide x approximately 5' deep. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Pit- LF-TP-03

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Vegetation and large concrete slabs on surface.	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 5		Buried waste including large volume of Silly Putty eggs.	

Note: Final Dimensions: 5' long x 4' wide x approximately 5' deep. Photo documentation and descriptions conducted by Mike Morris. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/22/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Pit- LF-TP-04

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Vegetation and large concrete slabs on surface.	
0 - 1		Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	NA
3 - 7		Poorly sorted, yellowish brown Sand and Gravel; loose, dry. No buried waste encountered in test pit.	

Note: Final Dimensions: 5' long x 4' wide x approximately 7' deep. Photo documentation and descriptions conducted by Mike Morris. Air monitoring conducted by Chad Kelley.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/14/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-01

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID
Ground Surface		Mounded area above ground surface covered with vegetation. Silty sand and gravel, dry. Littered with surface debris such as scrap metal.	
0 - 5		Dark gray to brown silty sand and gravel, loose, dry, no odor. Debris: bricks, pipe, scrap metal, glass bottles, chain link fence, hose, electrical wire insulation, floor grating and unidentified white fibrous material.	**SO-W03-UI***
5 - 8		Dark gray to brown (with some black mottling) silty sand and gravel, loose, dry, no odor. Debris SAA. Additional debris: burnt wood fragments, ceramic electric wire mounts, & a locker door.	

Note: Final dimensions: 18' long x 7' wide x 8' deep. Oriented northeast/southwest. Northeast edge of test trench is 17' from Pond A. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.
* Composited with sample collected from UI-TT-02; VOC sample collected at UI-TT-01.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/14/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench-UI-TT-02

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Mounded area above ground surface covered with vegetation. Silty sand and gravel, dry. Littered with surface debris such as scrap metal, pipe, & tires.	
0 - 5	Dark gray to brown silty sand and gravel, loose, dry, no odor. Debris: bricks, pipe, scrap metal, glass bottles, hose, and electical wire insulation.	**SO-W03-UI***
5 - 8	Dark gray to brown (with some black mottling) silty sand and gravel, loose, dry, no odor. Debris SAA. Additional debris: burnt wood fragments and ceramic electric wire mounts.	
8 - 10	Light gray sandy river gravel with cobbles, poorly sorted, fine to coarse, rounded, loose, saturated, no odor or staining. Below water table.	NA

Note: Final dimensions: 20' long x 7' wide x 10' deep. Oriented northeast/southwest. Northeast edge of test trench is 10' from Pond A. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.
* Composited with sample collected from UI-TT-01; VOC sample collected at UI-TT-01.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/14/2003 - 8/15/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-03

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Mounded area above ground surface covered with vegetation. Large amount of surface debri is present: scrap metal, rusted household appliances such as refrigerators and stoves, rusted/crushed 55 gal drums, and tires.	
0 - 8	Brown silt and fine sand, well sorted, loose, moist, no odor/staining noted. Debris similar to surface debris, but in addition: metal piping, bricks, wire, car parts, large pieces of concrete, cinder blocks, and large tank (estimated to be 250 gal. Tank was not removed.)	**SO-W04-UI**
> 8	Below tank, similar materials, water table present. Excavation ceased; debris extended to top of water table.	NA

Note: Final dimensions: 27' long x 8' wide x 8' deep. TT3 is located at the southeast end of Pond A where it meets the old access road, and is oriented in the northeast/southwest direction. On 8/15, TT3 was extended approximatedly another 20' in the west/southwest direction. Additional debris found included a water heater, railroad ties, pipe, and small tanks. Buried debris appeared to extend under the currently used access road between TT1 and TT3. The lateral extend of buried waste was explored in this area. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD TEST TRENCH LOGS

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/15/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Steve Scheidt**
SIGNATURE:

Test Trench- UI-TT-04

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetated mound of soil/debris consisting mostly of tires. Brown silt and sand, loose, moist, no odor/staining noted. Pond E ground surface littered with tires.	
0 - 8	Dark grey to brown silty sand and gravel, loose, dry, no odor. Similar demolition debris found (see TT1 - TT3): pipe, brick, tires, scrap metal, car parts, bed springs and a heater tank.	NA
8 - 12	Buried waste extends below water table. Soil SAA & saturated. Side of TT4 extending into low area southwest of Pond E; below water table are a large number of tires. Central area adjacent to Pond E was dug into and more tires were found, approximately 3 - 4' deep.	NA

Note: The ground surface in and around Pond E is littered with tires, and exploratory digging yields buried tires at least 3 - 4' bgs, and extends below water table. Entire Pond E area appears to hold buried tires and debris. The ground surface visibly "bounced" throughout the Pond E area when driven over by the excavator. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/15/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-05

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Large vegetated mounded area. Aerosol cans of "Cough whip" dated 1965 and a needleless syringe plunger were found in the area.	
0 - 6	Light grey/brown Silt and fine Sand, loose, dry, no odor/staining.	NA
6 - 10	Grey/brown Silt and Sand, loose, moist, no odor/staining noted. Debris: plastics, wires, glass, plastic doll parts, pipe, unidentified cohesive, white granular material, plastic bag labeled "Union Carbide - Polyethylene," and unidentified metal machine parts.	NA
10 - 15	Dark grey Silt and Sand, loose, moist, strong organic/decay odor and black/purple staining. Additional debris: rubber, tires, machine parts, string, unidentified burned material, wire/cable insulation, glass vials, glass bottles, and syringe needles. Glass vials labeled "Abbot Laboratories" and "Sterile Sodium Chloride for Injection." A chunk of of material was closely investigated consisted of rust stained deteriorated plastic bags, material, and an aggregate of hollow-point needles.	NA

Notes: Final dimensions: 30' long x 6' wide x 15' deep. Trench is located on the berm of the depression southeast of the abandoned excavator. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/15/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-06

Depth Interval (ft bgs)		Description	Lab Sample ID
Ground Surface		Surface littered with rusted appliances and scrap metal. Covered with vegetation. Berm opposite TT5.	
0 - 2		Brown Silt/Sand, loose, no odor/staining. Debris present.	NA
2 - 8		Municipal waste, bottles, paper, tires, strips of material, rubber and hose, plastic bags and wood debris in black sediment, saturated with water. Waste extends below water table. Strong odors: hydrocarbon, H_2S, and decayed organics.	SO-W01-UI GW-LE01-UI

Note: Final dimensions after exploring the lateral extent of buried wastes: 30' long x 7' wide x 8' deep. Extent of waste extends into central depression between TT5, TT6, TT7 and TT8. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/15/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Steve Scheidt**
SIGNATURE:

Test Trench- UI-TT-07

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetated berm.	
0 - 2	Berm contains burnt and unburnt waste, plastics, cardboard, paper, wood, glass and metal scrap. Water table encountered at 2'.	NA
2 - 11	Area of TT7 extended towards central depression surrounded by TT5, TT6, and TT8. Little to no soil. Waste completely saturated with water. Depth of waste below 11 ft undetermined. Neoprene electrical wire insulation, clear plastic sheeting, rubber strips, garden hose, wooden 2 x 4's, tires, and wastes such as deodorant cans, shaving cream cans, and an old Tabasco sauce bottle. Strong odors: hydrocarbon H2S, and decayed organics. Leachate is dark grey color.	NA

Note: Extent of waste could not be determined in the north direction. Excavation of berm would break small ponded area on the other side. Final dimensions: Approximately 25' long x 7' wide x 11' deep. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/15/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-08

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Moderate vegetation on small mounded berm. Debris such as wood, tires, and rusted appliances.	
0 - 5.5	Debris found: garden hose, plastics, tires, spray cans, vinyl tarp. Soil had strong odors: decayed organics, and similar to burnt plastics.	NA
5.5 - 8	Silt and Sand. Black staining.	NA
Note:	Final dimensions: 12' long x 6' wide x 8' deep. Extent of waste found on southeastern edge of trench. Photo-documented by Mike Morris and Steve Scheidt. Air monitoring by Chad Kelly.	

PROJECT/CLIENT: **Peterson/Puritan**
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SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/18/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-09

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Some surface debris noted: tire, crushed empty drum, and a pipe. Vegetated.	
0 - 9	Light brown Silt and Sand, loose, dry, no odor staining. Minimal debris: a tire, PVC pipe fragments and some wood pieces.	NA
9 - 12	Brown Silty Sand, moderately cohesive, moist, no odor, some light orange and dark grey banding/mottling or staining.	NA

Note: Final dimensions: 16' long x 5' wide x 12' deep. TT9 located 150' west/northwest from Pond A piezometer. Photo-documented by Stephen Scheidt. Air monitoring by Chad Kelly. Refer to S.S. field book for trenching activities log.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/18/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-10

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetated berm top. Little debris on surface.	
0 - 3	Light brown Silt and fine Sand, well sorted, loose, no odor staining. Some debris: pipe, wood, plastic, vinyl strips, and municipal waste items.	NA
3 - 16	Groundwater encountered at 4' BGS. Contents include plastic toys, pipe, wire, plastic sheeting, vinyl strips, rubber strips, electrical insulation, glass bottles, scrap metal, rubber garden hose, unidentified materials/objects, propane cylinder and wood. Waste saturated with water, gray leachate. Slight hydrocarbon odor, dark gray to reddish gray stained soil.	**SO-W02-UI** **GW-LE02-UI**

Note: Waste depth ranged from 4' to 16' bgs. TT10 consisted of several small test trenches and therefore do not have length and width measurements. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
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EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-11

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetated berm top. Some debris: pipe, scrap metal, and plastic.	
0 - 1	Light brown Silt and Sand, loose, dry, no odor, orange rust staining. Debris increasing with depth immediately upon excavation: rusted pipe and plastic.	NA
1 - 9	Debris and waste extending into water table 4' bgs. Rubber hose, rusted metal, pipe, car parts, cylinders, canisters, plastic, and paper.	NA

Note: TT11 adjecent to TT10 to the southwest. Dimensions: Approximately 20' long x 7' wide x 9' deep. Depth of buried waste could not be determined due to high groundwater in test trench. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log. Leachate and waste samples collected from trench.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/18/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-12

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation, wood debris, bare light grey sandy soil, loose, dry, no odor/staining.	
0 - 3	Light gray Sand, loose, dry, no odor/staining. Some debris: tires, plastic, wood.	NA
3-10	Dark gray Silty Sand, loose, moist, reddish black staining, strong decayed organic odor.	NA

Note: TT12 used to delinate the edge of buried waste pit area near TT10, TT11, and TT13. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/18/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-13

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetated berm, gravel, sand and silt on surface.	
0 - 12	Light grey silt and sand, loose, dry, and some dark grey/black staining near the bottom of the trench. No waste encountered.	NA

Note: Final Dimensions: Approximately 20' long x 6' wide x 12' deep. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/18/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-14

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetated lowland area, loose Sand and Silt. Little debris.	
0 - 3	Light grey fine Sand, well sorted, loose, dry, and no odor or staining. Some light yellow/brown Sand.	NA

Note: TT14 is located in the depression northeast of the canal berm and between the canal berm and Pond A. Final dimensions: 15' long x 7' wide x 3' deep. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching

PROJECT/CLIENT: **Peterson/Puritan**
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DATE: **8/18/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Steve Scheidt**
SIGNATURE:

Test Trench- UI-TT-15

Depth Interval	Description	Lab Sample ID
Ground Surface	Trace vegetation, organic/plant matter, Sand.	
0 - 7	Light grey fine Sand, well sorted, loose, dry, and no odor or staining. Some light yellow/brown Sand. No debris/waste found.	NA

Note: Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/18/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-16

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Light gray fine Sand, well sorted, loose, low moisture, no odor/staining.	
0 - 3	Light gray fine Sand, well sorted, loose, low moisture, no odor/staining.	NA
3 - 6	Dark brown silty Sand, well sorted, loose, moist, no staining, organic odor	NA
6 - 7	Gravel and cobbles, poorly sorted, rounded, hard, moist, no odor/staining. Not penetrated by excavator.	NA

Note: Final dimensions: 12' long x 5' wide x 7' deep. No debris found; no evidence of dumping. Trench located on northeast end of unnamed island. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **8/18/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-17

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetated berm and slope into depression (suspected waste pit). Debris: woods planks and scrap metal from cars, appliances, tires, and cinder blocks	
0 - 3	Brown Silt and Sand, loose, low moisture, no odor/staining. Debris: tires, scrap metal, tires, plastics, paper, and wood debris.	NA
3 - 6	Dark grey Silty, Sandy mud, saturated, strong hydrocarbon, H_2S, and decayed organic odors. Mostly waste: rubber hose, plastics, scrap metal, strips of material, wood, pipe, and unidentified metal machine parts. Water table at 6' bgs.	NA
> 6	Same as above.	NA

Note: Trash is 6' thick in crest of berm, and slopes into depression where waste is found below water table. Waste at depth could not be determined due to the water table. Area between berms in this area shakes and vibrates with the movement of the excavator similar to Pond E tire pit area. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-17A

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0 - 2	Yellowish brown sand.	NA
2 - 7.5	Dark gray Sand and Gravel. Organic odor.	0.8
7.5	Same as above. Ground water encountered	NA

Notes: Dimensions: 22' long, 4' wide, 7.5' deep. No buried waste observed in Trench 17A Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
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EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Stephen Scheidt**
SIGNATURE:

Test Trench- UI-TT-18

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Dense vegetation. Some debris, such as plastic doll parts.	
0 - 2	Brown Silt and Sand, well sorted, loose, moist, no odor detected, rust and black staining. Debris: plastics, paper, roofing tile, unidentified granular material (see photos)	NA
2 - 8	same as above, depth of waste undefined.	NA
> 8	same as above, depth of waste undefined.	NA

Note: Trench located near haul road built by ENPRO. Waste found on the northwest side; waste not found on southeast side. Trenching was photo-documented by Steve Scheidt and Mike Morris. Air monitoring conducted by Chad Kelly. Refer to S.S. field book for trenching activities.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-18A

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0 - 6	Yellowish brown sand.	NA
6-7.5	Poorly sorted Sand and Gravel. Ground water encountered at approximately 7.5 feet below ground surface.	0.8

Notes: Dimensions: 17' long, 4' wide, 7.5' deep. No buried waste observed in Trench 18A Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
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DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-19

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-9	Well sorted yellowish brown Sand; loose, dry. Ground water encountered at approximately 9 feet below ground surface.	0

Notes: Dimensions: 19' long, 4' wide, 9' deep. No buried waste observed in Trench 19. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-20

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-8	Well sorted yellowish brown Sand; loose, dry. Mild organic odor.	NA

Notes: Dimensions: 16' long, 4' wide, 8' deep. No buried waste observed in Trench 20. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-21

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-8.5	Well sorted yellowish brown Sand; loose, dry.	NA

Notes: Dimensions: 19' long, 4' wide, 8.5' deep. No buried waste observed in Trench 21. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-22

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-7	Well sorted yellowish brown Sand; loose, dry.	0.3
7-8	Poorly sorted Sand and Gravel; loose, wet. Ground water encountered at approximately 8 ft below ground surface.	NA

Notes: Dimensions: 20' long, 4' wide, 8' deep. No buried waste observed in Trench 22. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-23

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-6	Well sorted yellowish brown Sand; loose, dry.	0.8
6-6.5	Poorly sorted Sand and Gravel; loose, moist.	NA

Notes: Dimensions: 17' long, 4' wide, 6.5' deep. No buried waste observed in Trench 23. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-24

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-8	Well sorted yellowish brown Sand; loose, dry.	0.4
8-9	Poorly sorted Sand and Gravel; loose, wet. Ground water encountered at approximately 8 ft. below ground surface.	NA

Notes: Dimensions: 17' long, 4' wide, 9' deep. No buried waste observed in Trench 24. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-25

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-7.5	Well sorted yellowish brown Sand; loose, dry.	0.8
7.5-8	Poorly sorted Sand and Gravel; loose, wet. Ground water encountered at approximately 8 ft. below ground surface.	NA

Notes: Dimensions: 17' long, 4' wide, 8' deep. No buried waste observed in Trench 25. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-26

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-7.5	Well sorted yellowish brown Sand; loose, dry.	0.0

Notes: Dimensions: 18' long, 4' wide, 7.5' deep. No buried waste observed in Trench 26. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD TEST TRENCH LOGS

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-27

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-7.5	Well sorted yellowish brown Sand with some Gravel; loose, dry.	0.0

Notes: Dimensions: 16' long, 4' wide, 8' deep. No buried waste observed in Trench 27. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-28

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-8.5	Well sorted yellowish brown Sand; loose, dry.	0.0

Notes: Dimensions: 18' long, 4' wide, 8.5' deep. No buried waste observed in Trench 28. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-29

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-5	Poorly sorted, yellowish brown Sand and Gravel; loose, dry.	0.0

Notes: Dimensions: 19' long, 4' wide, 5' deep. No buried waste observed in Trench 29. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-30

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-4	Well sorted reddish brown Sand; loose, dry. Mounded fill material with no buried waste.	0.0

Notes: Dimensions: 10' long, 4' wide, 4' deep. No buried waste observed in Trench 30. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-31

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-7.5	Poorly sorted, grayish brown Silt, Sand and some Gravel; loose, dry.	0.0

Notes: Dimensions: 18' long, 4' wide, 7.5' deep. No buried waste observed in Trench 31. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

PROJECT/CLIENT: **Peterson/Puritan**
SHIELD PROJECT NO: **300-1821-0200**
SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**
DATE: **10/24/2003**
EXCAVATOR: **TMC, Dick Hadley-Operator**
LOGGED BY: **Michael E. Morris**
SIGNATURE:

Test Trench- UI-TT-32

Depth Interval (ft bgs)	Description	Lab Sample ID
Ground Surface	Vegetation. No surface debris observed.	
0-7	Poorly sorted, grayish brown Silt and Sand with some Gravel; loose, dry.	0.0

Notes: Dimensions: 17' long, 4' wide, 7' deep. No buried waste observed in Trench 32. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-1

PROJECT/CLIENT:	**Peterson/Puritan**	DATE/TIME DRILLED:	**09/05/03 14:00**
SHIELD PROJECT NO:	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**8 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes
0		ML	**0-8' Fill/Waste Material** 0-3' Very dark gray (10YR 3/1) SILT with some Sand; Stiff, no plasticity, no odors noted; Brick fragments present	**GP-1 (0-1')** **SO-033-NP**		100	
2				**GP-1 (1'-5')** **SO-W14-NP**	2.2	100	
4			3'5' Very dark gray (10YR 3/1) SILT; Soft, no plasticity, dry; No odors; Brick fragments throughout, glass fragments present at approximately 5 feet BGS.				
6			5'-8' Black (10YR 2/1) SILT with some sand; soft, no plasticity, wet at approximately 8 feet BGS. No odors noted. Brick fragments present throughout.	GP-1 (5'-8')	0.6	100	
8			Refusal encountered at 8 feet below ground surface				
10							
12							
14							
16							
18							
20							

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-2

PROJECT/CLIENT:	**Peterson/Puritan**	DATE/TIME DRILLED:	**09/05/03 15:50**
SHIELD PROJECT NO	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**13 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes
0		ML	**0-11' Fill/Waste Material** 0-1' Very dark grayish brown (10YR 3/2) SILT with some Sand; soft, no plasiticity; dry Rounded cobbles present	**GP-2 (0-1')** **SO-034-NP**		100	
2			1'-3' Very dark gray (10YR 3/1) SILT; stiff, low plasticity dry; No odors or waste present	GP-2 (1'-5')		100	
4		SW	3'-6' Dark grayish brown (10YR 4/2) poorly sorted, medium to fine SAND, loose, slightly moist, No odors or waste present				
6				GP-2 (5'-9')		50	
8			6'-11' Dark grayish brown (10YR 3/2) SAND mixed with waste; loose, no plasticity, dry; waste included green garden hose and wood	**SO-W13-NP** **(6'-10')**			
10				GP-2 (9'-13')		80	
12		OH	**11'-13' Alluvium/Lacustrine** 11'-13' Very dark gray (10YR 3/1) Clayey SILT; Soft, slight plasticity, wet; No odors or waste present				
14			Boring terminated at 13 feet BGS (no refusal)				
16							
18							
20							

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-3

PROJECT/CLIENT:	**Peterson/Puritan**	DATE/TIME DRILLED:	**09/06/03 9:00**
SHIELD PROJECT NO	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**13 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes
0		ML	**0-11' Fill/Waste Material** 0-1' Very dark gray (10YR 3/1) SILT with some Sand; stiff, no plasiticity; dry Rounded cobbles present	**GP-3 (0-1')** **SO-035-NP**		100	
2			1'-5' Very dark gray (10YR 3/1) SILT; stiff, low plasticity dry; No odors or waste present	GP-3 (1'-5')		100	
4							
6		SW	5'-11' Black (10YR 2/1) medium sorted SAND; Loose no plasticity, no odors; sand mixed with fiberglass and wood waste	GP-3 (5'-9') **SO-W15-NP (5'-9')**		60	
8							
10				GP-3 (9'-13')		70	
12		OH	**11'-13' Alluvium/Lacustrine** 11'-13' Very dark gray (10YR 3/1) Clayey SILT; Soft, slight plasticity, wet; No odors or waste present				
14			Boring terminated at 13 feet BGS (no refusal)				
16							
18							
20							

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-4

PROJECT/CLIENT:	**Peterson/Puritan**	DATE/TIME DRILLED:	**09/06/03 10:45**
SHIELD PROJECT NO	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**13 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec-overy	Notes
0		SM	**0-13' Alluvium/Fill** 0-1' Brown (10YR 4/3) and Dark Brown (10YR 3/3) SAND and SILT with some cobbles, loose, no plast, dry	**GP-4 (0-1')** **SO-036-NP**		100	
2		SM	1'-12' Very dark gray (10YR 3/1) SILT with some cobbles and rock fragments Soft, no plasticity, dry; Piece of rubber waste at approx. 3 ft No other waste or odors observed	**GP-4 (1'-5')** **SSO-01-NP**	3.2	100	
4							
6				GP-4 (5'-9')	1	100	
8							
10				GP-4 (9'-13')		100	
12		OH	12'-13' Very dark gray (10YR 3/1) SILT; Soft, slight plasticity, wet				
14			Boring terminated at 13 feet BGS (no refusal)				
16							
18							
20							

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-5

PROJECT/CLIENT:	**Peterson/Puritan**	DATE/TIME DRILLED:	**09/06/03 13:20**
SHIELD PROJECT NO	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**13 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes
0		SM	**0-11' Fill/Waste Material** 1'-5' Dark grayish brown (10YR 4/2) SILT and SAND with some rounded cobbles; loose, poorly sorted, dry; No odors or waste observed	**GP-5 (0-1')** **SO-037-NP**		100	
2				GP-5 (1'-5')		100	
4							
6			5'-11' Multiple layers of rubber waste; No alluvial fill material; Sample collected directly above and below waste	GP-5 (5'-9') **SO-W16-NP (5'-9')**		60	
8							
10				GP-5 (9'-13')		70	
12		SM	**11'-13' Alluvium** 11'-13' Brown (10YR 5/3) SILT and SAND Soft, loose,No odors or waste present				
14			Boring terminated at 13 feet BGS (no refusal)				
16							
18							
20							

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-6

PROJECT/CLIENT:	**Peterson/Puritan**	DATE/TIME DRILLED:	**09/06/03 14:00**
SHIELD PROJECT NO	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**12 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes
0		SW	**0-12' Alluvium** 0'-12' Yellowish brown poorly sorted, fine to coarse SAND with some Gravel and rounded cobbles; loose, dry; No odors or waste observed	GP-6 (0'-4')		100	
4				GP-6 (4'-8')		100	
8				GP-6 (8'-12')		100	
12			Boring terminated at 12 feet BGS (no refusal)				
20							

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-7

PROJECT/CLIENT:	**Peterson/Puritan**	DATE/TIME DRILLED:	**09/06/03 14:10**
SHIELD PROJECT NO	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**12 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec-overy	Notes
0		SW	**0-12' Alluvium** 0'-12' Yellowish brown poorly sorted, fine to coarse SAND with some Gravel and rounded cobbles; loose, dry; No odors or waste observed	GP-7 (0'-4')		100	
4				GP-7 (4'-8')		100	
8				GP-7 (8'-12')		100	
12			Boring terminated at 12 feet BGS (no refusal)				
20							

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-8

PROJECT/CLIENT:	**Peterson/Puritan**	DATE/TIME DRILLED:	**09/06/03 14:20**
SHIELD PROJECT NO	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**12 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes
0		SW	**0-12' Alluvium** 0'-12' Yellowish brown poorly sorted, fine to coarse SAND with some Gravel and rounded cobbles; loose, dry; No odors or waste observed	GP-8 (0'-4')		100	
4				GP-8 (4'-8')		100	
8				GP-8 (8'-12')		100	
12			Boring terminated at 12 feet BGS (no refusal)				
20							

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

SHIELD
Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD BOREHOLE LOG
BOREHOLE # GP-8

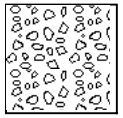
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SHIELD PROJECT NO	**300-1821-0200**	DRILLING COMPANY:	**Geologic Exploration, Inc.**
SITE NAME/LOCATN:	**Cumberland, Rhode Island**	RIG OPERATOR:	**Emil Schum**
BORING LOCATION	**Nunes Property**	RIG TYPE/METHOD:	**Track Mounted Geoprobe**
LOGGED BY:	**M. Morris**	SAMPLER DIAMETER:	**2 inches** LENGTH: **4 feet**
SIGNATURE:		TOTAL BORING DEPTH:	**12 feet BGS** GS ELEV. **Not Surveyed**

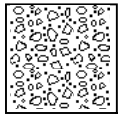
Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes
0		SW	**0-12' Alluvium** 0'-12' Yellowish brown poorly sorted, fine to coarse SAND with some Gravel and rounded cobbles; loose, dry; No odors or waste observed	GP-8 (0'-4')		100	
4				GP-8 (4'-8')		100	
8				GP-8 (8'-12')		100	
12			Boring terminated at 12 feet BGS (no refusal)				
20							

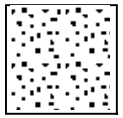
Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

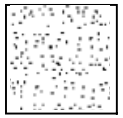
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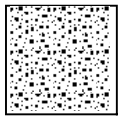
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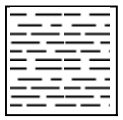

U-1
Gravel

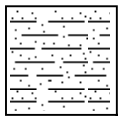

U-2
Sandy Gravel

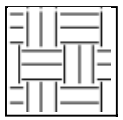

U-3
Sand


U-4
Silt


U-5
Sand and Silt or
Silt and Sand


U-6
Clay


U-7
Silty Clay or
Clayey Silt

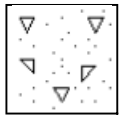

U-8
Topsoil/Loam/
Earth

FILL

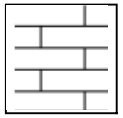

F-1
Fill-undifferentiated

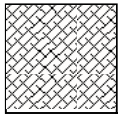

F-2
DGA


F-3
Coal Fragments


F-4
Asphalt

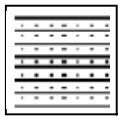
BEDROCK


B-1
Limestone


B-2
Bedrock-
undifferentiated

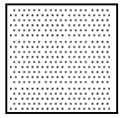

B-3
Siltstone

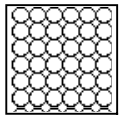

B-4
Shale


B-5
Sandstone

WELL CONSTRUCTION MATER


W-1
Grout


W-2
Sandpack


W-3
Bentonite

Date Start/Finish: 11/9/05 - 11/10/05
Drilling Company: Boart Longyear
Driller's Name: Jim and Justin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2"
Rig Type: Track-Mounted Mini Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 70' bgs
Surface Elevation: NA

Geologist: Sara Klimek/Joseph Lisi

Well/Boring ID: **GLF-700A**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0							Brown Silty fine SAND, some to little Organics (Roots, Wood), non-plastic, moist.	2" Locking J-Plug; 4" Steel Stick-up Protection; Concrete Pad
								Brown fine to coarse GRAVEL, little multicolored subrounded Cobbles and fine to coarse Sand, loose, non-plastic, moist.	
								Color change to gray, wet below 3.6' bgs.	
5	-5	1	0-10	8.0	0.0				Cement-Bentonite Grout (0.5' - 33' bgs)
									2" Sch. 40 PVC Riser (1.5' ags - 40' bgs)
10	-10							Gray-brown fine to coarse SAND, little fine to coarse subrounded to subangular Gravel, non-plastic, wet.	
		2	10-15	2.3	0.0				
15	-15								
		3	15-20	0.0	0.0				

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engineers, scientists, economists

Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

Well/Boring ID: **GLF-700A**

Borehole Depth: 70' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
	3	15-20	0.0	0.0			Gray-brown fine to coarse SAND, little fine to coarse subrounded to subangular Gravel, non-plastic, wet.	Cement-Bentonite Grout (0.5' - 33' bgs)
20 -20							Multicolored subangular to subrounded COBBLES, little fine to coarse subangular to subrounded Gravel, loose, non-plastic, wet.	2" Sch. 40 PVC Riser (1.5' ags - 40' bgs)
							Gray-brown fine to coarse SAND and fine to coarse GRAVEL, some subrounded Cobble, loose, non-plastic, wet.	
25 -25	4	20-30	1.5	0.0				
30 -30							Gray-brown fine to coarse SAND and fine to coarse GRAVEL, loose, non-plastic, wet. Increased Sand content from 31' - 32' bgs.	
	5	30-40	2.7	0.0				Bentonite Chips (33' - 38' bgs)
35 -35								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

Well/Boring ID: **GLF-700A**

Borehole Depth: 70' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
	5	30-40	2.7	0.0			Gray-brown fine to coarse SAND and fine to coarse GRAVEL, loose, non-plastic, wet.	Bentonite Chips (33' - 38' bgs)
40 -40							Gray-brown fine SAND, some Silt, medium dense, non-plastic, wet.	2" Sch. 40 PVC Riser (1.5' ags - 40' bgs)
							Brown-gray fine to coarse SAND and muticolored fine to coarse subrounded to subangular GRAVEL, non-plastic, wet. Increased Sand content below 40.85' bgs.	#0 Silica Sand Pack (38' - 51' bgs)
							Brown-gray fine to coarse SAND, some fine Gravel and fine Sand, non-plastic, wet.	
							Light brown fine to coarse SAND, non-plastic, wet. Grain size increases below 42.8' bgs.	2" Sch. 40 PVC 0.010" Slot Screen (40' - 50' bgs)
							Color change to orange between 42.8' - 43' bgs.	
45 -45	6	40-50	4.0	0.0				
50 -50							Brown fine to coarse SAND and multicolored fine GRAVEL, trace Silt, loose, non-plastic, wet.	Bentonite Chips (51' - 52' bgs)
							Brown Silty fine SAND, some medium to coarse Sand, little medium to coarse subrounded Gravel, non-plastic, wet.	
							Brown fine to coarse subrounded GRAVEL, little fine to coarse Sand, trace Silt, non-plastic, wet.	Natural Collapse (52' - 70' bgs)
	7	50-60	2.0	0.0				
55 -55								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

Well/Boring ID: **GLF-700A**

Borehole Depth: 70' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
	7	50-60	2.0	0.0			Brown fine to coarse subrounded GRAVEL, little fine to coarse Sand, trace Silt, non-plastic, wet.	
60 -60							Brown fine to medium SAND, some coarse Sand, non-plastic, wet.	Natural Collapse (52' - 70' bgs)
							Brown coarse SAND and multicolored fine to coarse subrounded to subangular GRAVEL, little Silt and fine to medium Sand, trace subrounded Cobble, medium dense, non-plastic, wet.	
							Light gray SILT and CLAY, trace coarse Gravel, stiff, non-plastic, wet.	
65 -65	8	60-70	9.3	0.0			Light brown-gray fine to coarse subangular GRAVEL, little fine to coarse Sand, non-plastic, wet. Cobbles from 65.6' - 65.8' bgs.	
							Light gray-green SILT and fine SAND, some Clay, little fine to coarse Gravel, very dense, non-plastic, wet. Increased Gravel content and some maroon coloring below 66.4' bgs.	
					X		Brown fine SAND, some medium to coarse subangular Gravel, loose, non-plastic, wet. Interbedded layers of light green-gray Silt and fine Sand, some Clay and fine to coarse Gravel, very dense, non-plastic, wet.	
							Light gray to light blue SILT and very fine SAND, some fine subangular Gravel, trace Clay, dense, non-plastic, wet.	
70 -70								
75 -75								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 10/12/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2"
Rig Type: Truck-Mounted Short-Stroke Rotary Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 20' bgs
Surface Elevation: NA

Geologist: Dave Cornell/Sara Kilmek

Well/Boring ID: **GLF-706**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0							Auger to 20' bgs. See log for GLF-706 for geologic information.	2" Locking J-Plug 4" Steel Stick-up Protection Concrete Pad 2" Sch. 40 PVC Riser (1.5' ags - 10' bgs) Cement-Bentonite Grout (0.5' - 5' bgs) Bentonite Chips (5' - 8' bgs) #0 Silica Sand Pack (8' - 20') 2" Sch. 40 PVC 0.010" Slot Screen (10' - 20' bgs)
5	-5								
10	-10								
15	-15								

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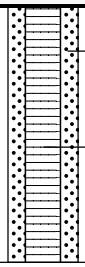
Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

Well/Boring ID: **GLF-706**

Borehole Depth: 20' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
							Auger to 20' bgs. See log for GLF-706 for geologic information.	 #0 Silica Sand Pack (8' - 20') 2" Sch. 40 PVC 0.010" Slot Screen (10' - 20' bgs)
20 -20								
25 -25								
30 -30								
35 -35								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 10/11/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2"
Rig Type: Truck-Mounted Short-Stroke Rotary Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 95' bgs
Surface Elevation: NA

Geologist: Dave Cornell/Sara Klimek

Well/Boring ID: **GLF-706A**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								2" Locking J-Plug 4" Steel Stick-up Protection
								Dark brown Silty fine SAND, some Organics (roots), little to trace medium Sand and fine Gravel, non-plastic, moist.	Concrete Pad
								Brown-gray Silty fine to medium SAND, little fine to coarse subrounded Gravel, trace Cobble, non-plastic, moist.	
		1	0-5	2.5	0.0				2" Sch. 40 PVC Riser (1.5' ags - 55' bgs)
5	-5							Dark gray SILT and fine SAND, some Plastic and Organics (Wood), little Metal and fine to coarse Gravel, faint odor, trace sheen, non-plastic, moist to wet.	
					19.7				Cement-Bentonite Grout (0.5' - 50' bgs)
								Gray to dark gray fine to coarse SAND and fine to coarse subrounded GRAVEL, little Cobble, trace Copper wire and Metal, non-plastic, wet.	
					4.5				
10	-10	2	5-15	6.0					
15	-15							No Copper wire or Metal below 15' bgs.	
		3	15-25	7.0					

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Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

Well/Boring ID: **GLF-706A**

Borehole Depth: 95' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
				2.3			Gray to dark gray fine to coarse SAND and fine to coarse subrounded GRAVEL, little Cobble, trace Copper wire and Metal, non-plastic, wet.	2" Sch. 40 PVC Riser (1.5' ags - 55' bgs)
				0.0				
							Gray fine to medium SAND, little coarse Sand and fine to medium subrounded Gravel, non-plastic, wet.	
20 -20	3	15-25	7.0				Gray medium to coarse SAND and fine subrounded GRAVEL, little fine Sand, trace medium to coarse subrounded Gravel, non-plastic, wet.	Cement-Bentonite Grout (0.5' - 50' bgs)
25 -25								
30 -30	4	25-35	10.0	0.0				
							Gray fine to coarse SAND, some fine to medium subrounded Gravel, little Silt, trace coarse Gravel, non-plastic, wet.	
							Light gray fine SAND, trace medium Sand and Silt, non-plastic, wet.	
35 -35							Little medium Sand below 35' bgs.	
	5	35-45	10.0	0.0				

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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

Well/Boring ID: **GLF-706A**

Borehole Depth: 95' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
							Light gray fine SAND, trace medium Sand and Silt, non-plastic, wet.	2" Sch. 40 PVC Riser (1.5' ags - 55' bgs)
40 -40	5	35-45	10.0	0.0				Cement-Bentonite Grout (0.5' - 50' bgs)
45 -45							Gray-brown below 48' bgs.	
50 -50	6	45-55	10.0	0.0	X			Bentonite Chips (50' - 53' bgs)
								#0 Silica Sand Pack (53' - 66' bgs)
55 -55	7	55-65	9.4	0.0			Brown-gray fine to medium SAND, trace Silt and coarse Sand, non-plastic, wet.	2" Sch. 40 PVC 0.010" Slot Screen (55' - 65' bgs)

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Waste Management

Site Location:
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Landfill Property
Cumberland, RI

Well/Boring ID: **GLF-706A**

Borehole Depth: 95' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
							Brown-gray fine to medium SAND, trace Silt and coarse Sand, non-plastic, wet.	#0 Silica Sand Pack (53' - 66' bgs)
							Brown-gray fine SAND, little Silt, trace medium Sand, slight brown banding, non-plastic, wet.	
							Gray-brown fine to medium SAND, little to trace coarse Sand, slight banding/mottling, non-plastic, wet.	
60 -60	7	55-65	9.4	0.0				2" Sch. 40 PVC 0.010" Slot Screen (55' - 65' bgs)
							Pink Clay stringer 1/4" thick at 61.3' bgs.	
							Gray-brown fine to medium SAND, little Silt, trace coarse Sand, non-plastic, wet.	
65 -65							Gray-brown Silty fine SAND, little medium Sand, slight banding, non-plastic, wet.	Bentonite Chips (66' - 67' bgs)
70 -70	8	65-75	9.5	0.0	X			Natural Collapse (67' - 95' bgs)
75 -75	9	75-85	10.0	0.0			No apparant banding below 75' bgs.	

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Waste Management

Site Location:
Peterson/Puritan Superfund Site
Landfill Property
Cumberland, RI

Well/Boring ID: **GLF-706A**

Borehole Depth: 95' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
80 -80	9	75-85	10.0	0.0			Gray-brown Silty fine SAND, little medium Sand, slight banding/mottling, non-plastic, wet.	Natural Collapse (67' - 95' bgs)
							Olive-gray fine to medium SAND, little Silt, non-plastic, wet.	
85 -85							Brown medium to coarse SAND, trace fine Sand and Silt, non-plastic, wet.	
							Brown SILT and fine SAND, non-plastic, wet.	
90 -90	10	85-95	9.0	0.0	X		Brown Silty fine to medium SAND, non-plastic, wet.	
95 -95								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 11/10/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2"
Rig Type: Track-Mounted ATV Mini Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 20' bgs
Surface Elevation: NA

Geologist: Joseph Lisi/Sara Klimek

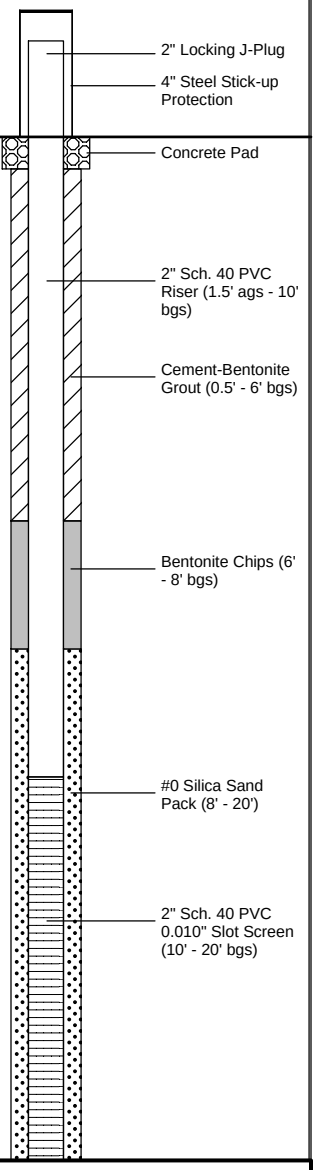
Well/Boring ID: **GNP-704**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
0	0							
		1	0-5	4.3	0.0			Red-maroon Silty fine SAND, some Organics (Roots), non-plastic, dry.
								Dark brown fine to medium SAND, non-plastic, moist. Color change to tan-brown below 0.8' bgs.
								Multicolored fine GRAVEL, some fine to coarse Sand, little coarse Gravel and Cobbles, non-plastic, moist to wet below 5.0' bgs.
5	-5							
		2	5-10	3.3	0.0			Dark gray subangular to subrounded crushed ROCK.
10	-10							
		3	10-15	2.7	0.0			Multicolored fine GRAVEL, some fine to coarse Sand, little coarse Gravel and Cobbles, non-plastic, wet.
								Dark gray fine to coarse subrounded GRAVEL, little coarse Sand, loose, non-plastic, wet.
15	-15							
		4	15-10	2.0	0.0			

Well/Boring Construction



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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-704**

Borehole Depth: 20' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
20 -20	4	15-20	2.0	0.0			Dark gray fine to coarse subrounded GRAVEL, little coarse Sand, loose, non-plastic, wet.	#0 Silica Sand Pack (8' - 20') 2" Sch. 40 PVC 0.010" Slot Screen (10' - 20' bgs)
25 -25								
30 -30								
35 -35								

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Project: 37902.001
Data File: GP-704.dat

Template: J:\Rockware\LogPlot 2001\LogFiles\37902\PPboring2.ldf
Date: 1/17/06

Date Start/Finish: 10/21/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2"
Rig Type: Truck-Mounted Short-Stroke Rotary Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 20' bgs
Surface Elevation: NA

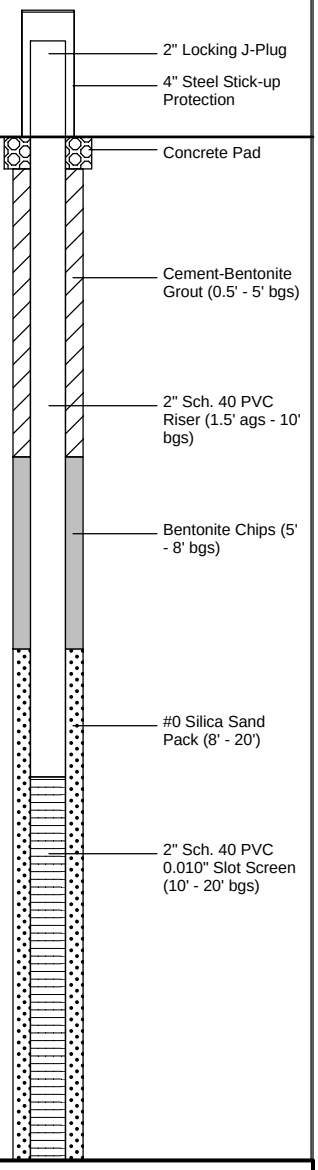
Geologist: Dave Cornell/Sara Klimek

Well/Boring ID: **GNP-705**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0							Auger to 20' bgs. See log for GNP-705B for geologic information.	
5	-5								
10	-10								
15	-15								



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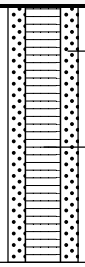
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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-705**

Borehole Depth: 20' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
20 -20							Auger to 20' bgs. See log for GNP-705B for geologic information.	 #0 Silica Sand Pack (8' - 20') 2" Sch. 40 PVC 0.010" Slot Screen (10' - 20' bgs)
25 -25								
30 -30								
35 -35								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 10/13/05 - 10/19/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2" & 7-5/8" Override Casing
Rig Type: Truck-Mounted Short-Stroke Rotary Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 168' bgs
Surface Elevation: NA

Geologist: Dave Cornell/Sara Klimek

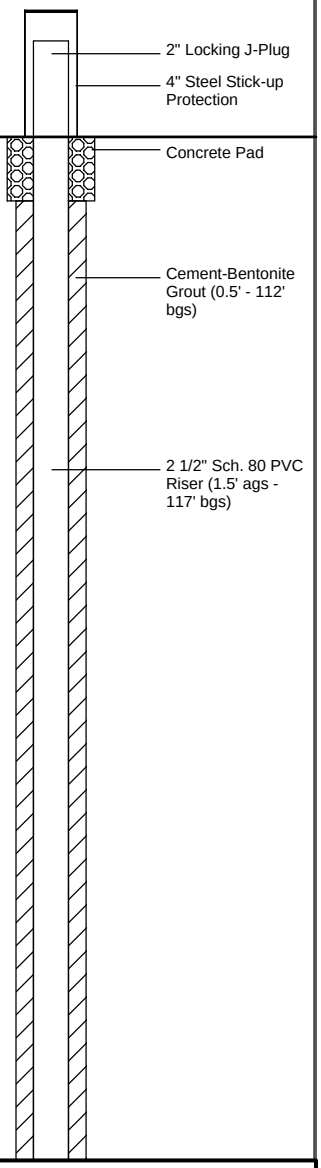
Well/Boring ID: **GNP-705B**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
0	0	1	0-5	3.0	0.0			Brown fine to coarse SAND, some fine to coarse subrounded Gravel, trace Organics (Grass, Roots) at surface, non-plastic, moist.
								Brown WOOD CHIPS.
								Dark gray-brown Silty fine SAND, little fine Gravel, trace Organics (Wood), non-plastic, moist.
								Red-orange BRICK.
								Dark gray-brown Silty fine SAND, some fine to coarse subrounded Gravel, trace medium to coarse Sand, Brick, Metal, Wood, Glass and Concrete, non-plastic, moist.
5	-5				2.2			Brown-gray ORGANICS (grass or hay).
					5.8			Silty fine SAND and DEBRIS (newspaper, plastic, styrofoam), non-plastic, moist.
					4.6			WOOD.
10	-10	2	5-15	3.4				Brown Silty fine SAND, some fine to coarse subrounded Gravel, little Wood, trace Metal, non-plastic, moist.
15	-15	3	15-25	8.2	16.1			Silty fine SAND, some waste Debris (vinyl, brick, plastic, metal), little fine to medium Gravel, non-plastic, moist to wet.

Well/Boring Construction



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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-705B**

Borehole Depth: 168' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
				343			Silty fine SAND, some waste Debris (vinyl, brick, plastic, metal), little fine to medium Gravel, non-plastic, moist to wet.	
				881			Dark gray-brown Silty fine to coarse SAND, some fine to coarse subrounded Gravel, trace Metal, moderate to strong petroleum-type odor (gasoline-like) , non-plastic, moist to wet.	Cement-Bentonite Grout (0.5' - 112' bgs)
				1430			Dark gray-brown Silty fine SAND, some to little fine to coarse subrounded Gravel, trace Brick, strong petroleum-type odor (gasoline-like), non-plastic, moist to wet.	
							Dark gray-brown fine to coarse SAND, some fine to coarse subrounded Gravel, trace Wood, Metal, Brick, and Silt, strong petroleum-type odor (gasoline-like), trace sheen, non-plastic, wet.	
20 -20	3	15-25	8.2	21.6			Dark brown SILT and fine SAND, trace Plastic and fine to coarse Gravel, non-plastic, wet.	2 1/2" Sch. 80 PVC Riser (1.5' ags - 117' bgs)
				5.4			Waste DEBRIS (Wood, Plastic, Paper), little Silt and fine Sand, non-plastic, wet.	
25 -25				3.9			Dark gray fine to medium SAND, little fine to coarse subrounded Gravel and Waste Debris (Wood, Plastic), trace coarse Sand, non-plastic, wet.	
							Gray fine to medium SAND, little fine to coarse subrounded Gravel, trace coarse Sand and Silt, non-plastic, wet.	
				0.0				
30 -30	4	25-35	7.0		X		Dark gray fine to coarse SAND and fine to medium subrounded GRAVEL, little fine Sand, trace Silt and coarse Gravel, non-plastic, wet.	
35 -35	5	35-45	3.0	0.0			Gray fine to coarse subrounded GRAVEL, some fine to coarse Sand, little subrounded Cobbles, non-plastic, wet.	

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Client: CCL Custom Manufacturing, Inc.
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Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-705B**

Borehole Depth: 168' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
							Gray fine to coarse subrounded GRAVEL, some fine to coarse Sand, little subrounded Cobbles, non-plastic, wet.	Cement-Bentonite Grout (0.5' - 112' bgs)
							Gray fine to medium SAND, little fine to coarse subrounded Gravel, trace Silt and coarse Gravel, non-plastic, wet.	
40 -40	5	35-45	3.0	0.0				2 1/2" Sch. 80 PVC Riser (1.5' ags - 117' bgs)
45 -45							Gray fine to coarse SAND, trace fine to coarse subrounded Gravel, trace Silt, non-plastic, wet.	
50 -50	6	45-55	7.9	0.0			Gray fine to coarse SAND, little fine to coarse subrounded Gravel, trace Silt and subrounded Cobbles, non-plastic, wet.	
					X		Gray SILT and fine SAND, trace Clay, non-plastic, wet.	
55 -55	7	55-65	5.8	0.0				

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Cumberland, RI

Well/Boring ID: **GNP-705B**

Borehole Depth: 168' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
							Gray Silty fine SAND, little fine to medium subrounded Gravel, non-plastic, wet.	Cement-Bentonite Grout (0.5' - 112' bgs)
							Gray fine to coarse SAND, trace fine Gravel, non-plastic, wet.	
							Gray SILT and fine SAND with olive-brown Silt seams and brown Clayey Silt seams, non-plastic, wet.	
60 -60							Brown fine to coarse SAND, non-plastic, wet.	2 1/2" Sch. 80 PVC Riser (1.5' ags - 117' bgs)
	7	55-65	5.8	0.0			Silty fine SAND, trace medium Sand, non-plastic, wet.	
65 -65							Brown fine to coarse SAND, trace fine Gravel, non-plastic, wet.	
							Brown Silty fine SAND, little medium Sand, trace medium Sand seams and gray Clay seams, non-plastic, moist.	
70 -70	8	65-75	9.2	0.0			Red-brown SILT, some multicolored fine to coarse subrounded to subangular Gravel and fine Sand, little to trace Clay, non-plastic, wet.	
					X		Gray Silty fine to medium SAND, trace fine to coarse subrounded to subangular Gravel, non-plastic, wet. Orange-brown below 72.9' bgs.	
75 -75	9	75-85	9.1	0.0			Gray-brown Silty fine to medium SAND, trace fine to medium subangular to subrounded Gravel, non-plastic, wet.	

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Waste Management

Site Location:
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Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-705B**

Borehole Depth: 168' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
							Gray-brown Silty fine to medium SAND, trace fine to medium subangular to subrounded Gravel, non-plastic, wet.	Cement-Bentonite Grout (0.5' - 112' bgs)
80 -80	9	75-85	9.1	0.0			Gray-brown Silty fine SAND, trace brown banding/mottling, non-plastic, wet.	2 1/2" Sch. 80 PVC Riser (1.5' ags - 117' bgs)
85 -85							Gray Silty fine SAND, little medium Sand, non-plastic, wet.	
							Trace medium Sand below 86.5' bgs.	
90 -90	10	85-95	10.0	0.0	X			
							Orange-brown fine to coarse SAND, trace Silt, non-plastic, wet.	
							Brown-gray between 93.5' - 94.5' bgs.	
							Increasing Silt content below 94.5' bgs.	
95 -95	11	95-105	10.0	0.0			Gray-brown Silty fine SAND, little medium Sand, non-plastic, wet.	

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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-705B**

Borehole Depth: 168' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
100 100	11	95-105	10.0	0.0			Gray-brown Silty fine SAND, little medium Sand, non-plastic, wet.	Cement-Bentonite Grout (0.5' - 112' bgs)
							Gray-brown Silty fine to medium SAND, trace coarse Sand, non-plastic, wet.	2 1/2" Sch. 80 PVC Riser (1.5' ags - 117' bgs)
							Gray-brown Silty fine SAND, trace medium Sand, non-plastic, wet.	
							Gray-brown fine to medium SAND, little coarse Sand, trace Silt, non-plastic, wet. Brown below 104.2' bgs.	
105 105							Gray-brown Silty fine SAND, non-plastic, wet.	
							Gray-brown fine to medium SAND, little Silt, non-plastic, wet. Trace brown banding/mottling below 107.5' bgs.	
							Gray-brown fine to coarse SAND, non-plastic, wet.	
110 110	12	105-115	9.0	0.0	X		Gray-brown Silty fine SAND, little medium Sand, non-plastic, wet.	Bentonite Chips (112' - 115' bgs)
115 115	13	115-125	10.0	0.0			Gray-brown Silty fine SAND, little medium Sand, trace coarse Sand, little brown banding/mottling, non-plastic, wet.	#0 Silica Sand Pack (115' - 130' bgs)

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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

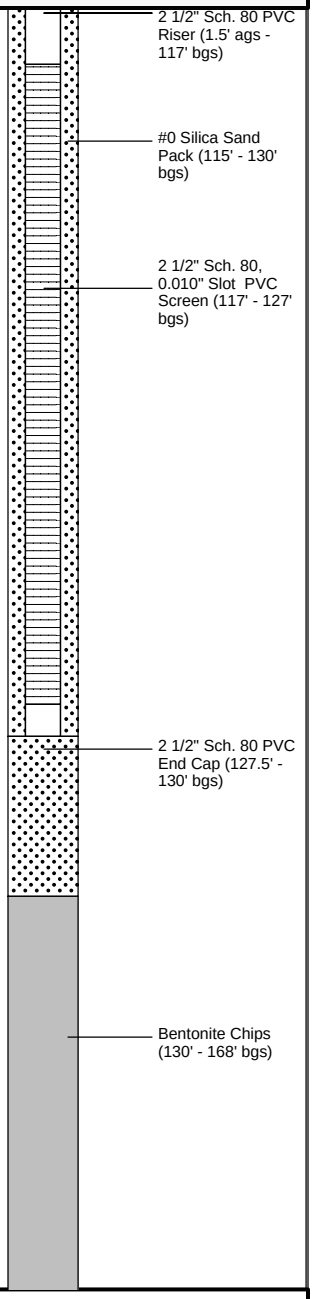
Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-705B**

Borehole Depth: 168' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
							Gray-brown SIlty fine SAND, little medium Sand, trace coarse Sand, little brown banding/mottling, non-plastic, wet.
							Gray-brown fine to medium SAND, little Silt, trace coarse Sand, non-plastic, wet.
							Gray-brown to red-brown Silty fine SAND, trace medium Sand, non-plastic, wet.
120 120	13	115-125	10.0	0.0			Gray-brown fine to medium SAND, little Silt and coarse Sand, non-plastic, wet.
							Gray-brown fine SAND, trace medium Sand, non-plastic, wet.
							Gray-brown medium to coarse SAND, little fine Sand and fine to coarse subrounded Gravel, trace Silt, non-plastic, wet.
125 125							
							Gray SILT and CLAY, some fine to coarse subrounded to subangular Gravel, trace fine Sand, slightly plastic, wet. [Possible Till]
							Dark gray to light gray COBBLES (possible Dolomite/Quartzite).
130 130	14	125-135	4.4	0.0	X		
135 135	15	135-140	2.0	0.0			Coarse GRAVEL and subrounded to subangular COBBLES, non-plastic, wet.

Well/Boring Construction



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Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-705B**

Borehole Depth: 168' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
	15	135-140	2.0	0.0			Coarse GRAVEL and subrounded to subangular COBBLES, non-plastic, wet.	Bentonite Chips (130' - 168' bgs)
140 140								
	16	140-148	6.5	0.0			Light gray fine-grained BEDROCK (possible Orthoquartzite), with little white, maroon and olive green banding, bedding at approximately 40° from horizontal. Becoming coarser-grained with trace to no apparent bedding/banding (white with olive-green grains) below 145' bgs.	
145 145								
	17	148-155	7.1	0.0			Gray fine to coarse SAND, some to little Cobbles (possible coarse gained Orthoquartzite), trace fine to coarse Gravel, non-plastic, wet. [Possible Pulverized Rock]	
150 150								
155 155	18	155-165	4.5	0.0			Light gray fine-grained BEDROCK (possible Orthoquartzite), dark green-gray band from 155' to 155.5' bgs, light brown laminations from 155.7' - 155.9' bgs and 157.5' - 158.4' bgs, bedding at approximately 40°.	

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Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-705B**

Borehole Depth: 168' bgs

DEPTH ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
160 160	18	155-165	4.5	0.0			Light gray fine-grained BEDROCK (possible Orthoquartzite), dark green-gray band from 155' to 155.5' bgs, light brown laminations from 155.7' - 155.9' bgs and 157.5' - 158.4' bgs, bedding at approximately 40° from horizontal. Becoming more white with green grains from 157.9' - 158.4' bgs.	Bentonite Chips (130' - 168' bgs)
165 165							Light gray fine-grained BEDROCK (possible Orthoquartzite), dark green-gray band from 155' to 155.5' bgs, light brown laminations from 155.7' - 155.9' bgs and 157.5' - 158.4' bgs, bedding at approximately 40°.	
	19	165-168	1.8	0.0			Light gray fine-grained BEDROCK (possible Orthoquartzite), with little white, maroon and olive green banding, bedding at approximately 40°.	
170 170								
175 175								

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Date Start/Finish: 10/10/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2"
Rig Type: Truck-Mounted Short-Stroke Rotary Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 36' bgs
Surface Elevation: NA

Geologist: Dave Cornell/Sara Kilmek

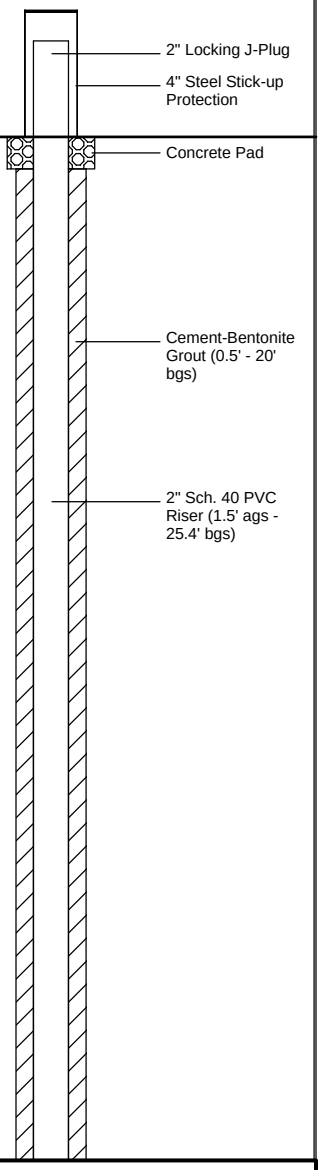
Well/Boring ID: **GNP-707**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
0	0							Gray fine SAND, little fine to medium Gravel, trace Silt, non-plastic, moist.
		1	0-5	4.0	0.0			Brown-gray Silty fine to medium SAND, some fine to coarse subangular Gravel, trace Concrete fragments and coarse Sand, non-plastic, moist.
5	-5							Gray-brown Silty fine to medium SAND, some fine to coarse subrounded Gravel, little Cobbles and coarse Sand, trace Brick fragments, non-plastic, moist.
10	-10	2	5-15	6.2	0.0			Gray to dark gray Silty fine to medium SAND, little fine to coarse subrounded Gravel, trace Cobbles, non-plastic, moist.
15	-15	3	15-25	7.0	0.0			Gray-brown Silty fine SAND, little fine to medium subrounded Gravel, trace fine to medium Sand, non-plastic, moist.

Well/Boring Construction



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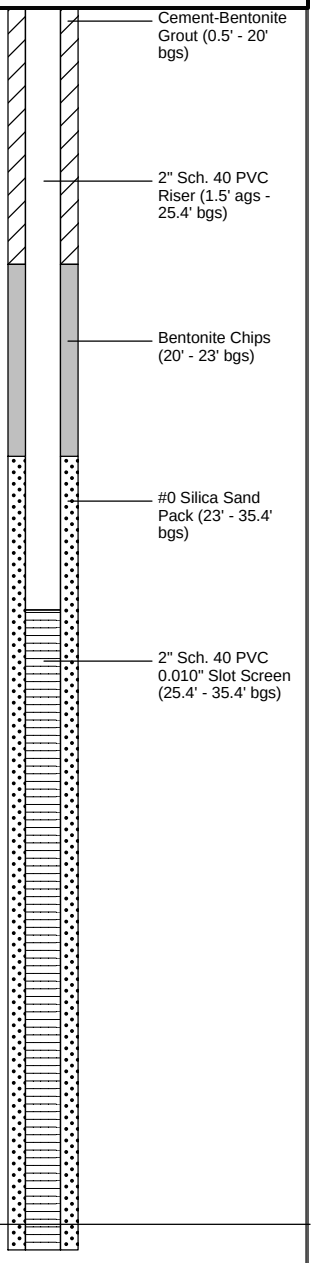
Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-707**

Borehole Depth: 36' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
							Gray-brown Silty fine SAND, little fine to medium subrounded Gravel, trace fine to medium Sand, non-plastic, moist.
							Brown fine to coarse SAND, little fine to coarse subrounded Gravel, non-plastic, moist.
							Gray fine to coarse SAND and fine to coarse subrounded GRAVEL, non-plastic, moist to wet.
20 -20	3	15-25	7.0	0.0			
25 -25							Gray fine to coarse SAND, some fine to coarse subrounded Gravel, trace Cobbles, non-plastic, wet.
30 -30	4	25-35	8.0	0.0			
35 -35							



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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 10/25/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2"
Rig Type: Truck-Mounted Short-Stroke Rotary Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 20' bgs
Surface Elevation: NA

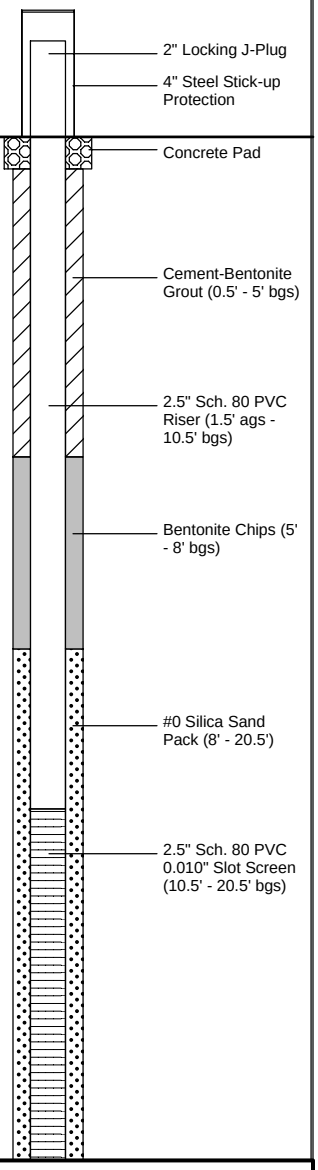
Geologist: Dave Cornell/Sara Klimek

Well/Boring ID: **GNP-708**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0							Auger to 20' bgs. See log for GNP-708 for geologic information.	
5	-5								
10	-10								
15	-15								



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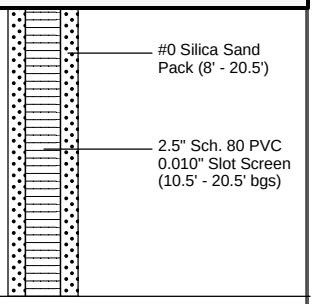
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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-708**

Borehole Depth: 20' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
20 -20							Auger to 20' bgs. See log for GNP-708 for geologic information.	 #0 Silica Sand Pack (8' - 20.5') 2.5" Sch. 80 PVC 0.010" Slot Screen (10.5' - 20.5' bgs)
25 -25								
30 -30								
35 -35								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 10/21/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Rotary Sonic
Bit Size: 5-1/2"
Casing Size: 5-1/2"
Rig Type: Truck-Mounted Short-Stroke Rotary Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 85' bgs
Surface Elevation: NA

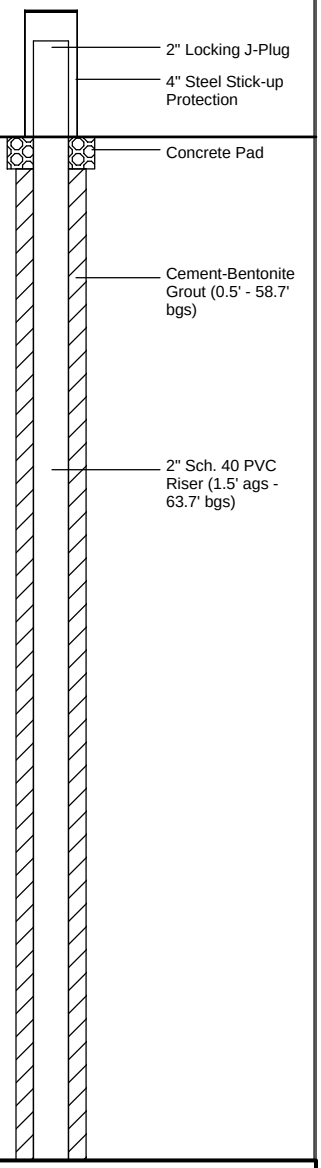
Geologist: Dave Cornell/Sara Klimek

Well/Boring ID: **GNP-708A**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
0	0							Brown-gray fine to medium SAND, little fine to medium subangular Gravel, trace Brick, white Ash-like material, and Cinders, trace Organics at surface, non-plastic, moist.
		1	0-5	3.9	0.0			Dark gray Silty fine to medium SAND, some fine to coarse subangular Gravel, trace Metal, Concrete and white Ash-like material, non-plastic, moist.
5	-5							Brown fine to medium SAND, some to little fine to medium subrounded Gravel, little coarse Sand, trace coarse Gravel, non-plastic, wet.
								Dark brown Silty fine SAND, trace medium Sand and Organics, trace red-brown banding, non-plastic, wet.
								Gray-brown fine to medium SAND, some fine to coarse subangular to subrounded Gravel, trace Silt and coarse Sand, non-plastic, moist to wet.
10	-10	2	5-15	8.2	0.0			Orange-brown fine to medium SAND, some multicolored fine to coarse subrounded Gravel, trace Cobbles, Silt, and coarse Sand, non-plastic, moist to wet.
15	-15	3	15-25	1.8	0.0			Gray-brown fine to coarse SAND, trace Silt, non-plastic, wet.



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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-708A**

Borehole Depth: 85' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
							Gray-brown fine to coarse SAND, trace Silt, non-plastic, wet.	Cement-Bentonite Grout (0.5' - 58.7' bgs)
20 -20	3	15-25	1.8	0.0				2" Sch. 40 PVC Riser (1.5' ags - 63.7' bgs)
25 -25							Gray-brown fine to coarse SAND, trace fine Gravel and Silt, non-plastic, wet.	
							Brown-gray medium to coarse SAND and multicolored fine to coarse subrounded GRAVEL, little fine Sand and Cobbles, non-plastic, wet.	
							Gray medium to coarse SAND, little fine Sand, trace fine subrounded Gravel, non-plastic, wet.	
30 -30	4	25-35	9.2	0.0			Gray Silty fine to coarse SAND and multicolored fine to coarse subrounded GRAVEL, little Cobbles, non-plastic, wet.	
							Gray Silty fine SAND, trace medium Sand and fine Gravel, non-plastic, wet.	
							Gray fine to coarse SAND, little fine to coarse subrounded Gravel, trace Cobbles, non-plastic, wet.	
							Gray-green Silty fine SAND, some multicolored fine to coarse subrounded Gravel, trace medium to coarse Sand, non-plastic, wet.	
35 -35	5	35-45	6.1	0.0			Gray to olive-gray medium to coarse SAND, some fine Sand, little fine to coarse subrounded Gravel, non-plastic, wet.	

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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-708A**

Borehole Depth: 85' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
							Gray to olive-gray medium to coarse SAND, some fine Sand, little fine to coarse subrounded Gravel, non-plastic, wet.	Cement-Bentonite Grout (0.5' - 58.7' bgs)
40 -40	5	35-45	6.1	0.0				2" Sch. 40 PVC Riser (1.5' ags - 63.7' bgs)
45 -45							Brown-gray fine to coarse SAND, little to trace fine subrounded Gravel, non-plastic, wet.	
							Gray-brown fine to coarse SAND, some to little fine to coarse subrounded Gravel, trace Cobbles, non-plastic, wet.	
50 -50	6	45-55	6.5	0.0			Gray-brown fine SAND, little medium Sand, trace Silt, non-plastic, wet.	
55 -55	7	55-65	7.2	0.0			Gray medium to coarse SAND and multicolored fine to medium subrounded GRAVEL, little fine Sand and Cobbles, trace Silt, non-plastic, wet.	

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Client: CCL Custom Manufacturing, Inc.
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Waste Management

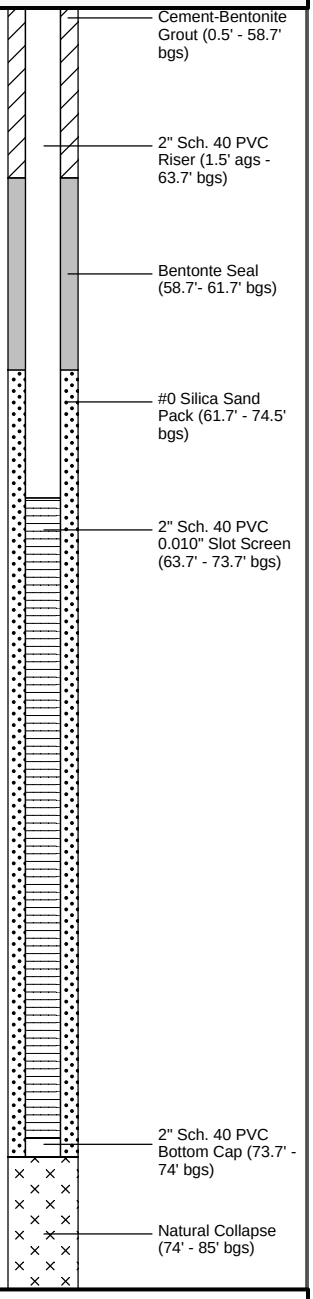
Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-708A**

Borehole Depth: 85' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
							Gray medium to coarse SAND and multicolored fine to medium subrounded GRAVEL, little fine Sand and Cobbles, trace Silt, non-plastic, wet.
60 -60	7	55-65	7.2	0.0			Gray-olive fine to coarse SAND, little fine to coarse subrounded Gravel, trace Cobble and Silt, non-plastic, wet.
65 -65							Brown-gray fine to coarse SAND, some fine to coarse subrounded Gravel, little Cobbles, non-plastic, wet.
70 -70	8	65-85	18.2	0.0			Brown fine to coarse SAND, trace fine subrounded Gravel, non-plastic, wet.
							Brown-gray fine to coarse SAND and fine to coarse subrounded GRAVEL, trace multicolored Cobbles, non-plastic, wet.
							Gray-olive Silty fine to coarse subrounded GRAVEL, some fine to coarse Sand, little Cobbles, trace Clay, non-plastic, wet.
75 -75							Gray olive-green Silty fine to coarse SAND and fine to coarse subrounded GRAVEL, non-plastic, wet.
							Dark olive-gray Silty fine SAND and multicolored fine to coarse Gravel, some to little Cobbles, trace medium to coarse Sand and Clay.

Well/Boring Construction



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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Former Waste Transfer Station
Cumberland, RI

Well/Boring ID: **GNP-708A**

Borehole Depth: 85' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
80 -80	8	65-85	18.2	0.0			Dark olive-gray Silty fine SAND and multicolored fine to coarse subrounded Gravel, some to little Cobbles, trace medium to coarse Sand and Clay, non-plastic, wet.	Natural Collapse (74' - 85' bgs)
							Olive-gray fine to medium subrounded GRAVEL, some Silt and fine Sand, little medium to coarse Sand and coarse Gravel, non-plastic, wet.	
							Brown-gray medium to coarse SAND, some to little fine to coarse subrounded Gravel and fine Sand, trace Cobbles, non-plastic, wet.	
							Gray fine to medium SAND, trace fine Gravel, Silt, and coarse Sand, non-plastic, wet.	
85 -85							Gray fine to medium subrounded GRAVEL, little medium to coarse Sand, trace Clay, non-plastic, wet.	
90 -90								
95 -95								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 11/15/05
Drilling Company: Boart Longyear
Driller's Name: Jim and Justin
Drilling Method: Direct Push
Sampling Method: 2" Macrocore
Casing Size: B-Casing
Rig Type: Track-Mounted Geoprobe

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 20' bgs
Surface Elevation: NA

Geologist: Sara Klimek

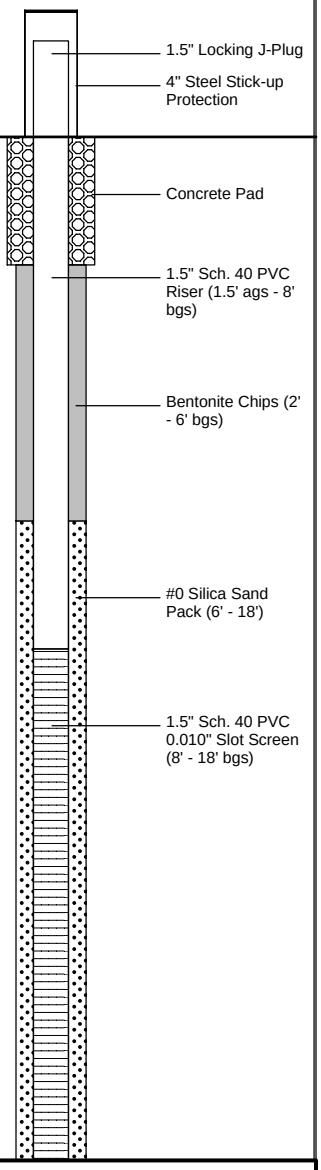
Well/Boring ID: **GUI-701**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Unnamed Island
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
0	0	1	0-4	2.8	0.0			Brown fine to medium SAND, some to little Organics (Roots), non-plastic, moist.
								White broken COBBLE.
								Gray coarse GRAVEL, some fine to coarse Sand, loose, non-plastic, moist.
								Brown fine to coarse SAND and fine to medium GRAVEL, loose, non-plastic, moist.
								Black Silty fine SAND, strong odor, medium dense, non-plastic, moist.
5	-5	2	4-8	3.4	0.0			Gray coarse SAND layer from 6.0' - 6.15' bgs.
								Dark gray Silty fine SAND, trace Organics (Roots), faint odor, non-plastic, moist.
10	-10	3	8-12	2.5	0.0			Light gray fine GRAVEL, some coarse Sand, non-plastic, wet.
								Multicolored fine to coarse subangular to subrounded GRAVEL, little medium to coarse Sand, non-plastic, wet.
								Gray-brown fine to medium GRAVEL and coarse SAND, trace coarse Gravel and fine to medium Sand, loose, non-plastic, wet.
		4	12-16	2.6	0.0			Gray Silty fine to coarse SAND, non-plastic, wet.
15	-15							

Well/Boring Construction



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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Unnamed Island
Cumberland, RI

Well/Boring ID: **GUI-701**

Borehole Depth: 20' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
20 -20	5	16-20	2.5	0.0			Gray Silty fine to coarse SAND, trace coarse subangular Gravel, non-plastic, wet.	#0 Silica Sand Pack (6' - 18') 1.5" Sch. 40 PVC 0.010" Slot Screen (8' - 18' bgs) Natural Collapse (18' - 20' bgs)
25 -25								
30 -30								
35 -35								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 11/15/05
Drilling Company: Boart Longyear
Driller's Name: Kevin and Rob
Drilling Method: Direct Push
Sampling Method: 2" Macrocore
Casing Size: B-Casing
Rig Type: Track-Mounted Geoprobe

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 20' bgs
Surface Elevation: NA

Geologist: Sara Klimek

Well/Boring ID: **GUI-702**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Unnamed Island
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								1.5" Locking J-Plug 4" Steel Stick-up Protection
								Brown fine to coarse SAND, little Organics (Roots), non-plastic, moist.	
								Brown-yellow fine to coarse SAND and fine to medium GRAVEL, non-plastic, moist.	Concrete Pad
		1	0-4	2.9	0.0			Dark brown Silty medium to fine SAND, trace Organics (Roots).	
								Red-orange banding from 2.7' - 2.8' bgs.	1.5" Sch. 40 PVC Riser (1.5' ags - 8' bgs)
								Brown-yellow fine to coarse SAND and fine to medium GRAVEL, non-plastic, moist.	Bentonite Chips (2' - 6' bgs)
5	-5							Brown Silty fine to coarse SAND, non-plastic, moist.	
		2	4-8	3.7	0.0			Black-brown Silty fine SAND, trace Organics (Roots), non-plastic, moist.	
								Brown Silty fine to coarse SAND, non-plastic, wet.	#0 Silica Sand Pack (6' - 18')
								Brown fine to coarse SAND and fine GRAVEL, non-plastic, wet.	
								Brown fine to medium SAND, non-plastic, wet.	
								Brown fine to coarse SAND and fine GRAVEL, non-plastic, wet.	
10	-10	3	8-12	2.4	0.0			Brown fine to coarse SAND and multicolored fine to medium GRAVEL, little coarse Gravel, non-plastic, wet.	1.5" Sch. 40 PVC 0.010" Slot Screen (8' - 18' bgs)
								Gray fine to coarse SAND and fine to coarse subangular to subrounded GRAVEL, loose, non-plastic, wet.	
		4	12-16	2.2	0.0				
15	-15								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Unnamed Island
Cumberland, RI

Well/Boring ID: **GUI-702**

Borehole Depth: 20' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
	5	16-20	2.6	0.0			Gray fine to medium GRAVEL, little coarse Sand, non-plastic, wet. Gray fine to coarse SAND, little coarse Gravel, trace Silt, non-plastic, wet. Gray fine to medium SAND, little Silt, dense, non-plastic, wet.	#0 Silica Sand Pack (6' - 18') 1.5" Sch. 40 PVC 0.010" Slot Screen (8' - 18' bgs) Natural Collapse (18' - 20' bgs)
20 -20								
25 -25								
30 -30								
35 -35								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

Date Start/Finish: 11/17/05
Drilling Company: Boart Longyear
Driller's Name: Scott Sherwin
Drilling Method: Direct Push
Sampling Method: 2" Macrocore
Casing Size: B-casing
Rig Type: Track-Mounted Geoprobe

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 20' bgs
Surface Elevation: NA

Geologist: Sara Klimek

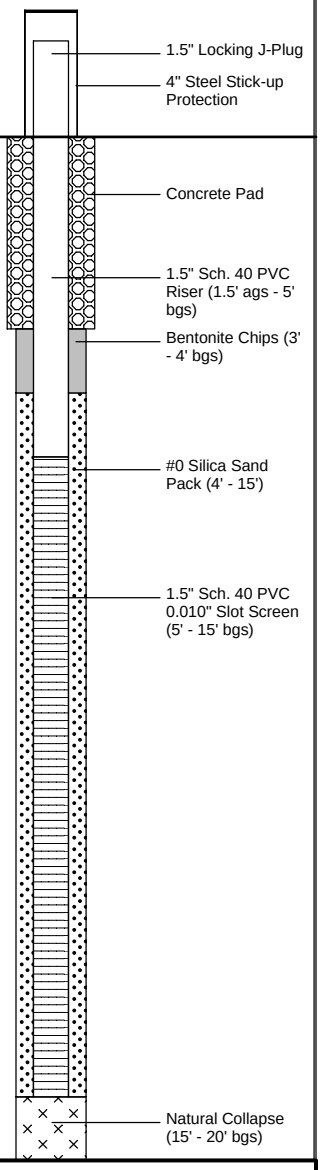
Well/Boring ID: **GUI-703**

Client:
CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Location: Peterson/Puritan Superfund Site
Unnamed Island
Cumberland, RI

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description
0	0	1	0-4	2.8	0.0			TOPSOIL/GRASS.
								Dark brown fine to medium SAND, some to little Organics (Roots, Grass, Wood), non-plastic, moist. Light brown from 0.5' - 1.2' bgs. Trace Cobbles below 1.2' bgs.
								Dark brown-maroon PEAT.
								Gray coarse SAND and fine GRAVEL, non-plastic, moist.
								Dark brown-gray PEAT, moist to wet.
5	-5	2	4-8	3.6	0.0			Gray coarse SAND and fine GRAVEL, little fine to medium Sand, trace Silt, non-plastic, wet.
								Dark brown PEAT, wet.
								Gray coarse SAND and fine GRAVEL, little fine to medium Sand, trace Silt, non-plastic, wet.
								Dark brown PEAT, wet.
								Brown-gray fine to coarse SAND, trace Silt, non-plastic, wet.
								Multicolored fine to coarse GRAVEL, trace coarse Sand, non-plastic, wet.
								Multicolored fine GRAVEL, little medium to coarse Sand, non-plastic, wet.
10	-10	3	8-12	2.0	0.0			Multicolored fine to coarse GRAVEL, trace coarse Sand, non-plastic, wet.
		4	12-16	1.6	0.0			Gray fine to coarse SAND and multicolored fine to coarse subrounded to subangular GRAVEL, non-plastic, wet.
15	-15							

Well/Boring Construction



Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

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Client: CCL Custom Manufacturing, Inc.
Best Foods (Formerly CPC International Inc.)
Waste Management

Site Location:
Peterson/Puritan Superfund Site
Unnamed Island
Cumberland, RI

Well/Boring ID: **GUI-703**

Borehole Depth: 20' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Vertical Profile Int.	Geologic Column	Stratigraphic Description	Well/Boring Construction
20 -20	5	16-20	3.0	0.0			Gray fine to coarse SAND, some fine to coarse subangular to subrounded Gravel, trace Silt. Gravel content decreases to trace below 17.9' bgs.	Natural Collapse (15' - 20' bgs)
25 -25								
30 -30								
35 -35								

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Remarks: a/bgs = above/below ground surface; NA = Not Applicable/Available; ND = Not Detected.

ARCADIS

Appendix I

Phase 1B and 2009 Unnamed Island Supplemental Sampling Logs

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL / AES
Well ID: GNP-705
Client / Job Number: P/P
Date: NOVEMBER 28, 2005
Weather: PARTLY CLOUDY, FEW SPRINKLES, LOW 50s
Time In: 1410 **Time Out:**

Well Information

(AES)

Depth to Water/Time:	(feet)	18.61	(from MP)
Total Depth:	(feet)	23.30	(from MP)
Length of Water Column:	(feet)	4.69	
Volume of Water in Well:	(gal)	0.76 gal	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 300 Water-Quality Meter Type: Horiba U-22
Total Volume Removed: (gal) ~5 gals Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1440 INITIAL	1445	1450	1455	1500	1505	1510	1515	1520
Volume Purged (liter)	—	750	1500	3000	4500	6000	7500	9000	10500
Rate (mL/min)	150	150	300	300	300	300	300	300	300
Depth to Water (ft.)	18.61	18.61	18.61	18.61	18.61	18.61	18.61	18.61	18.61
pH	6.55	6.54	6.52	6.52	6.52	6.52	6.52	6.52	6.52
Temp. (C)	14.23	13.96	13.76	13.74	13.69	13.66	13.65	13.63	13.61
Conductivity (mS/cm)	1.28	1.23	1.17	1.16	1.13	1.11	1.10	1.08	1.07
Dissolved Oxygen	2.68	0.81	1.58	1.27	1.49	1.51	1.44	1.46	2.46
ORP (mV)	-83	-86	-89	-89	-86	-81	-78	-73	-70
Turbidity (NTU) *	101.9	31.4	15.8	11.3	9.93	8.67	7.94	6.91	6.82
Notes: SAMPLE TIME = 1540									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Woods Hole
TCL SVOCs	2	
Pest./PCBs	3	
TAL Metals	1	
CN	1	
1,4-Dioxane	1	
Sample ID: GNP-705	Sample Time: 1540	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID: —	Dup. Time: —	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - INITIAL PURGE HAS BLACK PARTICULATES AND SLIGHT ODOR.

* Turbidity measured w/ a LaMotte Turbidimeter

~~[redacted] pump [redacted] feet~~ (AES)

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL/AES
Well ID: GWP-705
Client / Job Number:
Date: NOVEMBER 28, 2005
Weather:
Time In: 1410 **Time Out:**

Well Information SEE PAGE 1 . . .

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:	1.5"	2"	Other:

Sel. Pg 1

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:		
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1525	1580	1535						
Volume Purged (liter)	12,000	13,500	15,000						
Rate (mL/min)	300	300	300						
Depth to Water (ft.)	18.61	18.61	18.61						
pH	6.52	6.53	6.53						
Temp. (C)	13.58	13.52	13.58						
Conductivity (mS/cm)	1.06	1.06	1.05						
Dissolved Oxygen	2.56	2.53	2.51						
ORP (mV)	-66	-65	-64						
Turbidity (NTU)	7.12	7.27	7.15						
Notes: SAMPLE TIME = 1540									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

Pg 1 Sel

Problems / Observations

~~Initial Purge~~ -

FINAL DEPTH TO WATER = 18.61 (WITHOUT PUMP/TUBING)

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: AES/JDL/KMG/JH
Well ID: GNP-707
Client / Job Number: PETERSON/PURITAN
Date: NOVEMBER 29, 2005
Weather: COOL, LOW 50s, LIGHT RAIN
Time In: 0830 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	19.77	(from MP)
Total Depth:	(feet)	38.64	(from MP)
Length of Water Column:	(feet)	18.87	
Volume of Water in Well:	(gal)	3.08 gal	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	275	Water-Quality Meter Type:	HORIBA / LAMOTTE 2020
Total Volume Removed:	(gal)	5 gal	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 INITIAL 0845	2 0850	3 0855	4 0900	5 0905	6 0910	7 0915	8 0920	9 0925	10 0930
Volume Purged (liter)	—	750								
Rate (mL/min)	~~150~~ 150	275	275	275	275	275	275	275	275	275
Depth to Water (ft.)	19.77	19.77	19.77	19.77	19.77	19.77	19.77	19.77	19.77	19.77
pH	6.30	6.44	6.47	6.49	6.50	6.51	6.51	6.51	6.50	6.51
Temp. (C)	15.26	16.35	16.54	16.56	16.58	16.62	16.58	16.62	16.60	16.62
Conductivity (mS/cm)	0.278	.261	.260	.258	.258	.256	.255	.253	.253	0.253
Dissolved Oxygen	1.93	0.51	0.18	0.13	0.11	.06	.05	.01	.01	.01
ORP (mV)	5	-33	-44	-49	-52	-55	-57	-59	-60	-61
Turbidity (NTU) ¥	41.4	18.9	12.4	12.0	14.8	6.91	5.10	4.19	4.52	3.71
Notes:										

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Woods Hole
TCL SVOCs	2	
Pest./PCBs	3	
TAL Metals	1	
CN	1	
1,4-Dioxane	1	
Sample ID: GNP-707	Sample Time: 0935	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - CLEAR, NO NOTICEABLE ODOR.
*Turbidity measured w/ a Lamotte Turbidimeter
SAMPLE TIME = 0935

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: TRES/JMH
Well ID: GWP-708
Client / Job Number: PETERSON/PURITAN
Date: NOVEMBER 29, 2005
Weather: COOL, MID 50's, OVERCAST, CHANCE OF RAIN
Time In: 1020 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	15.75	(from MP)
Total Depth:	(feet)	23.98	(from MP)
Length of Water Column:	(feet)	8.23	
Volume of Water in Well:	(gal)	1.34 gal	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:		(Yes)	No
Measuring Point Marked:		(Yes)	No
Well Diameter:	1.5"	(2")	Other:

Purging Information

PUMP START TIME = 1025

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 250 Water-Quality Meter Type: HORIBA / LAMOTTE 2020
Total Volume Removed: (gal) ~~5~~ 5 gal Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 INITIAL 1030	2 1035	3 1040	4 1045	5 1050	6 1055	7 1100	8 1105	9 1110
Volume Purged (liter)	—	1250	2500	3750	5000	6250	7500	8750	10,000
Rate (mL/min)	250	250	250	250	250	250	250	250	250
Depth to Water (ft.)	15.75	15.75	15.75	15.75	15.75	15.75	15.75	15.75	15.75
pH	6.28	6.30	6.34	6.37	6.40	6.42	6.43	6.45	6.46
Temp. (C)	12.19	11.86	11.74	11.72	11.77	11.92	12.04	12.18	12.04
Conductivity (mS/cm)	0.449	0.448	0.443	0.441	0.440	0.438	0.437	0.435	0.436
Dissolved Oxygen	1.93	0.79	0.36	0.25	0.22	0.10	0.08	0.04	0.03
ORP (mV)	-28	-38	-42	-46	-49	-51	-52	-53	-54
Turbidity (NTU) *	34.7	24.7	13.4	9.87	7.65	7.70	6.78	5.51	5.26
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Woods Hole
TCL SVOCs	2	
Pest./PCBs	3	
TAL Metals	1	
CN	1	
1,4-Dioxane	1	
Sample ID: GWP-708	Sample Time: 1110	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID: —	Dup. Time: —	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - CLEAR, NO ODOR.

* Turbidity measured w/ a Lamotte Turbidimeter

SAMPLE TIME = 1110

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: AES/NBL
Client / Job Number: 111
Weather: WARM, PARTLY CLOUDY, MID 60S

Well ID: GLF - 706
Date: NOVEMBER 29, 2005
Time In: 1400 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	8.90	(from MP)
Total Depth:	(feet)	23.00	(from MP)
Length of Water Column:	(feet)	14.1	
Volume of Water in Well:	(gal)	2.29	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 300 Water-Quality Meter Type: HORIBA / LAMOTTE 2020
Total Volume Removed: (gal) ~5 gal Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 INITIAL 1400	2 1405	3 1420	4 1425	5 1430	6 1435	7 1440	8 1445	9
Volume Purged (liter)	—	875	2.375	3875	5.375	6875	8.375	9875	
Rate (mL/min)	175	300	300	300	300	300	300	300	
Depth to Water (ft.)	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	
pH	6.27	6.23	6.24	6.28	6.31	6.33	6.34	6.34	
Temp. (C)	15.08	14.44	14.33	14.29	14.23	14.20	14.19	14.13	
Conductivity (mS/cm)	0.547	0.577	0.577	0.579	0.582	0.583	0.587	0.585	
Dissolved Oxygen	1.79	0.24	0.09	0.07	0.01	0.00	0.00	0.00	
ORP (mV)	-58	-64	-70	-75	-80	-83	-85	-88	
Turbidity (NTU) *	21.1	12.1	9.65	7.70	6.93	6.64	6.75	6.67	
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Woods Hole
TCL SVOCs	2	
Pest./PCBs	3	
TAL Metals	1	
1,4-Dioxane	1	
CN	1	
Sample ID: GWL-706	Sample Time: 1450	
MS/MSD: (Yes)	No	
Duplicate: Yes	(No)	
Duplicate ID: —	Dup. Time: —	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - SLIGHTLY TURBID, NO ODOR
* Turbidity Measured w/ a Lamotte Turbidimeter.
SAMPLE TIME = 1450

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: KMG/JMH
Well ID: GLF-706A
Client / Job Number: ???
Date: NOVEMBER 29, 2005
Weather: WARM, MID-60s, PARTLY CLOUDY
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	9.26	(from MP)
Total Depth:	(feet)	67.63	(from MP)
Length of Water Column:	(feet)	58.37	
Volume of Water in Well:	(gal)	9.51 gal	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping:	(min)		
Average Pumping Rate:	(ml/min) 250	Water-Quality Meter Type:	Horiba U-22
Total Volume Removed:	(gal) ~7 gal 6	Did well go dry:	Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 INITIAL 1445	2 1450	3 1455 ~~1500~~	4 1500	5 1505	6 1510	7 1515	8 1520	9 1525
Volume Purged (liter)									
Rate (mL/min)	250	250	250	250	250	250	250	250	250
Depth to Water (ft.)	9.26	9.26	9.26	9.26	9.26	9.26	9.26	9.26	9.26
pH	6.52	6.49	6.48	6.48	6.48	6.47	6.48	6.48	6.48
Temp. (C)	13.16	13.16	13.12	13.08	13.08	13.02	12.99	12.94	12.92
Conductivity (mS/cm)	0.236	0.235	0.233	0.233	0.232	0.232	0.232	0.232	0.232
Dissolved Oxygen	0.52	0.46	0.75	0.84	0.94	0.99	0.99	0.77	0.64
ORP (mV)	5	11	20	23	24	25	26	26	26
Turbidity (NTU) *	>999	1005	490	330	175	97.5	62.1	41.6	31.5
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Woods Hole
TCL SVOCs	2	
Pest./PCBs	3	
TAL Metals	1	
CN	1	
1,4-Dioxane	1	
Sample ID: GLF-706A	Sample Time: 1600	
MS/MSD: Yes (No)		
Duplicate: (Yes) No		
Duplicate ID Dup-1	Dup. Time: 1600	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Very turbid, odorless

* Turbidity measured w/ a Lamotte Turbidimeter

Peterson/Puritan OU2 Site — **Groundwater Sampling**

Site — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: KMG/JMH — **Well ID:** GLF-706A

Client / Job Number: — **Date:** 11/29/05

Weather: — **Time In:** — **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1.5" 2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) — Water-Quality Meter Type:

Total Volume Removed: (gal) 4.5 — Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1530	1535	1540	1545	1550				
Volume Purged (liter)									
Rate (mL/min)	250	250	250	250	250				
Depth to Water (ft.)	9.26	9.26	9.26	9.26	9.26				
pH	6.43	6.42	6.43	6.42	6.43				
Temp. (C)	12.90	12.88	12.88	12.86	12.86				
Conductivity (mS/cm)	0.232	0.232	0.231	0.231	0.231				
Dissolved Oxygen	0.57	0.54	0.57	0.55	0.54				
ORP (mV)	27	26	26	26	26				
Turbidity (NTU)	27.0	20.3	18.2	17.8	16.8				
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:		Sample Time:	16:00
MS/MSD:	Yes	No	
Duplicate:	Yes	No	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

Initial Purge -

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: AES
Well ID: MW-112A
Client / Job Number: ???
Date: NOVEMBER 30, 2005
Weather: COOL, UPPER 40s, SPRINKLES
Time In: 0830 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	8.88	(from MP)
Total Depth:	(feet)	57.36	(from MP)
Length of Water Column:	(feet)	48.48	
Volume of Water in Well:	(gal)	7.90	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1.5"	(2")	Other:

Purging Information

PUMP START TIME = 0835

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type: HORIBA / (LAMOTTE 2020)
Total Volume Removed: (gal) Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 INITIAL 0840	2 0845	3 0850	4 0855	5 0900	6 0905	7 0910	8 0915	9 0920
Volume Purged (~~liter~~) mL	—	750	2250	3750	5250	6750	8250	9750	11250
Rate (mL/min)	150	300	300	300	300	300	300	300	300
Depth to Water (ft.)	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88
pH	5.62	5.92	5.97	5.98	5.99	6.00	6.01	6.01	6.00
Temp. (C)	13.24	13.42	13.05	12.95	12.90	12.68	12.66	12.53	12.50
Conductivity (mS/cm)	1.79	1.81	1.79	1.78	1.78	1.77	1.76	1.77	1.78
Dissolved Oxygen	3.93	3.32	3.93	4.19	4.28	5.04	5.06	5.08	5.01
ORP (mV)	240	225	226	226	227	228	228	229	229
Turbidity (NTU)	89.0	56.2	38.2	20.8	19.9	7.70	7.24	7.09	7.12
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
1,4-Dioxane		
Ethel CN		
Sample ID: MW-112A	Sample Time: 925	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - NO ODOR, PINKISH IN COLOR.

SAMPLE TIME = 0925

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL/AES
Well ID: MW-112AA
Client / Job Number: 11?
Date: 11/30/05
Weather:
Time In: 840 **Time Out:**

Well Information

Depth to Water/Time:	(feet) 9.37	(from MP)	
Total Depth:	(feet) 22.18	(from MP)	
Length of Water Column:	(feet) 12.81		
Volume of Water in Well:	(gal) 2.09		
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 300 Water-Quality Meter Type: Horiba U-22
Total Volume Removed: (gal) ~5 gal Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	855	900	905	910	915	920	925	930	935
Volume Purged (liter)									
Rate (mL/min)	300	300	300	300	300	300	300	300	300
Depth to Water (ft.)	9.45	9.45	9.45	9.45	9.45	9.45	9.45	9.45	9.45
pH	4.94	4.94	4.95	4.97	4.98	5.00	5.00	5.00	5.01
Temp. (C)	14.7	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6
Conductivity (mS/cm)	0.113	0.122	0.124	0.127	0.131	0.132	0.135	0.134	0.133
Dissolved Oxygen	8.05	9.18	8.53	8.01	7.24	6.76	6.28	5.84	5.82
ORP (mV)	284	286	284	277	268	264	259	256	258
Turbidity (NTU)	31.9	18.0	11.0	6.4	4.9	4.2	4.1	4.2	3.3
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total CN		
1,4-Dioxane		
Sample ID:	Sample Time: 940	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Rust colored, clear, odorless

* Turbidity taken w/ a LaMotte Turbidimeter.

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: AES
Client / Job Number: PP
Weather: 40s, rain
Well ID: MW-112B
Date: 11/30/05
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	10.20	(from MP)
Total Depth:	(feet)	84.45	(from MP)
Length of Water Column:	(feet)	74.25	
Volume of Water in Well:	(gal)	12.10	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 300 Water-Quality Meter Type: Horiba U-22 / Lamotte Turbidimeter
Total Volume Removed: (gal) ~5 gals Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1055	1100	1105	1110	1115	1120	1125	1130	1135
Volume Purged (liter)									
Rate (mL/min)	300	300	300	300	300	300	300	300	300
Depth to Water (ft.)	10.20	10.20	10.20	10.20	10.20	10.20	10.20	10.20	10.20
pH	6.33	6.16	6.14	6.18	6.20	6.21	6.21	6.22	6.21
Temp. (C)	12.42	12.27	12.16	12.20	12.21	12.18	12.17	12.10	12.08
Conductivity (mS/cm)	0.576	0.740	0.841	0.841	0.840	0.840	0.840	0.838	0.837
Dissolved Oxygen	3.24	1.98	1.49	1.50	1.41	1.36	1.38	1.39	1.37
ORP (mV)	208	212	213	212	211	211	211	211	211
Turbidity (NTU)	38.1	22.8	20.2	19.8	17.3	16.5	16.1	15.8	15.3
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total CN		
1,4-Dioxane		
Sample ID: MW-112B	Sample Time: 1140	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - clear, colorless, odorless.

Peterson/Puritan OU2 Site — Site

Groundwater Sampling — Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL/AES
Well ID: MW-112C
Client / Job Number:
Date: 11/30/05
Weather: heavy rain, 60°
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	9.65	(from MP)
Total Depth:	(feet)	121.61	(from MP)
Length of Water Column:	(feet)	111.96	
Volume of Water in Well:	(gal)	18.25 gal	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	(1.5")	2"	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	(Peristaltic)	Bladder	Other: VOCs w/ Bailer

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 275 Water-Quality Meter Type: Horiba U-22 (Lamotte Turbidimeter)
Total Volume Removed: (gal) ~5 gals Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1130	1135	1140	1145	1150	1155	1200	1205	1210
Volume Purged (liter)									
Rate (mL/min)	275	275	275	275	275	275	275	275	275
Depth to Water (ft.)	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75
pH	~~7.09~~	6.82	6.65	6.62	6.63	6.63	6.62	6.62	6.62
Temp. (C)	0.573	~~13.0~~	12.9	12.7	12.6	12.6	12.6	12.6	12.6
Conductivity (mS/cm)	>13	0.556	0.495	0.500	0.610	0.625	0.640	0.638	0.638
Dissolved Oxygen	1.17	0.69	0.65	0.58	0.85	1.02	1.00	1.05	1.04
ORP (mV)	53	41	52	86	156	168	169	171	172
Turbidity (NTU)	17	12	25	22	10	9.2	4.6	4.5	4.2
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
1,4-Dioxane		
Total CN		
Sample ID: MW-112C	Sample Time: 1220	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

~~Initial Purge~~ previous sampling at this well, it is not based on ~~[illegible]~~ possible to get the ~~[illegible]~~ 1" bladder pump all the way down to well screen. Used peristaltic pump (as was done in the past) to sample well. VOC samples collected w/ a bailer.

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:
Well ID: MW-112C
Client / Job Number:
Date: 11/30/05
Weather:
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

see pg 4

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type:
Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1215								
Volume Purged (liter)									
Rate (mL/min)	275								
Depth to Water (ft.)	9.75								
pH	6.63								
Temp. (C)	12.7								
Conductivity (mS/cm)	0.639								
Dissolved Oxygen	1.03								
ORP (mV)	172								
Turbidity (NTU)	4.3								
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

see pg 4

Sample ID: Sample Time:
MS/MSD: Yes No
Duplicate: Yes No
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Initial Purge -

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDC/AES
Well ID: GNP 705B
Client / Job Number: Peterson/Puritan
Date: 12/1/05
Weather: COOL, LOW 40s, SUNNY
Time In: 820 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	18.40	(from MP)
Total Depth:	(feet)	129.72	(from MP)
Length of Water Column:	(feet)	111.32	
Volume of Water in Well:	(gal)	18.15	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 100 Water-Quality Meter Type: Horiba U-22/Lamotte turb.
Total Volume Removed: (gal) ~5 gals Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	845	850	855	900	905	910	915	920	925
Volume Purged (liter)									
Rate (mL/min)	50	100	100	100	100	130	130	130	130
Depth to Water (ft.)	18.40	18.40	18.40	18.40	18.40	18.40	1840	18.40	18.40
pH	9.46	8.55	8.32	8.20	8.18	8.15	8.15	8.14	8.16
Temp. (C)	10.6	10.0	9.7	9.6	9.9	11.2	11.1	11.3	11.3
Conductivity (mS/cm)	0.420	0.485	0.491	0.491	0.497	0.513	0.504	0.506	0.501
Dissolved Oxygen	3.48	2.10	2.00	1.68	1.55	1.52	1.33	0.92	0.70
ORP (mV)	-93	-174	-181	-183	-184	-197	-225	-253	-276
Turbidity (NTU)	54.6	44.6	40.2	37.5	37.5	36.9	28.3	26.1	21.1
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Woodshole
TCL SVOCs	2	
Pest./PCBs	3	
TAL Metals	1	
CN	1	
1,4-Dioxane	1	
Sample ID:	Sample Time:	1000
MS/MSD: Yes / No		
Duplicate: Yes / No		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Clear, Colorless, odorless

M+E split w/ MS/MSD

SAMPLE TIME = 1000

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: AES/WDL
Well ID: GWP-706B
Client / Job Number: PETERSON/PURITAN
Date: DECEMBER 1, 2005
Weather: COOL, LOW 40s, SUNNY
Time In: 0820 **Time Out:**

Well Information

SEE PAGE 1...

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1.5"	(2")	Other:

Purging Information

SEE PG 1

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping:	(min)		
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:	HORIBA/LAMOTE 2020
Total Volume Removed:	(gal)	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	0930	0935	0940	0945	0950	0955	1000 SAMPLE		
Volume Purged (liter)									
Rate (mL/min)	150	150	150	150	150	150			
Depth to Water (ft.)	18.40	18.40	18.40	18.40	18.40	18.40			
pH	8.17	8.17	8.17	8.17	8.17	8.17			
Temp. (C)	11.3	11.2	11.3	11.2	11.2	11.2			
Conductivity (mS/cm)	0.495	0.487	0.498	0.492	0.491	0.490			
Dissolved Oxygen	0.64	0.61	0.51	0.50	0.48	0.49			
ORP (mV)	-299	-309	-316	-318	-318	-318			
Turbidity (NTU)	15.20	13.70	10.55	9.72	9.08	8.98			
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		ALPHA WOODS HOLE
TCL SVOCs		
Pest./PCBs		
TAL Metals		
SEE PAGE 1		

Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - (SEE PAGE 1)
MAE SPLIT WITH MS/MSD

SAMPLE TIME = 1000

DECEMBER 1, 2005 (YES)

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: AES/JDL
Well ID: GNP-208A
Client / Job Number: PETERSON/PURITAN
Date: ~~DECEMBER 20, 2005~~
Weather: COOL, 40s, CLOUDY/OVERCAST
Time In: 1320 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	14.87	(from MP)
Total Depth:	(feet)	76.90	(from MP)
Length of Water Column:	(feet)	62.03	
Volume of Water in Well:	(gal)	10.11	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 250 Water-Quality Meter Type: HORIBA / LAMOTTE 2020
Total Volume Removed: (gal) ~5 Gals Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	INITIAL 1330	2 1335	3 1340	4 1345	5 1350	6 1355	7 1400	8 1405	9 1410
Volume Purged (liter)	—								
Rate (mL/min)	250	250	250	250	250	250	250	250	250
Depth to Water (ft.)	14.87	14.87	14.87	14.87	14.87	14.87	14.87	14.87	14.87
pH	7.79	6.58	6.51	6.48	6.49	6.49	6.50	6.52	6.54
Temp. (C)	11.9	11.5	11.5	11.5	11.5	11.5	11.5	11.4	11.4
Conductivity (mS/cm)	0.283	0.357	0.349	0.341	0.350	0.348	0.347	0.346	0.346
Dissolved Oxygen	7.84	7.48	7.21	6.55	6.35	6.25	6.05	3.89	4.09
ORP (mV)	-46	-76	-82	-96	-99	-100	-101	-106	-109
Turbidity (NTU)	70.1	54.2	42.8	36.9	23.0	17.7	13.8	13.3	10.18
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Woods Lab
TCL SVOCs	2	
Pest./PCBs	3	
TAL Metals	1	
CN	1	
1,4-Dioxane	1	

Sample ID: Sample Time: 1430
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Initial Purge - SLIGHTLY TURBID, NO ODOR.
MIE split sample w/ Dup
SAMPLE TIME = 1430

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: AES/JDL
Well ID: GNP-708A
Client / Job Number: PETERSON/PURITAN
Date: [redacted] DECEMBER 1, 2005
Weather: COOL, 40s, OVERCAST
Time In: 1320 Time Out:

Well Information SEE PAGE 1

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type: HORIBA/LAMOTTE 2020
Total Volume Removed: (gal) Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1415	1420	1425	SAMPLE TIME		1480			
Volume Purged (liter)									
Rate (mL/min)	250	250	250						
Depth to Water (ft.)	14.87	14.87	14.87						
pH	6.68	6.61	6.63						
Temp. (C)	11.4	11.4	11.4						
Conductivity (mS/cm)	0.344	0.343	0.342						
Dissolved Oxygen	3.92	3.89	3.87						
ORP (mV)	-113	-115	-115						
Turbidity (NTU)	8.33	7.28	7.21						
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge -

(SEE NOTES ON PAGE 1)
M&E SPLIT WITH DUP

SAMPLE TIME = 1480

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: AES
Well ID: MW-106B
Client / Job Number: PETERSON/PURITAN
Date: DECEMBER 7, 2005
Weather: COOL (40S), PARTLY CLOUDY
Time In: 0830 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	—	(from MP)
Total Depth:	(feet)		(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

DEDICATED PUMP

Duration of Pumping:	(min)	300		
Average Pumping Rate:	(ml/min)	300	Water-Quality Meter Type:	HORIBA/LAMOTTE 2020
Total Volume Removed:	(gal)	~5 gals	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	INITIAL 0845	0850	0855	0900	0905	0910	0915	0920	0925
Volume Purged (liter)	—	1500	3000	4500	6000	7500	9000	10500	12000
Rate (mL/min)	300	300	300	300	300	300	300	300	300
Depth to Water (ft.)	—	—	—	—	—	—	—	—	—
pH	6.28	6.43	6.49	6.50	6.51	6.52	6.53	6.53	6.53
Temp. (C)	12.33	12.48	12.61	12.63	12.57	12.54	12.52	12.54	12.58
Conductivity (mS/cm)	0.459	0.448	0.444	0.427	0.415	0.408	0.407	0.406	0.405
Dissolved Oxygen	1.98	0.51	0.06	0.03	0.02	0.00	0.00	0.00	0.00
ORP (mV)	254	227	208	200	194	188	185	184	182
Turbidity (NTU)	87.4	62.9	25.8	10.5	5.4	1.6	0.00	0.00	0.00
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
1,4-Dioxane		
Cyanide		
Sample ID: MW-106B	Sample Time: 930	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - SLIGHTLY TURBID (BLACK PARTICULATES)

EPA OVERSIGHT (METCALF & EDDY)

SAMPLE TIME = 0930

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL
Well ID: MW-106C
Client / Job Number: PETERSON/PURITAN
Date: DECEMBER 2, 2005
Weather: COOL (40S), PARTLY CLOUDY
Time In: 0830 **Time Out:**

Well Information

unable to check WL due to dedicated pump in well.

Depth to Water/Time:	(feet)	NA	(from MP)	Well Type:	Flushmount / (Stick-Up)
Total Depth:	(feet)		(from MP)	Well Material:	Stainless Steel / (PVC)
Length of Water Column:	(feet)			Well Locked:	(Yes) / No
Volume of Water in Well:	(gal)			Measuring Point Marked:	(Yes) / No
Wellhead PID Reading:	(ppm)			Well Diameter:	1.5" / (2") Other:

Purging Information

Dedicated Bladder pump

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping:	(min)		DEDICATED PUMP
Average Pumping Rate:	(ml/min) 300	Water-Quality Meter Type:	HORIBA / LAMOTTE 2020
Total Volume Removed:	(gal) ~5 gals	Did well go dry:	Yes / (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 INITIAL 850	2 855	3 900	4 905	5 910	6 915	7 920	8 925	9 930
Volume Purged (liter)									
Rate (mL/min)	300	300	300	300	300	300	300	300	300
Depth to Water (ft.)	NA								
pH	6.50	6.51	6.50	6.47	6.43	6.41	6.40	6.38	6.38
Temp. (C)	12.5	12.2	12.2	12.1	12.1	12.1	12.1	12.0	12.0
Conductivity (mS/cm)	0.543	0.539	0.536	0.518	0.485	0.475	0.467	0.466	0.465
Dissolved Oxygen	0.81	0.46	0.33	0.24	0.20	0.19	0.15	0.14	0.14
ORP (mV)	249	242	235	230	223	221	218	216	214
Turbidity (NTU)	20.4	18.6	10.4	8.6	5.2	4.8	3.2	2.1	2.2
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Cyanide		
1,4-Dioxane		
Sample ID: MW-106C	Sample Time: 935	
MS/MSD: Yes / (No)		
Duplicate: Yes / (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - 0/cor, color-less, odor-less

M+E Split sample collected

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDC | AES
Well ID: MW-106A
Client / Job Number: P/P
Date: 12/2/05
Weather: 40s, Cloudy
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	8.20	(from MP)
Total Depth:	(feet)	19.85	(from MP)
Length of Water Column:	(feet)	11.65	
Volume of Water in Well:	(gal)	1.89	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	~~Bladder~~	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	300	Water-Quality Meter Type:	Horiba U-22 / Eureka Manta
Total Volume Removed:	(gal)	~5 gals	Did well go dry: Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

~~pH~~	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	950	955	1000	1005	1010	1015	1020	1025	1030
Volume Purged (liter)									
Rate (mL/min)	300	300	300	300	300	300	300	300	300
Depth to Water (ft.)	8.20	8.25	8.20	8.20	8.20	8.20	8.20	8.20	8.20
pH	6.67	6.66	6.66	6.67	6.66	6.66	6.66	6.65	6.65
Temp. (C)	13.98	14.27	14.26	14.33	14.34	14.32	14.36	14.33	14.32
Conductivity (mS/cm)	0.382	0.388	0.388	0.388	0.387	0.387	0.386	0.386	0.386
Dissolved Oxygen	3.52	2.93	3.01	3.12	2.96	2.92	2.94	2.92	2.93
ORP (mV)	170	167	167	166	166	167	167	168	168
Turbidity (NTU)	30.8	18.5	10.5	8.8	7.9	8.1	8.5	8.2	8.7
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total CN		
1,4-Dioxane		
Sample ID: MW-106A	Sample Time: 1035	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Slightly turbid, No odor.

Peterson/Puritan OU2 Site — **Groundwater Sampling**

Site — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:	SDL	**Well ID:**	SEA 606
Client / Job Number:	37952	**Date:**	12-5-02
Weather:	30°	**Time In:**	**Time Out:**

Well Information

Depth to Water/Time:	(feet)	8.87	(from MP)
Total Depth:	(feet)	22.78	(from MP)
Length of Water Column:	(feet)	13.91	
Volume of Water in Well:	(gal)	2.27	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	~~Stick Up~~	
Well Material:	Stainless Steel	PVC	
Well Locked:	Yes	No	
Measuring Point Marked:	Yes	No	
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other: Bladder
Tubing/Bailer Material:	St. Steel	Polyethylene	~~Teflon~~	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other: Bladder

Duration of Pumping:	(min)	15:15		
Average Pumping Rate:	(ml/min)	300	Water-Quality Meter Type:	Horriba U-22
Total Volume Removed:	(gal)	~5 gals	Did well go dry: Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	15:19	15:24	15:29	15:34	15:39	15:44	15:49	15:54	15:59
Volume Purged (liter)									
Rate (mL/min)	200	300	300	300	300	300	300	300	300
Depth to Water (ft.)	8.87	8.87	8.88	8.88	8.88	8.88	8.88	8.88	8.88
pH	6.48	6.49	6.50	6.49	6.50	6.51	6.51	6.50	6.51
Temp. (C)	9.30	11.90	11.86	11.89	11.90	11.94	11.90	11.90	11.93
Conductivity (mS/cm)	0.513	0.576	0.578	0.578	0.579	0.579	0.580	0.581	0.580
Dissolved Oxygen	3.76	0.19	0.13	0.07	0.03	0.00	0.01	0.01	0.01
ORP (mV)	-53	-68	-72	-74	-76	-77	-78	-80	-79
Turbidity (NTU)	115.0	25.8	6.3	0.7	0.0	0.0	0.0	0.0	0.0
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
1,4 Dioxane		
total cyanide		
Sample ID: 16:00	Sample Time:	SEA-606
MS/MSD: Yes	No	
Duplicate: Yes	No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Clear odorless

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL
Client / Job Number: P/P
Weather:
Well ID: OW-704
Date: 12/6/05
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet) 5.11 (1430 hr)	(from MP)	
Total Depth:	(feet) 23.25	(from MP)	
Length of Water Column:	(feet) 18.14		
Volume of Water in Well:	(gal) 2.957		
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other: Bladder
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other: Bladder

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 250 — Water-Quality Meter Type: Horiba U22
Total Volume Removed: (gal) ~5 gal — Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	9:30	9:35	~~9:40~~ 1100	~~9:45~~ 1105	~~9:50~~ 1110	~~9:55~~ 1115	~~10:00~~ 1120	~~10:05~~ 1125	1130
Volume Purged (liter)									
Rate (mL/min)	250	250	250	250	250	250	250	250	250
Depth to Water (ft.)	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11
pH	6.51	6.61	6.62	6.65	6.65	6.66	6.66	6.65	6.64
Temp. (C)	10.16	11.74	10.90	12.89	13.05	13.07	13.09	13.05	13.02
Conductivity (mS/cm)	1.53	1.65	1.63	1.76	1.76	1.77	1.75	1.75	1.76
Dissolved Oxygen	4.95	1.38	0.62	0.04	0.00	0.00	0.00	0.00	0.00
ORP (mV)	-63	-81	-73	-85	-89	-93	-94	-96	-97
Turbidity (NTU)	317.0	370.0	76.9	47.6	45.4	26.4	12.4	8.4	8.9
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		Woods Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total CN		
1,4-Dioxane		

Sample ID: Sample Time: 1135
MS/MSD: Yes (No)
Duplicate: (Yes) No
Duplicate ID: Dup-2 Dup. Time: 1135
Chain of Custody Signed By: Joseph E.

Problems / Observations

Initial Purge - River water reading @ 9:00
pH 5.88
cond 0.303
turb 9.0
DO 14.48
temp 2.22
ORP 150

Battery died @ 1129.
Restart pumping at 1100

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDC/JSH
Client / Job Number: 37902
Weather:
Well ID: MW-C2
Date: 12/6/05
Time In: ~~900~~ 930 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	3.58	(from MP)
Total Depth:	(feet)	17.80	(from MP)
Length of Water Column:	(feet)	14.22	
Volume of Water in Well:	(gal)	2.318	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 50 Water-Quality Meter Type: Horiba U-22/Hanna Turbidimeter
Total Volume Removed: (gal) ~3gal Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1015	1020	1025	1030	1035	1040	1045	1050	1055
Volume Purged (liter)									
Rate (mL/min)	50	50	50	50	50	50	50	50	50
Depth to Water (ft.)	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
pH	6.74	6.69	6.68	6.67	6.65	6.64	6.63	6.62	6.62
Temp. (C)	4.7	5.1	5.4	5.5	5.9	7.1	7.1	7.3	7.5
Conductivity (mS/cm)	0.460	0.463	0.470	0.469	0.479	0.488	0.493	0.498	0.498
Dissolved Oxygen	5.53	4.05	3.52	3.51	3.48	2.86	2.73	2.52	2.37
ORP (mV)	-41	-42	-42	-42	-42	-43	-43	-43	-43
Turbidity (NTU)	60	60	60	65	65	65	65	60	60
Notes:									

Sampling Information

Analyses	#	Laboratory
3 TCL VOCs	HCl	
6 TCL SVOCs	✓	
4 Pest./PCBs	✓	
1 TAL Metals	HNO3	
* 1,4-Dioxane	✓	
1 Total CN	NaOH	
Sample ID: MW-C2	Sample Time:	1330
MS/MSD:	Yes / No	
Duplicate:	Yes / No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Clear, colorless, odorless

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JMH/JDL
Well ID: MW-C2
Client / Job Number: 37902
Date: 12/6/05
Weather:
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

See Pg 1

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type:
Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	11:00	11:05	11:10	11:15	11:20	11:25	11:30	1135	1140
Volume Purged (liter)									
Rate (mL/min)	50	50	50	50	50	50	50	50	50
Depth to Water (ft.)	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
pH	6.61	6.60	6.60	6.59	6.59	6.58	6.58	6.57	6.57
Temp. (C)	7.5	7.7	7.7	7.7	7.8	7.8	7.6	7.6	7.5
Conductivity (mS/cm)	0.499	0.501	0.494	0.501	0.502	0.506	0.506	0.512	0.507
Dissolved Oxygen	2.20	2.09	1.96	1.81	1.77	1.62	1.55	1.54	1.57
ORP (mV)	-43	-42	-42	-42	-42	-42	-41	-41	-41
Turbidity (NTU)	55	55	55	45	40	44	45	45	45
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

See Pg 1

Sample ID: Sample Time: 1330
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID: Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Initial Purge -

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JMH / JDL
Client / Job Number: 37902
Weather:
Well ID: MW-C2
Date: 12/6/05
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:	1.5"	2"	Other:

see Pg 1

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:		
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1145	1150	1155	1200	1205	1210	1215	1220	1225
Volume Purged (liter)									
Rate (mL/min)	50	50	50	50	50	50	50	50	50
Depth to Water (ft.)	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
pH	6.57	6.56	6.56	6.56	6.56	6.56	6.55	6.55	6.56
Temp. (C)	7.5	7.8	7.6	7.6	7.6	7.6	7.7	7.7	8.0
Conductivity (mS/cm)	0.509	0.505	0.505	0.508	0.503	0.506	0.509	0.509	0.515
Dissolved Oxygen	1.51	1.44	1.29	1.18	1.18	1.15	1.09	1.06	1.04
ORP (mV)	-41	-41	-41	-41	-41	-41	-42	-42	-43
Turbidity (NTU)	40	40	38	38	38	35	37	38	38
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:		Sample Time: 1330
MS/MSD:	Yes	(No)
Duplicate:	Yes	(No)
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

see Pg 1

Problems / Observations

~~Initial Purge~~ - River water @ 14:30
pH 7.02
cond 0.282
turb 3.0
DO 12.43
temp 3.8
ORP -6

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL
Well ID: SEA-603
Client / Job Number: Peterson Puritan PRJ0/3790.003
Date: 12/6/05
Weather: cold (20°s - 30°), cloudy, snow
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	3.70	(from MP)
Total Depth:	(feet)	20.25	(from MP)
Length of Water Column:	(feet)	16.55	
Volume of Water in Well:	(gal)	2.70	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping:	(min)				
Average Pumping Rate:	(ml/min)	300	Water-Quality Meter Type:	Horiba U-22	
Total Volume Removed:	(gal)	~5gl	Did well go dry:	Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1340	1345	1350	1355	1400	1405	1410	1415	1420
Volume Purged (liter)									
Rate (mL/min)	300	300	300	300	300	300	300	300	300
Depth to Water (ft.)	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70
pH	6.47	6.43	6.43	6.44	6.43	6.44	6.44	6.43	6.43
Temp. (C)	10.88	11.08	10.96	10.90	10.95	10.80	10.77	10.83	10.80
Conductivity (mS/cm)	1.30	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
Dissolved Oxygen	2.49	0.37	0.15	0.08	0.14	0.11	0.11	0.13	0.08
ORP (mV)	-60	-63	-64	-63	-64	-63	-63	-63	-63
Turbidity (NTU)	89.5	43.4	34.6	24.6	20.4	11.6	8.2	8.1	7.3
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total Cr		
1,4-Dioxane		
Sample ID: SEA 603	Sample Time: 1435	
MS/MSD: Yes	(No)	
Duplicate: Yes	(No)	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - ~~Clear~~ slightly turbid, colorless, odorless

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL **Well ID:** SED-GW3

Client / Job Number: Peterson Puritan PRP / 37402.003 **Date:** 12/6/05

Weather: Low ... 20's - 30's, Snow, Cloudy **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1425	1430							
Volume Purged (liter)									
Rate (mL/min)	300	300							
Depth to Water (ft.)	3.70	3.70							
pH	6.45	6.44							
Temp. (C)	10.92	10.94							
Conductivity (mS/cm)	1.36	1.36							
Dissolved Oxygen	0.12	0.10							
ORP (mV)	-62	-62							
Turbidity (NTU)	7.0	10.9							
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

Problems / Observations

~~Initial Purge~~ - River reading 1530

pH = 5.72 ORP = 160

Cond. 0.90

Turb. 5.0

DO = 11.62

Temp - 2.9

Peterson/Puritan OU2 Site — *Site* | **Groundwater Sampling** — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL | JMH | **Well ID:** GLF-700a
Client / Job Number: | **Date:** 12/6/05
Weather: | **Time In:** | **Time Out:**

Well Information

Depth to Water/Time:	(feet) 3.55 (1445)	(from MP)	
Total Depth:	(feet) 53.10	(from MP)	
Length of Water Column:	(feet) 49.55		
Volume of Water in Well:	(gal) 8.08		
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min) 250	Water-Quality Meter Type:	Horiba U-22 (Low Flow)	
Total Volume Removed:	(gal) ~1 gal	Did well go dry:	Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

~~pH~~	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1445	1452	1457	1502	1507	1518	1523	1528	1533
Volume Purged (liter)	START								
Rate (mL/min)		250	250	250	250	250	250	250	250
Depth to Water (ft.)	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55
pH		7.05	6.77	6.69	6.66	6.64	6.62	6.60	6.59
Temp. (C)		10.3	11.0	11.2	11.3	11.4	11.8	11.8	11.9
Conductivity (mS/cm)		0.540	0.559	0.556	0.539	0.559	0.561	0.563	0.565
Dissolved Oxygen		4.63	4.12	4.32	4.41	4.23	4.29	4.55	4.62
ORP (mV)		34	51	60	69	66	62	61	61
Turbidity (NTU)		204	210	143	120	79	82	71.1	52.1
Notes:				Pump off	Battery died @1510	Replace battery, resume pumping @1513			

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total CN		
1,4-Dioxane		
Sample ID: GLF-700a	Sample Time: 1605	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Slightly turbid, no odor/sheen

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:

Well ID: GLF-720A

Client / Job Number:

Date:

Weather:

Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

See Pg 1

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1538	1533	1533	1548	1553	1558	1603		
Volume Purged (liter)									
Rate (mL/min)	250	250	250	250	250	250	250		
Depth to Water (ft.)	3.55	3.55	3.55	3.55	3.55	3.55	3.55		
pH	6.59	6.60	6.60	6.59	6.60	6.58	6.58		
Temp. (C)	11.9	11.4	11.3	10.9	10.5	11.6	11.6		
Conductivity (mS/cm)	0.565	0.559	0.558	0.555	0.553	0.564	0.565		
Dissolved Oxygen	4.58	4.52	4.43	4.73	4.68	4.65	4.60		
ORP (mV)	61	62	64	69	72	70	69		
Turbidity (NTU)	43.5	31.4	30.6	29.6	30.1	30.2	30.5		
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge -

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL / JMH
Well ID: MW-C1
Client / Job Number:
Date: 12/7/05
Weather: Sunny, Clear, 30°
Time In: 7:30 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	2.83	(from MP)
Total Depth:	(feet)	68.80	(from MP)
Length of Water Column:	(feet)	65.97	
Volume of Water in Well:	(gal)	10.75	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 50 Water-Quality Meter Type: Horiba U-22 / Flow-Thru Cell
Total Volume Removed: (gal) ~3 gals Did well go dry: Yes / No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	8:40	8:45	8:50	8:55	9:00	9:05	9:10	~~9:15~~ 9:30	9:35
Volume Purged (liter)									
Rate (mL/min)	50	50	50	50	50	50	50	50	50
Depth to Water (ft.)	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83
pH	6.56	6.59	6.58	6.58	6.58	6.58	6.56	~~6.56~~ 6.52	6.55
Temp. (C)	7.5	7.7	7.9	8.0	8.0	7.4	7.8	9.9	9.7
Conductivity (mS/cm)	0.294	0.297	0.301	0.301	0.301	0.295	0.299	0.311	0.310
Dissolved Oxygen	3.03	2.14	1.93	1.77	1.67	1.68	1.76	3.70	1.42
ORP (mV)	-21	-27	-29	-30	-30	-29	-29	-33	-34
Turbidity (NTU)	231	255	236	204	178	158	125	72.9	55.3
Notes:								Had to Switch Controller Empty	

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total CN		
1,4-Dioxane		
Sample ID: MW-C1	Sample Time: 1010	
MS/MSD: Yes / No		
Duplicate: Yes / No		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Orange color, odorless.

River reading 825
pH = 6.07
Cond 0.253
turb = 9.2
DO = 19.24
temp 2.5
ORP: 146

New-thru cell to get ~~rid~~ particles trapped in cell.

River reading @ 11:50

pH 6.80
Cond 0.238
turb 8.2
DO 18.40
temp 3.0
ORP 28

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:
Well ID: MW-C1
Client / Job Number:
Date:
Weather:
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:		
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	940	945	950	955	1000				
Volume Purged (liter)									
Rate (mL/min)	50	50	50	50	50				
Depth to Water (ft.)	2.83	2.83	2.83	2.83	2.83				
pH	6.53	6.52	6.52	6.52	6.51				
Temp. (C)	9.8	9.9	10.1	10.0	10.0				
Conductivity (mS/cm)	0.310	0.312	0.313	0.312	0.313				
Dissolved Oxygen	1.36	1.30	1.33	1.35	1.32				
ORP (mV)	-35	-36	-36	-36	-36				
Turbidity (NTU)	42.4	33.9	27.7	25.4	25.3				
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

~~Initial Purge~~ -

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:	SEIC / KMG	**Well ID:**	SEA-602a
Client / Job Number:	PTP	**Date:**	12-7-05
Weather:		**Time In:**	7:30 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	4.33 (7:30)	(from MP)
Total Depth:	(feet)	22.75	(from MP)
Length of Water Column:	(feet)	18.42	
Volume of Water in Well:	(gal)	3.00	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other: Bladder
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other: Bladder

Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	400	Water-Quality Meter Type:	Horiba U-22
Total Volume Removed:	(gal)	10 gal	Did well go dry:	Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1040	1047	1057	1102	1107	1112	1117	1122	1127
Volume Purged (liter)	START								5 gal
Rate (mL/min)		400	400	400	400	400	400	400	400
Depth to Water (ft.)		4.33	~~4.33~~ 6.65	~~4.33~~ 6.75	4.33	4.33	4.33	4.33	4.33
pH		6.55	~~6.68~~	6.73	6.77	6.78	6.83	6.87	6.86
Temp. (C)		11.8	12.1	12.0	12.0	12.1	12.2	11.9	12.0
Conductivity (mS/cm)		5.68	5.79	3.84	3.07	1.84	1.33	0.94	0.75
Dissolved Oxygen		6.31	6.47	4.80	4.80	4.99	4.70	4.81	4.81
ORP (mV)		-43	-51	-53	-56	-54	-55	-55	-55
Turbidity (NTU)		132	20.6	7.2	1.2	1.2	2.2	2.1	1.0
Notes:		Slightly turbid, no odor, sheen		H2O clear					

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha
TCL SVOCs & ~~Pesticides~~	6	Woods Hole
Pest./PCBs		
TAL Metals	1	↓
CN	1	
Sample ID: SEA-602a	Sample Time: 1220	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID —	Dup. Time: —	
Chain of Custody Signed By:	VOL	

Problems / Observations

Initial Purge -

River water @ 7:35

pH 5.76

cond 0.512

NTU 0.0

DO 12.12

temp 1.1

ORP 235

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:
Well ID: SB4-60227
Client / Job Number:
Date: 12/7/05
Weather:
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type:
Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1132	1142	1147	1152	1157	1202	1207		
Volume Purged (liter)							10		
Rate (mL/min)	400	400	400	400	400	400	400		
Depth to Water (ft.)	4.33	4.33	4.33	4.33	4.33	4.33	4.33		
pH	6.94	6.95	7.02	6.98	6.99	6.99	6.99		
Temp. (C)	11.4	11.9	11.4	11.8	11.4	11.4	11.8		
Conductivity (mS/cm)	0.90	0.89	0.90	0.90	0.90	0.90	0.90		
Dissolved Oxygen	4.93	4.77	4.77	4.80	4.81	4.80	4.91		
ORP (mV)	-58	-63	-63	-65	-64	-64	-65		
Turbidity (NTU)	0.0	1.2	2.7	3.1	2.2	0.0	0.2		
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

Problems / Observations

Initial Purge -

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JMH / JDL
Well ID: MW-108AA
Client / Job Number: 37902
Date: 12/7/05
Weather: Cloudy, cold
Time In: 1400 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	7.96	(from MP)
Total Depth:	(feet)	11.50	(from MP)
Length of Water Column:	(feet)	3.54	
Volume of Water in Well:	(gal)	0.58	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) 250
Total Volume Removed: (gal) ~5 gal
Water-Quality Meter Type: Horiba U-22 / Lamotte turbidity
Did well go dry: Yes / No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3875 ml = 0.1337 cubic feet

Unit Stability

~~pH~~	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1445	1450	1455	1500	1505	1510	1515	1520	1525
Volume Purged (liter)									
Rate (mL/min)	250	250	250	250	250	250	250	250	250
Depth to Water (ft.)	7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.96
pH	6.27	6.24	6.21	6.24	6.24	6.22	6.22	6.22	6.21
Temp. (C)	8.4	8.7	9.0	8.6	8.6	8.6	8.4	8.3	8.3
Conductivity (mS/cm)	0.168	0.172	0.176	0.187	0.187	0.188	0.187	0.187	0.187
Dissolved Oxygen	6.84	4.00	1.96	0.50	0.30	0.18	0.11	0.07	0.05
ORP (mV)	84	48	38	45	44	45	43	42	41
Turbidity (NTU)	36	22	14	6.4	4.5	3.5	3.0	~~3.72~~ 3.04	2.94
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total CN		
1,4-Dioxane		
Sample ID: MW-108AA	Sample Time: 1530	
MS/MSD: Yes / No		
Duplicate: Yes / No		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge - Clear, colorless, odorless.

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: KRISTINA GROSS
Well ID: SEA-605
Client / Job Number: PETERSON PURITAN PRP / 37902.023
Date: 12/7/05
Weather: 20's, partly cloudy
Time In: 1440
Time Out:

Well Information

Depth to Water/Time:	(feet) 7.82 (1445)	(from MP)	
Total Depth:	(feet) 23.10	(from MP)	
Length of Water Column:	(feet) 15.28		
Volume of Water in Well:	(gal) 2.49		
Wellhead PID Reading:	(ppm) 0.0		

Well Type:	Flushmount	Stick-Up	
Well Material:	Stainless Steel	PVC	
Well Locked:	Yes	No	
Measuring Point Marked:	Yes	No	
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) 275 — Water-Quality Meter Type: HORIBA U-22

Total Volume Removed: (gal) ~5 gal — Did well go dry: Yes / No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1453	1503	1508	1513	1518	1523	1528	1533	1538
Volume Purged (liter)	START								
Rate (mL/min)	~	275	275	275	275	275	275	275	275
Depth to Water (ft.)	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82
pH		6.29	6.31	6.34	6.33	6.35	6.35	6.35	6.34
Temp. (C)		9.59	9.58	9.55	9.69	9.48	9.51	9.46	9.25
Conductivity (mS/cm)		0.389	0.390	0.387	0.386	0.384	0.384	0.382	0.382
Dissolved Oxygen		0.10	0.11	0.06	0.10	0.02	0.02	0.00	0.00
ORP (mV)		-26	-32	-40	-44	-48	-51	-53	-56
Turbidity (NTU)		10.00	14.21	10.49	9.8	8.96	7.86	5.55	
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	ALPHA
TCL SVOCs	2	Woods Hole
Pest./PCBs	2	↓
TAL Metals	1	↓
1,4 Dioxane	2	↓
Ca	1	↓

Sample ID: SEA-605 — Sample Time: 1540

MS/MSD: Yes / No

Duplicate: Yes / No

Duplicate ID: — — Dup. Time: —

Chain of Custody Signed By: JDL

Problems / Observations

Initial Purge -

Surface H2O / river adjacent.

@1510 / @ 1600

pH - 7.13 / 7.03

temp - 5.0 / 5.0

cond - 0.321 / 0.309

DO - 0.94 / 2.6 / 13.61

ORP - 48 / 42

turb - 0.0 / 0.0

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JMH/JDL
Client / Job Number: 37902
Weather: Sunny, clear, ~30°F

Well ID: MW-A2
Date: 12-8-05
Time In: 8:30 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	6.72	(from MP)
Total Depth:	(feet)	38.88	(from MP)
Length of Water Column:	(feet)	32.16	
Volume of Water in Well:	(gal)	5.24	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	(1.5")	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Bladder)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Bladder)	Other:

Duration of Pumping: (min) 60 min
Average Pumping Rate: (ml/min) 50 Water-Quality Meter Type:
Total Volume Removed: (gal) ~1 gal Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	910	915	920	925	930	935	940	945	950
Volume Purged (liter)									
Rate (mL/min)	50	50	50	50	50	50	50	50	50
Depth to Water (ft.)	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72
pH	6.24	6.07	6.07	6.08	6.08	6.08	6.07	6.08	6.07
Temp. (C)	4.4	5.3	5.5	7.5	7.7	7.6	8.0	7.8	7.9
Conductivity (mS/cm)	0.262	0.265	0.267	0.278	0.281	0.285	0.287	0.290	0.290
Dissolved Oxygen	3.46	2.24	2.07	1.75	1.71	1.65	1.62	1.61	1.59
ORP (mV)	224	218	219	222	222	223	224	225	225
Turbidity (NTU)	8.35	2.60	2.96	2.66	1.65	1.15	1.02	0.74	0.90
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID: MW-A2 Sample Time: 10:10
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Initial Purge -

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JMH/JDL
Well ID: MW-A2
Client / Job Number:
Date: 12/8/05
Weather:
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type:
Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	955	1000							
Volume Purged (liter)									
Rate (mL/min)	50	50							
Depth to Water (ft.)	6.72	6.72							
pH	6.05	6.05							
Temp. (C)	8.1	8.0							
Conductivity (mS/cm)	0.293	0.294							
Dissolved Oxygen	1.55	1.56							
ORP (mV)	226	226							
Turbidity (NTU)	1.52	1.53							
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID: Sample Time: 10:10
MS/MSD: Yes No
Duplicate: Yes No
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Initial Purge -

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL/JMH
Well ID: MW-502
Client / Job Number:
Date: 12/13/05
Weather:
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet) 14.45	(from MP)
Total Depth:	(feet) —pump	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		~~Stick-Up~~
Well Material:	Stainless Steel		~~PVC~~
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1.5"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	~~Peristaltic~~	Bladder	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min) 300	Water-Quality Meter Type:	Horriba U-22/turbidimeter	
Total Volume Removed:	(gal) ~5 gal	Did well go dry:	Yes (No)	

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1305	1310	1315	1320	1325	1330	1335	1340	1345
Volume Purged (liter)									
Rate (mL/min)	300	300	300	300	300	300	300	300	300
Depth to Water (ft.)	N/A								
pH	7.33	7.22	6.82	6.69	6.69	6.69	6.67	6.67	6.67
Temp. (C)	12.1	12.1	12.0	12.0	12.1	12.1	12.1	12.1	12.0
Conductivity (mS/cm)	0.799	0.421	0.378	0.369	0.360	0.366	0.366	0.365	0.366
Dissolved Oxygen	4.21	3.99	2.56	2.38	1.95	1.97	1.90	1.90	1.89
ORP (mV)	273	251	248	231	226	222	219	218	217
Turbidity (NTU)	12.4	8.2	5.4	3.1	2.1	3.2	1.4	2.3	1.3
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Total CN		
1,4 Dioxane		

Sample ID: MW-502 Sample Time: 1350
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID: Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Initial Purge -

Tubing intake @ ~5' below TIC.
Attempted to sample well with dedicated pump in well. After pumping for approx. 10-15 minutes, no water was discharging from the well. Sampled w/ Peristaltic Pump through WL measurement hole in pucap. Cannot sample VOCs w/ bailer due to cap.

Peterson/Puritan OU2 Site — *Site*

Groundwater Sampling — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEL
Client / Job Number: 3719.02
Weather:
Well ID: GW-701
Date: 12-8-05
Time In: 14:00 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	7.5	(from MP)
Total Depth:	(feet)	20.46	(from MP)
Length of Water Column:	(feet)	12.96	
Volume of Water in Well:	(gal)	2.11	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1.5" 2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	~~Bladder~~	Other: R

Duration of Pumping:	(min)		
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:	
Total Volume Removed:	(gal)	Did well go dry: Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9	
	14:33	14:38	14:43	14:48	14:53	14:58	15:03	15:08	15:13	15:18
Volume Purged (liter)										
Rate (mL/min)	100	100	100	100	100	100	100	100	100	100
Depth to Water (ft.)	7.50	7.5	7.5	7.5	7.5	7.5	.05	7.5	7.5	7.5
pH	5.66	5.78	5.84	5.91	5.92	5.96	6.01	6.05	6.07	6.05
Temp. (C)	10.77	10.88	10.76	10.63	10.72	10.80	10.70	10.26	10.68	10.16
Conductivity (mS/cm)	0.305	0.293	0.292	0.290	0.287	0.287	0.286	0.286	0.287	0.286
Dissolved Oxygen	1.36	0.82	0.72	0.63	0.60	0.45	0.41	0.50	0.31	0.46
ORP (mV)	36	31	26	20	18	13	11	8	6	5
Turbidity (NTU)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Notes:										

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Problems / Observations

Initial Purge -

Sample time 15:20

151

Peterson/Puritan OU2 Site — **Groundwater Sampling**

Site — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JMH — **Well ID:** MW-EA1

Client / Job Number: — **Date:** 12/9/09

Weather: Snow — **Time In:** 8:30 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	22.71	(from MP)
Total Depth:	(feet)	~40.00	(from MP)
Length of Water Column:	(feet)	17.29	
Volume of Water in Well:	(gal)	2.82	
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1.5"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Bladder	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Bladder	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) 100 — Water-Quality Meter Type: Horiba U-22

Total Volume Removed: (gal) ~2 gals — Did well go dry: Yes / No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	8:40	8:45	8:50	855	900	905	910	915	
Volume Purged (liter)									
Rate (mL/min)	100	100	100	100	100	100	100	100	
Depth to Water (ft.)	22.71	22.71	22.71	22.71	22.71	22.71	22.71	22.71	
pH	6.31	6.11	6.10	6.09	6.09	6.08	6.07	6.07	
Temp. (C)	8.9	9.5	9.8	9.9	9.9	10.2	10.1	9.9	
Conductivity (mS/cm)	0.486	0.501	0.514	0.518	0.519	0.522	0.523	0.522	
Dissolved Oxygen	5.26	4.51	4.3	4.22	4.23	4.18	4.18	4.15	
ORP (mV)	182	190	205	209	211	216	219	222	
Turbidity (NTU)									
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: MW-EA1	Sample Time: 945	
MS/MSD: Yes / No		
Duplicate: Yes / No		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial Purge -

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG GLF

Sampling Personnel: SEK JDL **Well ID:** ~~GLF~~ 700a (5-10)
Client / Job Number: 37902 **Date:** 11-9-05
Weather: Cloudy 40° **Time In:** **Time Out:**

Well Information Stick-up = ~~1.5~~ 2.0'

Depth to Water/Time:	(feet)	4.62 (8:38)	(from MP)
Total Depth:	(feet)	10'	(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	NA	Yes	No
Measuring Point Marked:	NA	Yes	No
Well Diameter:	1"	(2")	Other:

Purging Information Pump Start: 8:55

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping:	(min)		
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:	Horiba U-22
Total Volume Removed:	(gal) ~30 gals	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	857	902	907	912	917	922	927	932	937
Volume Purged (liter)									
Rate (mL/min)	3.615	2400	2400	2400	2400	2400	2400	2400	2400
Depth to Water (ft.)	~~2408~~	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
pH	6.63	6.51	6.43	6.38	6.37	6.38	6.38	6.38	6.39
Temp. (C)	13.09	13.49	13.73	13.95	14.07	14.22	14.26	14.34	14.43
Conductivity (mS/cm)	0.430	0.543	0.632	0.802	0.891	0.963	1.08	1.15	1.18
Dissolved Oxygen	2.59	0.71	0.07	0.00	0.00	0.00	0.00	0.00	0.00
ORP (mV)	~~500~~ 5	-10	-20	-32	-48	-56	-62	-66	-71
Turbidity (NTU)	~~999~~	590	298	165	110	87.5	83.4	80.7	83.6
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: GLF ~~GLF~~ 700a	Sample Time: 950	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG GWLK

Sampling Personnel: SDL/SEK **Well ID:** ~~GWB~~-700a (5-10)

Client / Job Number: **Date:** 11/9/05

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

see Page 1

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	942	947							
Volume Purged (liter)									
Rate (mL/min)	240	240							
Depth to Water (ft.)	3.61	3.61							
pH	6.40	6.40							
Temp. (C)	14.46	14.52							
Conductivity (mS/cm)	1.22	1.23							
Dissolved Oxygen	0.00	0.00							
ORP (mV)	-76	-78							
Turbidity (NTU)	89.6	88.3							
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:	Sample Time:	
MS/MSD: Yes	No	
Duplicate: Yes	No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK/JDa **Well ID:** GLF-700a (25-30)

Client / Job Number: **Date:** 11/9/05

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet) 3.25	(from MP)	
Total Depth:	(feet)	(from MP)	
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)		

Well Type:		Flushmount	Stick-Up
Well Material:	N/A	Stainless Steel	PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:		1" 2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type: Horiba U-22

Total Volume Removed: (gal) ~75 gal/s Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1430	1435	1440	1445	1450	1455	1500	1505	1510
Volume Purged (liter)									
Rate (~~ml/min~~) gal/min	3600	3600	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Depth to Water (ft.)	3.35	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40
pH	6.74	6.68	6.60	6.63	6.68	6.72	6.74	6.75	6.76
Temp. (C)	14.89	14.98	14.87	14.79	14.74	14.68	14.64	14.62	14.57
Conductivity (mS/cm)	0.545	1.11	1.30	1.41	1.49	1.57	1.62	1.66	1.67
Dissolved Oxygen	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ORP (mV)	-72	-97	-99	-105	-110	-116	-121	-124	-128
Turbidity (NTU)	965	5994	917	800.2	768	279	204	122	124
Notes:									

2.5 gal in 5 min

2 33.40
2 37.10

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: GLF-700a (25-30)	Sample Time: 1535	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Drill water -1520
pH 8.34
cond 0.269
turb 0.0
DO 11.63
temp 10.98
ORP -94

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK/SDL **Well ID:** GLF-700a (25-30)
Client / Job Number: **Date:** 11/9/05
Weather: **Time In:** 1150 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	23.30 1152	(from MP)
Total Depth:	(feet)	30'	(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)		

Well Type:	N/A	Flushmount	Stick-Up
Well Material:		Stainless Steel	PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:		1" 2"	Other:

Purging Information

Stickup = ~2.0'

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type:
Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1232	1237	1300	1305					
Volume Purged (liter)									
Rate (mL/min)	1800	1800	750						
Depth to Water (ft.)	18.75	24.00	23.25						
pH	7.08	6.79	6.78						
Temp. (C)	15.17	15.52	16.22						
Conductivity (mS/cm)	0.636	0.560	1.25						
Dissolved Oxygen	1.42	1.35	2.28						
ORP (mV)	-95	-88	-102						
Turbidity (NTU)	563	453	409.0						
Notes:			problems w/ pump. trying to get water level to stabilize						

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID: Sample Time:
MS/MSD: Yes No
Duplicate: Yes No
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Start pump @ 12:27 GL = 14.9

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GLF-700a (25-30)

Client / Job Number: **Date:** 11/9/05

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1515	1520	1525	1530					
Volume Purged (liter)									
Rate (~~ml/min~~ Gal/min)	1.5	1.5	1.5	1.5					
Depth to Water (ft.)	3.40	3.40	3.40	3.40					
pH	6.76	6.76	6.76	6.76					
Temp. (C)	14.56	14.56	14.54	14.48					
Conductivity (mS/cm)	1.68	1.68	1.70	1.71					
Dissolved Oxygen	0.00	0.00	0.00	0.00					
ORP (mV)	-129	-131	-132	-133					
Turbidity (NTU)	82.4	74.6	50.4	48.2					
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: ~~GLF-700a (45-50)~~ JDL/SLE/k Well ID: GLF-700a (45-50)

Client / Job Number: Peterson Puritan Date: 11/16/05

Weather: 50°, rain Time In: Time Out:

Well Information

Depth to Water/Time:	(feet) 2.91	(from MP)	
Total Depth:	(feet)	(from MP)	
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

N/A

Purging Information

Stick up ~2' ags

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 800	2 805	3 810	4 815	5 820	6 825	7 830	8 835	9 840
Volume Purged (liter)					~20 gal				~40 gal
Rate (mL/min)	3000	3500	3500	3500	3500	3500	3500	3500	3500
Depth to Water (ft.)	2.82	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93
pH	6.48	6.26	6.25	6.23	6.20	6.20	6.21	6.23	6.25
Temp. (C)	13.10	13.24	13.14	13.09	13.14	13.09	13.09	13.09	13.09
Conductivity (mS/cm)	0.452	0.503	0.528	0.533	0.534	0.532	0.530	0.529	0.528
Dissolved Oxygen	0.03	1.45	3.80	4.44	4.95	5.22	5.42	5.59	5.75
ORP (mV)	21	26	25	27	33	34	39	41	44
Turbidity (NTU)	>999	>999	258.0	193.0	136.0	123.0	76.3	69.6	58.0
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Lab
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: GLF-700a (45-50)	Sample Time: 940	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GLF-700a (45-50)

Client / Job Number: **Date:** 11/10/05

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

see Page 1

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	845	850	855	900	905	910	915	920	925
Volume Purged (liter)			~55gal					~75gals	
Rate (mL/min)	3500	3500	3500	3500	3500	3500	3500	3500	3500
Depth to Water (ft.)	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93
pH	6.28	6.32	6.37	6.36	6.40	6.48	6.50	6.54	6.49
Temp. (C)	13.07	13.07	13.07	13.07	12.99	13.07	13.07	13.07	13.06
Conductivity (mS/cm)	0.527	0.526	0.526	0.525	0.524	0.523	0.523	0.523	0.522
Dissolved Oxygen	5.95	6.04	6.28	6.32	6.48	6.48	6.50	6.55	6.55
ORP (mV)	46	47	48	52	50	46	50	50	52
Turbidity (NTU)	45.3	42.6	34.2	22.5	21.4	23.4	26.3	28.1	17.3
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

275-gals - 10-30

75gals - 30-50

- 75gals yesterday

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GZE-7009 (45-50)

Client / Job Number: **Date:** 11/10/05

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

Purging Information

See pg 1

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	930	935							
Volume Purged (liter)									
Rate (mL/min)	3500	3500							
Depth to Water (ft.)	2.93	2.93							
pH	6.49	6.48							
Temp. (C)	13.05	13.06							
Conductivity (mS/cm)	0.522	0.522							
Dissolved Oxygen	6.61	6.60							
ORP (mV)	53	55							
Turbidity (NTU)	12.9	10.5							
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK / SDK
Well ID: GLF-700a (65-70)
Client / Job Number: Peterson / Puritan 37652.003
Date: 11/10/05
Weather:
Time In: 1120 Time Out:

Well Information

Depth to Water/Time:	(feet) 2.64	(from MP)	
Total Depth:	(feet)	(from MP)	
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)		

Well Type:		Flushmount	Stick-Up
Well Material:		Stainless Steel	PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:	1"	2"	Other:

Purging Information

Stickup = ~2.0' bgs

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type:
Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1129	1134	1139	1144	1149	1154	1159	1204	1209
Volume Purged (liter)									
Rate (~~mL/min~~ gal/min)	1	1	1	1	1	1	1	1	1
Depth to Water (ft.)	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55
pH	7.10	6.68	6.45	6.35	6.31	6.28	6.28	6.27	6.24
Temp. (C)	13.19	13.49	13.44	13.28	13.19	13.15	13.11	13.12	13.15
Conductivity (mS/cm)	0.419	0.420	0.419	0.418	0.417	0.418	0.416	0.416	0.416
Dissolved Oxygen	5.94	5.65	6.08	6.48	6.83	7.05	7.94	7.34	7.42
ORP (mV)	94	89	99	100	110	113	111	102	98
Turbidity (NTU)	>999	>999	>999	>999	>999	>999	>999	>999	>999
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Lab
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: GLF-700a (65-70)	Sample Time:	1235
MS/MSD: Yes / No		
Duplicate: Yes / No		
Duplicate ID: —	Dup. Time: —	
Chain of Custody Signed By:		

Problems / Observations

Drill Water 111005 - 1230

pH - 8.41
cond - 0.252
turb - 1.3
DO - 10.95
ORP - -83
Temp - 10.82

1050

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GLF-700a (GS-70)

Client / Job Number: **Date:** 11/10/05

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

see Pg 1

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1214	1219	1224	1229	1234				
Volume Purged (liter)									
Rate ~~(ml/min)~~ Gal/min	1	1	1	1	1				
Depth to Water (ft.)	2.55	2.55	2.55	2.55	2.55				
pH	6.24	6.25	6.27	6.30	6.35				
Temp. (C)	13.12	12.98	13.03	12.99	13.02				
Conductivity (mS/cm)	0.416	0.416	0.416	0.416	0.416				
Dissolved Oxygen	7.47	7.64	7.64	7.61	7.62				
ORP (mV)	100	100	99	92	90				
Turbidity (NTU)	>999	>999	>999	>999	>999				
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: S Klimek, D Cornell **Well ID:** GLF-706a ~~(25-35')~~ DRY (30-35')
Client / Job Number: BPP, Drilling 37902 **Date:** 10-11-05
Weather: rainy, 55° **Time In:** 9:00 **Time Out:** 11:30

Well Information

Depth to Water/Time:	(feet)	15' bgs.	(from MP)
Total Depth:	(feet)	35'	(from MP)
Length of Water Column:	(feet)	20	
Volume of Water in Well:	(gal)	3.2	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	NA	Flushmount	Stick-Up
Well Material:		Stainless Steel	PVC
Well Locked:	NA	Yes	No
Measuring Point Marked:	NA	Yes	No
Well Diameter:		1" (2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping:	(min)	75		
Average Pumping Rate:	(ml/min)	500	Water-Quality Meter Type:	Horiba U-22
Total Volume Removed:	(gal)	13 gallons	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1000	1010	1015	10.20	10:25	10:30	10:35	10:40	10.45
Volume Purged (liter)	0.0		2.5gal				6.5		
Rate (mL/min)	500	500	500	500	500	500	800	500	500
Depth to Water (ft.)	15.18	15.80	15.80	15.83	15.83	15.82	15.82	15.82	15.82
pH	7.08	7.49	7.83	7.54	8.06	8.08	7.97	7.82	7.72
Temp. (C)	15.9	16.8	16.7	16.6	16.5	16.5	16.5	16.5	16.4
Conductivity (mS/cm)	0.317	0.310	0.308	0.307	0.306	0.304	0.302	0.300	0.299
Dissolved Oxygen	8.1	6.74	6.51	6.29	6.05	5.95	5.80	5.44	5.24
ORP (mV)	274	248	229	229	230	201	64	-16	-50
Turbidity (NTU)	21.0	20.6	17.9	18.1	21.0	26.7	56.6	70.1	64.4
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL (VOCs)	3	Woods Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: GLF-706a	Sample Time:	11:15
MS/MSD: Yes	(No)	
Duplicate: Yes	(No)	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:	SEK	

Problems / Observations

7.5' - PVC casing is 7.5' above ground surface. DTW ~~should be~~ measurements reflect this.
no sheen, no odor.

Bottom of Packer installed @ 30.0 ft bgs

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GLF-706a (338'-352') DAR 30 350'

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

See page 1

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	10:49	10:53	10:57	11:01	11:05	11:09	11:13		
Volume Purged (liter)							13.00		
Rate (mL/min)	500	500	500	500	500	500	500		
Depth to Water (ft.)	15.82	15.82	15.82	15.82	15.82	15.83	15.83		
pH	7.68	7.58	7.44	7.43	7.37	7.31	7.25		
Temp. (C)	16.4	16.3	16.3	16.3	16.2	16.1	16.1		
Conductivity (mS/cm)	0.298	0.298	0.297	0.297	0.296	0.297	0.296		
Dissolved Oxygen	5.08	4.93	4.40	3.97	3.68	3.41	3.20		
ORP (mV)	-71	-86	-101	-113	-120	-125	-128		
Turbidity (NTU)	60.5	56.6	52.8	55.1	53.5	51.9	52.8		
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site — Vertical Profile

Site — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: S. Klinek, D. Cornell — **Well ID:** GLF-7060 (-53-55) DAR 50-55
Client / Job Number: 3790Q — **Date:** 10-11-05
Weather: Rain 55° — **Time In:** 1300 — **Time Out:**

Well Information

Depth to Water/Time:	(feet)	14.5	(from MP)
Total Depth:	(feet)	55'	(from MP)
Length of Water Column:	(feet)	40.5	
Volume of Water in Well:	(gal)	6.48	
Wellhead PID Reading:	(ppm)	ND	

Well Type: NA	Flushmount		Stick-Up
Well Material:	(Stainless Steel)		PVC
Well Locked: NA	Yes		No
Measuring Point Marked: NA	Yes		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping: (min) 40
Average Pumping Rate: (ml/min) ≈ 580 — Water-Quality Meter Type: Horiba U-22
Total Volume Removed: (gal) 6.5 gallons — Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
		13:05	13:10	13:15	13:20	13:25	13:30	13:35	13:40
Volume Purged (liter)		~	7.5			15	20	21.25	23.25
Rate (mL/min)	inside/outside	.75	.75	.70	.70	.70	.40	.25	.40
Depth to Water (ft.)	14.5/100	14.73	14.68	14.81	15.41	16.80	17.14	17.16	17.14
pH		7.86	8.02	8.19	8.33	8.45	8.51	8.56	8.58
Temp. (C)		15.8	16.4	16.6	16.7	N.T	16.8	16.8	16.8
Conductivity (mS/cm)		0.306	0.303	0.303	0.303	0.303	0.302	0.302	0.302
Dissolved Oxygen		8.33	6.99	6.40	6.30	6.20	6.08	5.94	5.89
ORP (mV)		245	195	193	194	188	186	182	177
Turbidity (NTU)		31.9	350	38.5	41.1	42.9	43.3	42.0	44.2
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL (VOCs)	3	Woods Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: GLF-7060A	Sample Time:	1345
MS/MSD: Yes (50-55) No		
Duplicate: Yes (No)		
Duplicate ID —	Dup. Time: —	
Chain of Custody Signed By: SEK		

Problems / Observations

No visible sheens or obvious odors

Bottom of Packer installed @ 50.0 ft bgs

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK + DAK
Well ID: GLF-706a (73-75) 70-75' DAD
Client / Job Number: 379.02
Date:
Weather: Rain & 55°F
Time In: 15:00 Time Out: 1625

Well Information

Depth to Water/Time:	(feet)	11.62	(from MP)
Total Depth:	(feet)	75'	(from MP)
Length of Water Column:	(feet)	63.38	
Volume of Water in Well:	(gal)	10.14	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	NA	Flushmount	Stick-Up
Well Material:		Stainless Steel	PVC
Well Locked:	NA	Yes	No
Measuring Point Marked:	NA	Yes	No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping:	(min)	55			
Average Pumping Rate:	(ml/min)	400	Water-Quality Meter Type:	Horiba U-22	
Total Volume Removed:	(gal)	≈ 6.38	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 Intial	2 1530	3 15:35	4 15:40	5 15:45	6 15:50	7 15:55	8 16:00	9 16:05
Volume Purged (liter)	—		4.5	5.0		7.0	8.0		13.0
Rate (mL/min)	500	200	200	100	200	200	200	500	500
Depth to Water (ft.)	11.62	21.2'	20.79	20.03	20.17	20.33	21.19	22.31	23.42
pH	8.35	7.91	7.83	7.81	7.67	7.63	7.50	7.53	7.35
Temp. (C)	15.7	15.6	15.4	15.2	15.3	15.5	15.3	16.5	16.9
Conductivity (mS/cm)	.240	0.265	0.265	0.251	0.249	0.251	0.273	0.268	0.267
Dissolved Oxygen	8.35	6.01	5.39	5.07	4.82	4.54	4.04	4.79	3.86
ORP (mV)	-41	-28	-37	-43	-46	-57	-51	-34	-78
Turbidity (NTU)	>999	>999	>999	>999	>999	>999	>999	>999	>999
Notes:	Water 12.1' outside Packer Casing						DTW outside 12.1		turn rate up

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Woods Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: GLF-706A (70-75)	Sample Time:	16:25
MS/MSD: Yes	No	
Duplicate: Yes	No	
Duplicate ID —	Dup. Time:	—
Chain of Custody Signed By: SEK		

Problems / Observations

DTW outside packer 12.1 @ 15.55

No noticeable sheens or odors

Bottom of Packer installed @ 70-75'

Peterson/Puritan OU2 Site

Site | *Event* 70-75 (MW)

GROUNDWATER SAMPLING LOG

Sampling Personnel: | **Well ID:** OLF-706a (73-75)

Client / Job Number: | **Date:**

Weather: | **Time In:** | **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up	
Well Material:	Stainless Steel	PVC	
Well Locked:	Yes	No	
Measuring Point Marked:	Yes	No	
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:		
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	16:10	16:15	16:20						
Volume Purged (liter)		21.0	24.0						
Rate (mL/min)	800	800	600						
Depth to Water (ft.)	24.0	25.90	26.49						
pH	7.37	7.35	7.36						
Temp. (C)	16.3	16.8	16.8						
Conductivity (mS/cm)	0.247	0.267	0.261						
Dissolved Oxygen	4.02	3.14	3.27						
ORP (mV)	-122	-131	-132						
Turbidity (NTU)	>999	>999	7999						
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site — Vertical Profile

Site — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK / DAC — **Well ID:** GLF-706a (90-95)
Client / Job Number: Peterson Puritan / 89902 — **Date:** 10-12-05
Weather: Rain 55° — **Time In:** 1245 — **Time Out:** 1505

Well Information

Depth to Water/Time:	(feet)	13.95'	(from MP)
Total Depth:	(feet)	95'	(from MP)
Length of Water Column:	(feet)	81.05'	
Volume of Water in Well:	(gal)	12.97	
Wellhead PID Reading:	(ppm)	NA	

Well Type:	NA	Flushmount	Stick-Up
Well Material:		Stainless Steel	PVC
Well Locked:	NA	Yes	No
Measuring Point Marked:	N/A	Yes	No
Well Diameter:		1" (2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping: (min) 135
Average Pumping Rate: (ml/min) ≈ 1500 — Water-Quality Meter Type: Horiba U-22
Total Volume Removed: (gal) ≈ 47.35 — Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1245	1250	1255	1300	1305	1310	1315	1320	1325
Volume Purged (liter)	—	13		28	35.5				67.5
Rate (mL/min)	1000	1600	1500	1500	1500	1600	1600	1600	1600
Depth to Water (ft.)	13.95	14.32	16.64	16.55	16.51	16.5	16.49	14.47	16.48
pH	7.72	7.76	7.91	8.00	8.03	7.69	7.49	7.31	7.09
Temp. (C)	15.4	16.2	16.5	16.5	16.3	16.4	16.2	16.1	16.1
Conductivity (mS/cm)	.301	.301	.300	.299	.298	0.291	0.293	0.298	0.306
Dissolved Oxygen	9.64	8.19	7.46	6.96	6.53	5.31	3.37	2.45	2.07
ORP (mV)	253	238	217	162	-81	-245	-254	-255	-249
Turbidity (NTU)	203	178	155	154	372	71000	>1000	>1000	>1000
Notes:	Outside Packer 8.44		Outside Packer 8.44					Outside Packer 8.44	

Sampling Information

Analyses	#	Laboratory
TCL (VOCs)	3	Woods Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID: GLF-706a (95-95)	Sample Time: 15:05	
MS/MSD:	Yes (No)	
Duplicate:	Yes (No)	
Duplicate ID —	Dup. Time: —	
Chain of Custody Signed By:	SEK	

Problems / Observations

Measuring point for GW levels @ is 7.5 ft Above Grade

No Noticeable Sheens or odors

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GLF-706A (90-95')

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:		Flushmount	Stick-Up
Well Material:		Stainless Steel	PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1330	1335	1340	1345	13:50	13:55	14:00	14:05	14:10
Volume Purged (liter)				99.5				131.5	
Rate (mL/min)	1600	1600	1600	1600	1600	1600	1600	1600	1600
Depth to Water (ft.)	16.49	16.57	16.53	16.54	16.56	16.60	16.60	16.61	16.63
pH	6.96	6.84	6.78	6.75	6.73	6.71	6.71	6.70	6.72
Temp. (C)	15.9	15.8	15.7	15.6	15.5	15.4	15.3	15.2	15.1
Conductivity (mS/cm)	0.313	0.322	0.328	0.331	0.335	0.339	0.341	0.343	0.343
Dissolved Oxygen	1.91	1.83	1.78	1.76	1.72	1.66	1.62	1.56	1.50
ORP (mV)	-237	-222	-226	-228	-210	-229	-230	-238	-247
Turbidity (NTU)	873	588	373	315	244	182	163	150	153
Notes:			Outside Packer 9:49'						

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GLF-70aa (90-95)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	14:15	14:20	14:25	14:35	14:40	14:45	14:50	14:55	15:00
Volume Purged (liter)		155.5	162	167	170				179
Rate (mL/min)	1600	1600	1300	1000	600	450	450	450	450
Depth to Water (ft.)	10.65	16.68	16.22	15.94	15.35	14.94	14.88	14.88	14.85
pH	6.73	6.73	6.72	6.63	6.69	6.77	6.77	6.76	6.75
Temp. (C)	15.0	15.0	14.9	14.8	14.8	14.9	14.9	14.8	14.8
Conductivity (mS/cm)	0.342	0.343	0.348	0.353	0.353	0.355	0.356	0.358	0.358
Dissolved Oxygen	1.46	1.40	1.32	2.95	2.00	~~0.33~~ 1.6	1.44	1.34	1.30
ORP (mV)	-256	-262	-273	-233	-269	-285	-288	-290	-295
Turbidity (NTU)	173.0	183.0	145.0	92.2	80.0	79.8	80.7	79.6	80.1
Notes:			generator stopped briefly						

Pump

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Backdrained due to generator shutting down

14:48 1454

Peterson/Puritan OU2 Site — Vertical Profile

Site — Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK / DAC — Well ID: GNP-705b (30'-35')
Client / Job Number: 379.02 Peterson Puritan — Date: 10-13-05
Weather: Overcast, 55° — Time In: 14:25 — Time Out: 1600

Well Information

Depth to Water/Time:	(feet)	24.15	(from MP)
Total Depth:	(feet)	35.0'	(from MP)
Length of Water Column:	(feet)	10.85	
Volume of Water in Well:	(gal)	1.72	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	NA	Flushmount	Stick-Up
Well Material:		(Stainless Steel)	PVC
Well Locked:	NA	Yes	No
Measuring Point Marked:	NA	Yes	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping: (min) 140
Average Pumping Rate: (ml/min) 3400 — Water-Quality Meter Type: Horiba U-22
Total Volume Removed: (gal) 65gal ≈ — Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	14:40	14:45	14:50	14:55	15:00	15:05	15:10	15:15	15:20
Volume Purged (liter)								25 gal	
Rate (mL/min)	500	3400	3400	3400	3400	3400	3400	3400	3400
Depth to Water (ft.)	24.15	24.17	24.18	24.18	24.18	24.18	24.18	24.18	24.19
pH	6.36	6.11	6.21	6.25	6.25	6.25	6.25	6.25	6.25
Temp. (C)	16.3	14.9	14.6	13.9	13.4	12.8	12.5	12.2	12.9
Conductivity (mS/cm)	0.330	0.339	0.357	0.370	0.384	0.398	0.403	0.406	0.408
Dissolved Oxygen	8.19	5.40	3.77	2.90	2.44	2.03	1.85	1.70	1.59
ORP (mV)	19	7	-30	-45	-51	-55	-57	-59	-60
Turbidity (NTU)	550.0	682.0	356.0	252.0	177.0	110.0	82.0	76.0	62.0
Notes:					OUTside packer 23.78			23.79	

OUTside packer 23.83

Sampling Information

Analyses	#	Laboratory
TCL (VOCs)	3	Woods Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID: GNP-705B — Sample Time:
MS/MSD: Yes (30-35') No
Duplicate: Yes (No)
Duplicate ID: — — Dup. Time: —
Chain of Custody Signed By: SEK

Problems / Observations

No Visible Sheens or odors

Bottom of Packer installed @ 30.0'

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GMP-7080 (30-35)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

See Profile

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	15:25	15:30	15:35	15:40	15:45	15:50	15:55	16:00	
Volume Purged ~~(liter) Gallons~~		40			55			65	
Rate (mL/min)	3400	3400	3400	3400	3400	3400	3400		
Depth to Water (ft.)	24.18	24.19	24.19	24.19	24.19	24.19	24.19		
pH	6.25	6.25	6.26	6.26	6.26	6.26	6.26		
Temp. (C)	11.8	11.7	11.5	11.4	11.4	11.3	11.3		
Conductivity (mS/cm)	0.409	0.417	0.410	0.411	0.411	0.411	411		
Dissolved Oxygen	1.50	1.43	1.38	1.32	1.29	1.27	1.26		
ORP (mV)	-60	-61	-62	-63	-63	-64	-64		
Turbidity (NTU)	57.8	54.4	87.7	80.8	49.7	49.1	48.7		
Notes:			Retrieve packer 23.85				23.85		

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site — Vertical Profile

Site — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK / DAC
Well ID: GNP-705b (50-55)
Client / Job Number: 379.02
Date: 10-14-05
Weather: Rain ~ 55 °F
Time In: ~0925 **Time Out:** 1155

Well Information

measuring pt. 8.25 ags

Depth to Water/Time:	(feet)	27.9	(from MP)
Total Depth:	(feet)	55.0'	(from MP)
Length of Water Column:	(feet)	27.1'	
Volume of Water in Well:	(gal)	4.3 gal	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	NA	Flushmount	Stick-Up
Well Material:		(Stainless Steel)	PVC
Well Locked:	NA	Yes	No
Measuring Point Marked:	NA	Yes	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping: (min) 145 min (went dry twice)
Average Pumping Rate: (ml/min) 400 Water-Quality Meter Type: Horiba U-22
Total Volume Removed: (gal) 28.5 Gallons Did well go dry: (Yes) twice No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.765 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	9:30	9:35	9:40	9:45	9:50	9:55	10:00	10:25	10:30
Volume Purged (liter)						5gal			
Rate (mL/min)	350	350	300	400	400	400	400	~~44.70~~	400
Depth to Water (ft.)	27.9	28.5	29.35	31.18	32.0	45.34	51.03	44.70	
pH	6.90	7.17	7.29	7.52	7.73	7.81	7.94	7.91	
Temp. (C)	16.7	17.2	18.1	18.6	18.6	18.6	17.8	16.7	
Conductivity (mS/cm)	0.294	0.291	0.291	0.292	0.292	0.294	0.294	0.294	
Dissolved Oxygen	9.33	7.12	6.45	6.22	5.97	5.83	5.90	9.75	
ORP (mV)	183	155	153	146	139	134	138	156	
Turbidity (NTU)	184.0	157.0	161.0	167.0	148.0	160.0	272.0	242.0	
Notes:							turned pump off		well went dry

Sampling Information

Analyses	#	Laboratory
(TCL VOCs)	3+~~3~~	Woods Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID: GNP-705B Sample Time: 12:00
MS/MSD: Yes (50-55') No
Duplicate: ~~Yes~~ No (PD)
Duplicate ID ~~Dup-1 10-14-05~~ Dup. Time: 1200
Chain of Custody Signed By: SEK

Problems / Observations

@ 8:45 well is dry
50.75 @ 10:05

Beginning @ 955 @ 10:00
outside packer

27.45 27.17 27.25

No Visible Sheens or odors

Bottom of Packer Set @ 50 ft bgs

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK/DAC Well ID: GNP-705B (50-55)

Client / Job Number: Date: 10-14-05

Weather: Rain ≈ 55°F Time In: Time Out:

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	10:43	10:25	10:28	10:33	10:38	10:43	10:48	10:53	
Volume Purged (liter)								≈9.5gal.	
Rate (mL/min)	400	400	400	400	400	400	400	400	
Depth to Water (ft.)	47.0	38.6	39.36	39.65	39.9	40.03	45.20	40.80	
pH		7.60	7.31	7.16	7.05	6.98	6.92	6.87	
Temp. (C)		18.8	16.5	16.9	17.2	17.3	17.2	17.4	
Conductivity (mS/cm)		0.317	0.316	0.316	0.318	0.318	0.318	0.319	
Dissolved Oxygen		8.38	5.03	3.85	2.87	2.53	2.23	2.09	
ORP (mV)		114	107	-103	-99	-97	-96	-85	
Turbidity (NTU)		376.0	357.0	335.0	300	286	270	245	
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Bailer Leaves @ 10:41
2.08

pH 8.25
cond. 0.318
Turb 40.9
DO 3.99
temp 16.01
ORP 129

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK / DAC
Well ID: GNR705b (70-75)
Client / Job Number: 37907 Peterson Puritan
Date: 11-14-05
Weather: Rain 55°
Time In: 13:45 **Time Out:** 1510

Well Information

Depth to Water/Time:	(feet)	20.70	(from MP)
Total Depth:	(feet)	75.0'	(from MP)
Length of Water Column:	(feet)	54.3'	
Volume of Water in Well:	(gal)	8.69	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	NA	Flushmount	Stick-Up
Well Material:		(Stainless Steel)	PVC
Well Locked:	NA	Yes	No
Measuring Point Marked:	NA	Yes	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping:	(min)	70			
Average Pumping Rate:	(ml/min)	1900	Water-Quality Meter Type:	Horiba U-22	
Total Volume Removed:	(gal)	≈ 18	Did well go dry:	Yes	(No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	13:55	14:00	14:05	14:10	14:15	14:20	14:28	14:30	14:35
Volume Purged (liter)		15	16.25	29.75					80.00
Rate (mL/min)	1500	1500	1280	1700	2000	2000	2000	2000	2000
Depth to Water (ft.)	26.6	31.81	34.84	37.2	42.3	43.25	43.70	43.90	44.1
pH	7.01	7.19	7.25	7.02	6.91	6.53	6.46	6.42	6.40
Temp. (C)	17.7	18.4	18.63	18.07	15.98	14.98	14.14	13.72	13.37
Conductivity (mS/cm)	0.287	0.287	0.310	0.455	0.623	0.744	0.777	0.794	0.802
Dissolved Oxygen	8.43	6.94	5.49	4.85	4.12	3.31	2.57	2.16	1.87
ORP (mV)	90	86	40	-40	-22	-16	-15	-15	-17
Turbidity (NTU)	>999	>999	>999	>999	>999	810	340	228	168
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL (VOCs)	3+3	Woods Hole
TCL SVOCs		
Pest./PCBs		
TAL Metals		
705b (70-75)		
Sample ID: GNR-705b	Sample Time:	15:10
MS/MSD: Yes (No)		
Duplicate: (Yes) No		
Duplicate ID Dup-1-10-14-05	Dup. Time:	15:10
Chain of Custody Signed By: SEK		

Problems / Observations

Obstacle packer 23.95

Orange-brown Turbid

No Visible Sheens or odors

Bottom of Packer Set @ 70.0 ft bgs

Peterson/Puritan OU2 Site Vertical Profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GWR705D (80-75)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	14:40	14:45	14:50	14:55	1500	15:05			
Volume Purged (liter)						140L Total			
Rate (mL/min)	2000	2000	2000	2000	2000	2000			
Depth to Water (ft.)	44.17	44.17	44.17	44.18	44.19	44.19			
pH	6.38	6.37	6.36	6.38	6.36	6.36			
Temp. (C)	13.35	12.97	12.94	12.90	12.85	12.83			
Conductivity (mS/cm)	0.808	0.812	0815	0818	0.818	0.818			
Dissolved Oxygen	2.30	2.07	1.63	1.47	1.45	1.43			
ORP (mV)	-16	-20	-21	-22	-23	-23			
Turbidity (NTU)	134	111.0	107.0	103.0	103	99.8			
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Vertical profiling

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK/DAC **Well ID:** GNP-705D (90-98)'
Client / Job Number: Peterson Puritan 379.02 **Date:** 10-17-05
Weather: Sunny 60° **Time In:** 10:30 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	17.30	(from MP)
Total Depth:	(feet)	95.0'	(from MP)
Length of Water Column:	(feet)	77.7'	
Volume of Water in Well:	(gal)	12.43	
Wellhead PID Reading:	(ppm)	NR	

Well Type:	NA	Flushmount	Stick-Up
Well Material:		(Stainless Steel)	PVC
Well Locked:	NA	Yes	No
Measuring Point Marked:	NA	Yes	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:
Duration of Pumping:	(min)	2hr 15min		
Average Pumping Rate:	(ml/min)	1430	Water-Quality Meter Type:	Horiba U-22
Total Volume Removed:	(gal)	50	Did well go dry: Yes	(No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	11:08	11:13	11:18	11:23	11:28	11:33	11:38	11:43	11:48
Volume Purged (liter)				5gal			10gal		
Rate (mL/min)	1200	12.00	11.00	11.00	1250	1250	1250	1480	1450
Depth to Water (ft.)	17.95	17.97	18.00	18.00	18.03	18.03	18.03	18.13	18.15
pH	7.98	8.37	8.48	8.57	8.56	8.54	8.55	8.41	8.29
Temp. (C)	11.89	12.06	12.15	12.12	12.23	12.24	12.25	12.26	12.29
Conductivity (mS/cm)	0.295	0.291	0.289	0.288	0.288	0.287	0.288	0.300	0.309
Dissolved Oxygen	8.95	4.02	2.82	2.30	2.02	1.82	1.72	1.73	1.85
ORP (mV)	-2	-178	-205	-222	-235	-245	-248	-224	-199
Turbidity (NTU)	251.0	221.0	180.0	153.0	140.0	121.0	108.0	86.5	85.0
Notes:	outside 14.98				turn up pumprate			turn pump rate up	outside 15.33

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Sample ID 205
TCL SVOCs		
Pest./PCBs		
TAL Metals		
GNP-705B (90'-95')		
Sample ID GNP705B(90-95)	Sample Time:	13:30
MS/MSD: Yes	(No)	
Duplicate: Yes	(No)	
Duplicate ID —	Dup. Time: —	
Chain of Custody Signed By:	SEK	

Problems / Observations

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GNP-7058 (90-98)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:		
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	11:53	11:58	12:03	12:08	12:13	12:18	12:23	12:28	12:33
Volume Purged (liter)	15 gal			20 gal		25 gal			30 gal
Rate (mL/min)	1450	1450	1450	1450	1450	1450	1450	1550	1550
Depth to Water (ft.)	18.17	18.18	18.19	18.20	18.20	18.20	18.20	18.30	18.31
pH	8.08	7.88	7.72	7.52	7.36	7.21	7.07	6.95	6.85
Temp. (C)	12.29	12.40	12.37	12.36	12.40	12.45	12.40	12.36	12.33
Conductivity (mS/cm)	0.321	0.339	0.361	0.361	0.403	0.425	0.437	0.459	0.466
Dissolved Oxygen	2.08	2.41	2.64	2.99	3.23	3.44	3.61	3.41	3.49
ORP (mV)	-176	-153	-137	-118	-102	-89	-77	-63	-57
Turbidity (NTU)	81.6	79.3	76.1	60.1	51.1	45.2	42.5	41.0	38.3
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GNP-705D(90-98)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

See Page 4

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	12:38	12:43	12:48	12:53	12:58	13:03	13:08	13:13	13:18
Volume Purged (liter)		35gal		39.5	41	42.5	45	47	~~48.5~~ 49
Rate (mL/min)	1550	1550	1550	1550	1550	1550	1550	1550	1550
Depth to Water (ft.)	18.31	18.32	18.33	18.34	18.35	18.36	18.37	18.37	18.38
pH	6.77	6.69	6.63	6.56	6.52	6.48	6.45	6.43	6.40
Temp. (C)	12.36	12.39	12.37	12.47	12.46	12.49	12.49	12.48	12.37
Conductivity (mS/cm)	0.476	0.485	0.492	0.495	0.497	0.497	0.497	0.494	0.497
Dissolved Oxygen	3.53	3.50	3.46	3.47	3.52	3.56	3.59	3.61	3.67
ORP (mV)	-52	-49	-42	-29	-23	-19	-16	-15	-13
Turbidity (NTU)	39.0	47.7	54.0	49.1	47.8	39.1	39.8	36.1	34.7
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GWP-705b (70-95)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	13:23	13:28							
Volume Purged (liter)									
Rate (mL/min)	1850								
Depth to Water (ft.)	18.39								
pH	6.38								
Temp. (C)	12.44								
Conductivity (mS/cm)	0.501								
Dissolved Oxygen	3.67								
ORP (mV)	-12								
Turbidity (NTU)	33.0								
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK / DAC
Well ID: GNP-705D (110-115)
Client / Job Number: Peterson Puritan 37902
Date: 10-17-05
Weather: sunny 60
Time In: 15:10 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	~~17.36~~ SK 7	(from MP)
Total Depth:	(feet)	17.365	(from MP) 115' Total
Length of Water Column:	(feet)	97.35'	
Volume of Water in Well:	(gal)	15.6	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	NA	Flushmount		Stick-Up
Well Material:		Stainless Steel		PVC
Well Locked:	NA	Yes		No
Measuring Point Marked:	NA	Yes		No
Well Diameter:		1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping:	(min)	90			
Average Pumping Rate:	(ml/min)	3200	Water-Quality Meter Type:	U-22	
Total Volume Removed:	(gal)	80 gal	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	15:20	15:25	15:30	15:35	15:40	15:48	15:50	15:55	16:00
Volume Purged (liter)		4gal	7	12	15	20	25	29	33
Rate (mL/min)	2400	3200	3200	3200	3200	3200	3200	3200	3200
Depth to Water (ft.)	18.32	18.54	21.24	21.18	21.20	21.25	21.29	21.30	21.32
pH	7.23	7.94	8.34	7.85	7.81	7.12	6.79	6.57	6.49
Temp. (C)	15.12	15.30	15.90	15.76	15.50	15.25	14.80	14.49	14.37
Conductivity (mS/cm)	0.293	0.289	0.289	0.318	0.380	0.475	0.521	0.557	0.568
Dissolved Oxygen	10.47	8.16	7.79	7.25	6.61	5.61	4.93	3.74	3.31
ORP (mV)	190	185	178	-48	-65	-62	-66	-74	-76
Turbidity (NTU)	503.0	394.0	385.0	>999	>999	>999	423.0	316.0	224.0
Notes:	DTW outside 11.63					11.62			11.63

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Woods
TCL SVOCs		Hall Corp
Pest./PCBs		
TAL Metals		

Sample ID: GNP705D(110-115) Sample Time: 16:50

MS/MSD: Yes (No)

Duplicate: Yes (No)

Duplicate ID: — Dup. Time: —

Chain of Custody Signed By: SEK

Problems / Observations

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GWP705b(110-115)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	16:05	16:10	16:15	16:20	16:25	16:30	16:35	16:40	16:45
Volume Purged (liter)	38	41	46	50	54	60	65	70	75
Rate (mL/min)	3200	3200	3200	3200	3200	3200	3200	3200	3200
Depth to Water (ft.)	21.33	21.35	21.37	21.39	21.40	21.41	21.42	21.43	21.43
pH	6.41	6.38	6.34	6.30	6.28	6.26	6.25	6.25	6.23
Temp. (C)	14.25	14.18	14.07	13.90	13.87	13.77	13.72	13.62	13.59
Conductivity (mS/cm)	0.573	0.576	0.588	0.604	0.609	0.613	0.617	0.623	0.625
Dissolved Oxygen	2.98	2.85	2.70	2.40	2.27	2.15	2.02	1.90	1.83
ORP (mV)	-76	-76	-77	-78	-78	-78	-78	-78	-78
Turbidity (NTU)	158.0	122.0	109.0	92.4	85.4	75.2	68.0	63.2	67.6
Notes:			11.63						11.63

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:	Sample Time:	
MS/MSD:	Yes No	
Duplicate:	Yes No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Drill Water
pH 6.77
Cond. 0.296
Turb 92.0
DO 4.52
Temp 14.33
ORP - 71
Used 80 gallons

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK/DAC **Well ID:** GNP-7050 (130-140)

Client / Job Number: Peterson Puritan 379.02 **Date:** 10-18-05

Weather: Overcast 55 **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	(Stainless Steel)		PVC
Well Locked:	NA	Yes	No
Measuring Point Marked:	NA	Yes	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping: (min) 120 min

Average Pumping Rate: (ml/min) 3000 Water-Quality Meter Type: U-22

Total Volume Removed: (gal) 95 Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	9:30	9:34	9:39	9:44	9:49	9:54	9:59	10:04	10:09
Volume Purged (liter)			7 gal		15gal	20	25	30	35
Rate (mL/min)	1200	0400	2400	4000	4000	4000	4000	4000	3200
Depth to Water (ft.)	20.03	22.53	27.08	27.9	28.1	28.10	28.08	28.04	28.00
pH	7.25	8.00	7.95	7.70	7.56	7.39	7.28	7.21	7.15
Temp. (C)	12.55	13.48	14.80	15.31	15.13	14.94	14.76	14.72	14.60
Conductivity (mS/cm)	0.327	0.361	6.392	6.463	6.487	6.497	0.501	0.506	0.510
Dissolved Oxygen	8.19	5.55	3.34	2.63	2.34	2.07	1.92	1.81	1.72
ORP (mV)	43	-188	-214	-239	-253	-258	-259	-259	-260
Turbidity (NTU)	>999	>999	>999	>999	>999	>999	>999	>999	>999
Notes:	Outside Packer 18.53				Outside 18.53				

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Woods Hole Grp
TCL SVOCs		
Pest./PCBs		
TAL Metals		
GNP-7050 (130-140)		
Sample ID:	Sample Time:	11:30
MS/MSD: (Yes)	No	
Duplicate: Yes	No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:	SEK	

Problems / Observations

Initial: turbid light brown-gray f sand & silty sediment

Drillers used 200 gal of water to Drill to 140' bgs

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** OMW-705b (130-140)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	10:14	10:19	10:24	10:29	10:34	10:39	10:44	10:49	10:54
Volume Purged (liter)	40	43 gal	45	48	51.5	54	59	63	67
Rate (mL/min)	3300		1500	2100	2200	2500	2800	2900	3000
Depth to Water (ft.)	28.00		22.92	24.91	25.41	25.60	25.80	26.02	26.30
pH	7.08		7.04	7.01	6.99	6.96	6.92	6.92	6.89
Temp. (C)	14.58		14.48	14.31	14.11	14.04	13.98	13.94	13.92
Conductivity (mS/cm)	0.513		0.509	0.513	0.536	0.535	0.539	0.541	0.544
Dissolved Oxygen	1.65		3.92	2.45	2.92	2.00	1.61	1.47	1.38
ORP (mV)	-289		-203	-243	-207	-241	-251	-255	-255
Turbidity (NTU)	>999		965	>999	>999	>999	>999	>999	>999
Notes:		pump stopped							

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GNP-705b(130-140)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

See Page 2

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:		
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	10:59	11:04	11:09	11:14	11:19	11:24	11:29	11:34	11:39
Volume Purged (liter)	71	74.5	79.5	84.5	90.0	95.6			
Rate (mL/min)	3100	3100	3500	3500	3800	3800			
Depth to Water (ft.)	26.77	27.20	27.82	27.91	27.99	27.95			
pH	13.99	14.00	14.04	14.15	14.09	14.09			
Temp. (C)	6.88	6.88	6.86	6.84	6.84	6.82			
Conductivity (mS/cm)	0.545	0.547	0.549	0.550	0.552	0.554			
Dissolved Oxygen	1.33	1.30	1.26	1.24	1.22	1.20			
ORP (mV)	-256	-256	-255	-253	-253	-251			
Turbidity (NTU)	>999	>999	>999	>999	>999	>999			
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK / DAC
Well ID: GNP-708a (40-45')
Client / Job Number: 37902
Date: 10-21-05
Weather: Overcast 55
Time In: 14:30 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	17.91	(from MP)
Total Depth:	(feet)	45'	(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)	ND	

Well Type:	NA	Flushmount		Stick-Up
Well Material:		Stainless Steel		(PVC)
Well Locked:	NA	Yes		No
Measuring Point Marked:		Yes		No
Well Diameter:		1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping:	(min)	~85		
Average Pumping Rate:	(ml/min)	3875	Water-Quality Meter Type:	U-22
Total Volume Removed:	(gal)	85	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	14:33	14:38	14:43	14:48	14:53	14:58	15:03	15:08	15:13
Volume Purged (liter)			12 gal	17 gal	21 gal	26 gal	31 gal	37 gal	42 gal
Rate (mL/min)	3200	3200	3200	3200	3200	3300	3300	3300	3300
Depth to Water (ft.)	18.26	18.26	18.26	18.26	18.26	18.27	18.28	18.29	18.29
pH	7.56	8.15	7.94	7.65	7.47	7.30	7.15	7.02	6.94
Temp. (C)	15.06	15.33	15.30	15.15	15.05	14.92	14.80	14.60	14.43
Conductivity (mS/cm)	0.261	0.260	0.256	0.255	0.256	0.261	0.270	0.289	0.306
Dissolved Oxygen	10.11	8.69	5.05	3.30	2.80	2.53	2.27	2.07	1.93
ORP (mV)	157	158	103	-75	-112	-116	-116	-118	-122
Turbidity (NTU)	74.0	68.3	92.6	77.7	93.5	109.0	96.9	68.6	52.1
Notes:	outside 16.09 Packer								

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha Woods
TCL SVOCs		hill group
Pest./PCBs		
TAL Metals		
GNP-708a (40-45)		

Sample ID:		Sample Time:	16:00
MS/MSD:	Yes	No	
Duplicate:	Yes	No	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

80 gal, from surface to 40' bgs, Drillwater used

Drillwater
pH 7.01
cond. 0.253
DO 10.83
ORP -69
turb 64.0
temp 15.44

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** OMP-708a (40-45)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:		Flushmount	Stick-Up
Well Material:		Stainless Steel	PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	15:18	15:23	15:28	15:33	15:38	15:43	15:48	15:53	15:58
Volume Purged (liter)	46gal	51gal	56gal	60gal	65gal	70gal	75gal	80gal	85gal
Rate (mL/min)	3200	3200	3200	3200	3200	3200	3200	3200	3200
Depth to Water (ft.)	18.29	18.29	18.29	18.28	18.28	18.27	18.27	18.27	18.27
pH	6.88	6.83	6.80	6.78	6.77	6.77	6.76	6.76	6.77
Temp. (C)	14.29	14.12	14.02	13.85	13.82	13.74	13.68	13.65	13.63
Conductivity (mS/cm)	0.320	0.331	0.339	0.348	0.350	0.354	0.357	0.359	0.359
Dissolved Oxygen	1.81	1.72	1.66	1.57	1.53	1.49	1.44	1.43	1.41
ORP (mV)	-127	-133	-137	-144	-146	-149	-152	-153	-154
Turbidity (NTU)	43.6	32.7	27.4	23.1	20.8	20.5	17.7	17.7	17.2
Notes:			to packer 16.18						

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK/DAC **Well ID:** GWP-705a (60-65)
Client / Job Number: 37902 **Date:** 10-24-05
Weather: cloudy 55 **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	17.72	(from MP)
Total Depth:	(feet)		(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping:	(min)	70		
Average Pumping Rate:	(ml/min)	4050	Water-Quality Meter Type:	Horiba U-22
Total Volume Removed:	(gal)	75	Did well go dry:	Yes / No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	11:22	11:27	11:32	11:37	11:42	11:47	11:52	11:57	12:02
Volume Purged (liter)			10 gal		20	26	33	39	44
Rate (mL/min)	3000	3000	4000	4000	4000	4000	4000	4000	4000
Depth to Water (ft.)	17.82	17.83	17.85	17.85	17.84	17.84	17.84	17.84	17.84
pH	7.59	8.54	8.15	7.57	7.38	7.25	7.15	7.06	7.02
Temp. (C)	12.74	12.86	12.96	12.98	12.97	12.93	12.99	13.00	12.99
Conductivity (mS/cm)	0.270	0.266	0.292	0.342	0.365	0.378	0.385	0.389	0.390
Dissolved Oxygen	10.59	3.17	2.26	2.15	2.04	1.97	1.86	1.79	1.83
ORP (mV)	141	82	-251	-218	-200	-189	-181	-176	-174
Turbidity (NTU)	186.0	140.0	91.7	59.7	41.7	27.2	21.2	18.0	17.0
Notes:	packer 17.42								

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	VOC
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GNP-705A (60-65)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

2 pages

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	12:07	12:12	12:17	12:22	12:27	12:32			
Volume Purged (liter)	50	55	60	65.0	70	75			
Rate (mL/min)	4000	4000	4000	4000	4000	4000			
Depth to Water (ft.)	17.83	17.83	17.83	17.83	17.83	17.83			
pH	6.97	6.94	6.91	6.90	6.89	6.88			
Temp. (C)	12.99	13.00	13.01	13.00	13.01	13.01			
Conductivity (mS/cm)	0.392	0.393	0.393	0.394	0.394	0.395			
Dissolved Oxygen	1.67	1.59	1.55	1.50	1.48	1.45			
ORP (mV)	-172	-171	-170	-170	-169	-170			
Turbidity (NTU)	415.2	14.0	13.8	13.3	13.1	12.8			
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK DAC
Well ID: GNP-708a (80-85)
Client / Job Number: 359302
Date: 10-24-05
Weather: cloudy 50°
Time In: **Time Out:**

Well Information

Depth to Water/Time:	(feet) 7	(from MP)	stick up 6.8' agl
Total Depth:	(feet) 100.3	(from MP)	
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	~~Grundfos~~	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping:	(min)	100			
Average Pumping Rate:	(ml/min)	3020	Water-Quality Meter Type:	U-22	
Total Volume Removed:	(gal)	78	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	14:40	14:45	14:50	14:55	15:00	15:05	15:10	15:15	15:20
Volume Purged (liter)			5gal		9	12	15	19	23
Rate (mL/min)	1400	1400	1500	2000	2200	2800	2800	2900	2900
Depth to Water (ft.)	19.03	19.10	19.21	19.35	19.51	19.71	19.85	19.88	20.15
pH	8.11	9.05	9.27	9.37	9.31	9.21	9.07	8.90	8.57
Temp. (C)	11.53	12.48	12.66	12.72	12.84	12.99	13.10	13.11	13.22
Conductivity (mS/cm)	0.292	0.293	0.294	0.294	0.291	0.288	0.286	0.284	.285
Dissolved Oxygen	10.12	7.87	7.53	7.34	5.91	4.29	3.00	2.17	1.71
ORP (mV)	66	80	89	95	90	64	20	-39	-144
Turbidity (NTU)	40.7	33.4	33.3	35.6	47.0	77.3	111.0	137.0	119.0
Notes:	packer 8.02								

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	Alpha
TCL SVOCs		
Pest./PCBs		
TAL Metals		
GNP-708a (80-85)		
Sample ID:	Sample Time:	16:25
MS/MSD: Yes	No	
Duplicate: Yes	No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

300 gal used by Drillers from 65-85'
Drill water

pH 7.37
temp 9.71
cond 0.276
DO 7.46
ORP +50
turb 34.9

Peterson/Puritan OU2 Site vertical profile

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GNP-708a(80-85)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

see page 1

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9	
	1525	15:30	15:35	15:40	15:45	15 50	15 55	16 00	16 05	16:10
Volume Purged (liter)			36.5							
Rate (mL/min)	3400	3400	3400	3500	3500	3500	3500	3500	3500	
Depth to Water (ft.)	20.26	20.28	20.31	20.49	20.49	20.50	20.50	20.50	20.50	
pH	8.22	8.06	7.77	7.62	7.52	7.42	7.37	7.29	7.22	
Temp. (C)	13.29	13.31	13.31	13.34	13.39	13.39	13.39	13.38	13.38	
Conductivity (mS/cm)	0.291	0.296	0.308	0.316	0.324	0.330	0.335	0.340	0.344	
Dissolved Oxygen	1.51	1.45	1.39	1.41	1.36	1.34	1.30	1.28	1.30	
ORP (mV)	-211	-208	-188	-176	-170	-165	-162	-160	-155	
Turbidity (NTU)	102	89.6	70.3	63.0	57.4	45.1	38.2	32.7	31.5	
Notes:										

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Vertical profile.

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GNP-708a (80-85)

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	16:10	16:15	16:20						
Volume Purged (liter)			78						
Rate (mL/min)	3500	3500	3500						
Depth to Water (ft.)	20.50	20.50	20.50						
pH	7.18	7.14	7.10						
Temp. (C)	13.34	13.33	13.64						
Conductivity (mS/cm)	0.347	0.349	0.351						
Dissolved Oxygen	1.27	1.24	1.22						
ORP (mV)	-154	-154	-154						
Turbidity (NTU)	29.4	24.1	26.0						
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Development

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:	SEK JDL	**Well ID:**	GNP-708
Client / Job Number:	3790Z	**Date:**	11-4-05
Weather:	SUNNY 50	**Time In:**	16:10 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	24.005	(from MP)
Total Depth:	(feet)	16.21 E	(from MP)
Length of Water Column:	(feet)	7.79	
Volume of Water in Well:	(gal)	1.28	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other: Marked
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping:	(min)		
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:	
Total Volume Removed:	(gal)	Did well go dry: Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1620	1625	1630	1635	1640	1645	1650	1655	
Volume Purged (liter)									
Rate (mL/min)	6000	6000	6000	6000	6000	6000	6000	6000	
Depth to Water (ft.)	16.25	16.25	16.25	16.25	16.25	16.25	16.25	16.25	
pH	6.37	6.38	6.42	6.43	6.43	6.43	6.42	6.44	
Temp. (C)	11.00	11.00	11.00	10.99	10.98	10.98	10.98	10.96	
Conductivity (mS/cm)	0.317	0.310	0.305	0.304	0.304	0.303	0.304	0.304	
Dissolved Oxygen	1.24	0.11	1.51	0.00	0.00	0.00	0.00	0.00	
ORP (mV)	-68	-68	-71	-87	-95	-99	-103	-106	
Turbidity (NTU)	160.0	352.4	288	112	54.7	35.5	17.1	9.9	
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Surged for ~3 mins at 1615

Surged for ~3 mins at 1623

Purged 40 gals @ 1643

Peterson/Puritan OU2 Site Development

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL **Well ID:** GNP-708a

Client / Job Number: 37900 **Date:** 11/7/05

Weather: Sunny Windy **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	16.09	(from MP)
Total Depth:	(feet)	~~16.75~~	(from MP)
Length of Water Column:	(feet)	7203	6.61'
Volume of Water in Well:	(gal)	10.9	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other: Whale
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:		
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	14 51	15 03	1508	1513	1518	1523	1528	1533	1538
Volume Purged (liter)									
Rate (mL/min)	1800	5400	5400	5400	5400	5400	5400	5400	5400
Depth to Water (ft.)	16.11	16.15	16.15	16.15	16.15	16.15	16.15	16.15	16.85
pH	7.34	6.99	7.03	7.06	7.00	6.98	6.97	6.96	6.94
Temp. (C)	10.88	11.65	11.65	11.66	11.67	11.68	11.68	11.68	11.68
Conductivity (mS/cm)	0.378	0.332	0.329	0.325	0.327	0.326	0.325	0.326	0.325
Dissolved Oxygen	5.66	2.08	0.00	0.00	0.00	0.00	0.00	0.00	1.54
ORP (mV)	-108	-111	-159	-173	-173	-175	-176	-177	-152
Turbidity (NTU)	135.0	121.0	14.4	38.8	18.5	35.6	49.8	0.5	0.0
Notes:			Surged 3 min					switch drums	

Purged 40 gal @ 1528

Purged 55 gals @ 1538

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JDL/SEL **Well ID:** GMW 708q
Client / Job Number: **Date:** 11/7/05
Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

see Pg 2

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)
Average Pumping Rate: (ml/min) Water-Quality Meter Type:
Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1543	1548	1553	1558	1603	1608	1613	1618	1623
Volume Purged (liter)									
Rate (mL/min)	5400	5400	5400	5400	5400	5400			
Depth to Water (ft.)	16.15	16.15	16.15	16.15	16.15	16.15			
pH	6.96	6.96	6.96	6.97	6.97	6.98			
Temp. (C)	11.69	11.69	11.68	11.68	11.69	11.68			
Conductivity (mS/cm)	0.324	0.324	0.323	0.322	0.322	0.321			
Dissolved Oxygen	0.00	0.00	0.00	0.00	0.00	0.00			
ORP (mV)	-168	-171	-174	-176	-178	-179			
Turbidity (NTU)	0.4	2.3	4.7	9.7	13	18.1			
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Purged 75 gals @ 1553
Purged 95 gals @ 1608

Peterson/Puritan OU2 Site — Development*

Site — *Event*

~~GROUNDWATER~~ SAMPLING LOG

Sampling Personnel:	SEK	**Well ID:**	OUF-704
Client / Job Number:	3702	**Date:**	11-16-05
Weather:	rain 60°	**Time In:**	**Time Out:**

Well Information

Depth to Water/Time:	(feet)	5.75	(from MP)
Total Depth:	(feet)	23.38	(from MP)
Length of Water Column:	(feet)	17.63	
Volume of Water in Well:	(gal)	2.87 gal	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	Flushmount		Stick-Up	
Well Material:	Stainless Steel		PVC	
Well Locked:		Yes		No
Measuring Point Marked:		Yes		No
Well Diameter:	1"	2"	Other:	

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:	Waterra
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:	
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:	

Duration of Pumping:	(min)	40			
Average Pumping Rate:	(ml/min)	8000	Water-Quality Meter Type:	Horiba	
Total Volume Removed:	(gal)	60	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	10:08	10:13	10:18	10:23	10:28	10:33	10:38	10:43	10:48
Volume Purged (liter)			20 gal @ 10:30			40 gal @ 10:35			
Rate (mL/min)	8000	8000	8000	8000	8000	8000	8000	8000	8000
Depth to Water (ft.)	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97
pH	6.60	6.60	6.59	6.60	6.59	6.59	6.60	6.60	6.59
Temp. (C)	13.88	13.89	13.90	13.95	13.96	13.93	13.96	13.95	13.94
Conductivity (mS/cm)	1.14	1.18	1.21	1.24	1.25	1.27	1.29	1.29	1.30
Dissolved Oxygen	3.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORP (mV)	-93	-105	-109	-108	-109	-116	-118	-121	-119
Turbidity (NTU)	57.5	60.1	54.6	81.5	333.0	119.0	54.4	20.3	15.3
Notes:	Surged 80 thru 5 min	Surged 80 thru 5 min	checked DO against River water it reads right.	surged 80 thru 5 min					

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

N/A

Problems / Observations

River Water Reading @ 11:05
pH 7.36
Cond 0.285
NTU 3.3
DO 11.82
ORP -53
Temp 9.40

Peterson/Puritan OU2 Site Development

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:	SEK	**Well ID:**	GLF-700a
Client / Job Number:	37902	**Date:**	11-16-05
Weather:	Cloudy 60°	**Time In:**	**Time Out:**

Well Information

Depth to Water/Time:	(feet)	3.00	(from MP)
Total Depth:	(feet)	53.33	(from MP)
Length of Water Column:	(feet)	50.33	
Volume of Water in Well:	(gal)	8.2 gal	
Wellhead PID Reading:	(ppm)	NA	

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: Whale
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Sil (Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping:	(min)	65			
Average Pumping Rate:	(ml/min)	5600	Water-Quality Meter Type:	Horiba U-22	
Total Volume Removed:	(gal)	90	Did well go dry:	Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	8:34	8:39	8:44	8:49	8:54	8:59	9:04	9:09	9:14
Volume Purged (liter)						40 gal @ 9:03			55 gal
Rate (mL/min)	5600	5600	5600	5600	5600	5600	5600	5600	5600
Depth to Water (ft.)	6.8'	6.85	6.83	6.83	6.83	6.83	6.83	6.83	6.83
pH	6.81	6.76	6.68	6.68	6.64	6.62	6.62	6.61	6.61
Temp. (C)	12.55	12.68	12.53	12.51	12.63	12.51	12.53	12.51	12.53
Conductivity (mS/cm)	0.498	0.509	0.520	0.559	0.559	0.576	0.578	0.588	0.590
Dissolved Oxygen	5.45	2.70	2.98	3.19	3.42	3.69	3.67	3.72	3.77
ORP (mV)	-11	-53	-59	-61	-68	-67	-67	-67	-65
Turbidity (NTU)	593	250	152.0	150.0	>999	104.0	61.9	381.0	81.5
Notes:	Surged prior to pumping			Surged for five min.			Surged for three min		

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:	Sample Time:	
MS/MSD:	Yes / No	
Duplicate:	Yes / No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

River water Readings @ 8:30 & 9:45

pH	7.05	7.12
cond	0.270	0.271
Turb	0.0	2.6
DO	12.33	11.95
temp	8.65	8.75
ORP	22	3

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** CLF-105D

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	9:19	9:24	9:29	9:34	9:39				
Volume Purged (liter)									
Rate (mL/min)	5600	5600	5600	5600	5600				
Depth to Water (ft.)	6.83	6.83	6.83	6.83	6.83				
pH	6.62	6.61	6.61	6.61	6.61				
Temp. (C)	12.57	12.58	12.51	12.53	12.51				
Conductivity (mS/cm)	0.592	0.593	0.589	0.592	0.594				
Dissolved Oxygen	3.86	3.96	4.18	3.94	3.94				
ORP (mV)	-65	-63	-56	-58	-56				
Turbidity (NTU)	88.1	84.1	3.9	4.0	7.6				
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Development

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:	SCK	**Well ID:**	MW-701
Client / Job Number:	37902	**Date:**	11-16-05
Weather:	Cloudy 60°	**Time In:**	**Time Out:**

Well Information

Depth to Water/Time:	(feet)	4.71	(from MP)	7.89	
Total Depth:	(feet)	20.88	(from MP)	20.60	
Length of Water Column:	(feet)				
Volume of Water in Well:	(gal)				
Wellhead PID Reading:	(ppm)				

Well Type:	Flushmount	Stick-Up		
Well Material:	Stainless Steel	PVC		
Well Locked:	Yes	No		
Measuring Point Marked:	Yes	No		
Well Diameter:	1"	2"	Other:	1.5' bgs

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: Waterra
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:	Horiba	
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	14:52	15:02	15:15	15:28	15:35	15:45	15:50	15:55	16:05
Volume Purged (liter)					73 gal				
Rate (mL/min)	6400	6400	6400	6400	6400	1500	1500	1500	1500
Depth to Water (ft.)	—	—	—	—	—	—	—	—	—
pH		6.65	6.61	6.57	6.56	6.56	6.55	6.54	6.53
Temp. (C)		17.56	17.58	17.46	17.48	17.49	17.51	17.51	17.46
Conductivity (mS/cm)		0.291	0.299	0.291	0.310	0.300	0.397	0.296	0.298
Dissolved Oxygen		4.81	3.82	3.30	3.30	6.12	5.55	5.35	5.71
ORP (mV)		-65	-61	-47	-50	-48	-50	-52	-39
Turbidity (NTU)		>999	>999	>999	584.0	612.0	808	798	~~>999~~ 999
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

Problems / Observations

River water Readings @

pH 7.19

cond 0.277

turb 5.1

DO 12.06

temp 10.34

ORP 95

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG — Development

Sampling Personnel:	SEK	**Well ID:**	GW-702
Client / Job Number:	32902	**Date:**	11-17-05
Weather:	Cloudy 40°	**Time In:**	9:10 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	9.11	(from MP)
Total Depth:	(feet)	20.20	(from MP)
Length of Water Column:	(feet)	11.09	
Volume of Water in Well:	(gal)	1.8	
Wellhead PID Reading:	(ppm)	ND	

Well Type:	Flushmount		Stick-Up	
Well Material:	Stainless Steel		PVC	
Well Locked:	Yes		No	
Measuring Point Marked:	Yes		No	
Well Diameter:	1"	2"	Other:	1.5'

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: Wacker
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping:	(min)	~~0120~~ 70 min			
Average Pumping Rate:	(ml/min)		Water-Quality Meter Type:		
Total Volume Removed:	(gal)	60 gal	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	9:30	9:40	9:50	10:00	10:05	10:10	10:15	10:25	10:30
Volume Purged (liter)			17gal@9:45			50gal@10:10			60gal
Rate (mL/min)	2700	2700	5000	5000	5000	5000	1850	1850	1850
Depth to Water (ft.)	—	—	—	—	—	—	—	—	—
pH	6.20	6.35	6.44	6.42	6.38	6.36	6.39	6.48	6.46
Temp. (C)	15.45	15.52	15.57	15.53	15.63	15.66	14.43	14.50	15.05
Conductivity (mS/cm)	0.352	0.293	0.286	0.289	0.286	0.286	0.293	0.301	0.293
Dissolved Oxygen	6.18	10.18	9.96	10.24	9.93	2.91	10.17	9.40	2.52
ORP (mV)	14	7	-14	-11	1	5	-20	-30	-7
Turbidity (NTU)	>999	>999	>999	>999	>999	>999	>999	>999	>999
Notes:		turbidity probe up							

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

Problems / Observations

River water @ 9:25 & @ 10:35

pH	7.01	7.00
cond	0.273	0.271
turb	8.7	12.4
DO	11.18	11.11
temp	9.34	9.56
ORP	136	145

Peterson/Puritan OU2 Site — Development

Site — *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel:	SCM	**Well ID:**	GW-703
Client / Job Number:	32902	**Date:**	4-17-05
Weather:	Sunny 45°	**Time In:**	10:45 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	6.81	(from MP)	6.81	
Total Depth:	(feet)	~~6.87~~ 16.5	(from MP)	16.75	
Length of Water Column:	(feet)	9.69			
Volume of Water in Well:	(gal)	1.56			
Wellhead PID Reading:	(ppm)	ND			

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	~~Yes~~		No
Well Diameter:	1"	2"	Other: 1.5

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:	Bucket
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:	
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:	
Duration of Pumping:	(min)	50			
Average Pumping Rate:	(ml/min)	4500	Water Quality Meter Type:		Horiba U-22
Total Volume Removed:	(gal)	50	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	10:50	11:00	11:10	11:15	11:20	11:25	11:30	11:35	11:40
Volume Purged (liter)	60 gal								
Rate (mL/min)		1000	4500	4500	4500	4500	4500	4500	4500
Depth to Water (ft.)									
pH	6.37	6.61	6.37	6.37		6.42	6.38	6.42	6.31
Temp. (C)	12.78	12.50	12.74	12.76		12.71	12.31	12.69	12.77
Conductivity (mS/cm)	0.370	0.366	0.369	0.369		0.367	0.361	0.361	0.362
Dissolved Oxygen	10.00	11.29	9.02	10.23		10.51	10.46	10.60	9.56
ORP (mV)	-3	-18	-13	5		2	1	1	2
Turbidity (NTU)	>999	>999	852.0	258.0		175.0	73.7	63.1	71.7
Notes:		turn rate up							

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

Problems / Observations

River water reading @ 10:50 & 11:5

pH	6.98	6.95
cond	0.269	0.270
turb	24.1	30.0
DO	11.41	12.35
Temp	9.99	10.52
ORP	~~-2~~	-15

Peterson/Puritan OU2 Site Well Development

Site *Event*

~~GROUNDWATER SAMPLING LOG~~

Sampling Personnel: **Well ID:** GWP-707

Client / Job Number: **Date:** 10-19-05

Weather: **Time In:** 10:20 **Time Out:**

Well Information

Depth to Water/Time:	(feet)	time 10:25	(from MP)	DTW 16.38
Total Depth:	(feet)	~~38.60~~ 38.60	(from MP)	final 38.61
Length of Water Column:	(feet)	22.22		
Volume of Water in Well:	(gal)	3.6 gal		
Wellhead PID Reading:	(ppm)	ND		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min) Start 10:40 72 min total

Average Pumping Rate: (ml/min) Water-Quality Meter Type: Horiba

Total Volume Removed: (gal) 57 gal Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	11:04 5	11:09 6	7	8	9
	10:44	10:49	10:54	10:59	~~10:54~~	~~10:59~~	11:29	11:32	11:42
Volume Purged (liter)							continue	20gal	
Rate (mL/min)	1900	2100	2800	2900	3500	Discontinue		3300	3300
Depth to Water (ft.)	16.45	16.45	16.45	16.48	16.49	sampling		16.51	16.51
pH			6.45	6.09	6.13	@ 18.5gal		6.10	6.23
Temp. (C)			15.72	15.46	15.46			15.36	15.64
Conductivity (mS/cm)			0.355	0.356	0.356			0.356	0.356
Dissolved Oxygen			8.95	3.41	2.63			5.01	2.16
ORP (mV)			-63	-74	-86			-42	-63
Turbidity (NTU)			131.0	89.7	670.0			>999	69.0
Notes:				surged for two min			surged for two minutes		surge for two minutes after taking readings.

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID: Sample Time:

MS/MSD: Yes No

Duplicate: Yes No

Duplicate ID Dup. Time:

Chain of Custody Signed By:

Problems / Observations

Surged for 10 min before purging whole screen length

purged one DRM

Peterson/Puritan OU2 Site Well Development

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GWP-707

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

See page

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	11:52	12:02	12:07	12:12					
Volume Purged (liter)	40 gal @ 11:54		55 gal @ 12:10						
Rate (mL/min)	3300	3300	3300	3300					
Depth to Water (ft.)	16.51	16.52	16.52	16.52					
pH	6.17	6.17	6.18	6.18					
Temp. (C)	15.16	15.58	15.59	15.62					
Conductivity (mS/cm)	0.355	0.356	0.356	0.356					
Dissolved Oxygen	1.82	1.59	1.52	1.46					
ORP (mV)	-73	-75	-78	-80					
Turbidity (NTU)	7999	654	630.0	164.0					
Notes:	surged for two min after readings	surge one min							

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Well Development

Site *Event*

~~GROUNDWATER SAMPLING LOG~~

Sampling Personnel:	SEK / DAC	**Well ID:**	GLF-706
Client / Job Number:	379.02	**Date:**	10-20-05
Weather:	partly sunny 55°	**Time In:**	**Time Out:**

Well Information

Depth to Water/Time:	(feet)	5.59	(from MP)
Total Depth:	(feet)	~~5.57~~ 22.83	(from MP) final 22.83
Length of Water Column:	(feet)	17.24	
Volume of Water in Well:	(gal)	2.81 gal	
Wellhead PID Reading:	(ppm)	NB	

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: whale
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: WB

Duration of Pumping:	(min)		
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:	
Total Volume Removed:	(gal)	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	14:20	14:25	14:30	14:35	14:40	14:45	14:50	14:55	15:00
Volume Purged (liter)			20 gal @ 14:32			40 gal @ 14:48			55 gal @ 15:00
Rate (mL/min)	6000	7000	7000	7000	7000	5000	5000	5000	5000
Depth to Water (ft.)	5.84	5.85	5.82	5.83	5.83	5.83	5.83	5.83	5.83
pH			5.99	6.06	6.10	6.14	6.13	6.13	6.14
Temp. (C)			14.80	14.81	14.82	14.85	14.85	14.87	14.88
Conductivity (mS/cm)			0.728	0.730	0.731	0.729	0.731	0.731	0.730
Dissolved Oxygen			7.65	3.43	2.44	2.04	1.78	1.68	1.56
ORP (mV)			-135	-159	-169	-174	-179	-180	-182
Turbidity (NTU)			29.3	~~29.5~~ 17.4	17.5	21.6	17.2	17.4	17.5
Notes:	Surge for 20 min			surged for 20 min.					

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Initial purge: strong organic odor clear.

Purged 1 Drum

Peterson/Puritan OU2 Site

Site: Well Development ~~GROUNDWATER SAMPLING LOG~~ Event

Sampling Personnel: SEK
Well ID: GLF-706A
Client / Job Number: 379.02.001
Date: 10-20-05
Weather: Sunny ≈ 55°f
Time In: 10:45 Time Out:

Well Information

Depth to Water/Time:	(feet)	60.45'	(from MP)		
Total Depth:	(feet)	67.72' Soft	(from MP)	Final 67.50	
Length of Water Column:	(feet)	61.26			
Volume of Water in Well:	(gal)	9.98			
Wellhead PID Reading:	(ppm)	ND			

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: whale
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min) 11:15
Average Pumping Rate: (ml/min) Water-Quality Meter Type:
Total Volume Removed: (gal) Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	11:17	11:22	11:27	11:32	~~12:37~~ 11:37	11:42	11:47	11:52	12:07
Volume Purged (liter)			20 gal @ 11:30				40 gal @ 11:49		55 @ 12:02
Rate (mL/min)	4750	4750	4750	4750	4000	4000	4000	4000	4000
Depth to Water (ft.)	10.95	11.07	10.90	10.91	10.00	9.90	9.80	9.89	9.79
pH					6.24	6.00	6.00	6.08	6.13
Temp. (C)					12.70	12.67	12.68	12.66	12.65
Conductivity (mS/cm)					0.319	0.315	0.301	0.307	0.301
Dissolved Oxygen					7.05	3.42	2.78	2.21	1.87
ORP (mV)					-78	-125	-145	-191	-219
Turbidity (NTU)					772.0	259.0	>999	91.7	171.0
Notes:		Purge for one min	Purge for one min	Purge for one min		Purge for three min		Purge for three min after taking parameter reading	Purge for seven min

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		
Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site Well Development

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: **Well ID:** GLF-706a

Client / Job Number: **Date:**

Weather: **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9	
	12:17	12:27	12:37	12:37	12:46	12:51	12:56	13:01	13:06	13:11
Volume Purged (liter)	75gal @ 12:20					110 gal @ 12:59				
Rate (mL/min)	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Depth to Water (ft.)	9.61	9.61	9.48	9.48	9.42	9.45	9.35	9.45	9.48	9.53
pH	6.18	6.15	6.23	6.19	6.20	6.21	6.22	6.19	6.20	6.19
Temp. (C)	12.666	12.65	12.70	12.666	12.65	12.64	12.67	12.65	12.64	12.63
Conductivity (mS/cm)	0.298	0.297	0.291	0.297	0.297	0.294	0.291	0.291	0.291	0.291
Dissolved Oxygen	1.74	1.65	1.58	1.58	3.07	1.83	1.54	1.46	1.42	1.36
ORP (mV)	-232	-233	-240	-238	-218	-237	-244	-246	-251	-255
Turbidity (NTU)	>999	125.0	>999	631.0	557.0	176.0	999.0	147.0	108.0	87.2
Notes:		Purged two min	Purged two min	Purged two min			Purged two min			

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Stop pump to check bottom & empty out flowthrough cell

purged two drums

Peterson/Puritan OU2 Site Well Development

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEK / DAL **Well ID:** GWP-205b

Client / Job Number: 37902 **Date:**

Weather: Cloudy 50° **Time In:** **Time Out:**

Well Information

Depth to Water/Time:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm)	

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Grundfos)	Other:
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	(Grundfos)	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) 150 gal Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	10:00	10:10	10:15	10:20					
Volume Purged (liter)									
Rate (mL/min)									
Depth to Water (ft.)									
pH	6.87	6.62	6.59	6.86					
Temp. (C)	13.60	13.04	12.84	17.85					
Conductivity (mS/cm)	0.614	0.598	0.602	0.606					
Dissolved Oxygen	6.33	5.26	5.42	4.23					
ORP (mV)	-203	-225	-219	-212					
Turbidity (NTU)	79.1	35.7	58.7	65.8					
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL VOCs		
TCL SVOCs		
Pest./PCBs		
TAL Metals		

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW
Well ID: GLF-706
Client / Job Number: 37902
Date: 3/13/07
Weather: Sunny, 70's, Slight Wind
Time In: 1515 **Time Out:**

Well Information

Depth to Water/Time: 1518	(feet) 9.65	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm) 0.0	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: BP
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: BP

Duration of Pumping: (min) ~40
Average Pumping Rate: (ml/min) 320 Water-Quality Meter Type: Horiba U-22
Total Volume Removed: (gal) NA Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

START: 1527 Time → Parameter:	1	2	3	4	5	6	7	8	9
	1530	1535	1540	1545	1550	1555	1600	1605	
Volume Purged (liter)									
Rate (mL/min)	320	320	320	320	320	320	320	320	
Depth to Water (ft.)	9.63	9.64	9.65	9.65	9.65	9.65	9.65	9.65	
pH	6.39	6.21	6.17	6.16	6.16	6.15	6.15	6.15	
Temp. (C)	13.45	12.40	12.23	12.18	12.03	11.98	11.97	11.89	
Conductivity (mS/cm)	0.854	1.04	0.980	0.980	0.950	0.920	0.920	0.918	
Dissolved Oxygen	1.12	1.04	0.97	0.88	0.76	0.69	0.65	0.61	
ORP (mV)	-57	-63	-67	-70	-71	-72	-75	-78	
Turbidity (NTU)	349	11.6	3.01	2.97	2.82	2.71	2.68		
Notes: Horiba #: 03595	Slightly Turbid	Clear →						Sampled	

Sampling Information

Analyses	#	Laboratory
TCL VOCs	6	AWAL
TCL SVOCs		
Pest./PCBs		
TAL Metals	2	AWAL
Sample ID: GLF-706	Sample Time:	1605
MS/MSD: Yes (No)		
Duplicate: (Yes) No		
Duplicate ID FD-031307	Dup. Time:	1605
Chain of Custody Signed By:		

Problems / Observations

*Collected duplicate here.

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW
Well ID: GLF-704
Client / Job Number: 37902
Date:
Weather: 70°F, Sunny, slight wind
Time In: 1250 **Time Out:**

Well Information

Depth to Water/Time: 1305	(feet) 5.23		(from MP)
Total Depth:	(feet)		(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm) 0.0		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: BP
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: BP

Duration of Pumping:	(min) 50				
Average Pumping Rate:	(ml/min) 300	Water-Quality Meter Type:	Horiba U-22		
Total Volume Removed:	(gal) NA	Did well go dry:	Yes	No	

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

START: 1310 Time → Parameter:	1	2	3	4	5	6	7	8	9
	1315	1320	1325	1330	1335	1340	1345	1350	1355
Volume Purged (liter)									
Rate (mL/min)	300	300	300	300	300	300	300	300	300
Depth to Water (ft.)	5.20	5.24	5.23	5.23	5.23	5.24	5.23	5.23	5.23
pH	6.65	6.63	6.61	6.60	6.60	6.64	6.65	6.64	6.68
Temp. (C)	12.54	12.73	12.57	12.54	12.45	12.69	12.50	12.67	13.10
Conductivity (mS/cm)	0.984	1.20	1.28	1.25	1.24	1.20	1.24	1.20	1.23
Dissolved Oxygen	5.04	3.89	2.69	1.87	1.26	1.09	0.89	0.84	0.81
ORP (mV)	-86	-80	-73	-72	-75	-78	-73	-78	-80
Turbidity (NTU)	319	219	198	103.8	43.8	29.7	25.4	25.1	24.9
Notes: Horiba # 03595									Sampled

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID: GLF-704	Sample Time: 1355		
MS/MSD:	Yes	No	
Duplicate:	Yes	No	
Duplicate ID	Dup. Time:		
Chain of Custody Signed By:			

Problems / Observations

* Could not get vehicle to well head. Had to run Airline ~75' up to trail.

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW
Well ID: MW-109A
Client / Job Number: Peterson Puritan
Date: 3/14/07
Weather: Sunny, 40's
Time In: 0830 **Time Out:**

Well Information

Depth to Water/Time: 0844	(feet) 9.69	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm) 0.0	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: BP
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: BP

Duration of Pumping:	(min) 90			
Average Pumping Rate:	(ml/min) 250	Water-Quality Meter Type:		
Total Volume Removed:	(gal) NA	Did well go dry:	Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

START: 0920 Time → Parameter:	1	2	3	4	5	6	7	8	9
	0930	0935	0940	0945	0950	0955	1000	1005	1010
Volume Purged (liter)									
Rate (mL/min)	400	250	250	250	250	250	250	250	250
Depth to Water (ft.)	9.86	9.86	9.86	9.86	9.86	9.86	9.86	9.86	9.86
pH	5.60	6.14	6.22	6.34	6.41	6.45	6.48	6.51	6.52
Temp. (C)	9.05	9.91	9.76	9.56	9.64	9.67	9.71	9.83	9.80
Conductivity (mS/cm)	0.279	0.381	0.427	0.455	0.474	0.436	0.449	0.483	0.502
Dissolved Oxygen	10.34	5.81	4.32	2.34	1.42	1.06	0.66	0.40	0.33
ORP (mV)	192	-26	-54	-81	-93	-99	-102	-106	-107
Turbidity (NTU)	17.3	14.1	17.0*	14.3	14.6	14.1	13.7	13.2	13.0
Notes:	Slowed Rate	Clear →							Continued pg 2

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID: MW-109A	Sample Time:	
MS/MSD:	Yes	(No)
Duplicate:	Yes	(No)
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW
Well ID: MW-109A
Client / Job Number: 37902
Date: 3/14/07
Weather: Sunny, 40's
Time In: 0830 **Time Out:**

Well Information

Depth to Water/Time: 0844	(feet) 9.69	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm) 0.0	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: BP
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: BP

Duration of Pumping:	(min)				
Average Pumping Rate:	(ml/min)	250	Water-Quality Meter Type:	Horiba U-22	
Total Volume Removed:	(gal)		Did well go dry:	Yes	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Continued Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1015	1020	1025	1030	1035				
Volume Purged (liter)									
Rate (mL/min)	250	250	250	250	250				
Depth to Water (ft.)	9.86	9.86	9.86	9.86	9.86				
pH	6.54	6.57	6.58	6.58	6.58				
Temp. (C)	9.82	10.05	10.17	10.26	10.40				
Conductivity (mS/cm)	0.534	0.590	0.593	0.597	0599				
Dissolved Oxygen	0.28	0.28	0.12	0.10	0.13				
ORP (mV)	-108	-111	-112	-113	-114				
Turbidity (NTU)	12.9	12.5	12.5	12.4	12.3				
Notes:	Clear →				Clear sampled				

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHC
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHC

Sample ID: MW-109A		Sample Time: 1035	
MS/MSD:	Yes	No	
Duplicate:	Yes	No	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW
Well ID: MW-108C
Client / Job Number: 37902
Date:
Weather: Cloudy, 60's
Time In: 1140 **Time Out:**

Well Information

Depth to Water/Time:	1145 (feet) 10.17	(from MP)	
Total Depth:	(feet)	(from MP)	
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm) 0.0		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other: 1.5"

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other:

Duration of Pumping:	(min)	35			
Average Pumping Rate:	(ml/min)	280	Water-Quality Meter Type:	Horiba	
Total Volume Removed:	(gal)	NA	Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Start: 11:50 Time → Parameter:	1	2	3	4	5	6	7	8	9
	1200	1205	1210	1215	1220	1225	1230		
Volume Purged (liter)									
Rate (mL/min)	280	280	280	280	280	280	280		
Depth to Water (ft.)	10.24	10.26	10.27	10.27	10.27	10.28	10.28		
pH									
Temp. (C)	10.28	9.15	9.18	9.35	9.35	9.44	9.54		
Conductivity (mS/cm)	0.748	0.734	0.734	0.730	0.739	0.730	0.730		
Dissolved Oxygen	4.89	3.72	3.15	3.06	2.97	3.09	3.08		
ORP (mV)	-122	-113	-105	-92	-82	-79	-77		
Turbidity (NTU)	313.0	96.4	17.5	1.8	1.3	2.4	2.1		
Notes: Horiba # 03595	Clear	→					Sampled		

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID: MW-108C	Sample Time: 1230		
MS/MSD:	Yes	No	
Duplicate:	Yes	No	
Duplicate ID	Dup. Time:		
Chain of Custody Signed By:			

Problems / Observations

* Difficult to get to well at bottom of landfill along tracks. Carried equipment w/ batteries down hill.

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW **Well ID:** MW-110B
Client / Job Number: 37902 **Date:**
Weather: Sunny, 70's **Time In:** 1350 **Time Out:**

Well Information

Depth to Water/Time:	1400 (feet)	7.95	(from MP)
Total Depth:	(feet)		(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)	0.0	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	(Peristaltic)	Grundfos	Other:

Duration of Pumping:	(min)	45			
Average Pumping Rate:	(ml/min)	290	Water-Quality Meter Type:	Horiba U-22	
Total Volume Removed:	(gal)	NA	Did well go dry:	Yes	(No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

START: 1415 Time → Parameter:	1	2	3	4	5	6	7	8	9
	1420	1425	1430	1435	1440	1445	1450	1455	1500
Volume Purged (liter)									
Rate (mL/min)	290	290	290	290	290	290	290	290	290
Depth to Water (ft.)	8.00	8.01	8.01	8.01	8.01	8.01	8.01	8.01	8.00
pH	5.48	5.65	5.63	5.61	5.62	5.61	5.61	5.61	5.60
Temp. (C)	13.95	13.91	13.66	13.69	13.71	13.44	13.25	13.33	13.36
Conductivity (mS/cm)	0.432	0.397	0.376	0.380	0.382	0.376	0.378	0.375	0.375
Dissolved Oxygen	2.39	1.98	1.78	1.69	1.57	1.63	1.62	1.54	1.56
ORP (mV)	215	222	229	233	237	236	238	239	241
Turbidity (NTU)	417.0	176.0	1.7	0.60	0.54	0.52	1.3	1.2	1.3
Notes: Horiba #03555	Turb Reading from Horiba U-22. Replaced batterys in Lamotte meter		Clear →						Sampled

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AW ITL
TCL SVOCs		
Pest./PCBs		
~~TAL~~ Metals	1	AW ITL
→ Arsenic only.		
Sample ID: MW-110B	Sample Time: 1500	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTG
Well ID: MW-110C
Client / Job Number: P.P.
Date: 3/14/07
Weather: 65°F Sunny
Time In: 1350 **Time Out:** 1515

Well Information

Depth to Water/Time:	7.80 (feet)	1405	(from MP)
Total Depth:	(feet)		(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)	6.0	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	2"	Other: 1.5

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	(Peristaltic)	Grundfos	Other:

Duration of Pumping: (min) 40
Average Pumping Rate: (ml/min) 180 Water-Quality Meter Type: Horiba #10595
Total Volume Removed: (gal) < 5 Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1410	1415	1420	1425	1430	1435	1440	1445	
Volume Purged (liter)									
Rate (mL/min)	180	180	180	180	180	180	180	180	
Depth to Water (ft.)	8.02	8.05	8.05	8.05	8.05	8.05	8.05	8.05	
pH	7.30	6.40	6.24	6.30	6.40	6.46	6.50	6.50	
Temp. (C)	14.3	14.2	14.1	13.9	13.8	13.8	13.8	13.8	
Conductivity (mS/cm)	0.475	0.536	0.535	0.544	0.554	0.550	0.553	0.552	
Dissolved Oxygen	9.48	8.40	7.76	7.36	7.17	4.00	4.10	4.08	
ORP (mV)	+170	+180	+182	+178	+175	+175	+175	+175	
Turbidity (NTU)	8.9	1.5	1.2	1.2	1.1	1.0	1.0	1.0	
Notes: Horiba #10595	Clear	11	11	11	11	11	11	11	

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWAL
TCL SVOCs		
Pest./PCBs		
TAL Metals	~~1~~	~~AWAL~~
Arsenic	1	AWAL
Sample ID: MW-110C	Sample Time: (1350) 1445	
MS/MSD: Yes	(No)	
Duplicate: Yes	(No)	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTG
Well ID: MW-112C
Client / Job Number: PP
Date: 3/14/07
Weather: 65°F Sunny
Time In: 1030 **Time Out:** 1150

Well Information

Depth to Water/Time: 10.33 (feet) 10:30		(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm) 0.0	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	2"	Other: 1.5"

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	(Peristaltic)	Grundfos	Other:

Duration of Pumping: (min) 40
Average Pumping Rate: (ml/min) 185 Water-Quality Meter Type: Horiba 10595
Total Volume Removed: (gal) NA <5 Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1050	1055	1100	1105	1110	1115	1120	1125	
Volume Purged (liter)									
Rate (mL/min)	185	185	185	185	185	185	185	185	
Depth to Water (ft.)	10.34	10.34	10.34	10.34	10.34	10.34	10.34	10.34	
pH	11.05	11.01	8.76	8.13	7.98	7.99	7.98	7.98	
Temp. (C)	9.1	9.1	9.5	9.7	9.9	9.9	10.0	10.0	
Conductivity (mS/cm)	0963	0948	0929	0921	0917	0.915	0.914	0915	
Dissolved Oxygen	1.77	1.62	~~1.58~~	1.22	1.09	1.07	1.06	1.08	
ORP (mV)	-91	-86	-84	-84	-83	-83	-82	-82	
Turbidity (NTU)	89.3	34.7	7.1	6.5	4.4	2.9	2.7	2.5	
Notes: Horiba 10595	Clear	"	"	"	"	"	"	"	

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID: Sample Time: 1125
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTG
Well ID: GNP-705
Client / Job Number: P.P. 37907
Date: 3/13/07
Weather: Sunny 50°F
Time In: 0840 **Time Out:** 1010

Well Information

Depth to Water/Time: 19.45 (feet)	(from MP)	
Total Depth: 23.0' (feet)	(from MP)	
Length of Water Column: (feet)		
Volume of Water in Well: (gal)		
Wellhead PID Reading: N/A (ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	Yes	(No)	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: BP
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: BP

Duration of Pumping:	(min)	35		
Average Pumping Rate:	(ml/min)	150	Water-Quality Meter Type:	Horiba #10595
Total Volume Removed:	(gal)	NA <5	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	0915	0920	0925	0930	0935	0940	0945		
Volume Purged (liter)									
Rate (mL/min)	150	150	150	150	150	150	150		
Depth to Water (ft.)	19.47	19.47	19.47	19.47	19.47	19.47	19.47		
pH	6.33	6.32	6.33	6.36	6.36	6.37	6.37		
Temp. (C)	11.9	12.5	12.8	12.7	12.8	12.9	12.9		
Conductivity (mS/cm)	1.32	1.29	1.28	1.28	1.27	1.26	1.26		
Dissolved Oxygen	1.38	0.34	0.24	0.09	0.05	0.02	0.01		
ORP (mV)	-63	-65	-66	-68	-66	-66	-67		
Turbidity (NTU)	22.3	9.5	7.2	4.9	4.1	3.7	3.5		
Notes: Horiba# 10595	Clear	"	"	"	"	"	"		

Sampling Information

Analyses	#	Laboratory
TCL VOCs	9	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	3	AWHL

Sample ID:		Sample Time:	0945
MS/MSD:	(Yes)	(No)	
Duplicate:	Yes	(No)	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTG
Well ID: MW-109C
Client / Job Number: P.P
Date: 3/14/07
Weather: 50°F Sunny
Time In: 0850 **Time Out:** 1015

Well Information

Depth to Water/Time: 0850	(feet) 10.55		(from MP)
Total Depth:	(feet)		(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading: N/A	(ppm)		

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	Yes		(No)
Well Diameter:	1"	2"	Other: 1.5

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	(Peristaltic)	Grundfos	Other:

Duration of Pumping:	(min)	40			
Average Pumping Rate:	(ml/min)	180	Water-Quality Meter Type:	Horiba #10595	
Total Volume Removed:	(gal)	NA 4.5	Did well go dry:	Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	0915	0920	0925	0930	0935	0940	0945	0950	
Volume Purged (liter)									
Rate (mL/min)	180	180	180	180	180	180	180	180	
Depth to Water (ft.)	11.52	11.51	11.49	11.46	11.45	11.45	11.45	11.45	
pH	7.49	7.52	7.56	7.56	7.58	7.62	7.64	7.66	
Temp. (C)	10.8	10.5	10.2	10.0	10.2	10.2	10.2	10.2	
Conductivity (mS/cm)	0.254	0.253	0.251	0.251	0.250	0.244	0.241	0.239	
Dissolved Oxygen	1.43	1.40	1.37	1.35	1.36	1.37	1.35	1.36	
ORP (mV)	-163	-162	-160	-159	-156	-157	-159	-160	
Turbidity (NTU)	75.6	21.5	6.1	5.1	4.4	4	3.9	3.5	
Notes: Horiba #10595	clear	clear	"	"	"	"	"	"	

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID:		Sample Time: 0950	
MS/MSD:	Yes	No	
Duplicate:	Yes	(No)	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTC
Well ID: SEA-602A
Client / Job Number: P.P
Date: 3/13/07
Weather: 65°F
Time In: 1300 **Time Out:** 1450

Well Information

Depth to Water/Time: 4.27	(feet) 1305	(from MP)
Total Depth: 22.54	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading: N/A	(ppm)	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:		(Yes)	No
Measuring Point Marked:		Yes	(No)
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	(Peristaltic)	Grundfos	Other:

Duration of Pumping:	(min)	65			
Average Pumping Rate:	(ml/min)	110	Water-Quality Meter Type:	Horiba U-10	
Total Volume Removed:	(gal)	<5 N/A	Did well go dry:	Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1330	1335	1340	1345	1350	1355	1400	1405	1410
Volume Purged (liter)									
Rate (mL/min)	110	110	110	110	110	110	110	110	110
Depth to Water (ft.)	4.24	4.24	4.24	4.24	4.24	4.24	4.24	4.24	4.24
pH	6.56	6.40	6.30	6.29	6.33	6.47	6.50	6.57	6.56
Temp. (C)	10.9	10.9	11.0	11.4	11.3	11.2	11.3	11.4	11.3
Conductivity (mS/cm)	0.724	0.717	0.708	.705	.710	0.716	0.710	0.707	0.702
Dissolved Oxygen	4.24	4.46	5.30	6.65	6.21	3.01	2.69	2.45	2.21
ORP (mV)	-64	-59	-51	-52	-55	-62	-65	-68	-69
Turbidity (NTU)	718	282	100	46.6	42.7	41.0	41.0	40.0	40.0
Notes: 11 10595	Reddish	light Red Brown	Cloudy	Clear	"	"	"	"	"

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID:		Sample Time:	1430
MS/MSD:	Yes	(No)	
Duplicate:	Yes	(No)	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTG **Well ID:** SGA-60ZA
Client / Job Number: P.P. **Date:** 3/13/07
Weather: 65°F **Time In:** 1300 **Time Out:** 1450

Well Information

Depth to Water/Time:	4.22 (feet) 1305	(from MP)
Total Depth:	22.54 (feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	N/A (ppm)	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	Yes		(No)
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	(Peristaltic)	Grundfos	Other:

Duration of Pumping:	(min)	65		
Average Pumping Rate:	(ml/min)	110	Water-Quality Meter Type:	Horiba #10595
Total Volume Removed:	(gal)	NA 45	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1415	1420	1425	1430					
Volume Purged (liter)									
Rate (mL/min)	110	110	110	110					
Depth to Water (ft.)	4.24	4.24	4.24	4.24					
pH	6.56	6.58	6.61	6.60					
Temp. (C)	10.7	11.0	11.2	11.1					
Conductivity (mS/cm)	0.702	0.700	0.695	0.697					
Dissolved Oxygen	1.79	1.85	2.10	2.16					
ORP (mV)	-69	-69	-68	-69					
Turbidity (NTU)	39	11	4	4					
Notes:	Clear	"	"	"					

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID:	Sample Time: 1430	
MS/MSD:	Yes	(No)
Duplicate:	Yes	(No)
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTG **Well ID:** MW-C2
Client / Job Number: P.P. **Date:** 3/13/07
Weather: 65°F sunny **Time In:** 1315 **Time Out:** 1635

Well Information

Depth to Water/Time: 3.68	(feet)	(from MP)
Total Depth: 17.43	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading: N/A	(ppm)	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:		(Yes)	No
Measuring Point Marked:		Yes	(No)
Well Diameter:	1"	2"	Other: 1.5"

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	(Peristaltic)	Grundfos	Other:

Duration of Pumping: (min) 45
Average Pumping Rate: (ml/min) 150 Water-Quality Meter Type: Horiba #10595
Total Volume Removed: (gal) NA <5 Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1 (LP) 1530	2 1535	3 1540	4 1545	5 1550	6 1555	7 1400	8 1605	9 1610
Volume Purged (liter)									
Rate (mL/min)	150	150	150	150	150	150	150	150	150
Depth to Water (ft.)	3.70	3.70	3.70	3.70	3.70	3.70	3.7	3.7	3.7
pH	6.16	6.10	6.14	6.26	6.41	6.47	6.49	6.51	6.51
Temp. (C)	11.1	11.0	11.0	10.9	10.9	10.8	10.8	10.8	10.8
Conductivity (mS/cm)	0.363	0.395	0.430	0.483	0.504	0.513	0.520	0.522	0.526
Dissolved Oxygen	9.59	1.13	6.05	6.27	6.35	6.60	6.79	6.80	6.84
ORP (mV)	-33	-34	-41	-51	-61	-65	-66	-68	-69
Turbidity (NTU)	91.9	77.9	49.3	25.9	18.2	11.6	7.1	5.2	3.1
Notes:	light Brown	clear	"	"	"	"	"	"	"

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWAL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWAL

Sample ID: Sample Time: 1610
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTG **Well ID:** GNP-708
Client / Job Number: P.P 37902 **Date:** 3/12/07
Weather: Partly Sunny 60°F **Time In:** 1500 **Time Out:** 1645

Well Information

Depth to Water/Time: 16.17 (feet)	(from MP)	
Total Depth: 23.79 (feet)	(from MP)	
Length of Water Column: (feet)		
Volume of Water in Well: (gal)		
Wellhead PID Reading: N/A (ppm)		

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: BP
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: BP

Duration of Pumping: (min) 60
Average Pumping Rate: (ml/min) 100 Water-Quality Meter Type: Horiba U-10
Total Volume Removed: (gal) N/A <5 Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1530	1535	1540	1545	1550	1555	1600	1605	1610
Volume Purged (liter)									
Rate (mL/min)	100	100	100	100	100	100	100	100	100
Depth to Water (ft.)	16.17	16.17	16.17	16.17	16.17	16.17	16.17	16.17	16.17
pH	6.13	5.97	5.99	6.02	6.08	6.10	6.14	6.25	6.40
Temp. (C)	11.9	11.5	11.3	11.4	11.2	11.2	11.2	11.2	11.2
Conductivity (mS/cm)	0.303	0.298	0.296	0.294	0.293	0.291	0.291	0.291	0.291
Dissolved Oxygen	1.43	2.49	2.70	2.65	2.09	2.02	2.13	1.89	1.77
ORP (mV)	-11	-2	-1	-2	-8	-10	-12	-18	-27
Turbidity (NTU)	*1000+	871	378	301	128	105	96.5	68.2	41.0
Notes: Horiba # 10595	Red Brown No odor	same as last	SAL	light Red Brown	SAL	Cloudy	cloudy	clear	Clear

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID: Sample Time: 1625
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: JTG
Well ID: GNP-708
Client / Job Number: P.P. 37902
Date: 3/12/07
Weather: Partly Sunny 60°F
Time In: 1500 **Time Out:** 1645

Well Information

Depth to Water/Time: 16.17	(feet)	(from MP)
Total Depth: 23.79	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading: N/A	(ppm)	

Well Type:	Flushmount	(Stick-Up)	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: BP
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: BP

Duration of Pumping:	(min)	60			
Average Pumping Rate:	(ml/min)	100	Water-Quality Meter Type:	Horiba #10595	
Total Volume Removed:	(gal)	<5	Did well go dry:	Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Time → / Parameter:	1	2	3	4	5	6	7	8	9
	1615	1620	1625						
Volume Purged (liter)									
Rate (mL/min)	100	100	100						
Depth to Water (ft.)	16.17	16.17	16.17						
pH	6.42	6.43	6.45						
Temp. (C)	11.1	11.1	11.1						
Conductivity (mS/cm)	0.290	0.290	0.291						
Dissolved Oxygen	1.80	1.79	1.81						
ORP (mV)	-28	-29	-30						
Turbidity (NTU)	33.4	19.1	2						
Notes:	clear	clear	clear						

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID:		Sample Time:	1625
MS/MSD:	Yes	(No)	
Duplicate:	Yes	(No)	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW
Client / Job Number: 37902
Weather: Partly Cloudy, 60's

Well ID: GNP-708A
Date: 3/12/07
Time In: 1445 **Time Out:** 1710

Well Information

Depth to Water/Time:	(feet)	16.21	(from MP)
Total Depth:	(feet)		(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)	NA	
Wellhead PID Reading:	(ppm)	0.0	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	Yes		(No)
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: Bladder pump
Tubing/Bailer Material:	St. Steel	Polyethylene	(Teflon)	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: Bladder Pump

Duration of Pumping: (min) 50
Average Pumping Rate: (ml/min) 260 Water-Quality Meter Type: Horiba U-22
Total Volume Removed: (gal) Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability				
pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Start: 1527 Time → Parameter:	1	2	3	4	5	6	7	8	9
	1535	1540	1545	1550	1555	1600	1605	1610	1615
Volume Purged (liter)									
Rate (mL/min)	250	260	260	260	260	260	260	260	260
Depth to Water (ft.)	16.23	16.23	16.23	16.23	16.23	16.23	16.23	16.23	16.23
pH	7.76	6.90	6.70	6.65	6.62	6.60	6.59	6.58	6.57
Temp. (C)	11.56	11.24	11.20	11.20	11.18	11.18	11.19	11.20	11.18
Conductivity (mS/cm)	0.378	0.354	0.527	0.579	0.587	0.524	0.504	0.472	0.450
Dissolved Oxygen	5.66	0.67	0.44	0.47	0.44	0.46	0.43	0.41	0.39
ORP (mV)	-103	-150	-144	-132	-126	-120	-118	-115	-112
Turbidity (NTU)	186.0	4.1	3.7	2.5	0.37	0.12	0.12	0.14	0.13
Notes: Horiba #: 03595									

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL
Sample ID: GNP-708A	Sample Time: 1620	
MS/MSD: Yes	(No)	
Duplicate: Yes	(No)	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW
Client / Job Number: 37902
Weather: Sunny, 40's
Well ID: GNP-705B
Date: 3/13/07
Time In: 0910 **Time Out:**

Well Information

Depth to Water/Time: 0841	(feet) 19.91	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Wellhead PID Reading:	(ppm) 0.0	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: BP
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: BP

Duration of Pumping:	(min)		
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:	Horiba-U-22
Total Volume Removed:	(gal)	Did well go dry: Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

Continued Time → / Parameter:	10	11	12	13	14	15	16	17	18	19
	1000	1005	1010							
Volume Purged (liter)										
Rate (mL/min)	250	250	250							
Depth to Water (ft.)	20.00	20.00	20.01							
pH	6.82	6.82	6.82							
Temp. (C)	11.33	11.36	11.27							
Conductivity (mS/cm)	0.528	0.531	0.526							
Dissolved Oxygen	0.27	0.25	0.22							
ORP (mV)	62	64	64							
Turbidity (NTU)	0.69	0.65								
Notes: Horiba #	03595		sampled							

Sampling Information

Analyses	#	Laboratory
TCL VOCs	3	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	1	AWHL

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Peterson/Puritan OU2 Site

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: SEW
Well ID: GNP-705B
Client / Job Number: 37402
Date: 3/13/07
Weather: Sunny, high 30's to low 40's
Time In: 0810 **Time Out:**

Well Information

Depth to Water/Time:	0840 (feet)	19.91	(from MP)
Total Depth:	(feet)		(from MP)
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Wellhead PID Reading:	(ppm)	0.0	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other: Bladder Pump
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Grundfos	Other: Bladder Pump
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)		Water-Quality Meter Type:	Horiba U-22
Total Volume Removed:	(gal)		Did well go dry:	Yes / No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP	Turb.
±0.1	±10%	±3%	±10mV	±10%*

* Refer to SOP for wells where turbidity is below 5 NTU.

START: 0903 Time → Parameter:	1	2	3	4	5	6	7	8	9
	0915	0920	0925	0930	0935	0940	0945	0950	0955
Volume Purged (liter)									
Rate (mL/min)	120	250	250	250	250	250	250	250	250
Depth to Water (ft.)	19.96	20.00	20.00	20.00	20.00	20.01	20.00	20.00	20.00
pH	6.53	6.24	6.51	6.65	6.71	6.74	6.77	6.80	6.81
Temp. (C)	11.36	11.42	11.49	11.36	11.39	11.41	11.62	11.29	11.47
Conductivity (mS/cm)	0.374	0.733	0.784	0.620	0.643	0.667	0.588	0.557	0.507
Dissolved Oxygen	4.85	3.48	1.65	0.89	0.83	0.41	0.13	0.08	0.19
ORP (mV)	-47	-4	15	33	44	52	57	59	62
Turbidity (NTU)	31.0	12.7	2.42	1.83	1.06	0.98	0.95	0.93	0.95
Notes: Horiba # 03595	INCREASED RATE								

Sampling Information

Analyses	#	Laboratory
TCL VOCs	9	AWHL
TCL SVOCs		
Pest./PCBs		
TAL Metals	3	AWHL

Sample ID: GNP-705B		Sample Time:	
MS/MSD:	Yes SEW	No	
Duplicate:	Yes	No	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

*Temp fluctuation likely due to sun coming in & out warming flow-through cell.

LOW-FLOW (Minimum Drawdown) GROUND-WATER SAMPLING
WELL PURGING WATER QUALITY MEASUREMENTS FORM

Well Number: _____

Date: _____

LFR
Braintree, MA 02184
(781) 356-7300 fax (781) 356-2211

Location: PETERSON PURITAN Project No.: 010-15339-00

Weather Conditions: 56° F, RAIN

Field Personnel: BATCHELDER

Purging Device: GEOPUMP 2 PERISTALTIC

Tubing Material: ~~PE~~ TEFLON TUBING

Total Well Depth: 9'

Static Water Level (before sampling): 3.97'

Screened Interval Depth : 0-9'

Pump Intake Depth (ft. below MP): 8'

Monitoring Equipment (type/model #) YSI 6280

Clock Time (hr:min)	Depth to Water (ft)	Purge Rate (L/min)	Cummulative Volume Purged (gallons)	Temperature (°C)	Specific Conductivity[2] @ 25 °C (uS/cm)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	ORP Eh[3] (mV)	Turbidity (NTU)	Comments:
802	3.97			13.02	796	614	1.93	6.53	-54.9	46.8	WATER TINTED DK
807				13.11	791	611	0.47	6.38	-57.6	28.9	GRAY
814				13.17	785	607	0.36	6.31	-59.8	21.9	
817	3.97			13.58	782	606	0.34	6.29	-59.4	21.3	
823				13.22	778	603	0.33	6.27	-59.7	20.8	
827				13.23	776	601	0.32	6.27	-57.2	20.1	
834	3.97		3	13.25	773	599	0.33	6.25	-57.6	20.3	
					SAMPLE @ 835						COLLECT DUP-3 MS/MSD
STABILIZATION CRITERIA GUIDELINES:				± 3%	± 3%	± 3%	± 10%	± 0.1	± 10 mV	± 10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).
4. Stabilization criteria guidelines are provided for reference and are not mandatory. Alternative, less stringent criteria may be used based on variable site conditions and project objectives.

WELL INSPECTION:		CORRECTIVE ACTIONS				FOLLOW-UP ACTIONS REQUIRED
Lock Present	Water in Wellbox	Well Bolts Replaced	Lock Replaced	Water Bailed from Wellbox	Other Actions Taken to Secure Well	Explain Items Required below (e.g. new bolts, expandable plug, etc.)

LFR

LOW-FLOW (Minimum Drawdown) GROUND-WATER SAMPLING
WELL PURGING WATER QUALITY MEASUREMENTS FORM

Well Number: GW-224A-W1

Date: _____

Braintree, MA 02184
(781) 356-7300 fax (781) 356-2211

Location: PETERSON PUNITAS **Project No.:**

Weather Conditions: CLOUDY, 50's

Field Personnel: BB/RIT

Purging Device: PERISTALTIC PUMP

Tubing Material: TEFLON/SILICONE

Total Well Depth: 9.95

Static Water Level (before sampling): 5.34

Screened Interval Depth : 1- 9.95

Pump Intake Depth (ft. below MP): ~9'

Monitoring Equipment (type/model #) YSI 6920

Clock Time (hr:min)	Depth to Water (ft)	Purge Rate (L/min)	Cummulative Volume Purged (gallons)	Temperature (°C)	Specific Conductivity[2] @ 25 °C (uS/cm)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	ORP Eh[3] (mV)	Turbidity (NTU)	Comments:
1219		0.3		11.73	363	272	5.03	6.21	-16.4	112.8	
1224				11.77	345	273	0.59	6.05	-9.7	22.4	
1229				11.77	370	276	0.50	6.03	-15.0	13.6	
1234				11.75	373	278	0.46	6.03	-18.2	10.6	
1239				11.78	379	283	0.46	6.04	-23.1	10.5	
1244				11.78	376	281	0.43	6.03	-24.2	9.8	SAMPLED @ 1244
STABILIZATION CRITERIA GUIDELINES:				± 3%	± 3%	± 3%	± 10%	± 0.1	± 10 mV	± 10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).
4. Stabilization criteria guidelines are provided for reference and are not mandatory. Alternative, less stringent criteria may be used based on variable site conditions and project objectives.

WELL INSPECTION:			CORRECTIVE ACTIONS				FOLLOW-UP ACTIONS REQUIRED
Well is Securable by Design	Lock Present	Water in Wellbox	Well Bolts Replaced	Lock Replaced	Water Bailed from Wellbox	Other Actions Taken to Secure Well	Explain Items Required below (e.g. new bolts, expandable plug, etc.)

LFR

Braintree, MA 02184
(781) 356-7300 fax (781) 356-2211

LOW-FLOW (Minimum Drawdown) GROUND-WATER SAMPLING
WELL PURGING WATER QUALITY MEASUREMENTS FORM

Well Number: GW-207-U1

Date: 11/25/09

Location: PETERSON PURITAN Project No.:

Weather Conditions: CLOUDY, 50's

Field Personnel: BD/RM

Purging Device: PERISTALTIC PUMP

Tubing Material: TEFLON/SILICONE

Total Well Depth: 9.96

Static Water Level (before sampling): 3.46

Screened Interval Depth : 0-9.96

Pump Intake Depth (ft. below MP): ~9

Monitoring Equipment (type/model #) YSI 6920

Clock Time (hr:min)	Depth to Water (ft)	Purge Rate (L/min)	Cummulative Volume Purged (gallons)	Temperature (°C)	Specific Conductivity[2] @ 25 °C (uS/cm)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	ORP Eh[3] (mV)	Turbidity (NTU)	Comments:
1105		0.3		13.72	514	403	1.98	7.14	-124.9	241.7	
1110				13.80	528	415	0.41	7.00	-124.2	16.1	
1115				13.78	527	414	0.37	6.97	-126.6	7.2	
1120				13.18	526	413	0.33	6.96	-129.8	5.3	
1125				13.76	524	411	0.32	6.95	-132.2	4.4	SAMPLED @ 1125
STABILIZATION CRITERIA GUIDELINES:				± 3%	± 3%	± 3%	± 10%	± 0.1	± 10 mV	± 10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).
4. Stabilization criteria guidelines are provided for reference and are not mandatory. Alternative, less stringent criteria may be used based on variable site conditions and project objectives.

WELL INSPECTION:			CORRECTIVE ACTIONS				FOLLOW-UP ACTIONS REQUIRED
Well is Securable by Design	Lock Present	Water in Wellbox	Well Bolts Replaced	Lock Replaced	Water Bailed from Wellbox	Other Actions Taken to Secure Well	Explain Items Required below (e.g. new bolts, expandable plug, etc.)

LOW-FLOW (Minimum Drawdown) GROUND-WATER SAMPLING
WELL PURGING WATER QUALITY MEASUREMENTS FORM

Well Number: GW-208-U1

Date: 11/25/09

LFR
Braintree, MA 02184
(781) 356-7300 fax (781) 356-2211

Location: PETERSON - PURITAN Project No.:

Weather Conditions: CLOUDY - SD's

Field Personnel: BB/RIT

Purging Device: PERISTALTIC PUMP

Tubing Material: TEFLON / SILICONE

Total Well Depth: 9.72

Static Water Level (before sampling): 3.09

Screened Interval Depth : 0-9.72

Pump Intake Depth (ft. below MP): ~9

Monitoring Equipment (type/model #) YSI 6920

Clock Time (hr:min)	Depth to Water (ft)	Purge Rate (L/min)	Cummulative Volume Purged (gallons)	Temperature (°C)	Specific Conductivity[2] @ 25 °C (uS/cm)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	ORP Eh[3] (mV)	Turbidity (NTU)	Comments:
0918	3.10	0.3		14.41	909	724	3.19	7.32	-92.5	475.9	
0923				14.30	858	682	1.23	7.21	-101.4	264.5	
0928	3.09			14.32	837	666	0.66	7.22	-108.9	97.3	
0933				14.34	820	653	0.53	7.23	-115.7	45.2	
0938				14.41	794	633	0.50	7.27	-127.6	23.5	
0943				14.41	796	635	0.47	7.26	-133.2	9.7	
0948				14.43	799	633	0.41	7.27	-134.7	8.6	
0953				14.46	786	628	0.34	7.28	-137.2	5.1	
0958				14.37	792	632	0.33	7.26	-135.2	4.4	
1003				14.44	795	635	0.36	7.25	-135.9	3.8	SAMPLED @ 1003
STABILIZATION CRITERIA GUIDELINES:				± 3%	± 3%	± 3%	± 10%	± 0.1	± 10 mV	± 10%	

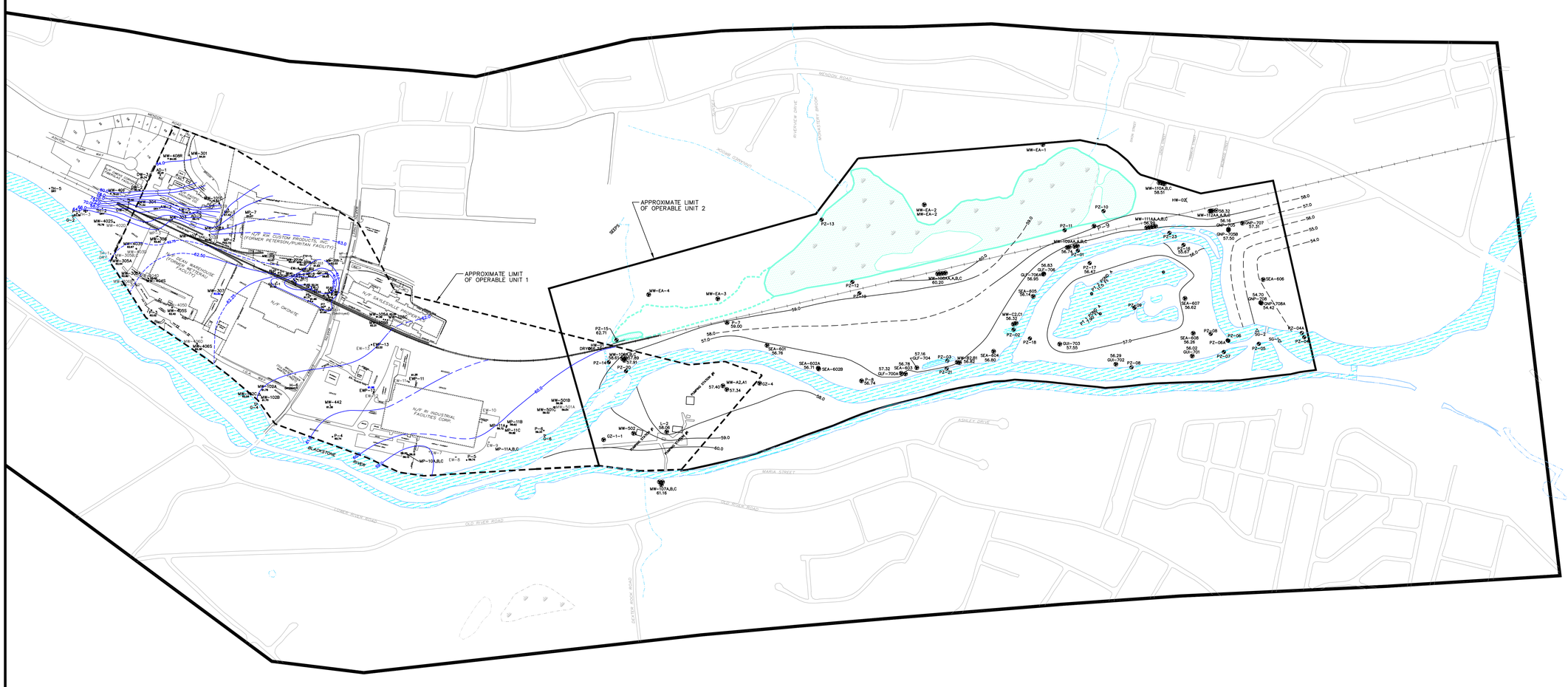
1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand *in for* Eh).
4. Stabilization criteria guidelines are provided for reference and are not mandatory. Alternative, less stringent criteria may be used based on variable site conditions and project objectives.

WELL INSPECTION:			CORRECTIVE ACTIONS				FOLLOW-UP ACTIONS REQUIRED
Well is Securable by Design	Lock Present	Water in Wellbox	Well Bolts Replaced	Lock Replaced	Water Bailed from Wellbox	Other Actions Taken to Secure Well	Explain Items Required below (e.g. new bolts, expandable plug, etc.)

ARCADIS

Appendix J

Combined OU1/OU2
Potentiometric Surface Map


APPROXIMATE LIMIT OF OPERABLE UNIT 1
APPROXIMATE LIMIT OF OPERABLE UNIT 2
NORTH
MENDON ROAD
RIVERVIEW DRIVE
DOGLESS DRIVE
KING GRANT DRIVE
ASHLEY DRIVE
MARIA STREET
OLD RIVER ROAD
NEW RIVER ROAD
LOWER RIVER ROAD
DEXTER ROAD
BLACKSTONE RIVER
N/F CRONIN
N/F GASKILL PROPERTIES
N/F DI INDUSTRIAL FACILITIES CORP.
N/F PETERSON/PURITAN FACILITY
N/F PETERSON/PURITAN FACILITY
N/F PETERSON/PURITAN FACILITY

ARCADIS

Appendix K

Benthic Community Species Abundance Report (Normandeau)

From: George Christian <gchristian@normandeau.com>
To: <DJB@bbl-inc.com>
Date: 8/12/2005 2:17:09 PM
Subject: Blackstone River benthos analysis

Hello Dave:

Biomass determinations for your project at the Peterson/Puritan super-fund site are complete. The attached file contains the completed data matrix. You may discard the one I sent you on 8 August.

The samples from Stations BR - 002 and BR - 004 are being retained here as requested on your Chain-of-Custody. The completed Chain-of-Custody is being mailed back to you today. All tracking and Quality Control information are on file and available upon request.

If you have any questions please give me a call. I should be back in the office the week of 21 August pending a Jury Duty obligation. Thank you for letting us be of service.

Sincerely,

George M. Christian
(Project Biologist)

Benthic Macroinvertebrates Collected by BBL Sciences at the Peterson/Puritan Superfund Site (Project Number 37902.013).

Sample Dates: 21-23 June 2005
Sample Type: Petite Ponar (area = 0.023 square meters)

Taxon:	Common Name	Feeding Guild	Habit	Tol. Index	Station BL-001 Number	Percent	Density (no./m²)	Biomass (g/m²)	Station BL-002 Number	Percent	Density (no./m²)	Biomass (g/m²)	Station BL-003 Number	Percent	Density (no./m²)	Biomass (g/m²)	Station BL-004 Number	Percent	Density (no./m²)	Biomass (g/m²)	Station BL-005 Number	Percent	Density (no./m²)	Biomass (g/m²)	Station BL-006 Number	Percent	Density (no./m²)	Biomass (g/m²)	Station Number	Percent
Lumbriculida																														
Lumbriculidae																														
Lumbriculus variegatus	earthworm	Collector Gatherer	Burrower	8																										
Lumbricina																														
Lumbricidae	earthworm	Collector Gatherer	Burrower	8																										
Tubificida																														
Naididae																											0.0174			
Dero sp.	naid worm	Collector Gatherer	Burrower	8																										
Ophiodonais serpentina	naid worm	Collector Gatherer	Burrower	6																					2	3.6%	87			
Tubificidae								0.2609				0.5783				0.1783								0.7870				0.1826		
Aulodrilus pleuriseta	tubeworm	Collector Gatherer	Burrower	8					4	2.7%	174										5	4.5%	217							
Bothrioneurum vejdovskyanum	tubeworm	Collector Gatherer	Burrower	10	5	4.3%	217																						10	5.3%
Brachiura sowerbyi	tubeworm	Collector Gatherer	Burrower	10																									1	0.5%
Ilydrilus templetoni	tubeworm	Collector Gatherer	Burrower	10	11	9.4%	478														5	4.5%	217		1	1.8%	43		14	7.4%
immature tubificid with hair chaetae	tubeworm	Collector Gatherer	Burrower	10																										
Limnodrilus claparedianus	tubeworm	Collector Gatherer	Burrower	10																										
Limnodrilus hoffmeisteri	tubeworm	Collector Gatherer	Burrower	10					5	3.4%	217		9	9.8%	391						16	14.4%	696		6	10.9%	261		79	42.0%
Limnodrilus sp.	tubeworm	Collector Gatherer	Burrower	10	52	44.4%	2261		38	25.9%	1652		4	4.3%	174						72	64.9%	3130		5	9.1%	217		66	35.1%
Veneroida																														
Sphaeriidae								0.1217				0.1304																		
Pisidium sp.	pill clam	Filtering Collector	Burrower	6	1	0.9%	43		1	0.7%	43																			
Amphipoda																														
Gammaridae								0.0043				0.0043												0.0043						
Gammarus fasciatus	sideswimmer	Collector Gatherer	Swimmer	6	1	0.9%	43		1	0.7%	43										1	0.9%	43							
Talitridae																														
Hyalella azteca	sideswimmer	Collector Gatherer	Swimmer	8																										
Isopoda																														
Asellidae																														
Caecidotea sp..	sowbug	Collector Gatherer	Sprawler	8																										
Odonata																														
Gomphidae																														
Dromogomphus spinosus	dragonfly	Predator	Burrower	6																									2	1.1%
Stylurus spiniceps	dragonfly	Predator	Sprawler	4																										
Coleoptera																														
Dytiscidae																0.0391														
Hydroporus sp.	diving beetle	Predator	Swimmer	5									1	1.1%	43															
Elmidae												0.0043																		
Ancyronyx variegatus	riffle beetle	Collector Gatherer	Clinger	5																									1	0.5%
Dubiraphia vittata	riffle beetle	Collector Gatherer	Clinger	6					1	0.7%	43																		8	4.3%
Haliplidae																											0.0348			
Peltodytes sp.	crawling beetle	Shredder	Climber	5																					1	1.8%	43			
Diptera																														
Ceratopogonidae																														
Culicoides sp.	biting midge	Predator	Burrower	10																										
Mallochohelia sp.	biting midge	Predator	Burrower	6																										
Sphaeromias sp.	biting midge	Predator	Burrower	6																										
Chaoboridae																														
Chaoborus punctipennis	phantom midge	Predator	Sprawler	8																										
Chironomidae								0.2652				0.6261				1.9739				2.7304				0.0261				0.5783		
Chironomini	midge	Collector Gatherer	Burrower	6																										
Chironomus sp.	midge	Collector Gatherer	Burrower	10	40	34.2%	1739		82	55.8%	3565		53	57.6%	2304		82	90.1%	3565		1	0.9%	43		38	69.1%	1652		1	0.5%
Cladopelma sp.	midge	Collector Gatherer	Burrower	9	2	1.7%	87		2	1.4%	87										8	7.2%	348							
Cladotanytarsus sp.	midge	Collector Gatherer	Cliimber	7																										
Cryptochironomus fulvus gr.	midge	Predator	Burrower	8	5	4.3%	217		1	0.7%	43																		2	1.1%
Dicrotendipes sp.	midge	Collector Gatherer	Burrower	8					1	0.7%	43																			
Enfeldia sp.	midge	Collector Gatherer	Burrower	9																										
Glyptotendipes sp.	midge	Filtering Collector	Burrower	10																										
Paralauterborniella nigrohalteralis	midge	Collector Gatherer	Clinger	8					1	0.7%	43										1	0.9%	43							
Paratanytarsus sp.	midge	Filtering Collector	Clinger	6									2	2.2%	87		3	3.3%	130											
Parachironomus tenuicaudatus gr.	midge	Preditor	Sprawler	10																										
Polypedilum scalaenum gr.	midge	Shredder	Climber	6					1	0.7%	43																			
Polypedilum sp.	midge	Shredder	Climber	6																										
Procladius sp.	midge	Preditor	Sprawler	9									2	2.2%	87		1	1.1%	43		1	0.9%	43		1	1.8%	43		1	0.5%
Stictochironomus sp.	midge	Collector Gatherer	Burrower	9													1	1.1%	43											
Tanypus sp.	midge	Preditor	Sprawler	10									5	5.4%	217		1	1.1%	43						1	1.8%	43			
Tanytarsus sp.	midge	Filtering Collector	Climber	6					9	6.1%	391		16	17.4%	696		3	3.3%	130		1	0.9%	43						3	1.6%
Ephydridae																														
nr. *Hydrellia sp.*	shore fly	Shredder	Burrower	6																										
Total Organisms					**117**	100.0%			**147**	100.0%			**92**	100.0%			**91**	100.0%			**111**	100.0%			**55**	100.0%			**188**	100.0%
Total Density (number per square meter)							**5087**				**6391**				**4000**				**3957**				**4826**				**2391**			
Total Biomass (grams per square meter)								**0.6522**				**1.3435**				**2.1913**				**2.7304**				**0.8174**				**0.8130**		
Total Taxa					**8**				**13**				**8**				**6**				**10**				**8**				**1**	
EPT Index (mayfly, stonefly, and caddisfly taxa)					**0**				**0**				**0**				**0**				**0**				**0**					
Percent Dominant Taxon (dominant taxon)					**44.4%** (*Limnodrilus sp .*)				**55.8%** (*Chironomus sp.*)				**57.6%** (*Chironomus sp.*)				**90.1%** (*Chironomus sp .*)				**79.3%** (*Limnodrilus spp.*)				**69.1%** (*Chironomus sp .*)				**77.1%** (*Limr*	
Percent Tolerant Organisms (Tol. = 7 - 10)					**98.3%**				**91.2%**				**79.3%**				**93.4%**				**98.2%**				**94.5%**				**92.**	
Percent Chironomidae					**38.5%**				**66.1%**				**84.8%**				**100.0%**				**10.8%**				**72.7%**				**3.7**	
Shannon Diversity (max.)					**1.37** (2.08)				**1.25** (2.48)				**1.27** (1.95)				**0.47** (1.79)				**0.86** (2.20)				**0.99** 1.95)				**0.96** (	
Hilsenhoff Biotic Index ("water quality rating")					**9.83** ("very poor")				**9.54** ("very poor")				**9.14** ("very poor")				**9.71** ("very poor")				**9.74** ("very poor")				**9.75** ("very poor")				**9.67** ("v	

Sources: (1) United States Environmental Agency. 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers (second. edition). US EPA (Publication Number EPA 841-B-99-002), Washington DC.
(2) New York State Department of Environmental Conservation (Bode, et.al.). 1991. Quality Assurance Work Plan for Biological Stream Monitoring in New York State. NY DEC, Albany, New York.

Benthic Macroinvertebrates Collected by BBL Sciences at the Peterson/Puritan Superfund S

Sample Dates: 21-23 June 2005
Sample Type: Petite Ponar (area = 0.023 square meters)

Taxon:	Common Name	Feeding Guild	Habit	Tol. Index	BL-007 Density (no./m²)	BL-007 Biomass (g/m²)	Station BR-001 Number	Station BR-001 Percent	Station BR-001 Density (no./m²)	Station BR-001 Biomass (g/m²)	Station BR-003 Number	Station BR-003 Percent	Station BR-003 Density (no./m²)	Station BR-003 Biomass (g/m²)	Station BR-005 Number	Station BR-005 Percent	Station BR-005 Density (no./m²)	Station BR-005 Biomass (g/m²)	Station BR-006 Number	Station BR-006 Percent	Station BR-006 Density (no./m²)	Station BR-006 Biomass (g/m²)	Station BR-007 Number	Station BR-007 Percent	Station BR-007 Density (no./m²)	Station BR-007 Biomass (g/m²)	Station PA-001 Number	Station PA-001 Percent	Station PA-001 Density (no./m²)	Station PA-001 Biomass (g/m²)
Lumbriculida																														
Lumbriculidae														0.0217																
Lumbriculus variegatus	earthworm	Collector Gatherer	Burrower	8							1	1.0%	43																	
Lumbricina																														
Lumbricidae	earthworm	Collector Gatherer	Burrower	8			1	1.0%	43	0.0174	1	1.0%	43	0.0522					1	2.7%	43	0.6000								
Tubificida																														
Naididae																										0.0043				
Dero sp.	naid worm	Collector Gatherer	Burrower	8																			4	2.7%	174					
Ophiodonais serpentina	naid worm	Collector Gatherer	Burrower	6																										
Tubificidae						2.2652				0.9391				0.4435				1.1957				0.0696				0.6957				
Aulodrilus pleuriseta	tubeworm	Collector Gatherer	Burrower	8			1	1.0%	43						7	3.7%	304		6	16.2%	261		5	3.4%	217					
Bothrioneurum vejdovskyanum	tubeworm	Collector Gatherer	Burrower	10	435		1	1.0%	43		34	32.7%	1478																	
Brachiura sowerbyi	tubeworm	Collector Gatherer	Burrower	10	43																									
Ilydrilus templetoni	tubeworm	Collector Gatherer	Burrower	10	609						1	1.0%	43		6	3.1%	261						16	10.8%	696					
immature tubificid with hair chaetae	tubeworm	Collector Gatherer	Burrower	10																										
Limnodrilus claparedianus	tubeworm	Collector Gatherer	Burrower	10																										
Limnodrilus hoffmeisteri	tubeworm	Collector Gatherer	Burrower	10	3435		76	76.8%	3304		6	5.8%	261		106	55.5%	4609		2	5.4%	87		52	35.1%	2261					
Limnodrilus sp.	tubeworm	Collector Gatherer	Burrower	10	2870		19	19.2%	826		18	17.3%	783		53	27.7%	2304		5	13.5%	217		6	4.1%	261					
Veneroida																														
Sphaeriidae																						0.0087								
Pisidium sp.	pill clam	Filtering Collector	Burrower	6															1	2.7%	43									
Amphipoda																														
Gammaridae														0.2826												0.0087				
Gammarus fasciatus	sideswimmer	Collector Gatherer	Swimmer	6							10	9.6%	435										2	1.4%	87					
Talitridae																														
Hyalella azteca	sideswimmer	Collector Gatherer	Swimmer	8																										
Isopoda																														
Asellidae																										0.0130				
Caecidotea sp..	sowbug	Collector Gatherer	Sprawler	8																			1	0.7%	43					
Odonata																														
Gomphidae						0.1609								4.2957																
Dromogomphus spinosus	dragonfly	Preditor	Burrower	6	87																									
Stylurus spiniceps	dragonfly	Preditor	Sprawler	4							1	1.0%	43																	
Coleoptera																														
Dytiscidae																														
Hydroporus sp.	diving beetle	Preditor	Swimmer	5																										
Elmidae						0.2130																				0.0087				
Ancyronyx variegatus	riffle beetle	Collector Gatherer	Clinger	5	43																									
Dubiraphia vittata	riffle beetle	Collector Gatherer	Clinger	6	348																		1	0.7%	43					
Haliplidae																														
Peltodytes sp.	crawling beetle	Shredder	Climber	5																										
Diptera																														
Ceratopogonidae																		0.0043												
Culicoides sp.	biting midge	Preditor	Burrower	10																										
Mallochohelia sp.	biting midge	Preditor	Burrower	6																										
Sphaeromias sp.	biting midge	Preditor	Burrower	6											1	0.5%	43													
Chaoboridae																														0.0174
Chaoborus punctipennis	phantom midge	Preditor	Sprawler	8																							3	100.0%	130	
Chironomidae						0.0261								0.2478				0.3217				0.1652				0.3783				
Chironomini	midge	Collector Gatherer	Burrower	6																										
Chironomus sp.	midge	Collector Gatherer	Burrower	10	43						22	21.2%	957		12	6.3%	522		21	56.8%	913		49	33.1%	2130					
Cladopelma sp.	midge	Collector Gatherer	Burrower	9															1	2.7%	43									
Cladotanytarsus sp.	midge	Collector Gatherer	Cliimber	7							1	1.0%	43																	
Cryptochironomus fulvus gr.	midge	Preditor	Burrower	8	87						2	1.9%	87										3	2.0%	130					
Dicrotendipes sp.	midge	Collector Gatherer	Burrower	8																										
Enfeldia sp.	midge	Collector Gatherer	Burrower	9																										
Glyptotendipes sp.	midge	Filtering Collector	Burrower	10																			1	0.7%	43					
Paralaterborniella nigrohalteralis	midge	Collector Gatherer	Clinger	8																										
Paratanytarsus sp.	midge	Filtering Collector	Clinger	6																										
Parachironomus tenuicaudatus gr.	midge	Preditor	Sprawler	10																										
Polypedilum scalaenum gr.	midge	Shredder	Climber	6																										
Polypedilum sp.	midge	Shredder	Climber	6											1	0.5%	43													
Procladius sp.	midge	Preditor	Sprawler	9	43										5	2.6%	217						5	3.4%	217					
Stictochironomus sp.	midge	Collector Gatherer	Burrower	9																										
Tanypus sp.	midge	Preditor	Sprawler	10																										
Tanytarsus sp.	midge	Filtering Collector	Climber	6	130						7	6.7%	304										3	2.0%	130					
Ephydridae										0.0087																				
nr. *Hydrellia sp.*	shore fly	Shredder	Burrower	6			1	1.0%	43																					
	Total Organisms						**99**	100.0%			**104**	100.0%			**191**	100.0%			**37**	100.0%			**148**	100.0%			**3**	100.0%		
	Total Density (number per square meter)				**8174**				**4304**				**4522**				**8304**				**1609**				**6435**				**130**	
	Total Biomass (grams per square meter)					**2.6652**				**0.9652**				**5.3435**				**1.5217**				**0.8435**				**1.1087**				**0.0174**
	Total Taxa				**2**		**6**				**12**				**8**				**7**				**13**				**1**			
	EPT Index (mayfly, stonefly, and caddisfly taxa)				**0**		**0**				**0**				**0**				**0**				**0**				**0**			
	Percent Dominant Taxon (dominant taxon)				*odrilus spp.*)		**96.0%** (*Limnodrilus spp.*)				**32.7%** (*Bothrioneurum vejdovskyanum*)				**83.2%** (*Limnodrilus spp.*)				**56.8%** (*Chironomus sp.*)				**39.2%** (*Limnodrilus spp.*)				**100.0%** (*Chaoborus punctipennis*)			
	Percent Tolerant Organisms (Tol. = 7 - 10)				**6%**		**99.0%**				**82.7%**				**99.0%**				**97.3%**				**95.9%**				**100.0%**			
	Percent Chironomidae				**7%**		**0.0%**				**24.0%**				**9.4%**				**59.5%**				**41.2%**				**0.0%**			
	Shannon Diversity (max.)				(2.40)		**0.22** (1.61)				**1.74** (2.40)				**0.71** (1.95)				**1.22** (1.79)				**1.62** (2.48)				**0.00** (0.00)			
	Hilsenhoff Biotic Index ("water quality rating")				ery poor")		**9.86** ("very poor")				**9.18** ("very poor")				**9.86** ("very poor")				**9.49** ("very poor")				**9.63** ("very poor")				**8.00** ("poor")			

Sources: (1) United States Environmental Agency
(2) New York State Department of Envi

Benthic Macroinvertebrates Collected by BBL Sciences at the Peterson/Puritan Superfund S

Sample Dates: 21-23 June 2005
Sample Type: Petite Ponar (area = 0.023 square meters)

Taxon:	Common Name	Feeding Guild	Habit	Tol. Index	Station PA-003 Number	PA-003 Percent	PA-003 Density (no./m²)	PA-003 Biomass (g/m²)	Station PD-002 Number	PD-002 Percent	PD-002 Density (no./m²)	PD-002 Biomass (g/m²)	Station PF-004 Number	PF-004 Percent	PF-004 Density (no./m²)	PF-004 Biomass (g/m²)
Lumbriculida																
Lumbriculidae																
Lumbriculus variegatus	earthworm	Collector Gatherer	Burrower	8												
Lumbricina																
Lumbricidae	earthworm	Collector Gatherer	Burrower	8					1	1.5%	43	0.1304				
Tubificida																
Naididae																
Dero sp.	naid worm	Collector Gatherer	Burrower	8												
Ophiodonais serpentina	naid worm	Collector Gatherer	Burrower	6												
Tubificidae								0.6478				0.5652				0.0435
Aulodrilus pleuriseta	tubeworm	Collector Gatherer	Burrower	8												
Bothrioneurum vejdovskyanum	tubeworm	Collector Gatherer	Burrower	10												
Brachiura sowerbyi	tubeworm	Collector Gatherer	Burrower	10	2	4.3%	87									
Ilydrilus templetoni	tubeworm	Collector Gatherer	Burrower	10	2	4.3%	87									
immature tubificid with hair chaetae	tubeworm	Collector Gatherer	Burrower	10	3	6.4%	130									
Limnodrilus claparedianus	tubeworm	Collector Gatherer	Burrower	10									3	50.0%	130	
Limnodrilus hoffmeisteri	tubeworm	Collector Gatherer	Burrower	10	11	23.4%	478		50	74.6%	2174					
Limnodrilus sp.	tubeworm	Collector Gatherer	Burrower	10	23	48.9%	1000						3	50.0%	130	
Veneroida																
Sphaeriidae																
Pisidium sp.	pill clam	Filtering Collector	Burrower	6												
Amphipoda																
Gammaridae																
Gammarus fasciatus	sideswimmer	Collector Gatherer	Swimmer	6												
Talitridae												0.0043				
Hyalella azteca	sideswimmer	Collector Gatherer	Swimmer	8					1	1.5%	43					
Isopoda																
Asellidae																
Caecidotea sp..	sowbug	Collector Gatherer	Sprawler	8												
Odonata																
Gomphidae																
Dromogomphus spinosus	dragonfly	Preditor	Burrower	6												
Stylurus spiniceps	dragonfly	Preditor	Sprawler	4												
Coleoptera																
Dytiscidae																
Hydroporus sp.	diving beetle	Preditor	Swimmer	5												
Elmidae																
Ancyronyx variegatus	riffle beetle	Collector Gatherer	Clinger	5												
Dubiraphia vittata	riffle beetle	Collector Gatherer	Clinger	6												
Haliplidae																
Peltodytes sp.	crawling beetle	Shredder	Climber	5												
Diptera																
Ceratopogonidae								0.0043				0.0435				
Culicoides sp.	biting midge	Preditor	Burrower	10					1	1.5%	43					
Mallochohelia sp.	biting midge	Preditor	Burrower	6	1	2.1%	43									
Sphaeromias sp.	biting midge	Preditor	Burrower	6					6	9.0%	261					
Chaoboridae																
Chaoborus punctipennis	phantom midge	Preditor	Sprawler	8												
Chironomidae								0.0087				0.2174				
Chironomini	midge	Collector Gatherer	Burrower	6	1	2.1%	43									
Chironomus sp.	midge	Collector Gatherer	Burrower	10	2	4.3%	87									
Cladopelma sp.	midge	Collector Gatherer	Burrower	9												
Cladotanytarsus sp.	midge	Collector Gatherer	Cliimber	7												
Cryptochironomus fulvus gr.	midge	Preditor	Burrower	8					1	1.5%	43					
Dicrotendipes sp.	midge	Collector Gatherer	Burrower	8					1	1.5%	43					
Enfeldia sp.	midge	Collector Gatherer	Burrower	9	2	4.3%	87									
Glyptotendipes sp.	midge	Filtering Collector	Burrower	10					1	1.5%	43					
Paralaterborniella nigrohalteralis	midge	Collector Gatherer	Clinger	8												
Paratanytarsus sp.	midge	Filtering Collector	Clinger	6					1	1.5%	43					
Parachironomus tenuicaudatus gr.	midge	Preditor	Sprawler	10					2	3.0%	87					
Polypedilum scalaenum gr.	midge	Shredder	Climber	6												
Polypedilum sp.	midge	Shredder	Climber	6												
Procladius sp.	midge	Preditor	Sprawler	9					1	1.5%	43					
Stictochironomus sp.	midge	Collector Gatherer	Burrower	9												
Tanypus sp.	midge	Preditor	Sprawler	10												
Tanytarsus sp.	midge	Filtering Collector	Climber	6					1	1.5%	43					
Ephydridae																
nr. *Hydrellia sp.*	shore fly	Shredder	Burrower	6												
Total Organisms					**47**	100.0%			**67**	100.0%			**6**	100.0%		
Total Density (number per square meter)							**2043**				**2913**				**261**	
Total Biomass (grams per square meter)								**0.6609**				**0.9609**				**0.0435**
Total Taxa							**9**				**12**				**2**	
EPT Index (mayfly, stonefly, and caddisfly taxa)							**0**				**0**				**0**	
Percent Dominant Taxon (dominant taxon)							**72.3%** (*Limnodrilus spp.*)				**74.6%** (*Limnodrilus hoffmeisteri*)				**100.0%** (*Limnodrilus spp.*)	
Percent Tolerant Organisms (Tol. = 7 - 10)							**95.7%**				**88.1%**				**100.0%**	
Percent Chironomidae							**10.6%**				**11.9%**				**0.0%**	
Shannon Diversity (max.)							**1.11** (2.08)				**1.10** (2.48)				**0.00** (0.00)	
Hilsenhoff Biotic Index ("water quality rating")							**9.79** (" very poor")				**9.39** (" very poor")				**10.00** (" very poor")	

Sources: (1) United States Environmental Agency
(2) New York State Department of Envi

ARCADIS

Appendix L

Toxicity Testing Report
(Envirosystems)

TOXICOLOGICAL EVALUATION OF SEDIMENT SAMPLES

Blackstone River Sediment Evaluation

Prepared For

BBL Sciences, Inc.
6723 Towpath Road
Box 66
Syracuse, New York 13214-0066

By

EnviroSystems, Incorporated
1 Lafayette Road
Hampton, New Hampshire 03842

September 2005
Reference Number 13446-05-09

From: DAVID BUYS
To: LEIDNER, JENNIFER
Date: 12/8/2005 3:51:19 PM
Subject: Fwd: Re: Reports

Jen,

Based on Kens response from Envirosystems, it looks like the report should have all the correct information in it, but that their statistical software prints the page numbers in an odd way. As long as all the information is contained in the report, is in the correct order, and is accessible, we may want to leave it as is.

>>> Ken <ksimon@envirosystems.com> 12/08/05 3:35 PM >>>
David,

I checked the original data file printout and the electronic CETIS file
to confirm; the three pages in question were not included in the report
as they were duplicates. One problem with the CETIS program is that it
is difficult, if not impossible, to identify individual statistical
analyses in the report function prior to printing the report. In this
case I had mistakenly run the same comparison twice. The easiest/only
way to remove the extra data page is to print the lot and discard the
extra. One other issue I have with the program is that there is no
control over order in which the pages are printed. It would be nice to
see data reported in the same fashion as the analyses are conducted. The
program however stores all data by endpoint, survival or growth, and
then stores individual reports by statistical method used and then order
of analysis. Unfortunately when we print a large data array we end up
having to manually reorder all the individual data sheets to obtain
easily readable reports. This is when we remove any duplicate analysis
reports.

Sorry for the confusion.

Regards,
Ken

DAVID BUYS wrote:

>Ken,
>
>Would you please check for missing pages and correct page order in our toxicity report (see below), and send us a new copy if needed.
>
>Also, please let Gene Swanson know that it takes a couple of weeks for our finance department to process and cut checks. When I last communicated about this, the process had just got started. You should see it soon.
>
>Thanks,
>
>Dave Buys
>
>

>
>>>>JENNIFER LEIDNER 12/06/05 12:22 PM >>>
>>>>
>>>>
>Dave, Thank you for reports. Please note pages 11 of 55, 38 of 55 and 39 of 55 are missing from the Envirosystems Report. Please let me know how can I get copies of these pages? Also, page 12 of 55 is on the back of page 54 of 55... We collated it in the pdf.
>
>Thanks.
>Jen
>
>
>
>>>>DAVID BUYS 12/1/2005 5:37 PM >>>
>>>>
>>>>
>Jennifer,
>
>The attached email is the benthic community data I received from Normandeau. I'll mail you a copy of the toxicity report from Envirosystems.
>
>
>
>

TABLE OF CONTENTS

1.0 INTRODUCTION 3

2.0 MATERIAL AND METHODS 3

2.1 General Methods, Biological Evaluations 3
2.2 Test Species 3
2.3 Test Sample and Laboratory Control Sediment 4
2.4 *Hyalella azteca* Survival and Growth Toxicity Tests 4
2.5 *Chironomus dilutus* Survival and Growth Toxicity Tests 5
2.6 Statistical Analysis 6
2.7 Quality Control 7
2.8 Protocol Deviations 7

3.0 RESULTS AND DISCUSSION 7

3.1 *Hyalella azteca* Initial 28 Day Survival and Growth Evaluation 7
3.2 *Chironomus dilutus* Survival and Growth Evaluation 8
3.3 Summary 8

4.0 REFERENCES 8

LIST OF TABLES

Table 1. Summary of Sample Collection Information. 9
Table 2. Reference Toxicant Evaluation 9

Summary of Statistical Comparison Tables:

Table 3. *C. dilutus* Survival & Growth Composited Samples 10
Table 4. *H. azteca* Survival & Growth Composited Samples 11
Table 5. *C. dilutus* Survival Individual Riverine Samples 12
Table 6. *H. azteca* Survival Individual Riverine Samples 13
Table 7. *C dilutus* Survival and Growth Individual Pond Samples 14
Table 8. *H. azteca* Survival Individual Riverine Samples 15
Table 9. *H azteca* Growth Individual Riverine Samples 16
Table 10. *H azteca* Survival & Growth Individual Pond Samples 17
Table 11. *C dilutus* Survival Data Statistical Analysis Summary For all Sites 18
Table 12. *C dilutus* Growth Data Statistical Analysis Summary For all Sites 19
Table 13. *H. azteca* Survival Data Statistical Analysis Summary For all Sites 20
Table 14. *H. azteca* Growth Data Statistical Analysis Summary For all Sites 21

Table 15. Summary of Initial and Final Water Qualities *C. dilutus* 22
Table 16. Summary of Initial and Final Water Qualities *H. Azteca* 23

Appendix A: Raw Data and Support 24

TOXICOLOGICAL EVALUATION OF SEDIMENT SAMPLES

Blackstone River Sediment Evaluation

1.0 INTRODUCTION

Toxicity tests expose groups of organisms to environmental samples and a laboratory control and/or a field reference site for a specified period to assess potential impacts on a variety of endpoints, such as survival, growth or reproduction. Analysis of variance techniques are used to determine the relative toxicity of the samples as compared to the laboratory control and/or field reference site.

This report presents the results of survival and growth toxicity tests conducted on eighteen (18) sediment samples collected from the Blackstone River. The samples were provided by BBL Sciences, Inc., Syracuse, New York. Testing was based on programs and protocols developed by the ASTM (2001) and US EPA (2000). The toxicity of the samples was assessed by conducting long term survival and growth toxicity tests using the freshwater amphipod, *Hyalella azteca* and midge larvae *Chironomus dilutus* Toxicity tests and supporting analyses were performed at EnviroSystems, Incorporated (ESI), Hampton, New Hampshire.

2.0 MATERIALS AND METHODS

2.1 General Methods, Biological Evaluations

Toxicological and analytical protocols used in this program follow procedures outlined in *Standard Test Methods for Measuring the Toxicity of Sediment-Associated Contaminants with Freshwater Invertebrates* (ASTM 2001), *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates* (US EPA 2000) and *Standard Methods for the Examination of Water and Wastewater*, 20th Edition (APHA 1998). These protocols provide standard approaches for physical and chemical analysis and for the evaluation of toxicological effects of sediments on aquatic invertebrates.

2.2 Test Species

H. azteca were obtained from Aquatic Research Organisms (ARO), Hampton, New Hampshire. Organisms were second instar at the start of the assay. Organisms were received at ESI the day prior to starting the assays. Organisms were held in a mix of moderately hard and natural surface water prior to the start of the assay.

C. dilutus were obtained from Aquatic BioSystems, Inc., Fort Collins, Colorado. Egg cases were shipped to ESI the day they were deposited. At ESI egg cases were transferred to fresh water and placed in an incubator at 23°C. Observations and water changes were made daily until hatch. Once larvae started to hatch, approximately 48 hours after receipt, the cases were transferred to a new culture vessel. After approximately 20 hours the hatched larvae were collected and added to the test vessels.

2.3 Test Samples, Laboratory Control Sediment and Overlying Water

Samples from the Blackstone River project site were sampled between June 21 and 23, 2005 and received at ESI on June 24, 2005. Once received, samples were inspected, to determine integrity, given unique sample numbers and logged into the laboratory sample management database. Once logged into the sample management database, samples were placed in a secure refrigerator, 2 - 4 °C, storage area until required. A listing of sample sites, sample collection and receipt information is summarized in Table 1.

Sediment samples from the project site were collected from two distinct environments, pond and riverine areas. A total of 6 pond samples, including 2 reference sites, were evaluated. Samples were also analyzed from 10 riverine samples, including 5 reference site samples.

The laboratory control substrate for both species was an artificial sediment consisting primarily of silica sand, with approximately 2-3%, by weight, of natural detritus. The detritus was collected above the water line at a natural water body, but in a damp area. Only the top 0.5 to 1.0 cm of the sediment was collected. The organic detritus was mixed into the silica sand. Additionally, the sediment was supplemented with a laboratory organic mixture prepared by ESI. The material was prepared by soaking trout chow with yeast until it fermented. The digested material was then autoclaved, bottled and stored until required.

Overlying water for the amphipod assay was a mix of moderately hard synthetic and natural surface water. The surface water was collected from Bow Lake, Strafford, New Hampshire. Use of synthetic/natural surface water over an artificial reconstituted water is recommended by the protocol (EPA 2000, ASTM 2004).

Overlying water for the midge assay was natural surface water. The surface water was collected from Bow Lake, Strafford, New Hampshire. Use of natural surface water over an artificial reconstituted water is recommended by the protocol (EPA 2000, ASTM 2004).

2.4 *H. azteca* Survival and Growth Assays

The 28 day amphipod survival and growth tests were conducted according to ASTM Method E 1706-95 (ASTM 2001) and EPA method 100.4 (EPA 2000). Endpoints of the assay were survival and growth, measured as dry weight.

The site sediment and laboratory control sediment treatments consisted of 8 replicates with 10 organisms/replicate. Test vessels were 400 mL glass beakers containing approximately 100 mL of sediment and 250 mL of overlying water. The overlying water volume to sediment surface area ratio was approximately 7:1. Test vessels were drilled at a consistent height above their bases and the hole covered with Nytex® screen. The screened hole facilitated water exchange without compromising organisms. Vessels were maintained in a water bath during the assay. Depth of the water in the bath was set to be approximately 1 cm below the drain hole in the test vessel to eliminate flow of water from the bath into the test vessel. The water bath was maintained in a limited-access temperature controlled room. Temperatures in the room and water bath were independently maintained at 23 ±1°C. The photoperiod in the test chamber was set at 16:8 hour light:dark. Light was provided by cool white flourescent bulbs.

One day prior to test initiation (Day -1), control and test sediments were sieved using a 2 mm sieve to remove rocks, twigs, and other debris. Sediments were placed in the test vessels. Overlying water was immediately added, and the vessels were left undisturbed overnight to settle. Floating detritus was removed the next morning. On Day 0, organisms were added below the water surface of each test vessel.

Overlying water in each replicate was renewed daily after collection of water quality data. The volume of water added to each test chamber was approximately 500 mL or two volumes. Water exchanges were facilitated by use of a distribution system designed to provide equal, regulated, flow to each chamber. The system was activated manually by the addition of water during the assay.

Prior to the daily overlying water renewal, temperature, specific conductance, pH, and dissolved oxygen were measured in one replicate of each treatment. Temperature data was collected in a surrogate test chamber on an hourly basis during the 10 day exposure period documented a mean temperature of 23.3°C with values ranging from 20.9 to 25.1°C. Alkalinity, ammonia and hardness of the overlying water were measured at the beginning and end of the assay. Water quality data are presented in Table 12. Daily overlying water quality records are available in Appendix A. Each replicate was fed 1.0 mL of a yeast/trout chow/alfalfa suspension after the daily renewal.

After 28 days exposure, all replicates of each test treatment were terminated to collect data for the survival and growth endpoints. Each test chamber was gently swirled to loosen the sediments and the test material was dumped into an 8" stainless steel sieve with a 0.35 mm mesh screen. The sediments were washed through the sieve using synthetic, moderately hard reconstituted water and material left on the screen was sorted to recover the organisms. This process was continued until the entire sample was evaluated. Organisms recovered were set aside to determine growth. Surviving amphipods were counted and placed on tared weighing pans. Pans were dried overnight at 70°C to obtain dry weight to the nearest 0.01 mg. The mean dry weight of surviving organisms was determined to assess growth.

2.5 *Chironomus dilutus* Survival and Growth Assays

The 20-day midge survival and growth evaluation sediment tests were conducted according to ASTM method E 1706-95 (ASTM 2004) and EPA method 100.5 (EPA 2000). Endpoints of the 20 day exposure were survival and growth, measured as ash free dry weight.

The site sediment and laboratory control sediment treatments consisted of 8 replicates with 10 organisms/replicate. Test vessels were 400 mL glass beakers containing approximately 100 mL of sediment and 250 mL of overlying water. Test vessels were drilled at a consistent height above their bases and the hole covered with Nytex® screen. The screened hole facilitated water exchange without compromising organisms. The overlying water volume to sediment surface area ratio was approximately 7:1. Vessels were maintained in a water bath during the assay. Depth of the water in the bath was set to be approximately 1 cm below the drain hole in the test vessel to eliminate flow of water from the bath into the test vessel. The water bath was maintained in a limited access, temperature controlled room. Temperatures in the room and water bath were independently maintained at 23 ±1°C. The photoperiod in the test chamber was set at 16:8 hour light:dark. Light was provided by cool white flourescent bulbs.

The day prior to test initiation (day -1), control and test sediments were sieved using a 4 mm sieve to remove rocks, twigs, and other debris. Sediments were placed in the test vessels. Overlying water was immediately added, and the vessels were left undisturbed overnight to settle. Floating detritus was removed the next morning. On day 0, larvae were added below the water surface of each test vessel.

Overlying water in each replicate was renewed daily after collection of water quality data. The volume of water added to each test chamber was approximately 500 mL, two volumes. Water exchanges were facilitated by use of a distribution system designed to provide equal, regulated, flow to each chamber. The system was activated manually by the addition of the water.

Prior to the daily overlying water renewal, temperature, specific conductance, pH, and dissolved oxygen were measured in one replicate of each treatment. Temperature data was collected in a surrogate test chamber on an hourly basis during the 20 day exposure period. Alkalinity, ammonia, and hardness of the overlying water were measured at the beginning and end of the assay. Water quality data are presented in Table 11. Daily overlying water quality records are available in Appendix A. Each replicate was fed 1.5 mL of a 6 g/L Tetramin® flake fish food suspension after the daily renewal.

After 20 days exposure, all replicates of each test treatment were terminated to collect data for the initial survival and growth portion of the tests. Each test chamber was gently swirled to loosen the sediments and the test material was dumped into an 8" stainless steel sieve with a 0.5 mm mesh screen. The sediments were washed through the sieve using synthetic, moderately hard reconstituted water and material left on the screen was sorted to recover the organisms. This process was continued until the entire sample was evaluated. Surviving larvae were placed on tared weighing pans; partially and fully emerged organisms were recorded in survival counts but not included in weight measurements. Pans were dried overnight at 70°C to obtain dry weight to the nearest 0.01 mg. The organisms were then fired in a muffle furnace for two hours at 550 °C to obtain the ash free dry weight to the nearest 0.01 mg. The mean weight of surviving organisms was determined to assess growth.

2.6 Statistical Analysis

Endpoints were analyzed using CETIS® (Comprehensive Environmental Toxicity Information System) software to determine significant differences between the test sediments and the laboratory control sediment and project reference site samples. Individual statistical analyses were made based on EPA decision tree guidelines. Comparisons of sample site verses reference area are based on the sample site being statistically less than the associated reference site. Comparison of endpoints for reference site verses reference site are based on there being a statistical difference between the two sites without regards as to if the difference is either greater than or less the other site. Statistical difference was evaluated at α=0.05.

Initial statistical evaluations were made comparing composited sample groups; *i.e.* all pond samples verses all pond reference sites. After the initial composite, statistical comparisons were made on a sample by sample basis against each appropriate reference site sample and laboratory control. Subsequently, statistical comparisons were made for each sample site against each reference site without segregating varying environmental type areas.

2.7 Quality Control

As part of the laboratory quality control program, reference toxicant evaluations are conducted on a regular basis for each test species. These results provide relative health and response data while allowing for comparison with historic data sets. Results are summarized in Table 2.

2.8 Protocol Deviations

Review of data collected during this assay indicated no deviation from mandated or suggested protocols. One non-deviation was observed during the study, the temperature logger used during the assays appears to have functioned normally through July 10. After that time the unit appears to have become less stable reporting more short term variation in the recorded temperature than during previous periods. Additionally, there were periodic spikes in the recorded temperatures of plus 100°C from one reading to the next and then a return to normal values. These spike values were considered as artifacts related to the logger's data storage/collection mechanisms and both not realistic or representative of actual conditions. As such they were removed from the data record prior to analysis. Temperature values reported by the data logger at the time daily observations were made were similar to those daily data points obtained with a standard thermometer. As such, the data from the data logger, minus spike values, was considered to represent conditions during the assay. This variation was considered to have had no impact on the outcome of the assay or impact interpretation of the data.

3.0 TOXICOLOGICAL TESTING RESULTS AND DISCUSSION

Tables 3 and 14 provide summaries of survival and growth data with comparisons based on composite sample types, individual sites to specific reference sample types and all samples compared against all reference types.. Support data, including copies of laboratory bench sheets and individual endpoint summaries, are provided in Appendix A.

3.1 *Hyalella azteca* Initial 28 Day Survival and Growth Evaluation

At the end of the initial 28 day exposure period, mean survival in the laboratory control sediment was 91.25%; survival in the individual replicates ranged from 80% to 100%. Larvae recovered from the laboratory control sediment had a mean dry weight of 0.595 mg/amphipod, with mean dry weights of amphipods recovered from individual replicates ranging from 0.54 to 0.71 mg/individual. The dry weight of a representative group of amphipods at the start of the assay was 0.035 mg/individual. The minimum acceptable criteria for survival in the laboratory control is 80%. The minimum acceptable criteria for growth is a demonstration of increased dry weight after 28 days exposure. These data indicate that the organisms were healthy and not stressed by handling.

Temperature data collected in a surrogate test chamber during the 28 day exposure period documented a mean temperature of 22.9°C with values ranging from 20.8 to 25.6°C. Acceptable criteria are a mean value of 23±1°C with maximum temporary fluctuations of 23±3°C. Review of daily temperature data, taken from the overlying water of the laboratory control treatment, showed values ranging from 22 to 23 °C.

Alkalinity, ammonia and hardness concentrations collected from the laboratory control and project sample treatment at the beginning and end of the test are summarized in Table 12.

3.2 *Chironomus dilutus* Survival and Growth Evaluation

Survival and growth in the laboratory control treatment at the end of the 20-day exposure period was 83.7% and ash free dry weight of 1.79 mg/larvae, respectively. These values exceeded minimum endpoint requirements for the assay of 70% survival and a mean ash free dry weight of 0.48 mg/larvae. These data indicate that the organisms were healthy and not stressed by handling.

Temperature data collected in a surrogate test chamber during the 28 day exposure period documented a mean temperature of 23.1°C with values ranging from 20.8 to 25.6°C. Acceptable criteria are a mean value of 23±1°C with maximum temporary fluctuations of 23±3°C. Review of daily temperature data, taken from the overlying water of the laboratory control treatment, showed values ranging from 22 to 23 °C.

Alkalinity, ammonia and hardness concentrations collected from the laboratory control and project sample treatment at the beginning and end of the test are summarized in Table 11.

3.3 Summary

Review of data collected during this series of assays documented varying levels of response between the project reference and test sites. This held true for analysis of both composited groups of samples, *i.e.* all riverine reference sites verses all riverine test sites, and for individual comparisons of reference verses test site.

Review of survival and growth data for the reference sites document that sediments from sites T05BL-003 and T05BL-005 had significant impact on organism survival to an extent that survival failed to meet protocol acceptability criteria, 70% for the midge larvae and 80% for the amphipod.

Data from the individual project sites document that for these samples the amphipod appeared to be more sensitive than the midge larvae based on the number of instances where an endpoint for a sample was determined to be statistically less than the associated reference site. Additionally, that for these samples survival appears to be a slightly more sensitive endpoint indicator than growth.

4.0 REFERENCES

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th Edition. Washington D.C.

ASTM. 2001. Annual Book of ASTM Standards. Volume 11.05. *Test Methods for Measuring the Toxicity of sediment-Associated Contaminants with Freshwater Invertebrates*. E 1706-00. ASTM, Philadelphia.

U.S. EPA. 2000. *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates.* Second Edition. EPA/600-R-99/064.

TABLE 1. Summary of Sample Collection Information. Blackstone River Sediment Evaluation. July 2005.

Sample ID	ESI Ref	Site Type	Sampled Day	Sampled Time	Received Day
T05BL-004	13446-015	Reference - Pond	06/23/05	1600	06/24/05
T05BL-003	13446-014	Reference - Pond	06/23/05	1430	06/24/05
T05PA-001	13446-001	Pond	06/21/05	1100	06/24/05
T05PD-002	13446-002	Pond	06/21/05	1230	06/24/05
T05PA-003	13446-004	Pond	06/21/05	1530	06/24/05
T05PF-004	13446-007	Pond	06/21/05	1830	06/24/05
T05BL-001	13446-012	Reference - River	06/23/05	1100	06/24/05
T05BL-002	13446-013	Reference - River	06/23/05	1130	06/24/05
T05BL-005	13446-016	Reference - River	06/23/05	1650	06/24/05
T05BL-006	13446-017	Reference - River	06/23/05	1700	06/24/05
T05BL-007	13446-018	Reference - River	06/23/05	1730	06/24/05
T05BR-001	13446-003	Riverine	06/21/05	1500	06/24/05
T05BR-002	13446-005	Riverine	06/21/05	1645	06/24/05
T05BR-003	13446-006	Riverine	06/21/05	1830	06/24/05
T05BR-004	13446-008	Riverine	06/22/05	900	06/24/05
T05BR-005	13446-009	Riverine	06/22/05	1100	06/24/05
T05BR-006	13446-010	Riverine	06/22/05	1045	06/24/05
T05BR-007	13446-011	Riverine	06/23/05	1320	06/24/05

TABLE 2. Reference Toxicant Evaluation: Blackstone River Sediment Evaluation. July 2005.

Date	Endpoint		Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
H. azteca						
06/22/05	Survival	LC-50	0.002	0.0014	0.000 - 0.003	Cadmium µg/L
C. dilutus						
06/22/05	Survival	LC-50	0.97	0.47	0.00 - 1.48	Cadmium µg/L

TABLE 3. Summary of Statistical Comparisons for *C. dilutus* Survival and Growth Based on Composited Samples. Blackstone River Sediment Evaluation. July 2005.

				SURVIVAL			GROWTH	
Composite Site	ESI Ref	Number Sites	Mean Survival	Lab	Riverine	Mean Dry Wt	Lab	Riverine
Lab Control	-000	1	83.8%	-	-	1.791	-	-
Riverine Ref	-100	5	88.0%	Not Significant	-	1.578	Significant	-
		p=		0.8882			0.0255	
Riverine Sites	-101	5	80.0%	Not Significant	Significant	1.701	Not Significant	Not Significant
		p=		0.4606	0.0206		0.1890	0.8624

				SURVIVAL			GROWTH	
Composite Site	ESI Ref	Number Sites	Mean Survival	Lab	Pond	Mean Dry Wt	Lab	Pond
Lab Control	-000	1	83.8%	-	-	1.791	-	-
Pond Ref	-200	2	90.0%	Not Significant	-	1.476	Significant	-
		p=		0.9327	Significant		0.0019	
Pond Sites	-201	4	77.8%	Not Significant	0.0020	1.648	Not Significant	Not Significant
		p=		0.1580			0.1229	0.9646

TABLE 4. Summary of Statistical Comparisons for *H. azteca* Survival and Growth Based on Composited Samples. Blackstone River Sediment Evaluation. July 2005.

				SURVIVAL			GROWTH	
Composite Site	ESI Ref	Number Sites	Mean Survival	Lab	Riverine	Mean Dry Wt	Lab	Riverine
Lab Control	-000	1	91.3%	-	-	0.595	-	-
Riverine Ref	-100	5	72.5%	Significant	-	0.366	Significant	-
		p=		0.0488			0.0000	
Riverine Sites	-101	5	72.0%	NS	NS	0.391	Significant	NS
		p=		0.1380	0.6446		0.0000	0.8329

				SURVIVAL			GROWTH	
Composite Site	ESI Ref	Number Sites	Mean Survival	Lab	Pond	Mean Dry Wt	Lab	Pond
Lab Control	-000	1	91.3%	-	-	0.595	-	-
Pond Ref	-200	2	64.4%	Significant	-	0.263	Significant	-
		p=		0.0003			0.0000	
Pond Sites	-201	4	23.4%	Significant	Significant	0.418	Significant	NS
		p=		0.0000	0.0000		0.0006	0.9986

TABLE 5. Summary of Statistical Comparisons for *C. dilutus* Survival Based on Individual Riverine Sample Sites. Blackstone River Sediment Evaluation. July 2005.

SURVIVAL COMPARISONS		Mean Survival		Lab Control	Reference site Comparisons				
					T05BL-001	T05BL-002	T05BL-005	T05BL-006	T05BL-007
Lab Control	-000	83.75%		-	-	-	-	-	-
T05BL-001	-012	88.75%		NS	-	-	-	-	-
(Reference)			p=	0.8225					
T05BL-002	-013	81.25%		NS	NS	-	-	-	-
(Reference)			p=	0.4140	>0.05				
T05BL-005	-016	92.50%		NS	NS	NS	-	-	-
(Reference)			p=	0.9301	>0.05	>0.05			
T05BL-006	-017	78.75%		NS	NS	NS	NS	-	-
(Reference)			p=	0.3088	>0.05	>0.05	>0.05		
T05BL-007	-018	98.75%		NS	NS	NS	NS	Significant	-
(Reference)			p=	0.9926	>0.05	>0.05	>0.05	<0.05	
T05BR-001	-003	85.00%		NS	NS	NS	NS	NS	Significant
			p=	0.5982	0.2506	0.6644	0.0652	0.7556	0.0023
T05BR-003	-006	85.00%		NS	NS	NS	NS	NS	NS
			p=	0.6589	0.3683	0.7078	0.1783	0.7816	0.0652
T05BR-005	-009	88.75%		NS	NS	NS	NS	NS	NS
			p=	0.8253	0.5708	0.8425	0.4796	0.8874	0.0508
T05BR-006	-010	56.25%		Significant	Significant	Significant	Significant	Significant	Significant
			p=	0.0016	0.0003	0.0062	0.0002	0.0139	0.0001
T05BR-007	-011	85.00%		NS	NS	NS	NS	NS	Significant
			p=	0.6468	0.3798	0.6957	0.2869	0.7679	0.0400

TABLE 6. Summary of Statistical Comparisons for *C. dilutus* Growth Based on Individual Riverine Sample Sites. Blackstone River Sediment Evaluation. July 2005.

GROWTH COMPARISONS		Site Mean AFDW	Lab Control	Reference site Comparisons				
				T05BL-001	T05BL-002	T05BL-005	T05BL-006	T05BL-007
Lab Control	-000	1.79	-	-	-	-	-	-
T05BL-001 (Reference)	-012	2.20	NS p= 0.9476	-	-	-	-	-
T05BL-002 (Reference)	-013	1.42	Significant p= 0.0004	Significant <0.05	-	-	-	-
T05BL-005 (Reference)	-016	1.22	Significant p= 0.0000	Significant <0.05	NS >0.05	-	-	-
T05BL-006 (Reference)	-017	1.47	Significant p= 0.0157	Significant <0.05	NS >0.05	NS >0.05	-	-
T05BL-007 (Reference)	-018	1.57	NS p= 0.0813	Significant <0.05	NS >0.05	NS >0.05	NS >0.05	-
T05BR-001	-003	2.03	NS p= 0.8588	NS 0.2756	NS 0.9904	NS 0.9989	NS 0.9847	NS 0.9616
T05BR-003	-006	1.40	Significant p= 0.0080	Significant 0.0023	NS 0.4326	NS 0.8594	NS 0.3325	NS 0.2007
T05BR-005	-009	1.20	Significant p= 0.0002	Significant 0.0003	NS 0.0510	NS 0.4437	NS 0.0554	Significant 0.0311
T05BR-006	-010	1.84	NS p= 0.6272	NS 0.0887	NS 0.9998	NS 0.9985	NS 0.9628	NS 0.9014
T05BR-007	-011	2.03	NS p= 0.9531	NS 0.2338	NS 0.9890	NS 1.0000	NS 0.9975	NS 0.9878

TABLE 7. Summary of Statistical Comparisons for *C. dilutus* Survival and Growth Based on Individual Pond Sample Sites. Blackstone River Sediment Evaluation. July 2005.

SURVIVAL		Mean Survival	Lab Control	T05BL-003	T05BL-004
Lab Control	-000	91.25%	-	-	-
T05BL-003 (Reference)	-014	51.25%	Significant p= 0.0000	-	-
T05BL-004 (Reference)	-015	88.75%	NS p= 0.2782	Significant <0.05	-
T05PA-001	-001	8.75%	Significant p= 0.0000	Significant 0.0000	Significant 0.0000
T05PD-002	-002	16.25%	Significant p= 0.0000	Significant 0.0000	Significant 0.0000
T05PA-003	-004	1.25%	Significant p= 0.0001	Significant 0.0000	Significant 0.0001
T05PF-004	-007	77.50%	Significant p= 0.0001	NS 0.9939	Significant 0.0006

GROWTH		Mean Dry Weight	Lab Control	T05BL-003	T05BL-004
Lab Control	-000	0.597	-	-	-
T05BL-003 (Reference)	-014	0.237	Significant p= 0.0000	-	-
T05BL-004 (Reference)	-015	0.290	Significant p= 0.0000	NS 0.9795	-
T05PA-001	-001	0.300	Significant p= 0.0141	NS 0.7473	NS 0.5487
T05PD-002	-002	0.528	NS p= 0.2349	NS 0.9920	NS 0.9834
T05PA-003	-004	0.080	Significant p= 0.0000	Significant 0.0141	Significant 0.0007
T05PF-004	-007	0.439	Significant p= 0.0026	NS 0.9997	NS 0.9951

TABLE 8. Summary of Statistical Comparisons for *H. azteca* Survival Based on Individual Riverine Sample Sites. Blackstone River Sediment Evaluation. July 2005.

SURVIVAL COMPARISONS		Mean Survival		Lab Control	Reference site Comparisons				
					T05BL-001	T05BL-002	T05BL-005	T05BL-006	T05BL-007
Lab Control	-000	91.25%		-	-	-	-	-	-
T05BL-001	-012	91.25%		NS	-	-	-	-	-
(Reference)			p=	0.4796					
T05BL-002	-013	95.00%		NS	NS	-	-	-	-
(Reference)			p=	0.8628	>0.05				
T05BL-005	-016	17.50%		Significant	Significant	Significant	-	-	-
(Reference)			p=	0.0000	<0.05	<0.05			
T05BL-006	-017	82.50%		Significant	NS	Significant	Significant	-	-
(Reference)			p=	0.0103	>0.05	<0.05	<0.05		
T05BL-007	-018	87.50%		NS	ND	NS	Significant	NS	-
(Reference)			p=	0.1536	>0.05	>0.05	<0.05	>0.05	
T05BR-001	-003	90.00%		NS	NS	NS	NS	NS	NS
			p=	0.4286	0.4286	0.1495	1.0000	0.9529	0.7365
T05BR-003	-006	95.00%		NS	NS	NS	NS	NS	NS
			p=	0.4796	0.4796	0.1169	1.0000	0.9210	0.6551
T05BR-005	-009	92.50%		NS	NS	Significant	NS	NS	NS
			p=	0.1558	0.1558	0.0392	1.0000	0.8136	0.4247
T05BR-006	-010	2.50%		Significant	Significant	Significant	Significant	Significant	Significant
			p=	0.0001	0.0001	0.0000	0.0026	0.0001	0.0000
T05BR-007	-011	95.00%		NS	NS	NS	NS	NS	NS
			p=	0.6475	0.6475	0.2527	1.0000	0.9751	0.8876

TABLE 9. Summary of Statistical Comparisons for *H. azteca* Growth Based on Individual Riverine Sample Sites. Blackstone River Sediment Evaluation. July 2005.

GROWTH COMPARISONS		Site Mean AFDW	Lab Control	Reference site Comparisons				
				T05BL-001	T05BL-002	T05BL-005	T05BL-006	T05BL-007
Lab Control	-000	0.597	-	-	-	-	-	-
T05BL-001 (Reference)	-012	0.475	Significant p= 0.0002	-	-	-	-	-
T05BL-002 (Reference)	-013	0.352	Significant p= 0.0000	Significant <0.05	-	-	-	-
T05BL-005 (Reference)	-016	0.315	Significant p= 0.0000	Significant <0.05	NS >0.05	-	-	-
T05BL-006 (Reference)	-017	0.282	Significant p= 0.0000	Significant <0.05	NS >0.05	NS >0.05	-	-
T05BL-007 (Reference)	-018	0.399	Significant p= 0.0000	NS >0.05	NS >0.05	NS >0.05	Significant <0.05	-
T05BR-001	-003	0.416	Significant p= 0.0010	NS 0.1127	NS 0.9016	NS 9599.0000	NS 0.9948	NS 0.6471
T05BR-003	-006	0.401	Significant p= 0.0001	Significant 0.0312	NS 0.0872	NS 0.9560	NS 0.9964	NS 0.5119
T05BR-005	-009	0.314	Significant p= 0.0000	Significant 0.0002	NS 0.1516	NS 0.4935	NS 0.8191	Significant 0.0232
T05BR-006	-010	0.140	Significant p= 0.0000	Significant 0.0000	Significant 0.0010	Significant 0.0146	Significant 0.0045	Significant 0.0007
T05BR-007	-011	0.494	Significant p= 0.0030	NS 0.7378	NS 0.9997	NS 0.9998	NS 1.0000	NS 0.9931

TABLE 10. Summary of Statistical Comparisons for *H. azteca* Survival and Growth Based on Individual Pond Sample Sites. Blackstone River Sediment Evaluation. July 2005.

SURVIVAL		Mean Survival	Lab Control	T05BL-003	T05BL-004
Lab Control	-000	91.25%	-	-	-
T05BL-003 (Reference)	-014	51.25%	Significant p= 0.0000	-	-
T05BL-004 (Reference)	-015	88.75%	NS p= 0.2782	Significant <0.05	-
T05PA-001	-001	8.75%	Significant p= 0.0000	Significant 0.0000	Significant 0.0000
T05PD-002	-002	16.25%	Significant p= 0.0000	Significant 0.0000	Significant 0.0000
T05PA-003	-004	1.25%	Significant p= 0.0001	Significant 0.0000	Significant 0.0001
T05PF-004	-007	77.50%	Significant p= 0.0001	NS 0.9939	Significant 0.0006

GROWTH		Mean Dry Weight	Lab Control	T05BL-003	T05BL-004
Lab Control	-000	0.597	-	-	-
T05BL-003 (Reference)	-014	0.237	Significant p= 0.0000	-	-
T05BL-004 (Reference)	-015	0.290	Significant p= 0.0000	NS 0.9795	-
T05PA-001	-001	0.300	Significant p= 0.0141	NS 0.7473	NS 0.5487
T05PD-002	-002	0.528	NS p= 0.2349	NS 0.9920	NS 0.9834
T05PA-003	-004	0.080	Significant p= 0.0000	Significant 0.0141	Significant 0.0007
T05PF-004	-007	0.439	Significant p= 0.0026	NS 0.9997	NS 0.9951

Table 11. *Chironomus dilutus* Survival Summary. *C. dilutus* 20 day exposure Assay. Blackstone River Sediment Evaluation. July 2005.

		Site Mean Survival		Site Comparisons - Statistically "<" Reference							
				Lab Control 133446-000	T05BL-001 13446-012	T05BL-002 13446-013	T05BL-005 13446-016	T05BL-006 13446-017	T05BL-007 13446-018	T05BL-003 13446-014	T05BL-004 13446-015
Lab Control		83.75%		-							
T05BL-001	Ref - River	88.75%		NS	-						
			p=	>0.05							
T05BL-002	Ref - River	81.25%		NS	NS	-					
			p=	>0.05	>0.05						
T05BL-005	Ref - River	92.50%		NS	NS	NS	-				
			p=	>0.05	>0.05	>0.05					
T05BL-006	Ref - River	78.75%		NS	NS	NS	Significant	-			
			p=	>0.05	>0.05	>0.05	<0.05				
T05BL-007	Ref - River	98.75%		Significant	NS	Significant	NS	*Significant*	-		
			p=	<0.05	>0.05	<0.05	>0.05	<0.05			
T05BL-003	Ref - Pond	86.25%		NS	NS	NS	NS	NS	Significant	-	
			p=	>0.05	>0.05	>0.05	>0.05	>0.05	<0.05		
T05BL-004	Ref - Pond	93.75%		NS	NS	Significant	NS	Significant	NS	NS	-
			p=	>0.05	>0.05	<0.05	>0.05	<0.05	>0.05	>0.05	
T05BR-001	Riverine	85.00%		NS	NS	NS	NS	NS	Significant	NS	Significant
			p=	0.5982	0.2506	0.6644	0.0652	0.7556	0.0023	0.4429	0.0362
T05BR-003	Riverine	85.00%		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.6589	0.3683	0.7078	0.1783	0.7816	0.0652	0.5449	0.1188
T05BR-005	Riverine	88.75%		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.8253	0.5708	0.8425	0.4796	0.8874	0.0508	0.7539	0.2442
T05BR-006	Riverine	56.25%		Significant	Significant	Significant	Significant	Significant	Significant	Significant	Significant
			p=	0.0016	0.0003	0.0062	0.0002	0.0139	0.0001	0.0004	0.0000
T05BR-007	Riverine	85.00%		NS	NS	NS	NS	NS	Significant	NS	NS
			p=	0.6468	0.3798	0.6957	0.2869	0.7679	0.0400	0.541	0.1442
T05PA-001	Pond	76.25%		NS	Significant	NS	Significant	NS	Significant	NS	Significant
			p=	0.1591	0.0375	0.2511	0.0164	0.3568	0.0010	0.0735	0.0035
T05PD-002	Pond	77.50%		NS	Significant	NS	Significant	NS	Significant	Significant	Significant
			p=	0.0974	0.0249	0.2547	0.0112	0.3737	0.0009	0.0249	0.0023
T05PA-003	Pond	71.25%		NS	Significant	NS	Significant	NS	Significant	NS	Significant
			p=	0.1036	0.0300	0.1634	0.0249	0.2373	0.0028	0.0538	0.0090
T05PF-004	Pond	86.25%		NS	NS	NS	NS	NS	Significant	NS	NS
			p=	0.6980	0.3869	0.7408	0.1769	0.8110	0.0187	0.5828	0.1103

Table 12. *Chironomus dilutus* Growth, mg/larvae as Ash Free Dry Weight, Summary. *C. dilutus* 20 day exposure Assay. Blackstone River Sediment Evaluation. July 2005.

				Site Comparisons - Statistically "<" Reference							
				Control 133446-000	T05BL-001 13446-012	T05BL-002 13446-013	T05BL-005 13446-016	T05BL-006 13446-017	T05BL-007 13446-018	T05BL-003 13446-014	T05BL-004 13446-015
Lab Control		1.79		-							
T05BL-001	Ref - River	2.20		Significant	-						
			p=	<0.05							
T05BL-002	Ref - River	1.42		Significant	Significant	-					
			p=	<0.05	<0.05						
T05BL-005	Ref - River	1.22		Significant	Significant	NS	-				
			p=	<0.05	<0.05	>0.05					
T05BL-006	Ref - River	1.47		NS	Significant	NS	NS	-			
			p=	>0.05	<0.05	>0.05	>0.05				
T05BL-007	Ref - River	1.57		NS	Significant	NS	Significant	NS	-		
			p=	>0.05	<0.05	>0.05	<0.05	>0.05			
T05BL-003	Ref - Pond	1.39		Significant	Significant	NS	NS	NS	NS	-	
			p=	<0.05	<0.05	>0.05	>0.05	>0.05	>0.05		
T05BL-004	Ref - Pond	1.56		NS	Significant	NS	Significant	NS	NS	NS	-
			p=	>0.05	<0.05	>0.05	<0.05	>0.05	>0.05	>0.05	
T05BR-001	Riverine	2.03		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.8588	0.2756	0.9904	0.9989	0.9847	0.9616	0.9947	0.9775
T05BR-003	Riverine	1.40		Significant	Significant	NS	NS	NS	NS	NS	NS
			p=	0.0080	0.0023	0.4326	0.8594	0.3325	0.2007	0.5217	0.1516
T05BR-005	Riverine	1.20		Significant	Significant	NS	NS	NS	Significant	NS	Significant
			p=	0.0002	0.0003	0.0510	0.4437	0.0554	0.0311	0.1036	0.0093
T05BR-006	Riverine	1.84		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.6272	0.0887	0.9998	0.9985	0.9628	0.9014	0.9894	0.9412
T05BR-007	Riverine	2.03		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.9531	0.2338	0.9890	1.0000	0.9975	0.9878	0.9997	0.9974
T05PA-001	Pond	1.68		NS	Significant	NS	NS	NS	NS	NS	NS
			p=	0.1038	0.0052	0.9969	0.9998	0.9378	0.7828	0.9937	0.8869
T05PD-002	Pond	1.81		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.5637	0.0504	0.9975	0.9997	0.9767	0.9120	0.9966	0.9663
T05PA-003	Pond	1.47		Significant	Significant	NS	NS	NS	NS	NS	NS
			p=	0.0087	0.0029	0.6462	0.9559	0.4843	0.2978	0.7164	0.2465
T05PF-004	Pond	1.63		NS	Significant	NS	NS	NS	NS	NS	NS
			p=	0.1888	0.0230	0.8608	0.9740	0.7625	0.6095	0.8823	0.6360

Table 13. *Hyalella azteca* Survival Summary. *H. azteca* 28 day exposure Assay. Blackstone River Sediment Evaluation. July 2005.

				Site Comparisons - Statistically "<" Reference							
		Mean Survival		Lab Control 133446-000	T05BL-001 13446-012	T05BL-002 13446-013	T05BL-005 13446-016	T05BL-006 13446-017	T05BL-007 13446-018	T05BL-003 13446-014	T05BL-004 13446-015
Lab Control		91.25%		-							
T05BL-001	Ref - River	91.25%		NS	-						
			p=	>0.05							
T05BL-002	Ref - River	95.00%		NS	NS	-					
			p=	>0.05	>0.05						
T05BL-005	Ref - River	17.50%		Significant	Significant	Significant	-				
			p=	<0.05	<0.05	<0.05					
T05BL-006	Ref - River	82.50%		Significant	Significant	Significant	Significant	-			
			p=	<0.05	<0.05	<0.05	<0.05				
T05BL-007	Ref - River	87.50%		NS	NS	Significant	Significant	NS	-		
			p=	>0.05	>0.05	<0.05	<0.05	>0.05			
T05BL-003	Ref - Pond	51.25%		Significant	Significant	Significant	Significant	Significant	Significant	-	
			p=	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
T05BL-004	Ref - Pond	88.75%		NS	NS	NS	Significant	NS	NS	Significant	-
			p=	>0.05	>0.05	>0.05	<0.05	>0.05	>0.05	<0.05	
T05BR-001	Riverine	90.00%		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.4286	0.4286	0.1495	1.0000	0.9529	0.7365	1.0000	0.6234
T05BR-003	Riverine	95.00%		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.4796	0.4796	0.1169	1.0000	0.9210	0.6551	1.0000	0.5417
T05BR-005	Riverine	92.50%		NS	NS	Significant	NS	NS	NS	NS	NS
			p=	0.1558	0.1558	0.0392	1.0000	0.8136	0.4247	1.0000	0.3228
T05BR-006	Riverine	2.50%		Significant	Significant	Significant	Significant	Significant	Significant	Significant	Significant
			p=	0.0001	0.0001	0.0000	0.0026	0.0001	0.0000	0.0000	0.0000
T05BR-007	Riverine	95.00%		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.6475	0.6475	0.2527	1.0000	0.9751	0.8876	0.9999	0.8008
T05PA-001	Pond	8.75%		Significant	Significant	Significant	Significant	Significant	Significant	Significant	Significant
			p=	0.0000	0.0000	0.0000	0.0377	0.0000	0.0001	0.0000	0.0000
T05PD-002	Pond	16.25%		Significant	Significant	Significant	NS	Significant	Significant	Significant	Significant
			p=	0.0000	0.0000	0.0000	0.4301	0.0000	0.0000	0.0000	0.0000
T05PA-003	Pond	1.25%		Significant	Significant	Significant	Significant	Significant	Significant	Significant	Significant
			p=	0.0001	0.0001	0.0000	0.0011	0.0010	0.0000	0.0000	0.0001
T05PF-004	Pond	77.50%		Significant	Significant	Significant	NS	Significant	Significant	NS	Significant
			p=	0.0001	0.0001	0.0000	1.0000	0.0044	0.0006	0.9939	0.0006

Table 14. Hyalella azteca Growth, mg/amphipod dry weight, Summary. *H. azteca* 28 day exposure Assay. Blackstone River Sediment Evaluation. July 2005.

				Site Comparisons - Statistically "<" Reference							
				Lab Control 133446-000	T05BL-001 13446-012	T05BL-002 13446-013	T05BL-005 13446-016	T05BL-006 13446-017	T05BL-007 13446-018	T05BL-003 13446-014	T05BL-004 13446-015
Lab Control		0.597		-							
T05BL-001	Ref - River	0.475		Significant	-						
			p=	<0.05							
T05BL-002	Ref - River	0.352		Significant	Significant	-					
			p=	<0.05	<0.05						
T05BL-005	Ref - River	0.315		Significant	Significant	NS	-				
			p=	<0.05	<0.05	>0.05					
T05BL-006	Ref - River	0.282		Significant	Significant	Significant	NS	-			
			p=	<0.05	<0.05	<0.05	>0.05				
T05BL-007	Ref - River	0.399		Significant	Significant	NS	Significant	Significant	-		
			p=	<0.05	<0.05	>0.05	<0.05	<0.05			
T05BL-003	Ref - Pond	0.237		Significant	Significant	Significant	Significant	NS	Significant	-	
			p=	<0.05	<0.05	<0.05	<0.05	>0.05	<0.05		
T05BL-004	Ref - Pond	0.290		Significant	Significant	Significant	NS	NS	Significant	NS	-
			p=	<0.05	<0.05	<0.05	>0.05	>0.05	<0.05	>0.05	
T05BR-001	Riverine	0.416		Significant	NS	NS	NS	NS	NS	NS	NS
			p=	0.0010	0.1127	0.9016	0.9599	0.9948	0.6471	0.9992	0.9893
T05BR-003	Riverine	0.401		Significant	Significant	NS	NS	NS	NS	NS	NS
			p=	0.0001	0.0312	0.0872	0.9560	0.9964	0.5119	0.9997	0.9963
T05BR-005	Riverine	0.314		Significant	Significant	NS	NS	NS	Significant	NS	NS
			p=	0.0000	0.0002	0.1516	0.4935	0.8191	0.0232	0.9773	0.7666
T05BR-006	Riverine	0.140		Significant	Significant	Significant	Significant	Significant	Significant	Significant	Significant
			p=	0.0000	0.0000	0.0010	0.0146	0.0045	0.0007	0.0294	0.0014
T05BR-007	Riverine	0.494		Significant	NS	NS	NS	NS	NS	NS	NS
			p=	0.0030	0.7378	0.9997	0.9998	1.0000	0.9931	1.0000	1.0000
T05PA-001	Pond	0.300		Significant	NS	NS	NS	NS	NS	NS	NS
			p=	0.0141	0.0571	0.2381	0.4292	0.5757	0.1005	0.7473	0.5487
T05PD-002	Pond	0.528		NS	NS	NS	NS	NS	NS	NS	NS
			p=	0.2349	0.7173	0.9531	0.9816	0.9846	0.9019	0.9920	0.9834
T05PA-003	Pond	0.080		Significant	Significant	Significant	Significant	Significant	Significant	Significant	Significant
			p=	0.0000	<0.05	<0.05	<0.05	<0.05	<0.05	0.0141	0.0007
T05PF-004	Pond	0.439		Significant	NS	NS	NS	NS	NS	NS	NS
			p=	0.0026	0.2223	0.9558	0.9816	0.9979	0.7900	0.9997	0.9951

Table 15. Summary of Initial and Final Water Qualities. *C. dilutus* 20 day exposure Assay. Blackstone River Sediment Evaluation. July 2005.

Site	ESI Ref	Day	Alkalinity	Ammonia	Hardness
Lab Control	-000	0	15	<0.1	32
		20	29	0.31	21
Pond Water	-	0	<10	<0.1	9.1
		20	<10	<0.1	8.6
		Pond Sites			
Reference Sites					
T05BL-003	-014	0	29	0.45	8.8
		20	<10	0.72	7.4
T05BL-004	-015	0	<10	0.25	7.1
		20	<10	0.34	6.3
Project Sites					
T05PA-001	-001	0	<10	0.96	19
		20	<10	0.23	14
T05PD-002	-002	0	<10	0.86	16
		20	<10	0.27	15
T05PA-003	-004	0	<10	1.7	22
		20	<10	0.11	15
T05PF-004	-007	0	10	0.87	15
		20	<10	0.5	13
		Riverine Sites			
Reference Sites					
T05BL-001	-012	0	<10	0.3	18
		20	<10	0.45	17
T05BL-002	-013	0	<10	<0.1	9.4
		20	<10	0.25	13
T05BL-005	-016	0	<10	0.53	18
		20	<10	0.35	13
T05BL-006	-017	0	<10	3.1	13
		20	<10	0.93	12
T05BL-007	-018	0	<10	1.8	18
		20	<10	0.35	12
		0	<10	1.6	14
Project Sites		20	<10	0.6	12
T05BR-001	-003	0	<10	1.7	15
		20	<10	0.91	13
T05BR-003	-006	0	<10	<0.1	12
		20	<10	0.39	13
T05BR-005	-009	0	<10	0.67	17
		20	<10	0.65	15
T05BR-006	-010	0	<10	<0.1	12
		20	<10	0.39	13
T05BR-007	-011	0	<10	0.67	17
		20	<10	0.65	15

Table 16. Summary of Initial and Final Water Qualities. *H. azteca* 28 day exposure Assay. Blackstone River Sediment Evaluation. July 2005.

Site	ESI Ref	Day	Alkalinity	Ammonia	Hardness
Lab control	-000	0	<10	<0.1	27
		28	24	<0.1	39
MHR/POND	-	0	19	<0.1	37
		28	14	<0.1	40
		Pond Sites			
Reference Sites					
T05BL-003	-014	0	<10	0.28	15
		28	25	0.2	36
T05BL-004	-015	0	27	0.13	13
		28	16	<0.1	36
Project Sites					
T05PA-001	-001	0	28	0.95	25
		28	22	<0.1	68
T05PD-002	-002	0	<10	<0.1	25
		28	25	<0.1	58
T05PA-003	-004	0	35	0.17	31
		28	25	<0.1	42
T05PF-004	-007	0	<10	1.3	28
		28	21	<0.1	50
		Riverine Sites			
Reference Sites					
T05BL-001	-012	0	<10	<0.1	45
		28	22	<0.1	43
T05BL-002	-013	0	<10	0.3	26
		28	25	<0.1	45
T05BL-005	-016	0	29	<0.1	40
		28	18	<0.1	51
T05BL-006	-017	0	32	<0.1	32
		28	19	0.54	44
T05BL-007	-018	0	22	0.63	34
		28	<10	<0.1	51
Project Sites					
T05BR-001	-003	0	<10	<0.1	26
		28	28	0.11	46
T05BR-003	-006	0	<10	<0.1	24
		28	23	0.66	44
T05BR-005	-009	0	20	<0.1	26
		28	20	<0.1	43
T05BR-006	-010	0	28	<0.1	29
		28	26	<0.1	46
T05BR-007	-011	0	<10	<0.1	31
		28	32	<0.1	49

APPENDIX A
RAW DATA
STATISTICAL SUPPORT

Contents	Number of Pages
H. azteca Survival and Growth Evaluation	
Daily Water Quality Measurements and Feeding Record Bench Sheets	9
Water Quality Parameter Summary	6
Temperature Profile	1
Day 28 Organism Recovery Bench Sheets	10
Day 28 Dry Weight Bench Sheets	3
Day 0 Start Dry Weight Bench Sheet	2
Day 28 Survival and Growth Statistical Analysis	200
C. dilutus Survival and Growth Evaluation	
Daily Water Quality Measurements and Feeding Record Bench Sheets	9
Water Quality Parameter Summary	3
Temperature Profile	1
Day 28 Organism Recovery Bench Sheets	9
Day 28 Dry Weight Bench Sheets	5
Day 28 Survival and Growth Statistical Analysis	180
Organism History Record	1
Sample Receipt Record	1
Chain of Custody Records	2
Total Appendix Pages	442

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	Lab				-001				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.9	122	6.88	22	6.8	118	6.78	22	1	330i	✓	7/1/05	BB
1	6.5	203	7.09	21	6.6	148	6.78	22	1	330I	✓	7/2	CW
2	7.5	145	7.31	20	7.5	170	7.01	20	1	330i	✓	7/3	CW
3	7.4	121	7.01	21	7.3	136	6.83	21	1	330i	✓	7/4/05	BB
4	6.8	111	7.11	21	7.3	118	6.89	21	1	330i	✓	7/5/05	DHB
5	7.1	114	6.31	23	7.1	112	6.05	23	1	330i	✓	7/6/05	BB
6	6.6	117	6.53	22	7.2	122	6.32	22	2	330i	✓	7/7/05	DHB
7	7.5	117	7.31	21	7.4	110	7.18	21	2	330i	✓	7/8/05	DHB
8	7.4	260	7.20	21	7.5	131	7.15	21	1	330I	✓	7/9	CW
9	7.2	166	7.18	21	7.7	146	7.11	21	1	330i	✓	7/10	TP
10	6.2	184	7.00	22	7.2	147	6.77	22	2	330i	✓	7/11/05	⌐
11	6.5	170	7.40	23	7.3	130	7.05	24	1	330i	✓	7/12/05	DHB
12	6.2	183	7.33	22	7.0	141	7.25	22	1	330i	✓	7/13/05	BB
13	6.1	188	7.33	23	6.7	147	7.32	23	1	330i	✓	7/14/05	BB
14	5.3	186	7.16	23	5.8	147	6.99	23	1	330i	✓	7/15/05	BB
15	5.4	190	6.81	21	6.9	144	6.55	22	2	330I	✓	7/16/05	PS
16	5.8	175	6.99	24	6.1	142	7.01	24	1	330i	✓	7/17/05	BB
17	5.7	165	6.85	23	5.8	146	6.89	23	1	330i	✓	7/18/05	BB
18	5.0	157	6.48	23	5.4	144	6.53	24	2	330i	✓	7/19/05	DHB
19	5.8	147	6.74	23	5.7	145	6.81	23	1	330i	✓	7/20/05	BB
20	6.3	141	7.21	23	6.6	145	7.39	22	2	330i	✓	7/21/05	DHB
21	7.0	154	7.06	22	7.1	158	7.27	22	2	330i	✓	7/22/05	⌐
22	5.9	144	6.86	24	6.2	153	7.04	24	1	330i	✓	7/23/05	⌐
23	6.1	147	7.08	22	6.9	158	7.20	22	2	330i	✓	7/24	TP
24	6.9	145	6.84	24	7.0	160	7.07	24	1	330i	✓	7/25/05	DHB
25	6.8	144	6.72	22	6.7	159	7.06	22	2	330i	✓	7/26/05	BB
26	7.1	135	6.78	22	7.3	152	7.23	22	2	330i	✓	7/27/05	DHB
27	6.5	137	6.79	21	6.6	154	6.93	22	2	330i	✓	7/28/05	DHB
28	6.9	147	6.90	22	7.1	162	7.09	22	2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~ 7, 14, 21, 28
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-002				-003				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.1	108	6.83	22	7.1	150	6.90	22	1	330i	✓	7/1/05	BB
1	6.8	130	6.82	22	6.8	163	6.92	21	1	330i	✓	7/2	CW
2	7.5	142	6.97	20	7.0	176	7.12	20	1	330i	✓	7/3	CW
3	7.3	128	6.82	21	7.2	142	6.97	21	1	330i	✓	7/4/05	BB
4	7.2	118	6.85	21	7.4	120	7.00	21	1	330i	✓	7/5/05	DHB
5	7.2	112	6.16	23	7.1	112	6.13	23	1	330i	✓	7/6/05	BB
6	7.2	119	6.45	22	6.7	117	6.42	22	2	330i	✓	7/7/05	DHB
7	7.2	110	7.20	21	7.4	109	7.22	21	2	330i	✓	7/8/05	DHB
8	7.3	121	6.93	22	7.4	125	6.89	22	1	330i	✓	7/9	CW
9	7.6	139	6.99	21	7.5	146	7.05	21	1	330i	✓	7/10	TP
10	6.4	143	6.58	22	6.3	147	6.75	22	2	330i	✓	7/11/05	[illegible]
11	7.0	135	7.01	24	7.1	132	7.07	24	1	330i	✓	7/12/05	DHB
12	7.1	146	7.08	22	6.8	144	6.96	22	1	330i	✓	7/13/05	BB
13	6.6	156	7.24	23	6.4	152	7.12	23	1	330i	✓	7/14/05	BB
14	5.6	162	7.07	23	5.7	148	7.03	23	1	330i	✓	7/15/05	BB
15	6.0	164	6.87	22	5.9	144	6.55	22	2	330i	✓	7/16/05	PS
16	5.6	176	7.24	24	5.7	153	7.08	24	1	330i	✓	7/17/05	BB
17	5.8	176	7.19	23	5.7	151	7.09	23	1	330i	✓	7/18/05	BB
18	5.1	183	6.97	24	4.8	151	6.55	24	2	330i	✓	7/19/05	DHB
19	5.1	185	7.05	23	5.2	146	7.05	23	1	330i	✓	7/20/05	BB
20	6.4	190	7.60	22	6.6	145	7.44	22	2	330i	✓	7/21/05	DHB
21	6.8	194	7.57	22	6.8	152	7.51	23	2	330i	✓	7/22/05	TP
22	6.1	188	7.23	24	6.2	145	7.16	24	1	330i	✓	7/23/05	[illegible]
23	6.9	190	7.46	22	6.8	148	7.36	22	2	330i	✓	7/24	TP
24	7.1	195	7.34	24	6.9	149	7.22	24	1	330i	✓	7/25/05	DHB
25	6.7	183	7.24	22	6.7	148	7.16	22	2	330i	✓	7/26/05	BB
26	7.2	177	7.28	22	7.3	143	7.25	22	2	330i	✓	7/27/05	DHB
27	6.7	174	7.07	22	6.6	146	7.05	22	2	330i	✓	7/28/05	DHB
28	7.3	179	7.17	22	7.2	154	7.15	22	2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, ~~7~~, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-004				-006				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.8	130	6.92	22	6.8	129	6.82	22	1	330i	✓	7/1/05	BB
1	6.9	140	6.88	21	6.7	138	6.80	21	1	330i	✓	7/2	[illegible]
2	7.2	152	7.05	20	7.1	146	7.06	20	1	330i	✓	7/3	[illegible]
3	7.1	127	6.96	21	7.2	129	6.97	21	1	330i	✓	7/4/05	BB
4	7.2	114	6.97	21	7.2	114	7.11	21	1	330i	✓	7/5/05	DHB
5	6.8	112	6.16	23	6.9	108	6.23	23	1	330i	✓	7/6/05	BB
6	7.0	120	6.40	22	6.7	117	6.49	22	2	330i	✓	7/7/05	DHB
7	7.5	109	7.04	21	7.1	102	6.99	21	2	330i	✓	7/8/05	DHB
8	7.5	122	6.85	21	7.3	116	6.85	21	1	330i	✓	7/9	[illegible]
9	7.3	143	7.01	21	7.3	137	7.02	21	1	330i	✓	7/10	TP
10	6.1	143	6.52	22	6.1	134	6.62	22	2	330i	✓	7/11/05	✓
11	7.0	124	6.96	24	6.9	123	6.97	24	1	330i	✓	7/12/05	DHB
12	6.6	137	6.86	22	6.4	135	6.86	22	1	330i	✓	7/13/05	BB
13	6.2	144	6.98	23	6.1	140	6.93	23	1	330i	✓	7/14/05	BB
14	5.6	137	6.88	23	5.6	137	6.86	23	1	330i	✓	7/15/05	BB
15	6.0	137	6.39	22	5.9	135	6.38	22	2	330i	✓	7/16/05	PS
16	5.8	142	6.91	24	5.8	142	6.90	24	1	330i	✓	7/17/05	BB
17	5.7	142	7.02	23	5.6	144	6.93	23	1	330i	✓	7/18/05	BB
18	5.0	141	6.41	24	4.9	141	6.43	24	2	330i	✓	7/19/05	DHB
19	5.3	140	6.87	23	5.3	141	6.85	23	1	330i	✓	7/20/05	BB
20	6.4	139	7.36	22	6.3	143	7.30	22	2	330i	✓	7/21/05	DHB
21	6.9	148	7.35	23	6.7	149	7.25	23	2	330i	✓	7/22/05	DHB
22	6.3	140	7.05	24	6.2	141	7.03	24	1	330i	✓	7/23/05	✓
23	6.6	142	7.24	22	6.7	142	7.20	22	2	330i	✓	7/24	TP
24	6.8	146	7.10	24	6.5	142	7.03	24	1	330i	✓	7/25/05	DHB
25	6.7	144	7.06	22	6.6	139	6.97	22	2	330i	✓	7/26/05	BB
26	7.2	136	7.16	22	7.0	134	7.06	22	2	330i	✓	7/27/05	DHB
27	6.6	140	6.97	22	6.4	136	6.92	22	2	330i	✓	7/28/05	DHB
28	7.0	150	7.08	22	7.1	144	7.02	22	2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, ~~7~~, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-007				-009				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.6	134	6.74	22	6.4	125	6.77	22	1	330i	✓	7/1/05	BB
1	6.4	153	6.82	21	6.6	154	6.84	21	1	330i	✓	7/2	CW
2	7.0	169	6.91	20	7.1	168	6.99	20	1	330i	✓	7/3	CW
3	7.1	115	7.02	21	7.5	132	7.02	21	1	330i	✓	7/4/05	BB
4	7.3	121	7.02	21	7.2	133	7.05	21	1	330i	✓	7/5/05	DBB
5	6.8	105	6.14	23	6.6	112	6.26	23	1	330i	✓	7/6/05	BB
6	6.8	107	6.39	22	6.7	128	6.55	22	2	330i	✓	7/7/05	DBB
7	6.9	111	6.94	21	7.0	116	7.03	21	2	330i	✓	7/8/05	DBB
8	7.1	120	6.81	21	7.1	123	6.83	21	1	330i	✓	7/9	CW
9	7.6	140	7.02	21	7.4	130	7.04	21	1	330i	✓	7/10	TP
10	6.4	142	6.65	22	6.3	130	6.56	22	2	330i	✓	7/11/05	✓
11	7.4	128	7.09	24	7.2	119	7.02	24	1	330i	✓	7/12/05	DBB
12	6.4	147	6.89	22	6.7	136	6.92	22	1	330i	✓	7/13/05	BB
13	6.2	158	7.09	23	6.4	141	7.14	23	1	330i	✓	7/14/05	BB
14	5.5	167	7.25	23	5.7	140	7.12	23	1	330i	✓	7/15/05	BB
15	5.9	167	7.06	22	6.1	138	6.52	22	2	330i	✓	7/16/05	PS
16	5.8	[illegible]	7.43	24	5.9	146	7.11	24	1	330i	✓	7/17/05	BB
17	5.4	195	7.23	23	5.4	144	7.06	23	1	330i	✓	7/18/05	BB
18	4.7	183	6.82	24	5.2	141	6.55	24	2	330i	✓	7/19/05	DBB
19	5.4	167	7.00	23	5.5	139	6.99	23	1	330i	✓	7/20/05	BB
20	6.4	164	7.36	22	6.3	142	7.40	22	2	330i	✓	7/21/05	DBB
21	6.7	164	7.27	23	7.3	141	7.34	23	2	330i	✓	7/22/05	✓/DBB
22	6.3	158	7.15	24	6.6	140	7.16	24	1	330i	✓	7/23/05	✓
23	6.2	170	7.22	22	6.9	143	7.25	22	2	330i	✓	7/24	TP
24	6.4	167	7.08	24	7.2	143	7.15	24	1	330i	✓	7/25/05	DBB
25	6.3	160	7.02	22	6.3	145	7.05	22	2	330i	✓	7/26/05	BB
26	6.8	155	7.08	22	6.9	135	7.11	22	2	330i	✓	7/27/05	DBB
27	6.3	155	6.92	22	6.5	141	6.95	22	2	330i	✓	7/28/05	DBB
28	7.4	164	7.10	22	7.1	141	7.08	22	2	330i	✓	7/29/05	DBB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, 7, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-002				-003				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.1	108	6.83	22	7.1	150	6.90	22	1	330i	✓	7/1/05	BB
1	6.8	130	6.82	22	6.8	163	6.92	21	1	330i	✓	7/2	CW
2	7.5	142	6.97	20	7.0	176	7.12	20	1	330i	✓	7/3	CW
3	7.3	128	6.82	21	7.2	142	6.97	21	1	330i	✓	7/4/05	BB
4	7.2	118	6.85	21	7.4	120	7.00	21	1	330i	✓	7/5/05	DHB
5	7.2	112	6.16	23	7.1	112	6.13	23	1	330i	✓	7/6/05	BB
6	7.2	119	6.45	22	6.7	117	6.42	22	2	330i	✓	7/7/05	DHB
7	7.2	110	7.20	21	7.4	109	7.22	21	2	330i	✓	7/8/05	DHB
8	7.3	121	6.93	22	7.4	125	6.89	22	1	330i	✓	7/9	CW
9	7.6	139	6.99	21	7.5	146	7.05	21	1	330i	✓	7/10	TP
10	6.4	143	6.58	22	6.3	147	6.75	22	2	330i	✓	7/11/05	[illegible]
11	7.0	135	7.01	24	7.1	132	7.07	24	1	330i	✓	7/12/05	DHB
12	7.1	146	7.08	22	6.8	144	6.96	22	1	330i	✓	7/13/05	BB
13	6.6	156	7.24	23	6.4	152	7.12	23	1	330i	✓	7/14/05	BB
14	5.6	162	7.07	23	5.7	148	7.03	23	1	330i	✓	7/15/05	BB
15	6.0	164	6.87	22	5.9	144	6.55	22	2	330i	✓	7/16/05	PS
16	5.6	176	7.24	24	5.7	153	7.08	24	1	330i	✓	7/17/05	BB
17	5.8	176	7.19	23	5.7	151	7.09	23	1	330i	✓	7/18/05	BB
18	5.1	183	6.97	24	4.8	151	6.55	24	2	330i	✓	7/19/05	DHB
19	5.1	185	7.05	23	5.2	146	7.05	23	1	330i	✓	7/20/05	BB
20	6.4	190	7.60	22	6.6	145	7.44	22	2	330i	✓	7/21/05	DHB
21	6.8	194	7.57	22	6.8	152	7.51	23	2	330i	✓	7/22/05	TP
22	6.1	188	7.23	24	6.2	145	7.16	24	1	330i	✓	7/23/05	[illegible]
23	6.9	190	7.46	22	6.8	148	7.36	22	2	330i	✓	7/24	TP
24	7.1	195	7.34	24	6.9	149	7.22	24	1	330i	✓	7/25/05	DHB
25	6.7	183	7.24	22	6.7	148	7.16	22	2	330i	✓	7/26/05	BB
26	7.2	177	7.28	22	7.3	143	7.25	22	2	330i	✓	7/27/05	DHB
27	6.7	174	7.07	22	6.6	146	7.05	22	2	330i	✓	7/28/05	DHB
28	7.3	179	7.17	22	7.2	154	7.15	22	2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, ~~7~~, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-007				-009				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.6	134	6.74	22	6.4	125	6.77	22	1	330i	✓	7/1/05	BB
1	6.4	153	6.82	21	6.6	154	6.84	21	1	330i	✓	7/2	CW
2	7.0	169	6.91	20	7.1	168	6.99	20	1	330i	✓	7/3	CW
3	7.1	115	7.02	21	7.5	132	7.02	21	1	330i	✓	7/4/05	BB
4	7.3	121	7.02	21	7.2	133	7.05	21	1	330i	✓	7/5/05	DBB
5	6.8	105	6.14	23	6.6	112	6.26	23	1	330i	✓	7/6/05	BB
6	6.8	107	6.39	22	6.7	128	6.55	22	2	330i	✓	7/7/05	DBB
7	6.9	111	6.94	21	7.0	116	7.03	21	2	330i	✓	7/8/05	DBB
8	7.1	120	6.81	21	7.1	123	6.83	21	1	330i	✓	7/9	CW
9	7.6	140	7.02	21	7.4	130	7.04	21	1	330i	✓	7/10	TP
10	6.4	142	6.65	22	6.3	130	6.56	22	2	330i	✓	7/11/05	✓
11	7.4	128	7.09	24	7.2	119	7.02	24	1	330i	✓	7/12/05	DBB
12	6.4	147	6.89	22	6.7	136	6.92	22	1	330i	✓	7/13/05	BB
13	6.2	158	7.09	23	6.4	141	7.14	23	1	330i	✓	7/14/05	BB
14	5.5	167	7.25	23	5.7	140	7.12	23	1	330i	✓	7/15/05	BB
15	5.9	167	7.06	22	6.1	138	6.52	22	2	330i	✓	7/16/05	PS
16	5.8	[illegible]	7.43	24	5.9	146	7.11	24	1	330i	✓	7/17/05	BB
17	5.4	195	7.23	23	5.4	144	7.06	23	1	330i	✓	7/18/05	BB
18	4.7	183	6.82	24	5.2	141	6.55	24	2	330i	✓	7/19/05	DBB
19	5.4	167	7.00	23	5.5	139	6.99	23	1	330i	✓	7/20/05	BB
20	6.4	164	7.36	22	6.3	142	7.40	22	2	330i	✓	7/21/05	DBB
21	6.7	164	7.27	23	7.3	141	7.34	23	2	330i	✓	7/22/05	✓/DBB
22	6.3	158	7.15	24	6.6	140	7.16	24	1	330i	✓	7/23/05	✓
23	6.2	170	7.22	22	6.9	143	7.25	22	2	330i	✓	7/24	TP
24	6.4	167	7.08	24	7.2	143	7.15	24	1	330i	✓	7/25/05	DBB
25	6.3	160	7.02	22	6.3	145	7.05	22	2	330i	✓	7/26/05	BB
26	6.8	155	7.08	22	6.9	135	7.11	22	2	330i	✓	7/27/05	DBB
27	6.3	155	6.92	22	6.5	141	6.95	22	2	330i	✓	7/28/05	DBB
28	7.4	164	7.10	22	7.1	141	7.08	22	2	330i	✓	7/29/05	DBB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, 7, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-010				-011				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.8	115	6.90	22	7.2	118	6.82	22	1	330i	✓	7/1/05	BB
1	6.9	139	6.90	21	6.9	153	6.87	21	1	330I	✓	7/2	CM
2	7.5	158	6.97	20	7.4	160	6.99	20	1	330i	✓	7/3	CM
3	7.7	128	7.03	21	7.8	128	7.01	21	1	330i	✓	7/4/05	BB
4	7.4	135	7.00	21	7.3	130	7.09	21	1	330 i	✓	7/5/05	DKB
5	6.8	119	6.23	23	7.1	110	6.29	23	1	330i	✓	7/6/05	BB
6	7.0	122	6.44	22	6.8	117	6.53	22	2	330i	✓	7/7/05	DKB
7	7.2	124	6.98	21	6.9	111	7.02	21	2	330i	✓	7/8/05	DKB
8	6.9	129	6.83	21	6.9	120	6.85	22	1	332	✓	7/9	CM
9	7.3	144	7.00	21	7.0	136	7.06	21	1	330i	✓	7/10	TP
10	7.0	153	6.66	22	6.2	139	Ex 6:08 6.84	22	2	330i	/	7/11/05	⌐
11	7.1	142	6.93	24	7.4	129	6.99	24	1	330i	✓	7/12/05	DKB
12	6.8	154	6.89	22	6.8	136	6.91	22	1	330i	✓	7/13/05	BB
13	6.6	154	7.07	23	6.3	149	7.07	23	1	330i	✓	7/14/05	BB
14	5.8	153	6.99	23	6.2	151	7.07	23	1	330i	✓	7/15/05	BB
15	6.5	148	6.50	22	6.0	173	6.73	22	2	330i	✓	7/16/05	PS
16	6.1	152	7.03	24	6.3	167	7.11	24	1	330i	✓	7/17/05	BB
17	5.6	154	6.95	23	5.2	173	7.07	24	1	330i	✓	7/18/05	BB
18	5.4	153	6.45	24	4.1	176	6.78	24	2	330i	✓	7/19/05	DKB
19	5.4	149	6.90	23	4.8	171	7.11	23	1	330i	✓	7/20/05	BB
20	6.7	150	7.32	22	6.1	174	7.50	22	2	330i	✓	7/21/05	DKB
21	7.4	151	7.27	23	6.7	176	7.35	23	2	330i	✓	7/22/05	DKB
22	6.4	149	7.18	24	6.1	169	7.14	24	1	330i	/	7/23/05	⌐
23	7.0	150	7.29	22	6.2	169	7.34	22	2	330i	✓	7/24	TP
24	7.2	150	7.11	24	6.8	170	7.14	24	1	330i	✓	7/25/05	DKB
25	6.5	151	7.03	22	6.6	165	7.12	22	2	330i	✓	7/26/05	BB
26	7.4	139	7.05	22	7.1	152	7.06	22	2	330i	✓	7/27/05	BB
27	6.6	144	6.93	22	6.8	152	6.96	22	2	330i	✓	7/28/05	DKB
28	7.4	145	7.07	22	7.0	152	7.08	22	2	330i	✓	7/29/05	DKB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 7, 14, 21, 28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-002				-003				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.1	108	6.83	22	7.1	150	6.90	22	1	330i	✓	7/1/05	BB
1	6.8	130	6.82	22	6.8	163	6.92	21	1	330i	✓	7/2	CW
2	7.5	142	6.97	20	7.0	176	7.12	20	1	330i	✓	7/3	CW
3	7.3	128	6.82	21	7.2	142	6.97	21	1	330i	✓	7/4/05	BB
4	7.2	118	6.85	21	7.4	120	7.00	21	1	330i	✓	7/5/05	DHB
5	7.2	112	6.16	23	7.1	112	6.13	23	1	330i	✓	7/6/05	BB
6	7.2	119	6.45	22	6.7	117	6.42	22	2	330i	✓	7/7/05	DHB
7	7.2	110	7.20	21	7.4	109	7.22	21	2	330i	✓	7/8/05	DHB
8	7.3	121	6.93	22	7.4	125	6.89	22	1	330i	✓	7/9	CW
9	7.6	139	6.99	21	7.5	146	7.05	21	1	330i	✓	7/10	TP
10	6.4	143	6.58	22	6.3	147	6.75	22	2	330i	✓	7/11/05	[illegible]
11	7.0	135	7.01	24	7.1	132	7.07	24	1	330i	✓	7/12/05	DHB
12	7.1	146	7.08	22	6.8	144	6.96	22	1	330i	✓	7/13/05	BB
13	6.6	156	7.24	23	6.4	152	7.12	23	1	330i	✓	7/14/05	BB
14	5.6	162	7.07	23	5.7	148	7.03	23	1	330i	✓	7/15/05	BB
15	6.0	164	6.87	22	5.9	144	6.55	22	2	330i	✓	7/16/05	PS
16	5.6	176	7.24	24	5.7	153	7.08	24	1	330i	✓	7/17/05	BB
17	5.8	176	7.19	23	5.7	151	7.09	23	1	330i	✓	7/18/05	BB
18	5.1	183	6.97	24	4.8	151	6.55	24	2	330i	✓	7/19/05	DHB
19	5.1	185	7.05	23	5.2	146	7.05	23	1	330i	✓	7/20/05	BB
20	6.4	190	7.60	22	6.6	145	7.44	22	2	330i	✓	7/21/05	DHB
21	6.8	194	7.57	22	6.8	152	7.51	23	2	330i	✓	7/22/05	TP
22	6.1	188	7.23	24	6.2	145	7.16	24	1	330i	✓	7/23/05	[illegible]
23	6.9	190	7.46	22	6.8	148	7.36	22	2	330i	✓	7/24	TP
24	7.1	195	7.34	24	6.9	149	7.22	24	1	330i	✓	7/25/05	DHB
25	6.7	183	7.24	22	6.7	148	7.16	22	2	330i	✓	7/26/05	BB
26	7.2	177	7.28	22	7.3	143	7.25	22	2	330i	✓	7/27/05	DHB
27	6.7	174	7.07	22	6.6	146	7.05	22	2	330i	✓	7/28/05	DHB
28	7.3	179	7.17	22	7.2	154	7.15	22	2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, ~~7~~, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-007				-009				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.6	134	6.74	22	6.4	125	6.77	22	1	330i	✓	7/1/05	BB
1	6.4	153	6.82	21	6.6	154	6.84	21	1	330i	✓	7/2	CW
2	7.0	169	6.91	20	7.1	168	6.99	20	1	330i	✓	7/3	CW
3	7.1	115	7.02	21	7.5	132	7.02	21	1	330i	✓	7/4/05	BB
4	7.3	121	7.02	21	7.2	133	7.05	21	1	330i	✓	7/5/05	DBB
5	6.8	105	6.14	23	6.6	112	6.26	23	1	330i	✓	7/6/05	BB
6	6.8	107	6.39	22	6.7	128	6.55	22	2	330i	✓	7/7/05	DBB
7	6.9	111	6.94	21	7.0	116	7.03	21	2	330i	✓	7/8/05	DBB
8	7.1	120	6.81	21	7.1	123	6.83	21	1	330i	✓	7/9	CW
9	7.6	140	7.02	21	7.4	130	7.04	21	1	330i	✓	7/10	TP
10	6.4	142	6.65	22	6.3	130	6.56	22	2	330i	✓	7/11/05	✓
11	7.4	128	7.09	24	7.2	119	7.02	24	1	330i	✓	7/12/05	DBB
12	6.4	147	6.89	22	6.7	136	6.92	22	1	330i	✓	7/13/05	BB
13	6.2	158	7.09	23	6.4	141	7.14	23	1	330i	✓	7/14/05	BB
14	5.5	167	7.25	23	5.7	140	7.12	23	1	330i	✓	7/15/05	BB
15	5.9	167	7.06	22	6.1	138	6.52	22	2	330i	✓	7/16/05	PS
16	5.8	[illegible]	7.43	24	5.9	146	7.11	24	1	330i	✓	7/17/05	BB
17	5.4	195	7.23	23	5.4	144	7.06	23	1	330i	✓	7/18/05	BB
18	4.7	183	6.82	24	5.2	141	6.55	24	2	330i	✓	7/19/05	DBB
19	5.4	167	7.00	23	5.5	139	6.99	23	1	330i	✓	7/20/05	BB
20	6.4	164	7.36	22	6.3	142	7.40	22	2	330i	✓	7/21/05	DBB
21	6.7	164	7.27	23	7.3	141	7.34	23	2	330i	✓	7/22/05	✓/DBB
22	6.3	158	7.15	24	6.6	140	7.16	24	1	330i	✓	7/23/05	✓
23	6.2	170	7.22	22	6.9	143	7.25	22	2	330i	✓	7/24	TP
24	6.4	167	7.08	24	7.2	143	7.15	24	1	330i	✓	7/25/05	DBB
25	6.3	160	7.02	22	6.3	145	7.05	22	2	330i	✓	7/26/05	BB
26	6.8	155	7.08	22	6.9	135	7.11	22	2	330i	✓	7/27/05	DBB
27	6.3	155	6.92	22	6.5	141	6.95	22	2	330i	✓	7/28/05	DBB
28	7.4	164	7.10	22	7.1	141	7.08	22	2	330i	✓	7/29/05	DBB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, 7, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-010				-011				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.8	115	6.90	22	7.2	118	6.82	22	1	330i	✓	7/1/05	BB
1	6.9	139	6.90	21	6.9	153	6.87	21	1	330I	✓	7/2	CM
2	7.5	158	6.97	20	7.4	160	6.99	20	1	330i	✓	7/3	CM
3	7.7	128	7.03	21	7.8	128	7.01	21	1	330i	✓	7/4/05	BB
4	7.4	135	7.00	21	7.3	130	7.09	21	1	330 i	✓	7/5/05	DKB
5	6.8	119	6.23	23	7.1	110	6.29	23	1	330i	✓	7/6/05	BB
6	7.0	122	6.44	22	6.8	117	6.53	22	2	330i	✓	7/7/05	DKB
7	7.2	124	6.98	21	6.9	111	7.02	21	2	330i	✓	7/8/05	DKB
8	6.9	129	6.83	21	6.9	120	6.85	22	1	332	✓	7/9	CM
9	7.3	144	7.00	21	7.0	136	7.06	21	1	330i	✓	7/10	TP
10	7.0	153	6.66	22	6.2	139	Ex 6:08 6.84	22	2	330i	/	7/11/05	⌐
11	7.1	142	6.93	24	7.4	129	6.99	24	1	330i	✓	7/12/05	DKB
12	6.8	154	6.89	22	6.8	136	6.91	22	1	330i	✓	7/13/05	BB
13	6.6	154	7.07	23	6.3	149	7.07	23	1	330i	✓	7/14/05	BB
14	5.8	153	6.99	23	6.2	151	7.07	23	1	330i	✓	7/15/05	BB
15	6.5	148	6.50	22	6.0	173	6.73	22	2	330i	✓	7/16/05	PS
16	6.1	152	7.03	24	6.3	167	7.11	24	1	330i	✓	7/17/05	BB
17	5.6	154	6.95	23	5.2	173	7.07	24	1	330i	✓	7/18/05	BB
18	5.4	153	6.45	24	4.1	176	6.78	24	2	330i	✓	7/19/05	DKB
19	5.4	149	6.90	23	4.8	171	7.11	23	1	330i	✓	7/20/05	BB
20	6.7	150	7.32	22	6.1	174	7.50	22	2	330i	✓	7/21/05	DKB
21	7.4	151	7.27	23	6.7	176	7.35	23	2	330i	✓	7/22/05	DKB
22	6.4	149	7.18	24	6.1	169	7.14	24	1	330i	/	7/23/05	⌐
23	7.0	150	7.29	22	6.2	169	7.34	22	2	330i	✓	7/24	TP
24	7.2	150	7.11	24	6.8	170	7.14	24	1	330i	✓	7/25/05	DKB
25	6.5	151	7.03	22	6.6	165	7.12	22	2	330i	✓	7/26/05	BB
26	7.4	139	7.05	22	7.1	152	7.06	22	2	330i	✓	7/27/05	BB
27	6.6	144	6.93	22	6.8	152	6.96	22	2	330i	✓	7/28/05	DKB
28	7.4	145	7.07	22	7.0	152	7.08	22	2	330i	✓	7/29/05	DKB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 7, 14, 21, 28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-010				-011				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.8	115	6.90	22	7.2	118	6.82	22	1	330i	✓	7/1/05	BB
1	6.9	139	6.90	21	6.9	153	6.87	21	1	330I	✓	7/2	CM
2	7.5	158	6.97	20	7.4	160	6.99	20	1	330i	✓	7/3	CM
3	7.7	128	7.03	21	7.8	128	7.01	21	1	330i	✓	7/4/05	BB
4	7.4	135	7.00	21	7.3	130	7.09	21	1	330 i	✓	7/5/05	DKB
5	6.8	119	6.23	23	7.1	110	6.29	23	1	330i	✓	7/6/05	BB
6	7.0	122	6.44	22	6.8	117	6.53	22	2	330i	✓	7/7/05	DKB
7	7.2	124	6.98	21	6.9	111	7.02	21	2	330i	✓	7/8/05	DKB
8	6.9	129	6.83	21	6.9	120	6.85	22	1	332	✓	7/9	CM
9	7.3	144	7.00	21	7.0	136	7.06	21	1	330i	✓	7/10	TP
10	7.0	153	6.66	22	6.2	139	Ex 6:08 6.84	22	2	330i	/	7/11/05	⌐
11	7.1	142	6.93	24	7.4	129	6.99	24	1	330i	✓	7/12/05	DKB
12	6.8	154	6.89	22	6.8	136	6.91	22	1	330i	✓	7/13/05	BB
13	6.6	154	7.07	23	6.3	149	7.07	23	1	330i	✓	7/14/05	BB
14	5.8	153	6.99	23	6.2	151	7.07	23	1	330i	✓	7/15/05	BB
15	6.5	148	6.50	22	6.0	173	6.73	22	2	330i	✓	7/16/05	PS
16	6.1	152	7.03	24	6.3	167	7.11	24	1	330i	✓	7/17/05	BB
17	5.6	154	6.95	23	5.2	173	7.07	24	1	330i	✓	7/18/05	BB
18	5.4	153	6.45	24	4.1	176	6.78	24	2	330i	✓	7/19/05	DKB
19	5.4	149	6.90	23	4.8	171	7.11	23	1	330i	✓	7/20/05	BB
20	6.7	150	7.32	22	6.1	174	7.50	22	2	330i	✓	7/21/05	DKB
21	7.4	151	7.27	23	6.7	176	7.35	23	2	330i	✓	7/22/05	DKB
22	6.4	149	7.18	24	6.1	169	7.14	24	1	330i	/	7/23/05	⌐
23	7.0	150	7.29	22	6.2	169	7.34	22	2	330i	✓	7/24	TP
24	7.2	150	7.11	24	6.8	170	7.14	24	1	330i	✓	7/25/05	DKB
25	6.5	151	7.03	22	6.6	165	7.12	22	2	330i	✓	7/26/05	BB
26	7.4	139	7.05	22	7.1	152	7.06	22	2	330i	✓	7/27/05	BB
27	6.6	144	6.93	22	6.8	152	6.96	22	2	330i	✓	7/28/05	DKB
28	7.4	145	7.07	22	7.0	152	7.08	22	2	330i	✓	7/29/05	DKB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 7, 14, 21, 28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-012				-013				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.0	146	6.93	22	6.8	132	7.01	22	1	330i	✓	7/1/05	BB
1	7.1	173	6.91	21	6.6	134	7.03	21	1	330I	✓	7/2	CM
2	7.0	167	7.12	20	7.7	143	7.14	20	1	330i	✓	7/3	M
3	7.4	129	6.98	21	7.4	116	7.10	21	1	330i	✓	7/4/05	BB
4	7.3	130	7.14	21	7.5	118	7.15	21	1	330i	✓	7/5/05	DHB
5	6.8	113	6.29	23	6.8	106	6.33	23	1	330i	✓	7/6/05	BB
6	6.8	127	6.62	22	6.9	116	6.52	22	2	330i	✓	7/7/05	DHB
7	7.0	116	7.08	21	7.4	109	7.01	21	2	330i	✓	7/8/05	DHB
8	7.1	126	6.87	21	7.3	119	6.93	21	1	330I	✓	7/9	CM
9	7.1	146	7.15	21	7.2	136	7.15	21	1	330i	✓	7/10	TP
10	6.4	155	6.84	22	7.0	140	6.77	22	2	330i	✓	7/11/05	✓
11	6.8	134	7.11	24	7.3	121	7.11	24	1	330i	✓	7/12/05	DHB
12	6.6	144	6.94	22	6.4	141	7.00	22	1	330i	✓	7/13/05	BB
13	6.2	164	7.23	23	6.3	147	7.23	23	1	330i	✓	7/14/05	BB
14	5.8	169	7.20	23	5.7	148	7.15	23	1	330i	✓	7/15/05	BB
15	5.7	165	6.87	22	6.3	146	6.56	22	2	330i	✓	7/16/05	PS
16	5.4	177	7.19	24	6.3	148	7.20	24	1	330i	✓	7/17/05	BB
17	5.1	179	7.17	24	6.4	145	7.21	24	1	330i	✓	7/18/05	BB
18	4.9	172	6.83	24	6.1	143	6.60	24	2	330i	✓	7/19/05	DHB
19	5.1	166	7.13	23	5.7	142	7.07	23	1	330i	✓	7/20/05	BB
20	6.3	161	7.51	22	6.8	145	7.47	22	2	330i	✓	7/21/05	DHB
21	6.7	159	7.37	23	7.1	146	7.37	23	2	330i	✓	7/22/05	DHB
22	5.9	150	7.20	24	6.3	145	7.16	24	1	330i	✓	7/23/05	✓
23	6.3	149	7.26	22	6.5	147	7.26	22	2	330i	✓	7/24	TP
24	6.6	152	7.11	24	7.1	152	7.13	24	1	330i	✓	7/25/05	DHB
25	6.5	151	7.07	22	6.9	151	7.11	22	2	330i	✓	7/26/05	BB
26	7.1	140	7.06	22	7.3	137	7.09	22	2	330i	✓	7/27/05	DHB
27	6.2	143	6.94	22	6.8	142	6.97	22	2	330i	✓	7/28/05	DHB
28	6.9	144	7.05	22	7.4	144	7.12	22	2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~ 1, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-014				-015				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.1	373	7.21	22	7.2	300	7.28	22	1	330i	✓	7/1/05	BB
1	7.1	472	7.08	21	7.1	432	7.37	21	1	330i	✓	7/2	CM
2	8.0	583	7.44	20	7.9	533	7.57	20	1	330i	✓	7/3	CM
3	8.1	259	7.24	21	8.3	283	7.37	21	1	330i	✓	7/4/05	BB
4	7.4	287	7.28	21	7.3	311	7.42	21	1	330i	✓	7/5/05	DHB
5	7.2	206	6.55	23	7.2	223	6.63	23	1	330i	✓	7/6/05	BB
6	7.1	398	6.80	22	6.8	285	6.93	22	2	330i	✓	7/7/05	DHB
7	7.2	245	7.12	21	7.1	191	7.18	21	2	330i	✓	7/8/05	DHB
8	7.3	169	6.99	21	7.0	185	7.08	21	1	330i	✓	7/9	CM
9	7.2	191	7.22	21	7.1	215	7.26	21	1	330i	✓	7/10	TP
10	6.6	209	6.86	22	6.6	243	6.95	22	2	330i	✓	7/11/05	✓
11	7.2	175	7.16	24	7.1	205	7.24	24	1	330i	✓	7/12/05	DHB
12	6.7	164	7.04	22	6.7	179	7.08	22	1	330i	✓	7/13/05	BB
13	6.4	162	7.22	23	6.4	172	7.17	23	1	330i	✓	7/14/05	BB
14	6.0	159	7.15	23	6.1	172	7.10	23	1	330i	✓	7/15/05	BB
15	6.2	180	6.63	22	5.5	161	6.57	22	2	330i	✓	7/16/05	PS
16	6.3	161	7.16	24	6.2	167	7.12	24	1	330i	✓	7/17/05	BB
17	6.4	159	7.15	24	6.2	166	7.10	24	1	330i	✓	7/18/05	BB
18	5.8	154	6.64	24	5.3	160	6.58	24	2	330i	✓	7/19/05	DHB
19	6.0	154	7.07	23	5.7	154	7.01	23	1	330i	✓	7/20/05	BB
20	6.9	158	7.44	22	7.4	157	7.42	22	2	330i	✓	7/21/05	DHB
21	7.0	150	7.32	23	7.0	149	7.31	23	2	330i	✓	7/22/05	DHB
22	6.3	148	7.16	24	6.3	151	7.16	24	1	330i	✓	7/23/05	✓
23	6.7	156	7.31	22	6.6	147	7.33	22	2	330i	✓	7/24	TP
24	7.0	161	7.14	24	7.1	155	7.15	24	1	330i	✓	7/25/05	DHB
25	6.9	159	7.06	22	6.9	158	7.10	22	2	330i	✓	7/26/05	BB
26	7.2	138	7.05	22	7.1	141	7.03	22	2	330i	✓	7/27/05	DHB
27	6.9	146	6.97	22	6.6	148	6.98	22	2	330i	✓	7/28/05	DHB
28	7.2	150	7.11	22	7.5	152	7.18	22	2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, ~~7~~, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-016				-017				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.1	157	6.99	22	6.7	151	6.92	22	1	330i	✓	7/1/05	BB
1	7.3	202	7.06	21	6.6	172	7.03	21	1	330I	✓	7/2	CW
2	7.5	235	7.05	20	7.5	185	7.10	20	1	330i	✓	7/3	CW
3	8.1	165	7.23	21	7.9	146	7.21	21	1	330i	✓	7/4/05	BB
4	7.3	169	7.13	21	7.2	142	7.16	21	1	330i	✓	7/5/05	DHB
5	7.2	149	6.29	23	7.1	122	6.33	23	1	330i	✓	7/6/05	BB
6	7.0	158	6.51	22	7.1	131	6.59	22	2	330i	✓	7/7/05	DHB
7	7.3	132	6.93	21	7.0	117	6.74	21	2	330i	✓	7/8/05	DHB
8	7.1	147	6.97	21	7.2	130	6.92	21	1	330I	✓	7/9	CW
9	7.2	152	7.05	21	7.0	128	6.95	21	1	330i	✓	7/10	DP
10	6.4	163	6.64	22	6.6	132	6.26	22	2	330i	✓	7/11/05	✓
11	6.9	149	6.95	23	6.9	120	6.86	23	1	330i	✓	7/12/05	DHB
12	6.8	152	6.89	22	6.7	131	6.88	22	1	330i	✓	7/13/05	BB
13	6.3	155	7.06	23	6.3	136	7.03	23	1	330i	✓	7/14/05	BB
14	5.7	155	7.03	23	5.8	136	6.96	23	1	330i	✓	7/15/05	BB
15	6.0	147	6.55	22	6.0	132	6.39	23	2	330i	✓	7/16/05	PS
16	5.8	161	7.06	24	5.8	145	7.04	24	1	330i	✓	7/17/05	BB
17	5.8	164	7.04	24	5.7	144	7.02	24	1	330i	✓	7/18/05	BB
18	5.2	167	6.68	24	5.7	139	6.43	24	2	330i	✓	7/19/05	DHB
19	5.6	169	7.05	23	5.6	139	6.97	23	1	330i	✓	7/20/05	BB
20	6.5	177	7.54	22	6.6	144	7.43	22	2	330i	✓	7/21/05	DHB
21	6.8	172	7.29	22	6.8	137	7.28	22	2	330i	✓	7/22/05	DHB
22	6.3	169	7.16	24	6.3	139	7.26	24	1	330i	✓	7/23/05	✓
23	6.6	162	7.34	22	6.5	138	7.25	22	2	330i	✓	7/24	DP
24	6.8	177	7.09	24	6.8	142	7.05	24	1	330i	✓	7/25/05	DHB
25	6.7	162	7.06	22	6.7	140	7.03	22	2	330i	✓	7/26/05	BB
26	7.3	153	7.05	22	7.2	138	7.02	22	2	330i	✓	7/27/05	DHB
27	6.6	145	6.92	22	6.4	136	6.91	22	2	330i	✓	7/28/05	DHB
28	7.3	155	7.08	22	7.2	144	7.09	22	2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 7, 14, 21, 28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

H. azteca SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: MHR/Pond	START DATE: 07/01/05

DAY	-018								Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	6.7	150	6.98	22					1	330i	✓	7/1/05	BB
1	6.8	172	704	21					1	330I	✓	7/2	CM
2	7.1	193	7.09	19					1	330i	✓	7/3	M
3	7.7	137	7.21	21					1	330i	✓	7/4/05	BB
4	7.2	130	7.19	21					1	330i	✓	7/5/05	DHB
5	6.9	113	6.31	23					1	330i	✓	7/6/05	BB
6	6.9	132	4.64	22					2	330i	✓	7/7/05	DHB
7	7.1	122	6.94	21					2	330i	✓	7/8/05	DHB
8	6.8	136	6.93	21					1	330I	✓	7/9	CM
9	7.0	144	6.99	21					1	330i	✓	7/10	TP
10	6.5	150	6.71	22			BB 7/11/05		2	330i	✓	7/11/05	✓
11	7.0	136	6.99	23					1	330i	✓	7/12/05	DHB
12	6.7	145	6.91	22					1	330i	✓	7/13/05	BB
13	6.4	149	7.06	23					1	330i	✓	7/14/05	BB
14	5.8	147	7.00	23					1	330i	✓	7/15/05	BB
15	6.1	154	6.51	22					2	330I	✓	7/16/05	PS
16	5.8	157	7.03	24					1	330i	✓	7/17/05	BB
17	5.8	156	7.05	24					1	330i	✓	7/18/05	BB
18	5.7	153	6.70	24					2	330i	✓	7/19/05	DHB
19	5.8	156	7.10	23					1	330i	✓	7/20/05	BB
20	6.7	164	7.49	22					2	330i	✓	7/21/05	DHB
21	7.0	154	7.29	22					2	330i	✓	7/22/05	✓ DHB
22	6.4	157	7.23	24					1	330i	✓	7/23/05	✓
23	6.6	163	7.26	22					2	330i	✓	7/24	TP
24	7.0	180	7.14	24					1	330i	✓	7/25/05	DHB
25	6.8	170	7.18	22					2	330i	✓	7/26/05	BB
26	7.5	154	7.08	22					2	330i	✓	7/27/05	DHB
27	7.0	158	7.02	21					2	330i	✓	7/28/05	DHB
28	7.4	166	7.29	22					2	330i	✓	7/29/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, ~~7~~, ~~14~~, ~~21~~, ~~28~~
23° C
Feed 1 mL of YCT/Replicate Daily
Two Volume Additions Daily

STUDY: 13446
CLIENT: BBL Sciences
PROJECT: Blackstone River
TASK: H. azteca 28 Day Survival and Growth
DATA: Alkalinity
START DATE: 07/01/05
DATE ENDED: 07/29/05

Lab ID	Sample #	Date Sampled	Exposure Day	Conc.	Units
-001 Ha	13446-022	07/01/05	0	28	mg/L as CaCO3
-001 Ha	13446-127	07/08/05	7	11	mg/L as CaCO3
-001 Ha	13446-181	07/15/05	14	19	mg/L as CaCO3
-001 Ha	13446-289	07/22/05	21	27	mg/L as CaCO3
-001 Ha	13446-397	07/29/05	28	22	mg/L as CaCO3
-002 Ha	13446-025	07/01/05	0	<10	mg/L as CaCO3
-002 Ha	13446-130	07/08/05	7	13	mg/L as CaCO3
-002 Ha	13446-184	07/15/05	14	28	mg/L as CaCO3
-002 Ha	13446-292	07/22/05	21	28	mg/L as CaCO3
-002 Ha	13446-400	07/29/05	28	25	mg/L as CaCO3
-003 Ha	13446-028	07/01/05	0	<10	mg/L as CaCO3
-003 Ha	13446-133	07/08/05	7	24	mg/L as CaCO3
-003 Ha	13446-187	07/15/05	14	28	mg/L as CaCO3
-003 Ha	13446-295	07/22/05	21	33	mg/L as CaCO3
-003 Ha	13446-403	07/29/05	28	28	mg/L as CaCO3
-004 Ha	13446-031	07/01/05	0	35	mg/L as CaCO3
-004 Ha	13446-136	07/08/05	7	14	mg/L as CaCO3
-004 Ha	13446-190	07/15/05	14	21	mg/L as CaCO3
-004 Ha	13446-298	07/22/05	21	23	mg/L as CaCO3
-004 Ha	13446-406	07/29/05	28	25	mg/L as CaCO3
-006 Ha	13446-034	07/01/05	0	<10	mg/L as CaCO3
-006 Ha	13446-139	07/08/05	7	16	mg/L as CaCO3
-006 Ha	13446-193	07/15/05	14	28	mg/L as CaCO3
-006 Ha	13446-301	07/22/05	21	24	mg/L as CaCO3
-006 Ha	13446-409	07/29/05	28	23	mg/L as CaCO3
-007 Ha	13446-037	07/01/05	0	<10	mg/L as CaCO3
-007 Ha	13446-142	07/08/05	7	10	mg/L as CaCO3
-007 Ha	13446-196	07/15/05	14	34	mg/L as CaCO3
-007 Ha	13446-304	07/22/05	21	39	mg/L as CaCO3
-007 Ha	13446-412	07/29/05	28	21	mg/L as CaCO3
-009 Ha	13446-040	07/01/05	0	20	mg/L as CaCO3
-009 Ha	13446-145	07/08/05	7	19	mg/L as CaCO3
-009 Ha	13446-199	07/15/05	14	18	mg/L as CaCO3
-009 Ha	13446-307	07/22/05	21	24	mg/L as CaCO3
-009 Ha	13446-415	07/29/05	28	20	mg/L as CaCO3
-010 Ha	13446-043	07/01/05	0	28	mg/L as CaCO3
-010 Ha	13446-148	07/08/05	7	14	mg/L as CaCO3
-010 Ha	13446-202	07/15/05	14	23	mg/L as CaCO3
-010 Ha	13446-310	07/22/05	21	26	mg/L as CaCO3
-010 Ha	13446-418	07/29/05	28	26	mg/L as CaCO3
-011 Ha	13446-046	07/01/05	0	<10	mg/L as CaCO3
-011 Ha	13446-151	07/08/05	7	19	mg/L as CaCO3
-011 Ha	13446-205	07/15/05	14	31	mg/L as CaCO3
-011 Ha	13446-313	07/22/05	21	44	mg/L as CaCO3
-011 Ha	13446-421	07/29/05	28	32	mg/L as CaCO3
-012 Ha	13446-049	07/01/05	0	<10	mg/L as CaCO3
-012 Ha	13446-154	07/08/05	7	22	mg/L as CaCO3
-012 Ha	13446-208	07/15/05	14	30	mg/L as CaCO3

-012 Ha	13446-316	07/22/05	21	35 mg/L as CaCO3
-012 Ha	13446-424	07/29/05	28	22 mg/L as CaCO3
-013 Ha	13446-052	07/01/05	0	<10 mg/L as CaCO3
-013 Ha	13446-157	07/08/05	7	15 mg/L as CaCO3
-013 Ha	13446-211	07/15/05	14	20 mg/L as CaCO3
-013 Ha	13446-319	07/22/05	21	23 mg/L as CaCO3
-013 Ha	13446-427	07/29/05	28	25 mg/L as CaCO3
-014 Ha	13446-055	07/01/05	0	<10 mg/L as CaCO3
-014 Ha	13446-160	07/08/05	7	20 mg/L as CaCO3
-014 Ha	13446-214	07/15/05	14	23 mg/L as CaCO3
-014 Ha	13446-322	07/22/05	21	22 mg/L as CaCO3
-014 Ha	13446-430	07/29/05	28	25 mg/L as CaCO3
-015 Ha	13446-058	07/01/05	0	27 mg/L as CaCO3
-015 Ha	13446-163	07/08/05	7	25 mg/L as CaCO3
-015 Ha	13446-217	07/15/05	14	31 mg/L as CaCO3
-015 Ha	13446-325	07/22/05	21	22 mg/L as CaCO3
-015 Ha	13446-433	07/29/05	28	16 mg/L as CaCO3
-016 Ha	13446-061	07/01/05	0	29 mg/L as CaCO3
-016 Ha	13446-166	07/08/05	7	14 mg/L as CaCO3
-016 Ha	13446-220	07/15/05	14	24 mg/L as CaCO3
-016 Ha	13446-328	07/22/05	21	28 mg/L as CaCO3
-016 Ha	13446-436	07/29/05	28	18 mg/L as CaCO3
-017 Ha	13446-064	07/01/05	0	32 mg/L as CaCO3
-017 Ha	13446-169	07/08/05	7	16 mg/L as CaCO3
-017 Ha	13446-223	07/15/05	14	<10 mg/L as CaCO3
-017 Ha	13446-331	07/22/05	21	13 mg/L as CaCO3
-017 Ha	13446-439	07/29/05	28	19 mg/L as CaCO3
-018 Ha	13446-067	07/01/05	0	22 mg/L as CaCO3
-018 Ha	13446-172	07/08/05	7	13 mg/L as CaCO3
-018 Ha	13446-226	07/15/05	14	24 mg/L as CaCO3
-018 Ha	13446-334	07/22/05	21	27 mg/L as CaCO3
-018 Ha	13446-442	07/29/05	28	<10 mg/L as CaCO3
Lab Ha	13446-019	07/01/05	0	<10 mg/L as CaCO3
Lab Ha	13446-124	07/08/05	7	26 mg/L as CaCO3
Lab Ha	13446-178	07/15/05	14	47 mg/L as CaCO3
Lab Ha	13446-286	07/22/05	21	24 mg/L as CaCO3
Lab Ha	13446-394	07/29/05	28	24 mg/L as CaCO3
MHR/POND	13446-175	07/08/05	7	19 mg/L as CaCO3
MHR/POND	13446-229	07/15/05	14	45 mg/L as CaCO3
MHR/POND	13446-337	07/22/05	21	25 mg/L as CaCO3
MHR/POND	13446-445	07/29/05	28	14 mg/L as CaCO3

STUDY: 13446
CLIENT: BBL Sciences
PROJECT: Blackstone River
TASK: H. azteca 28 Day Survival and Growth
DATA: Ammonia
START DATE: 07/01/05
DATE ENDED: 07/29/05

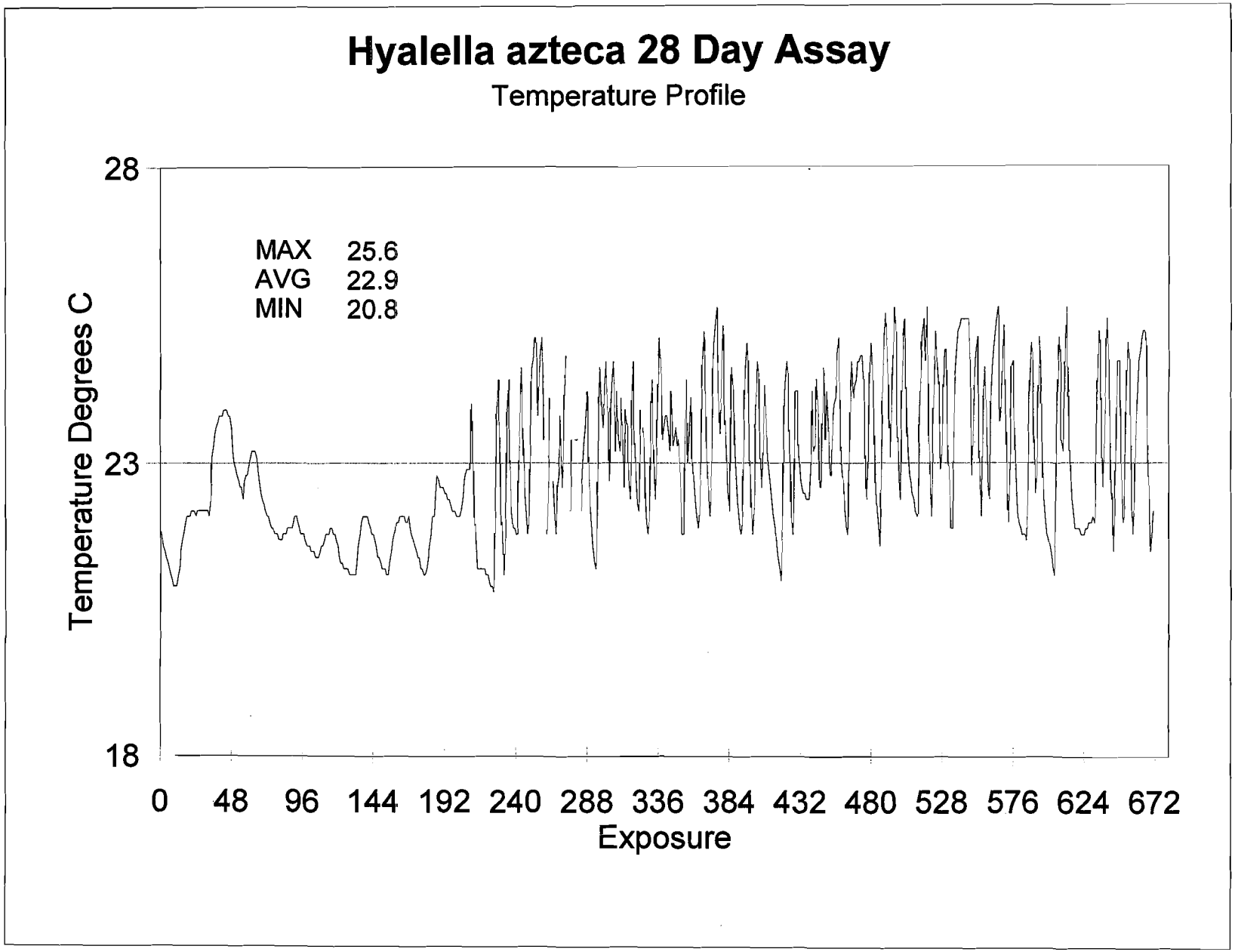
Lab ID	Sample #	Date Sampled	Exposure Day	Conc.	Units
-001 Ha	13446-024	07/01/05	0	0.95	mg/L as N
-001 Ha	13446-129	07/08/05	7	0.16	mg/L as N
-001 Ha	13446-183	07/15/05	14	<0.1	mg/L as N
-001 Ha	13446-291	07/22/05	21	<0.1	mg/L as N
-001 Ha	13446-288	07/22/05		<0.1	mg/L as N
-001 Ha	13446-399	07/29/05	28	<0.1	mg/L as N
-002 Ha	13446-027	07/01/05	0	0.58	mg/L as N
-002 Ha	13446-132	07/08/05	7	0.31	mg/L as N
-002 Ha	13446-186	07/15/05	14	<0.1	mg/L as N
-002 Ha	13446-294	07/22/05	21	<0.1	mg/L as N
-002 Ha	13446-402	07/29/05	28	<0.1	mg/L as N
-003 Ha	13446-030	07/01/05	0	1.8	mg/L as N
-003 Ha	13446-135	07/08/05	7	<0.1	mg/L as N
-003 Ha	13446-189	07/15/05	14	<0.1	mg/L as N
-003 Ha	13446-297	07/22/05	21	0.11	mg/L as N
-003 Ha	13446-405	07/29/05	28	0.17	mg/L as N
-004 Ha	13446-033	07/01/05	0	1.5	mg/L as N
-004 Ha	13446-138	07/08/05	7	0.42	mg/L as N
-004 Ha	13446-192	07/15/05	14	<0.1	mg/L as N
-004 Ha	13446-300	07/22/05	21	<0.1	mg/L as N
-004 Ha	13446-408	07/29/05	28	<0.1	mg/L as N
-006 Ha	13446-036	07/01/05	0	1.8	mg/L as N
-006 Ha	13446-141	07/08/05	7	<0.1	mg/L as N
-006 Ha	13446-195	07/15/05	14	0.12	mg/L as N
-006 Ha	13446-303	07/22/05	21	0.66	mg/L as N
-006 Ha	13446-411	07/29/05	28	1.3	mg/L as N
-007 Ha	13446-039	07/01/05	0	0.99	mg/L as N
-007 Ha	13446-144	07/08/05	7	<0.1	mg/L as N
-007 Ha	13446-198	07/15/05	14	<0.1	mg/L as N
-007 Ha	13446-306	07/22/05	21	<0.1	mg/L as N
-007 Ha	13446-414	07/29/05	28	<0.1	mg/L as N
-009 Ha	13446-042	07/01/05	0	1.9	mg/L as N
-009 Ha	13446-147	07/08/05	7	0.56	mg/L as N
-009 Ha	13446-201	07/15/05	14	<0.1	mg/L as N
-009 Ha	13446-309	07/22/05	21	<0.1	mg/L as N
-009 Ha	13446-417	07/29/05	28	<0.1	mg/L as N
-010 Ha	13446-045	07/01/05	0	<0.1	mg/L as N
-010 Ha	13446-150	07/08/05	7	0.12	mg/L as N
-010 Ha	13446-204	07/15/05	14	<0.1	mg/L as N
-010 Ha	13446-312	07/22/05	21	<0.1	mg/L as N
-010 Ha	13446-420	07/29/05	28	<0.1	mg/L as N
-011 Ha	13446-048	07/01/05	0	0.73	mg/L as N
-011 Ha	13446-153	07/08/05	7	<0.1	mg/L as N
-011 Ha	13446-207	07/15/05	14	<0.1	mg/L as N
-011 Ha	13446-315	07/22/05	21	<0.1	mg/L as N
-011 Ha	13446-423	07/29/05	28	<0.1	mg/L as N
-012 Ha	13446-051	07/01/05	0	0.37	mg/L as N
-012 Ha	13446-156	07/08/05	7	<0.1	mg/L as N

-012 Ha	13446-210	07/15/05	14	<0.1 mg/L as N
-012 Ha	13446-318	07/22/05	21	<0.1 mg/L as N
-012 Ha	13446-426	07/29/05	28	0.3 mg/L as N
-013 Ha	13446-054	07/01/05	0	<0.1 mg/L as N
-013 Ha	13446-159	07/08/05	7	<0.1 mg/L as N
-013 Ha	13446-213	07/15/05	14	<0.1 mg/L as N
-013 Ha	13446-321	07/22/05	21	<0.1 mg/L as N
-013 Ha	13446-429	07/29/05	28	0.28 mg/L as N
-014 Ha	13446-057	07/01/05	0	0.54 mg/L as N
-014 Ha	13446-162	07/08/05	7	0.17 mg/L as N
-014 Ha	13446-216	07/15/05	14	<0.1 mg/L as N
-014 Ha	13446-324	07/22/05	21	0.2 mg/L as N
-014 Ha	13446-432	07/29/05	28	0.13 mg/L as N
-015 Ha	13446-060	07/01/05	0	0.34 mg/L as N
-015 Ha	13446-165	07/08/05	7	<0.1 mg/L as N
-015 Ha	13446-219	07/15/05	14	<0.1 mg/L as N
-015 Ha	13446-327	07/22/05	21	<0.1 mg/L as N
-015 Ha	13446-435	07/29/05	28	<0.1 mg/L as N
-016 Ha	13446-063	07/01/05	0	0.44 mg/L as N
-016 Ha	13446-168	07/08/05	7	<0.1 mg/L as N
-016 Ha	13446-222	07/15/05	14	<0.1 mg/L as N
-016 Ha	13446-330	07/22/05	21	<0.1 mg/L as N
-016 Ha	13446-438	07/29/05	28	<0.1 mg/L as N
-017 Ha	13446-066	07/01/05	0	4.6 mg/L as N
-017 Ha	13446-171	07/08/05	7	0.92 mg/L as N
-017 Ha	13446-225	07/15/05	14	<0.1 mg/L as N
-017 Ha	13446-333	07/22/05	21	0.54 mg/L as N
-017 Ha	13446-441	07/29/05	28	0.63 mg/L as N
-018 Ha	13446-069	07/01/05	0	0.75 mg/L as N
-018 Ha	13446-174	07/08/05	7	<0.1 mg/L as N
-018 Ha	13446-228	07/15/05	14	<0.1 mg/L as N
-018 Ha	13446-336	07/22/05	21	<0.1 mg/L as N
-018 Ha	13446-444	07/29/05	28	<0.1 mg/L as N
Lab Ha	13446-021	07/01/05	0	1.2 mg/L as N
Lab Ha	13446-126	07/08/05	7	0.46 mg/L as N
Lab Ha	13446-180	07/15/05	14	<0.1 mg/L as N
Lab Ha	13446-396	07/29/05	28	<0.1 mg/L as N
MHR/POND	13446-177	07/08/05	7	<0.1 mg/L as N
MHR/POND	13446-231	07/15/05	14	<0.1 mg/L as N
MHR/POND	13446-339	07/22/05	21	<0.1 mg/L as N
MHR/POND	13446-447	07/29/05	28	<0.1 mg/L as N

STUDY: 13446
CLIENT: BBL Sciences
PROJECT: Blackstone River
TASK: H. azteca 28 Day Survival and Growth
DATA: Hardness
START DATE: 07/01/05
DATE ENDED: 07/29/05

Lab ID	Sample #	Date Sampled	Exposure Day	Conc.	Units
-001 Ha	13446-023	07/01/05	0	25	mg/L
-001 Ha	13446-128	07/08/05	7	27	mg/L
-001 Ha	13446-182	07/15/05	14	40	mg/L
-001 Ha	13446-290	07/22/05	21	41	mg/L
-001 Ha	13446-398	07/29/05	28	68	mg/L
-002 Ha	13446-026	07/01/05	0	25	mg/L
-002 Ha	13446-131	07/08/05	7	26	mg/L
-002 Ha	13446-185	07/15/05	14	46	mg/L
-002 Ha	13446-293	07/22/05	21	54	mg/L
-002 Ha	13446-401	07/29/05	28	58	mg/L
-003 Ha	13446-029	07/01/05	0	26	mg/L
-003 Ha	13446-134	07/08/05	7	30	mg/L
-003 Ha	13446-188	07/15/05	14	44	mg/L
-003 Ha	13446-296	07/22/05	21	40	mg/L
-003 Ha	13446-404	07/29/05	28	46	mg/L
-004 Ha	13446-032	07/01/05	0	31	mg/L
-004 Ha	13446-137	07/08/05	7	31	mg/L
-004 Ha	13446-191	07/15/05	14	43	mg/L
-004 Ha	13446-299	07/22/05	21	38	mg/L
-004 Ha	13446-407	07/29/05	28	42	mg/L
-006 Ha	13446-035	07/01/05	0	24	mg/L
-006 Ha	13446-140	07/08/05	7	28	mg/L
-006 Ha	13446-194	07/15/05	14	41	mg/L
-006 Ha	13446-302	07/22/05	21	40	mg/L
-006 Ha	13446-410	07/29/05	28	44	mg/L
-007 Ha	13446-038	07/01/05	0	28	mg/L
-007 Ha	13446-143	07/08/05	7	28	mg/L
-007 Ha	13446-197	07/15/05	14	45	mg/L
-007 Ha	13446-305	07/22/05	21	61	mg/L
-007 Ha	13446-413	07/29/05	28	50	mg/L
-009 Ha	13446-041	07/01/05	0	26	mg/L
-009 Ha	13446-146	07/08/05	7	31	mg/L
-009 Ha	13446-200	07/15/05	14	40	mg/L
-009 Ha	13446-308	07/22/05	21	41	mg/L
-009 Ha	13446-416	07/29/05	28	43	mg/L
-010 Ha	13446-044	07/01/05	0	29	mg/L
-010 Ha	13446-149	07/08/05	7	34	mg/L
-010 Ha	13446-203	07/15/05	14	45	mg/L
-010 Ha	13446-311	07/22/05	21	43	mg/L
-010 Ha	13446-419	07/29/05	28	46	mg/L
-011 Ha	13446-047	07/01/05	0	31	mg/L
-011 Ha	13446-152	07/08/05	7	32	mg/L
-011 Ha	13446-206	07/15/05	14	49	mg/L
-011 Ha	13446-314	07/22/05	21	56	mg/L
-011 Ha	13446-422	07/29/05	28	49	mg/L
-012 Ha	13446-050	07/01/05	0	45	mg/L
-012 Ha	13446-155	07/08/05	7	38	mg/L
-012 Ha	13446-209	07/15/05	14	57	mg/L

-012 Ha	13446-317	07/22/05	21	59 mg/L
-012 Ha	13446-425	07/29/05	28	43 mg/L
-013 Ha	13446-053	07/01/05	0	26 mg/L
-013 Ha	13446-158	07/08/05	7	29 mg/L
-013 Ha	13446-212	07/15/05	14	42 mg/L
-013 Ha	13446-320	07/22/05	21	41 mg/L
-013 Ha	13446-428	07/29/05	28	45 mg/L
-014 Ha	13446-056	07/01/05	0	15 mg/L
-014 Ha	13446-161	07/08/05	7	24 mg/L
-014 Ha	13446-215	07/15/05	14	34 mg/L
-014 Ha	13446-323	07/22/05	21	32 mg/L
-014 Ha	13446-431	07/29/05	28	36 mg/L
-015 Ha	13446-059	07/01/05	0	13 mg/L
-015 Ha	13446-164	07/08/05	7	21 mg/L
-015 Ha	13446-218	07/15/05	14	31 mg/L
-015 Ha	13446-326	07/22/05	21	31 mg/L
-015 Ha	13446-434	07/29/05	28	36 mg/L
-016 Ha	13446-062	07/01/05	0	40 mg/L
-016 Ha	13446-167	07/08/05	7	36 mg/L
-016 Ha	13446-221	07/15/05	14	44 mg/L
-016 Ha	13446-329	07/22/05	21	39 mg/L
-016 Ha	13446-437	07/29/05	28	51 mg/L
-017 Ha	13446-065	07/01/05	0	32 mg/L
-017 Ha	13446-170	07/08/05	7	30 mg/L
-017 Ha	13446-224	07/15/05	14	38 mg/L
-017 Ha	13446-332	07/22/05	21	46 mg/L
-017 Ha	13446-440	07/29/05	28	44 mg/L
-018 Ha	13446-068	07/01/05	0	34 mg/L
-018 Ha	13446-173	07/08/05	7	35 mg/L
-018 Ha	13446-227	07/15/05	14	45 mg/L
-018 Ha	13446-335	07/22/05	21	51 mg/L
-018 Ha	13446-443	07/29/05	28	51 mg/L
Lab Ha	13446-020	07/01/05	0	27 mg/L
Lab Ha	13446-125	07/08/05	7	31 mg/L
Lab Ha	13446-179	07/15/05	14	59 mg/L
Lab Ha	13446-287	07/22/05	21	44 mg/L
Lab Ha	13446-395	07/29/05	28	39 mg/L
MHR/POND	13446-176	07/08/05	7	37 mg/L
MHR/POND	13446-230	07/15/05	14	41 mg/L
MHR/POND	13446-338	07/22/05	21	40 mg/L
MHR/POND	13446-446	07/29/05	28	40 mg/L


Hyalella azteca 28 Day Assay
Temperature Profile
MAX 25.6
AVG 22.9
MIN 20.8
Temperature Degrees C
28
23
18
0 48 96 144 192 240 288 336 384 432 480 528 576 624 672
Exposure

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
Lab A	1015	9	
B	1025	9	
C	1040	9	
D	1045	8	
E	1055	9	
F	1100	10	
G	1110	10	
H	1115	9	

ANALYST: DKB
DATE: 7/29/01

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
-001A	1023	0	
-001B	1024	1	
-001C	1025	1	
-001D	1027	1	
-001E	1030	1	
-001F	1032	0	
-001G	1035	2	
-001H	1036	1	
-002A	1038	2	
-002B	1040	0	
-002C	1044	1	
-002D	1045	4	
-002E	1049	2	
-002F	1054	1	
-002G	1055	21 JHC 7/29	
-002H	1056	2	

ANALYST: JH
DATE: 7/29

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
003A	1100	10	
003B	1103	10	
003C	1107	7	
003D	1108	10	
003E	1110	8	
003F	1112	9	
003G	1115	9	
003H	1121	9	
004A	1123	0	
004B	1124	0	
004C	1126	dH 0	
004D	1127	0	
004E	1128	0	
004F	1130	0	
004G	1131	0	
004H	1132	1	

ANALYST: XH
DATE: 7/27/05

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
-006A	1125	9	
-006B	1129	9	
-006C	1134	6	
-006D	1139	10	
-006E	1144	9	
-006F	1149	9	
-006G	1154	9	
-006H	1200	11	
-007A	1325	8	
-007B	1330	7	
-007C	1333	7	
-007D	1335	7	
-007E	1340	8	
-007F	1343	4	
-007G	1345	7	
-007H	1350	6	

ANALYST: LCD
DATE: 7/29/05

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
009A	1217	9	
009B	1219	9	
009C	1222	8	
009D	1224	10	
009E	1226	8	
009F	1228	10	
009G	1231	7	
009H	1234	8	
-010A	1236	0	
-010B	1237	0	
-010C	1238	0	
-010D	1239	~~0~~ 1 AH (ES) 7/27	
-010E	1240	0	
-010F	1241	0	
-010G	1243	1	
-010H	1244	0	

ANALYST: AH
DATE: 7/27

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
-011 A	1245	10	
-011 B	1247	10	
-011C	1249	8	
-011D	1252	10	
-011E	1254	9	
-011F	1257	8	
-011G	1259	9	
-011H	1301	10	
-012A	1303	9	
-012B	1306	9	
-012C	1308	9	
-012D	1311	8	
-012E	1313	10	
-012F	1315	9	
-012G	1317	10	
-012H	1319	9	

ANALYST: _____

DATE: _____

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
013 A	1252	9	
013 B	1258	10	
013 C	1301	10	
013 D	1304	10	
013 E	1307	10	
013 F	1311	8	
013 G	1315	9	
013H	1317	11	
014A	1323	5	
014B	1327	6	
014C	1330	4	
014D	1333	6	
014E	1337	4	
014F	1341	6	
014G	1315	4	
014H	1318	6	

ANALYST: _____
DATE: WB

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
-015A	1330	10	
-015B	1333	8	
-015C	1335	9	
-015D	1337	9	
-015E	1340	8	
-015F	1343	8	
-015G	1345	9	
-015H	1347	~~10~~ 11 (EDIT)	
-016A	1351	1	
-016B	1353	2	
-16C	1354	2	
-16D	1356	1	
-16E	1358	3	
16F	1359	0	
-016G	1600	4	
-16H	1602	1	

ANALYST: dH
DATE: 7/27

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
-018A	1354	9	
-018B	1358	8	
-018C	1407	9	
-018D	1410	11	
-018E	1414	8	
-018F	1420	9	
-018G	1422	8	
-018H	1425	9	

ANALYST: LCD
DATE: 7/29/05

ESI STUDY# 13446 BBL
***H. azteca* SEDIMENT ASSAY**

DAY 28:

SAMPLE ID	TIME	#LIVE	COMMENTS
017 A	1355	8	
017 B	1357	9	
017 C	1400	8	
017 D	1403	9	
017 E	1406	7	
017 F	1411	9	
017 G	1415	8	
017 H	1418	8	

ANALYST: _____
DATE: WB

Hyalella azteca Assay
GROWTH DATA

STUDY NUMBER: 13446 **CLIENT:** BBL

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*H. azteca* + FOIL (g)
Lab	A	0.20735	0.21378
	B	0.21093	0.21609
	C	0.20872	0.21423
	D	0.20752	0.21203
	E	0.20846	0.21356
	F	0.20763	0.21305
	G	0.20796	0.21345
	H	0.20860	0.21447
-001	A	0.20823	~~0.2~~ —
	B	0.20899	0.20907
	C	0.20861	0.20910
	D	0.20810	0.20821
	E	0.20791	~~0.2~~ Pan empty *
	F	0.20911	~~0.2~~ —
	G	0.20697	0.20777
	H	0.20849	0.20891
-002	A	0.20788	0.20909
	B	0.20790	—
	C	0.20800	0.20865
	D	0.20759	0.20923
	E	0.20796	0.20880
	F	0.20793	0.20888
	G	0.20942	0.20970
	H	0.20766	0.20842
-003	A	0.20722	0.21149
	B	0.20836	0.21411
	C	0.20776	0.21078
	D	0.20767	0.21286
	E	0.20624	0.20914
	F	0.20830	0.20990
	G	0.21308	0.21646
	H	0.20845	0.21244
RECORDED BY:			
DATE:		7/29/05	8/1/05

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*H. azteca* + FOIL (g)
-004	A	-	-
	B	-	-
	C	-	-
	D	-	-
	E	-	-
	F	-	-
	G	-	-
	H	0.20937	0.20945
-006	A	0.20888	0.21317
	B	0.21102	0.21484
	C	0.20987	0.21169
	D	0.20972	0.21405
	E	0.20928	0.21350
	F	0.20744	0.21105
	G	0.20888	0.21324
	H	0.20829	0.21071
-007	A	0.21058	0.21419
	B	0.20980	0.21141
	C	0.20980	0.21385
	D	0.21049	0.21376
	E	0.20790	0.21198
	F	0.20834	0.21059
	G	0.20925	0.21152
	H	0.20809	0.21042
-009	A	0.20906	0.21228
	B	0.20724	0.20981
	C	0.20807	0.21062
	D	0.20759	0.21046
	E	0.20880	0.21076
	F	0.20855	0.21287
	G	0.21066	0.21351
	H	0.20988	0.21131
RECORDED BY:			
DATE:		7/29/05	8/1/05

NOTES: _____

* One organism recovered, but weigh pan was empty

Hyalella azteca Assay
GROWTH DATA

STUDY NUMBER: 13446 **CLIENT:** BBL

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*H. azteca* + FOIL (g)
-010	A	–	–
	B	–	–
	C	–	–
	D	0.21003	0.21012
	E	–	–
	F	–	–
	G	0.20818	0.20837
	H	–	–
-011	A	0.21075	0.21611
	B	0.20735	0.21298
	C	0.20898	0.21221
	D	0.21089	0.21641
	E	0.20909	0.21301
	F	0.20586	0.21019
	G	0.20875	0.21244
	H	0.20815	0.21322
-012	A	0.20859	0.21281
	B	0.20796	0.21158
	C	0.20820	0.21213
	D	0.20821	0.21163
	E	0.20871	0.21390
	F	0.20791	0.21253
	G	0.20678	0.21191
	H	0.20844	0.21310
-013	A	0.20759	0.20981
	B	0.20778	0.21118
	C	0.20549	0.20949
	D	0.20579	0.20895
	E	0.20847	0.21163
	F	0.20818	0.21153
	G	0.20782	0.21107
	H	0.21134	0.21596
RECORDED BY:		M	M
DATE:		7/29/05	8/1/05

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*H. azteca* + FOIL (g)
-014	A	0.20983	0.21112
	B	0.20898	0.21012
	C	0.20880	0.20932
	D	0.20846	0.21005
	E	0.20837	0.20945
	F	0.20757	0.20897
	G	0.20815	0.20916
	H	0.20916	0.21094
-015	A	0.20856	0.21166
	B	0.20818	0.21047
	C	0.20833	0.21083
	D	0.20767	0.21075
	E	0.20841	0.21016
	F	0.20838	0.21042
	G	0.20834	0.21125
	H	0.20868	0.21201
-016	A	0.20880	0.20915
	B	0.20803	0.20861
	C	0.20820	0.20899
	D	0.20892	0.20923
	E	0.20916	0.21026
	F	0.20911	–
	G	0.20787	0.20847
	H	0.20837	0.20871
-017	A	0.20907	0.21122
	B	0.20799	0.21053
	C	0.20843	0.21056
	D	0.20772	0.21095
	E	0.20874	0.21071
	F	0.20860	0.21160
	G	0.20783	0.20933
	H	0.20839	0.21063
RECORDED BY:		M	M
DATE:		7/29/05	8/1/05

NOTES:

Hyalella azteca Assay
GROWTH DATA

STUDY NUMBER: 13446 **CLIENT:** BBL

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*H. azteca* + FOIL (g)
-018	A	0.20952	0.21297
	B	0.21031	0.21382
	C	0.20894	0.21256
	D	0.20815	0.21187
	E	0.20877	0.21259
	F	0.20899	0.21148
	G	0.20901	0.21217
	H	0.20966	0.21395
	A		
	B		
	C		
	D		
	E		
	F		
	G		
	H		
	A		
	B		
	C		
	D		
	E		
	F		
	G		
	H		
	A		
	B		
	C		
	D		
	E		
	F		
	G		
	H		
RECORDED BY:			
DATE:		7/29/05	8/1/05

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*H. azteca* + FOIL (g)
	A		
	B		
	C		
	D		
	E		
	F		
	G		
	H		
	A		
	B		
	C		
	D		
	E		
	F		
	G		
	H		
	A		
	B		
	C		
	D		
	E		
	F		
	G		
	H		
	A		
	B		
	C		
	D		
	E		
	F		
	G		
	H		
RECORDED BY:			
DATE:			

NOTES: _____

STUDY: 13446
CLIENT: BBL
PROJECT: Blackstone River, RI
TASK: Hyalella azteca 28 Day Exposure Assay
DATA: Initial Dry Weight Data
START DATE: 07/07/05
DATE ENDED: 07/27/05

Sample ID	Replicate	Tare Wt (g)	Final Wt (g)	Net Dry Wt (g)	# Amphipod	Mean Dry Wt (mg)	Overall Mean Dry Wt
lab	A	0.20836	0.20869	0.00033	10	0.033	0.035
	B	0.20852	0.20888	0.00036	10	0.036	
	C	0.20880	0.20918	0.00038	10	0.038	
	D	0.20802	0.20837	0.00035	10	0.035	

Hyalella azteca Sediment Evaluation

STUDY NUMBER: 13446 **CLIENT:** BBL

PROJECT: BBL **START DATE:** 7/1/05

	REP	TARE WEIGHT (G)	*H. azteca*+ FOIL (G)	NET WEIGHT (mg)	# *H. azteca*	MEAN DRY WEIGHT PER Individual (mg)
START ORGANISMS	A	0.20911	0.20922			
	B	0.20879	0.20893			
	C	0.20993	0.21013			
	D	0.20786	0.20817			
RECORDED BY:		BB	BB			
DATE:		7/1/05	7/2/05			

NOTES: Use 10 Amphipods per replicate to set start weight

CETIS Test Summary

Report Date: 07 Sep-05 7:27 PM
Link: 05-0578-5540

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	20-9519-9280	**Test Type:**	Growth-Survival (10d)	**Duration:**	28d 0h
Start Date:	01 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	29 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Research Organisms, NH
Setup Date:	01 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	17-8578-7404	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	01 Jul-05 12:00 PM	**Code:**	13446-000	**Project:**	Ecologcal Risk Assessment
Receive Date:	01 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Lab Control		

Sample No:	11-6952-0824	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	29 Jul-05 12:00 PM	**Code:**	13446-100	**Project:**	Ecologcal Risk Assessment
Receive Date:	29 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite River Reference Site -100		

Sample No:	06-5176-0793	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	29 Jul-05 12:00 PM	**Code:**	13446-101	**Project:**	Ecologcal Risk Assessment
Receive Date:	29 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite River Sites -101		

Sample No:	03-5362-2872	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	29 Jul-05 12:00 PM	**Code:**	13446-200	**Project:**	Ecologcal Risk Assessment
Receive Date:	29 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite Pond Reference Site -200		

Sample No:	13-2299-3223	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	29 Jul-05 12:00 PM	**Code:**	13446-201	**Project:**	Ecologcal Risk Assessment
Receive Date:	29 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite Pond Sites -201		

1d Proportion Survived Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000	8	0.91250	0.80000	1.00000	0.02266	0.06409	7.02%
13446-100	40	0.72500	0.00000	1.00000	0.05022	0.31764	43.81%
13446-101	40	0.72000	0.00000	1.00000	0.05765	0.36459	50.64%
13446-200	16	0.64375	0.10000	1.00000	0.06122	0.24486	38.04%
13446-201	32	0.23438	0.00000	0.80000	0.04931	0.27895	119.02

1d Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-100	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000	0.90000	1.00000
	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000	0.10000	0.20000	0.20000	0.10000
	0.30000	0.00000	0.40000	0.10000	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000
	0.80000	0.80000	0.90000	0.80000	0.90000	0.10000	0.80000	0.90000	0.80000	0.90000
13446-101	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000	0.90000	0.90000
	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000	0.90000	0.90000	0.80000	1.00000
	0.80000	1.00000	0.70000	0.80000	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000
	0.10000	0.00000	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000
13446-200	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000	0.10000	0.80000
	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000				
13446-201	0.00000	0.10000	0.10000	0.10000	0.10000	0.00000	0.20000	0.10000	0.20000	0.00000
	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.10000	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000
	0.70000	0.60000								

CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	20.26674	7.43112	0.00039	Unequal Variances
Distribution	Shapiro-Wilk W	0.74940	0.92871	0.00000	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3568078	0.3568078	1	2.09	0.15528	Non-Significant Effect
Error	7.862329	0.1709202	46			
Total	8.21913636	0.5277280	47			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-101	1.08955	1.64485	0.1380	6	Non-Significant Effect

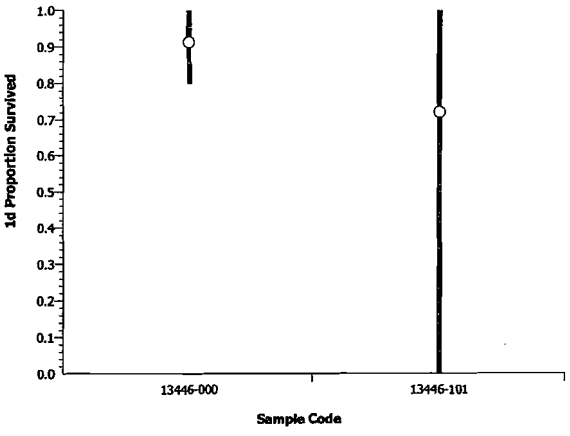
Data Summary

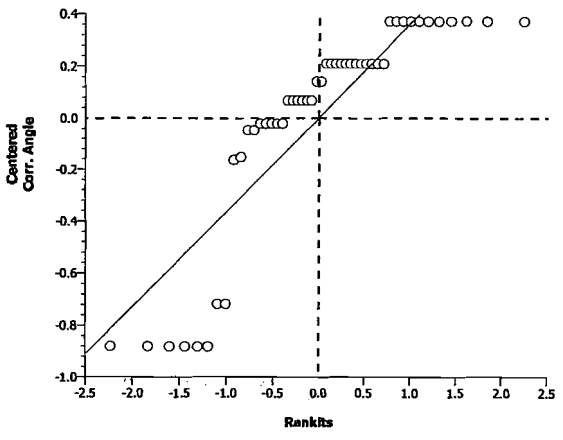
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-101	40	0.72000	0.00000	1.00000	0.36459	1.04070	0.15878	1.41202	0.44702

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-101	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000	0.90000	0.90000
	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000	0.90000	0.90000	0.80000	1.00000
	0.80000	1.00000	0.70000	0.80000	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000
	0.10000	0.00000	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	8.14798	7.96777	0.00934	Unequal Variances
Distribution	Shapiro-Wilk W	0.95366	0.88421	0.33058	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5561211	0.5561211	1	9.60	0.00524	Significant Effect
Error	1.274096	0.0579135	22			
Total	1.83021718	0.6140345	23			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-200	4.08337	1.72472	0.0003	0.13639	Significant Effect

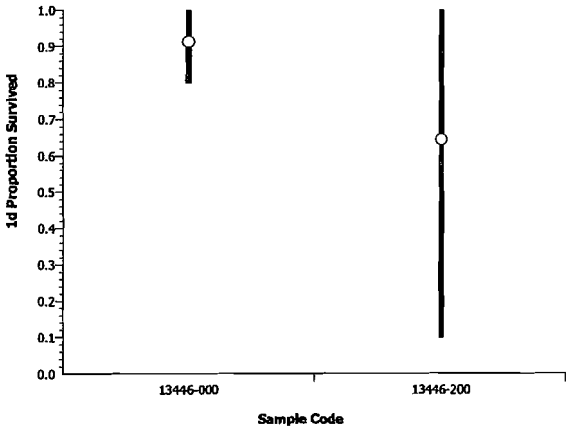
Data Summary

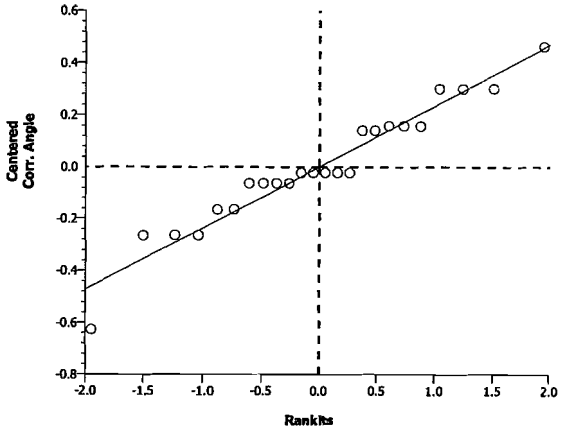
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-200	16	0.64375	0.10000	1.00000	0.24486	0.94914	0.32175	1.41202	0.28344

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-200	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000	0.10000	0.80000
	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000				

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	10.88790	7.52012	0.00312	Unequal Variances
Distribution	Shapiro-Wilk W	0.83708	0.91882	0.00003	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.20327	4.20327	1	47.02	0.00000	Significant Effect
Error	3.396987	0.0893944	38			
Total	7.6002574	4.2926644	39			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-201	4.36246	1.64485	0.0000	8	Significant Effect

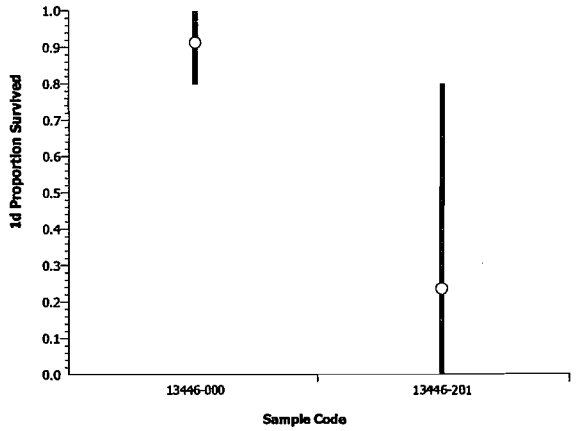
Data Summary

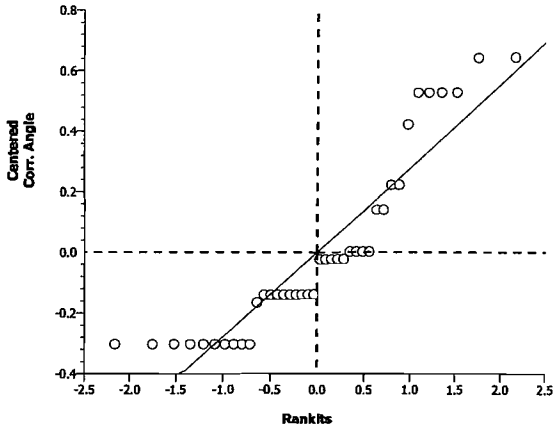
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-201	32	0.23438	0.00000	0.80000	0.27895	0.46164	0.15878	1.10715	0.32765

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-201	0.00000	0.10000	0.10000	0.10000	0.10000	0.00000	0.20000	0.10000	0.20000	0.00000
	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.10000	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000
	0.70000	0.60000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.33627	3.67377	0.56136	Equal Variances
Distribution	Shapiro-Wilk W	0.90380	0.92871	0.00114	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.534949	2.534949	1	25.72	0.00001	Significant Effect
Error	4.533045	0.0985445	46			
Total	7.06799340	2.6334930	47			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-200		13446-201	3.94849	1.64485	0.0000	8	Significant Effect

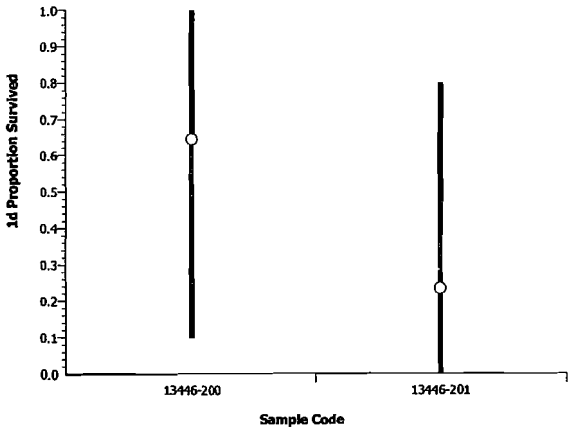
Data Summary

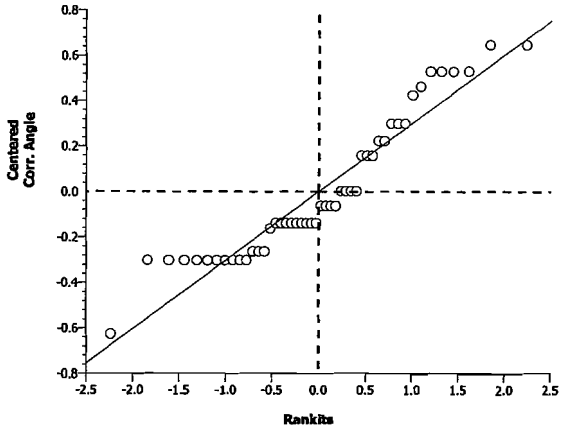
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-200	16	0.64375	0.10000	1.00000	0.24486	0.94914	0.32175	1.41202	0.28344
13446-201	32	0.23438	0.00000	0.80000	0.27895	0.46164	0.15878	1.10715	0.32765

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-200	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000	0.10000	0.80000
	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000				
13446-201	0.00000	0.10000	0.10000	0.10000	0.10000	0.00000	0.20000	0.10000	0.20000	0.00000
	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.10000	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000
	0.70000	0.60000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	14.20626	7.43112	0.00126	Unequal Variances
Distribution	Shapiro-Wilk W	0.80044	0.92871	0.00000	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.331405	0.331405	1	2.76	0.10371	Non-Significant Effect
Error	5.53185	0.1202576	46			
Total	5.86325538	0.4516627	47			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-100	1.65656	1.64485	0.0488	5	Significant Effect

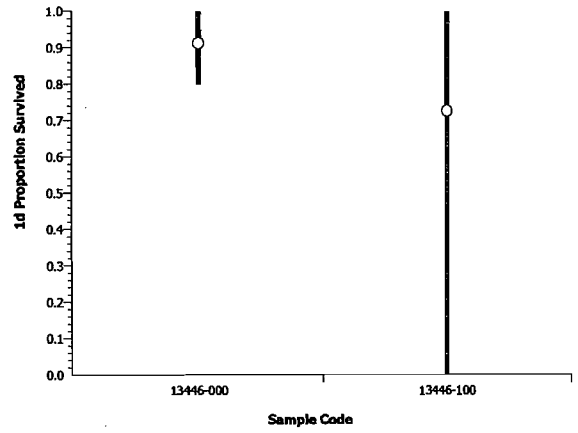
Data Summary

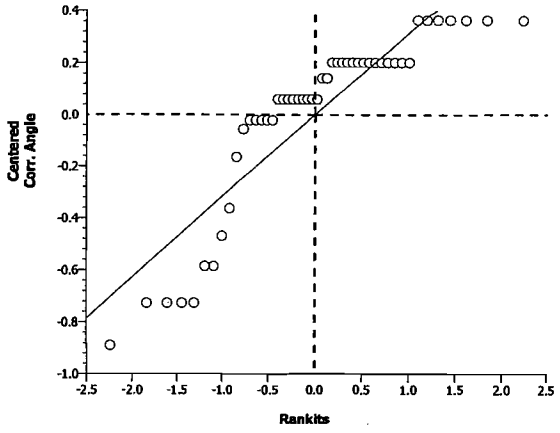
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-100	40	0.72500	0.00000	1.00000	0.31764	1.04909	0.15878	1.41202	0.37426

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-100	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000	0.90000	1.00000
	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000	0.10000	0.20000	0.20000	0.10000
	0.30000	0.00000	0.40000	0.10000	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000
	0.80000	0.80000	0.90000	0.80000	0.90000	0.10000	0.80000	0.90000	0.80000	0.90000

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.42661	2.32129	0.27156	Equal Variances
Distribution	Kolmogorov-Smirnov D	0.29385	0.11566	0.00000	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.001407	0.001407	1	0.01	0.92774	Non-Significant Effect
Error	13.25614	0.1699505	78			
Total	13.2575467	0.1713575	79			

Group Comparisons

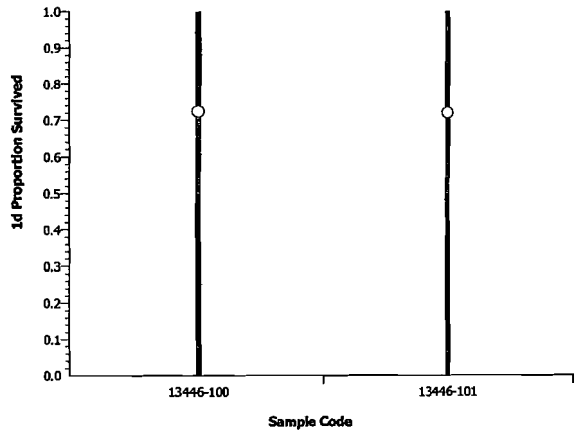
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-100		13446-101	-0.3709	1.64485	0.6446	7	Non-Significant Effect

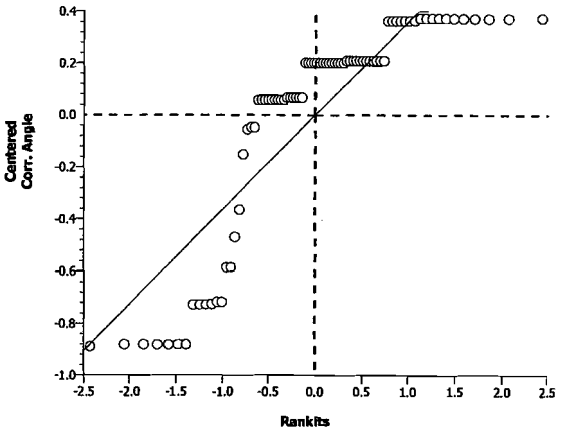
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-100	40	0.72500	0.00000	1.00000	0.31764	1.04909	0.15878	1.41202	0.37426
13446-101	40	0.72000	0.00000	1.00000	0.36459	1.04070	0.15878	1.41202	0.44702

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-100	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000	0.90000	1.00000
	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000	0.10000	0.20000	0.20000	0.10000
	0.30000	0.00000	0.40000	0.10000	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000
	0.80000	0.80000	0.90000	0.80000	0.90000	0.10000	0.80000	0.90000	0.80000	0.90000
13446-101	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000	0.90000	0.90000
	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000	0.90000	0.90000	0.80000	1.00000
	0.80000	1.00000	0.70000	0.80000	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000
	0.10000	0.00000	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000

Graphics





CETIS Test Summary

Report Date: 07 Sep-05 7:28 PM
Link: 05-0578-5540

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	20-9519-9280	**Test Type:**	Growth-Survival (10d)	**Duration:**	28d 0h
Start Date:	01 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	29 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Research Organisms, NH
Setup Date:	01 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	17-8578-7404	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	01 Jul-05 12:00 PM	**Code:**	13446-000	**Project:**	Ecologcal Risk Assessment
Receive Date:	01 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Lab Control		

Sample No:	11-6952-0824	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	29 Jul-05 12:00 PM	**Code:**	13446-100	**Project:**	Ecologcal Risk Assessment
Receive Date:	29 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite River Reference Site -100		

Sample No:	06-5176-0793	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	29 Jul-05 12:00 PM	**Code:**	13446-101	**Project:**	Ecologcal Risk Assessment
Receive Date:	29 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite River Sites -101		

Sample No:	03-5362-2872	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	29 Jul-05 12:00 PM	**Code:**	13446-200	**Project:**	Ecologcal Risk Assessment
Receive Date:	29 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite Pond Reference Site -200		

Sample No:	13-2299-3223	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	29 Jul-05 12:00 PM	**Code:**	13446-201	**Project:**	Ecologcal Risk Assessment
Receive Date:	29 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite Pond Sites -201		

Mean Dry Weight-mg Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000	8	0.59500	0.54000	0.71000	0.02070	0.05855	9.84%
13446-100	40	0.36641	0.15000	0.52000	0.01441	0.09001	24.57%
13446-101	40	0.39088	0.09000	0.58000	0.02130	0.12423	31.78%
13446-200	16	0.26250	0.13000	0.34000	0.01315	0.05260	20.04%
13446-201	32	0.41810	0.08000	0.95000	0.04429	0.20294	48.54%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-100	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000	0.25000	0.34000
	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000	0.35000	0.29000	0.40000	0.31000
	0.37000	N/A	0.15000	0.34000	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000
	0.19000	0.28000	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000
13446-101	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000	0.48000	0.42000
	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000	0.36000	0.29000	0.32000	0.29000
	0.24000	0.43000	0.41000	0.18000	N/A	N/A	N/A	0.09000	N/A	N/A
	0.19000	N/A	0.54000	0.56000	0.40000	0.55000	0.44000	0.54000	0.41000	0.51000
13446-200	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000	0.31000	0.29000
	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000				
13446-201	N/A	0.08000	0.49000	0.11000	N/A	N/A	0.40000	0.42000	0.60000	N/A
	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	0.08000	0.45000	0.23000	0.58000	0.47000	0.51000	0.56000
	0.32000	0.39000								

CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.50116	7.49393	0.04522	Equal Variances
Distribution	Shapiro-Wilk W	0.95933	0.92157	0.19899	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2698241	0.2698241	1	20.24	0.00006	Significant Effect
Error	0.5332735	0.0133318	40			
Total	0.80309761	0.2831559	41			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-101	4.49879	1.68385	0.0000	0.0764	Significant Effect

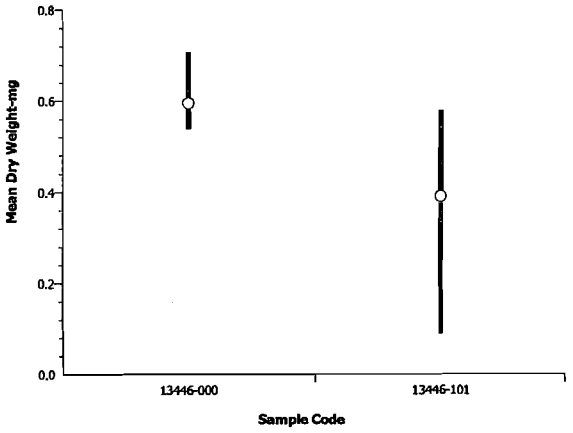
Data Summary

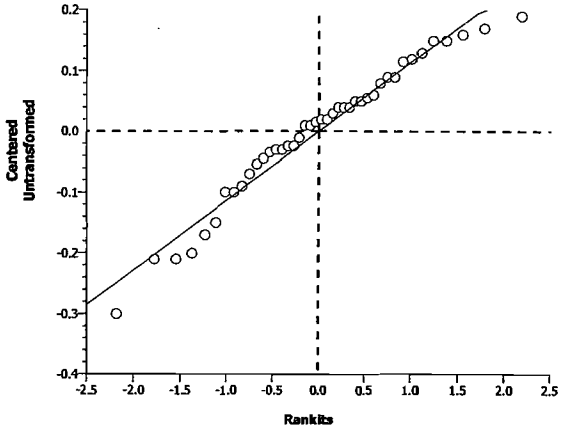
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-101	34	0.39088	0.09000	0.58000	0.12423				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-101	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000	0.48000	0.42000
	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000	0.36000	0.29000	0.32000	0.29000
	0.24000	0.43000	0.41000	0.18000	0.09000	0.19000	0.54000	0.56000	0.40000	0.55000
	0.44000	0.54000	0.41000	0.51000						

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	14.88657	3.88259	0.00000	Unequal Variances
Distribution	Shapiro-Wilk W	0.89930	0.91374	0.00367	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2198519	0.2198519	1	8.89	0.00518	Significant Effect
Error	0.8652238	0.0247207	35			
Total	1.08507562	0.2445725	36			

Group Comparisons

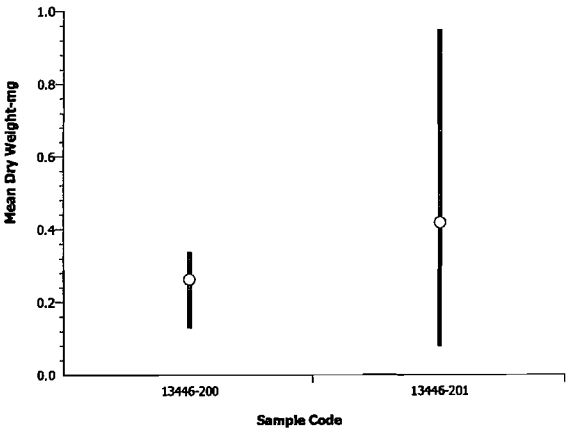
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-200		13446-201	-3.0518	1.64485	0.9989	8	Non-Significant Effect

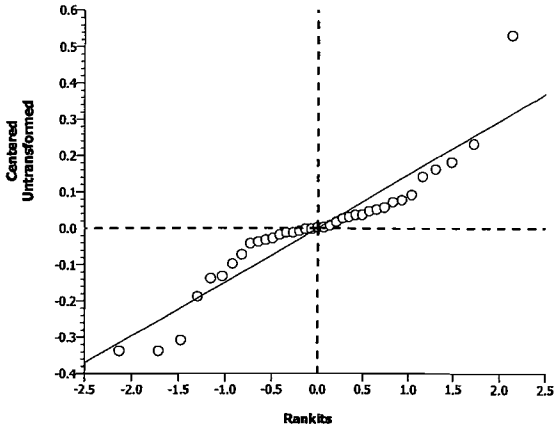
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-200	16	0.26250	0.13000	0.34000	0.05260				
13446-201	21	0.41810	0.08000	0.95000	0.20294				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-200	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000	0.31000	0.29000
	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000				
13446-201	0.08000	0.49000	0.11000	0.40000	0.42000	0.60000	0.65000	0.41000	0.42000	0.95000
	0.28000	0.38000	0.08000	0.45000	0.23000	0.58000	0.47000	0.51000	0.56000	0.32000
	0.39000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.23924	4.84726	0.68410	Equal Variances
Distribution	Shapiro-Wilk W	0.98808	0.88421	0.98515	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5896333	0.5896333	1	198.04	0.00000	Significant Effect
Error	0.0655	0.0029773	22			
Total	0.65513334	0.5926106	23			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-200	14.0728	1.71714	0.0000	0.04057	Significant Effect

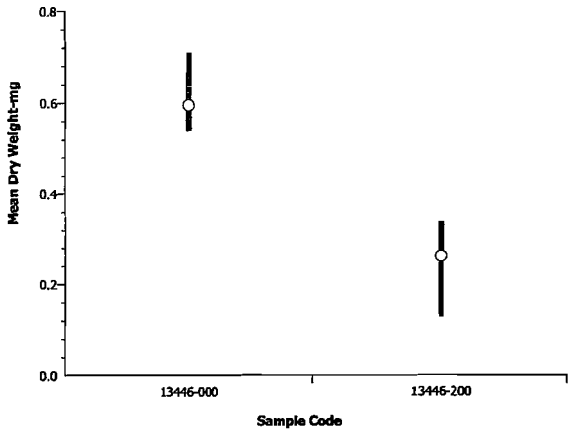
Data Summary

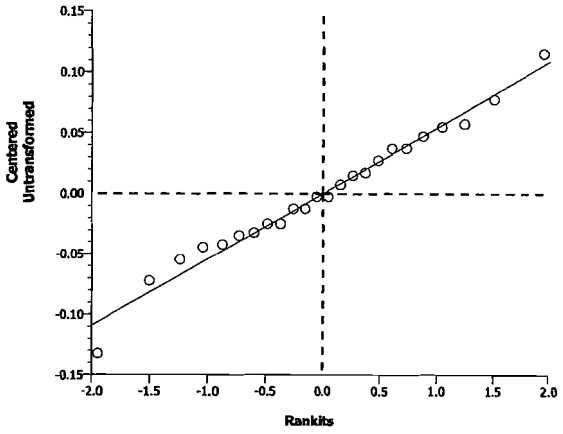
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-200	16	0.26250	0.13000	0.34000	0.05260				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-200	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000	0.31000	0.29000
	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000				

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.36325	7.44025	0.23655	Equal Variances
Distribution	Shapiro-Wilk W	0.97175	0.92770	0.43295	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3468728	0.3468728	1	47.03	0.00000	Significant Effect
Error	0.3318974	0.0073755	45			
Total	0.67877018	0.3542483	46			

Group Comparisons

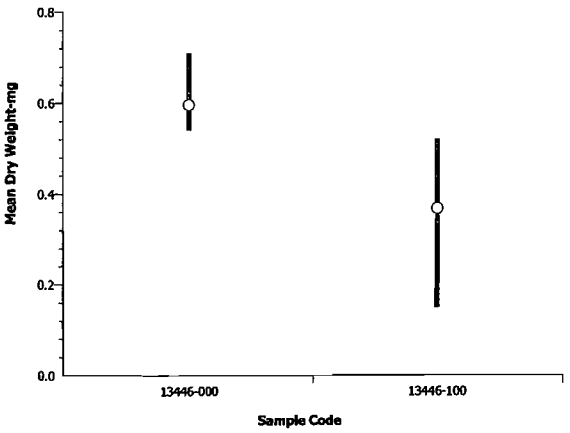
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-100	6.85787	1.67943	0.0000	0.05598	Significant Effect

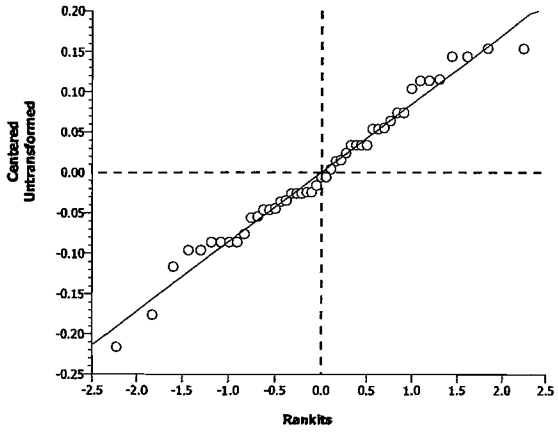
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-100	39	0.36641	0.15000	0.52000	0.09001				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-100	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000	0.25000	0.34000
	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000	0.35000	0.29000	0.40000	0.31000
	0.37000	0.15000	0.34000	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000
	0.28000	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000	

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	12.01264	7.75396	0.00254	Unequal Variances
Distribution	Shapiro-Wilk W	0.92336	0.89812	0.04383	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1812969	0.1812969	1	5.77	0.02340	Significant Effect
Error	0.8477238	0.0313972	27			
Total	1.02902067	0.2126941	28			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-201	3.61874	1.70562	0.0006	0.08338	Significant Effect

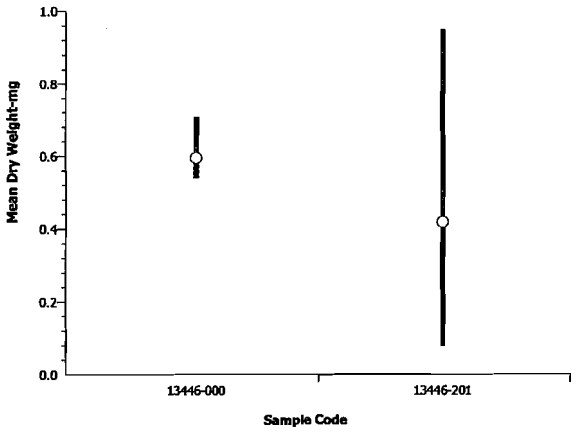
Data Summary

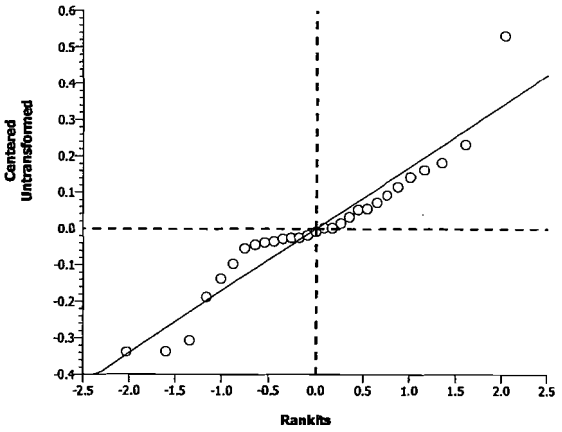
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-201	21	0.41810	0.08000	0.95000	0.20294				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-201	0.08000	0.49000	0.11000	0.40000	0.42000	0.60000	0.65000	0.41000	0.42000	0.95000
	0.28000	0.38000	0.08000	0.45000	0.23000	0.58000	0.47000	0.51000	0.56000	0.32000
	0.39000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	05-0578-5540	05-0578-5540	07 Sep-05 7:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.90465	2.39870	0.05649	Equal Variances
Distribution	Kolmogorov-Smirnov D	0.06835	0.12095	0.50408	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0108784	0.0108784	1	0.95	0.33425	Non-Significant Effect
Error	0.8171709	0.0115095	71			
Total	0.82804927	0.0223878	72			

Group Comparisons

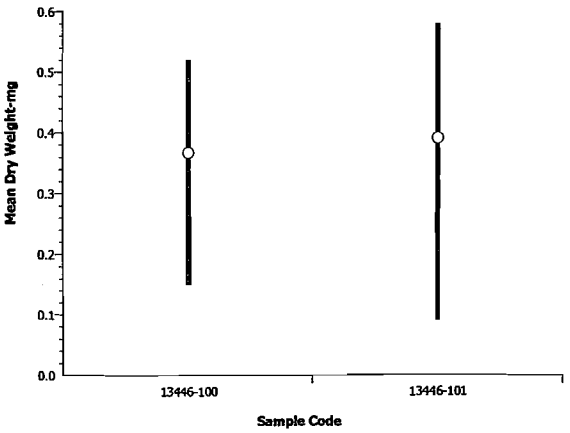
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-100		13446-101	-0.9722	1.6666	0.8329	0.04195	Non-Significant Effect

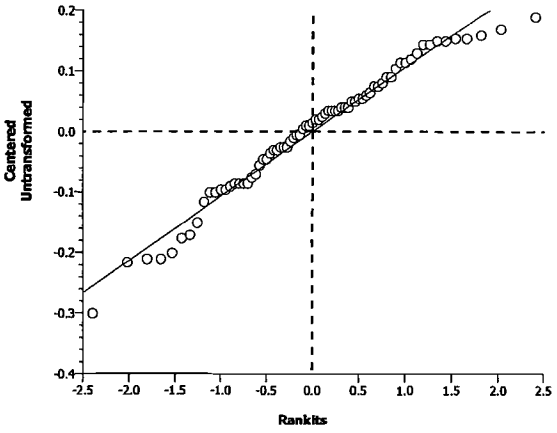
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-100	39	0.36641	0.15000	0.52000	0.09001				
13446-101	34	0.39088	0.09000	0.58000	0.12423				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-100	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000	0.25000	0.34000
	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000	0.35000	0.29000	0.40000	0.31000
	0.37000	0.15000	0.34000	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000
	0.28000	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000	
13446-101	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000	0.48000	0.42000
	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000	0.36000	0.29000	0.32000	0.29000
	0.24000	0.43000	0.41000	0.18000	0.09000	0.19000	0.54000	0.56000	0.40000	0.55000
	0.44000	0.54000	0.41000	0.51000						

Graphics





CETIS Data Worksheet

Report Date: 07 Sep-05 7:34 PM
Link: 05-0578-5540

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Start Date: 01 Jul-05 12:00 PM
Ending Date: 29 Jul-05 12:00 PM
Sample Date: 01 Jul-05 12:00 PM
Species: Hyalella azteca
Protocol: EPA/600/R-99/064 (2000)
Material: Freshwater Sedment
Sample Code: 13446-000
Sample Source: Blackstone River
Sample Station: Lab Control

Sample Code	Rep	Pos	Exposed	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Total Weight-m	are Weight-m	an Coun
13446-000	1	15	10	9											0.71	0	1
13446-000	2	23	10	9											0.57	0	1
13446-000	3	9	10	9											0.61	0	1
13446-000	4	67	10	8											0.56	0	1
13446-000	5	27	10	9											0.57	0	1
13446-000	6	13	10	10											0.54	0	1
13446-000	7	32	10	10											0.55	0	1
13446-000	8	41	10	9											0.65	0	1
13446-100	1	38	10	9											0.47	0	1
13446-100	2	58	10	9											0.4	0	1
13446-100	3	55	10	9											0.44	0	1
13446-100	4	22	10	8											0.43	0	1
13446-100	5	68	10	10											0.52	0	1
13446-100	6	77	10	9											0.51	0	1
13446-100	7	127	10	10											0.51	0	1
13446-100	8	70	10	9											0.52	0	1
13446-100	9	43	10	9											0.25	0	1
13446-100	10	103	10	10											0.34	0	1
13446-100	11	28	10	10											0.4	0	1
13446-100	12	117	10	10											0.32	0	1
13446-100	13	33	10	10											0.32	0	1
13446-100	14	105	10	8											0.42	0	1
13446-100	15	7	10	9											0.36	0	1
13446-100	16	107	10	10											0.42	0	1
13446-100	17	2	10	1											0.35	0	1
13446-100	18	133	10	2											0.29	0	1
13446-100	19	104	10	2											0.4	0	1
13446-100	20	121	10	1											0.31	0	1
13446-100	21	116	10	3											0.37	0	1
13446-100	22	78	10	0												0	1
13446-100	23	10	10	4											0.15	0	1
13446-100	24	49	10	1											0.34	0	1
13446-100	25	102	10	8											0.27	0	1
13446-100	26	125	10	9											0.28	0	1
13446-100	27	69	10	8											0.27	0	1
13446-100	28	42	10	9											0.36	0	1
13446-100	29	60	10	7											0.28	0	1
13446-100	30	12	10	9											0.33	0	1
13446-100	31	92	10	8											0.19	0	1
13446-100	32	111	10	8											0.28	0	1
13446-100	33	79	10	9											0.38	0	1
13446-100	34	44	10	8											0.44	0	1
13446-100	35	80	10	9											0.4	0	1
13446-100	36	74	10	1											0.34	0	1
13446-100	37	72	10	8											0.48	0	1
13446-100	38	84	10	9											0.28	0	1
13446-100	39	40	10	8											0.39	0	1
13446-100	40	130	10	9											0.48	0	1
13446-101	1	47	10	10											0.43	0	1
13446-101	2	97	10	10											0.58	0	1
13446-101	3	11	10	7											0.45	0	1
13446-101	4	113	10	10											0.52	0	1
13446-101	5	29	10	8											0.36	0	1

CETIS Data Worksheet

Report Date: 07 Sep-05 7:34 PM
Link: 05-0578-5540

Sample Code	Rep	Pos	Exposed	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Total Weight-m	are Weight-m	Pan Coun
13446-101	6	45	10	9										0.18	0	1
13446-101	7	119	10	9										0.38	0	1
13446-101	8	120	10	9										0.44	0	1
13446-101	9	85	10	9										0.48	0	1
13446-101	10	76	10	9										0.42	0	1
13446-101	11	106	10	6										0.3	0	1
13446-101	12	50	10	10										0.43	0	1
13446-101	13	98	10	9										0.47	0	1
13446-101	14	118	10	9										0.4	0	1
13446-101	15	132	10	9										0.48	0	1
13446-101	16	128	10	10										0.22	0	1
13446-101	17	63	10	9										0.36	0	1
13446-101	18	36	10	9										0.29	0	1
13446-101	19	34	10	8										0.32	0	1
13446-101	20	56	10	10										0.29	0	1
13446-101	21	136	10	8										0.24	0	1
13446-101	22	91	10	10										0.43	0	1
13446-101	23	101	10	7										0.41	0	1
13446-101	24	90	10	8										0.18	0	1
13446-101	25	134	10	0											0	1
13446-101	26	21	10	0											0	1
13446-101	27	1	10	0											0	1
13446-101	28	62	10	1										0.09	0	1
13446-101	29	48	10	0											0	1
13446-101	30	96	10	0											0	1
13446-101	31	122	10	1										0.19	0	1
13446-101	32	5	10	0											0	1
13446-101	33	83	10	10										0.54	0	1
13446-101	34	30	10	10										0.56	0	1
13446-101	35	61	10	8										0.4	0	1
13446-101	36	94	10	10										0.55	0	1
13446-101	37	95	10	9										0.44	0	1
13446-101	38	93	10	8										0.54	0	1
13446-101	39	81	10	9										0.41	0	1
13446-101	40	18	10	10										0.51	0	1
13446-200	1	115	10	5										0.26	0	1
13446-200	2	89	10	6										0.19	0	1
13446-200	3	87	10	4										0.13	0	1
13446-200	4	57	10	6										0.26	0	1
13446-200	5	3	10	4										0.27	0	1
13446-200	6	114	10	6										0.23	0	1
13446-200	7	129	10	4										0.25	0	1
13446-200	8	59	10	6										0.3	0	1
13446-200	9	65	10	1										0.31	0	1
13446-200	10	31	10	8										0.29	0	1
13446-200	11	75	10	9										0.28	0	1
13446-200	12	8	10	9										0.34	0	1
13446-200	13	37	10	8										0.22	0	1
13446-200	14	16	10	8										0.25	0	1
13446-200	15	19	10	9										0.32	0	1
13446-200	16	71	10	10										0.3	0	1
13446-201	1	66	10	0											0	1
13446-201	2	126	10	1										0.08	0	1
13446-201	3	131	10	1										0.49	0	1
13446-201	4	4	10	1										0.11	0	1
13446-201	5	53	10	1											0	1
13446-201	6	17	10	0											0	1
13446-201	7	52	10	2										0.4	0	1

CETIS Data Worksheet

Report Date: 07 Sep-05 7:34 PM
Link: 05-0578-5540

Sample Code	Rep	Pos	Exposed	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Total Weight-m	are Weight-m	Pan Coun
13446-201	8	64	10	1										0.42	0	1
13446-201	9	14	10	2										0.6	0	1
13446-201	10	35	10	0											0	1
13446-201	11	73	10	1										0.65	0	1
13446-201	12	82	10	4										0.41	0	1
13446-201	13	24	10	2										0.42	0	1
13446-201	14	20	10	1										0.95	0	1
13446-201	15	26	10	1										0.28	0	1
13446-201	16	46	10	2										0.38	0	1
13446-201	17	88	10	0											0	1
13446-201	18	6	10	0											0	1
13446-201	19	100	10	0											0	1
13446-201	20	39	10	0											0	1
13446-201	21	54	10	0											0	1
13446-201	22	124	10	0											0	1
13446-201	23	108	10	0											0	1
13446-201	24	99	10	1										0.08	0	1
13446-201	25	110	10	8										0.45	0	1
13446-201	26	86	10	7										0.23	0	1
13446-201	27	109	10	7										0.58	0	1
13446-201	28	51	10	7										0.47	0	1
13446-201	29	123	10	8										0.51	0	1
13446-201	30	135	10	4										0.56	0	1
13446-201	31	112	10	7										0.32	0	1
13446-201	32	25	10	6										0.39	0	1

CETIS Test Summary

Report Date: 29 Jul-05 10:13 PM
Link: 13-3830-0274

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-8161-5537	**Test Type:**	Growth-Survival (10d)	**Duration:**	28d 0h
Start Date:	01 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	29 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Research Organisms, NH
Setup Date:	01 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	15-2759-3311	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:00 PM	**Code:**	13346-015	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 20h (4 °C)	**Station:**	T05BL-004 - 13446-015 - Pond Refere		
Sample No:	06-2942-1705	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	06 Jul-05 12:00 PM	**Code:**	13446-000	**Project:**	Ecologcal Risk Assessment
Receive Date:	06 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Lab Control		
Sample No:	03-5574-1378	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 11:00 AM	**Code:**	13446-001	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	10d 1h (4 °C)	**Station:**	T05PA-001 - 13446-001 - Pond		
Sample No:	06-2098-4840	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 12:30 PM	**Code:**	13446-002	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 23h (4 °C)	**Station:**	T05PD-002 - 13446-002 - Pond		
Sample No:	02-7805-4131	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:00 PM	**Code:**	13446-003	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 21h (4 °C)	**Station:**	T05BR-001 - 13446-003 - Riverine		
Sample No:	07-4822-9464	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:30 PM	**Code:**	13446-004	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 20h (4 °C)	**Station:**	T05PA-003 - 13446-004 - Pond		
Sample No:	09-5133-3778	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-006	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 17h (4 °C)	**Station:**	T05BR-003 - 13446-006 - Riverine		
Sample No:	14-6644-4706	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-007	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 17h (4 °C)	**Station:**	T05PF-004 - 13446-007 - Pond		
Sample No:	11-7563-0513	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 11:00 AM	**Code:**	13446-009	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 1h (4 °C)	**Station:**	T05BR-005 - 13446-009 - Riverine		
Sample No:	10-0504-8146	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 10:45 AM	**Code:**	13446-010	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 1h (4 °C)	**Station:**	T05BR-006 - 13446-010 - Riverine		
Sample No:	09-8620-6643	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 01:20 PM	**Code:**	13446-011	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 22h (4 °C)	**Station:**	T05BR-011 - 13446-011 - Riverine		

CETIS Test Summary

Report Date: 29 Jul-05 10:13 PM
Link: 13-3830-0274

Sample No:	09-4449-7974	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:00 AM	**Code:**	13446-012	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	8d 1h (4 °C)	**Station:**	T05BL-001 - 13446-012 - Riverine Ref		
Sample No:	08-9678-2866	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:30 AM	**Code:**	13446-013	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	8d 0h (4 °C)	**Station:**	T05BL-002 - 13446-013 - Riverine Ref		
Sample No:	15-3550-8902	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 02:30 PM	**Code:**	13446-014	**Project:**	Ecologcal Risk Assessment
Receive Date:	23 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 21h (4 °C)	**Station:**	T05BL-003 - 13446-014 - Pond Refere		
Sample No:	08-7654-4935	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:50 PM	**Code:**	13446-016	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 19h (4 °C)	**Station:**	T05BL-005 - 13446-016 - Riverine Ref		
Sample No:	12-3605-9504	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:00 PM	**Code:**	13446-017	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 19h (4 °C)	**Station:**	T05BL-006 - 13446-017 - Riverine Ref		
Sample No:	04-4912-0227	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:30 PM	**Code:**	13446-018	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 18h (4 °C)	**Station:**	TO5BL-007 - 13446-018 - Riverine Ref		

1d Proportion Survived Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000	8	0.91250	0.80000	1.00000	0.02266	0.06409	7.02%
13446-012	8	0.91250	0.80000	1.00000	0.02266	0.06409	7.02%
13446-013	8	0.95000	0.80000	1.00000	0.02673	0.07559	7.96%
13446-016	8	0.17500	0.00000	0.40000	0.04532	0.12817	73.24%
13446-017	8	0.82500	0.70000	0.90000	0.02500	0.07071	8.57%
13446-018	8	0.87500	0.80000	1.00000	0.02500	0.07071	8.08%
13446-014	8	0.51250	0.40000	0.60000	0.03504	0.09910	19.34%
13346-015	8	0.88750	0.80000	1.00000	0.02950	0.08345	9.40%
13446-001	8	0.08750	0.00000	0.20000	0.02266	0.06409	73.24%
13446-002	8	0.16250	0.00000	0.40000	0.04199	0.11877	73.09%
13446-004	8	0.01250	0.00000	0.10000	0.01250	0.03536	282.84
13446-007	8	0.67500	0.40000	0.80000	0.04532	0.12817	18.99%
13446-003	8	0.90000	0.70000	1.00000	0.03780	0.10690	11.88%
13446-006	8	0.88750	0.60000	1.00000	0.04407	0.12464	14.04%
13446-009	8	0.86250	0.70000	1.00000	0.03750	0.10607	12.30%
13446-010	8	0.02500	0.00000	0.10000	0.01637	0.04629	185.16
13446-011	8	0.92500	0.80000	1.00000	0.03134	0.08864	9.58%

CETIS Test Summary

Report Date: 29 Jul-05 10:13 PM
Link: 13-3830-0274

1d Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000
13446-001	0.00000	0.10000	0.10000	0.10000	0.10000	0.00000	0.20000	0.10000
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000
13446-007	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000	0.70000	0.60000
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000
13446-009	0.90000	0.90000	0.80000	1.00000	0.80000	1.00000	0.70000	0.80000
13446-010	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000	0.10000	0.00000
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000

CETIS Data Worksheet

Report Date: 29 Jul-05 9:33 PM
Link: 13-3830-0274

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Start Date: 01 Jul-05 12:00 PM
Ending Date: 29 Jul-05 12:00 PM
Sample Date: 06 Jul-05 12:00 PM
Species: Hyalella azteca
Protocol: EPA/600/R-99/064 (2000)
Material: Freshwater Sedment
Sample Code: 13446-000
Sample Source: Blackstone River
Sample Station: Lab Control

Conc-µg/L	Rep	Pos	Exposed	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Total Weight-m	are Weight-m	Pan Coun
13446-000	1	103	10	9											0	
13446-000	2	100	10	9											0	
13446-000	3	89	10	9											0	
13446-000	4	58	10	8											0	
13446-000	5	127	10	9											0	
13446-000	6	77	10	10											0	
13446-000	7	72	10	10											0	
13446-000	8	14	10	9											0	
13446-012	1	47	10	9											0	
13446-012	2	33	10	9											0	
13446-012	3	104	10	9											0	
13446-012	4	8	10	8											0	
13446-012	5	109	10	10											0	
13446-012	6	27	10	9											0	
13446-012	7	35	10	10											0	
13446-012	8	90	10	9											0	
13446-013	1	9	10	9											0	
13446-013	2	60	10	10											0	
13446-013	3	42	10	10											0	
13446-013	4	6	10	10											0	
13446-013	5	63	10	10											0	
13446-013	6	110	10	8											0	
13446-013	7	133	10	9											0	
13446-013	8	17	11	11											0	
13446-016	1	26	10	1											0	
13446-016	2	23	10	2											0	
13446-016	3	105	10	2											0	
13446-016	4	71	10	1											0	
13446-016	5	13	10	3											0	
13446-016	6	50	10	0											0	
13446-016	7	53	10	4											0	
13446-016	8	130	10	1											0	
13446-017	1	119	10	8											0	
13446-017	2	20	10	9											0	
13446-017	3	22	10	8											0	
13446-017	4	111	10	9											0	
13446-017	5	10	10	7											0	
13446-017	6	32	10	9											0	
13446-017	7	7	10	8											0	
13446-017	8	4	10	8											0	
13446-018	1	117	10	9											0	
13446-018	2	113	10	8											0	
13446-018	3	88	10	9											0	
13446-018	4	15	11	11											0	
13446-018	5	73	10	8											0	
13446-018	6	70	10	9											0	
13446-018	7	107	10	8											0	
13446-018	8	51	10	9											0	
13446-014	1	101	10	5											0	
13446-014	2	120	10	6											0	
13446-014	3	124	10	4											0	
13446-014	4	106	10	6											0	
13446-014	5	93	10	4											0	

CETIS Data Worksheet

Report Date: 29 Jul-05 9:33 PM
Link: 13-3830-0274

Conc-µg/L	Rep	Pos	Exposed	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Total Weight-m	are Weight-m	Pan Coun
13446-014	6	128	10	6											0	
13446-014	7	38	10	4											0	
13446-014	8	57	10	5											0	
13346-015	1	87	10	10											0	
13346-015	2	64	10	8											0	
13346-015	3	94	10	9											0	
13346-015	4	134	10	9											0	
13346-015	5	86	10	8											0	
13346-015	6	126	10	8											0	
13346-015	7	66	10	9											0	
13346-015	8	95	11	11											0	
13446-001	1	82	10	0											0	
13446-001	2	3	10	1											0	
13446-001	3	54	10	1											0	
13446-001	4	28	10	1											0	
13446-001	5	69	10	1											0	
13446-001	6	49	10	0											0	
13446-001	7	41	10	2											0	
13446-001	8	25	10	1											0	
13446-002	1	5	10	2											0	
13446-002	2	80	10	0											0	
13446-002	3	65	10	1											0	
13446-002	4	81	10	4											0	
13446-002	5	36	10	2											0	
13446-002	6	12	10	1											0	
13446-002	7	115	10	1											0	
13446-002	8	116	10	2											0	
13446-004	1	68	10	0											0	
13446-004	2	34	10	0											0	
13446-004	3	123	10	0											0	
13446-004	4	83	10	0											0	
13446-004	5	129	10	0											0	
13446-004	6	37	10	0											0	
13446-004	7	19	10	0											0	
13446-004	8	40	10	1											0	
13446-007	1	112	10	8											0	
13446-007	2	114	10	7											0	
13446-007	3	102	10	7											0	
13446-007	4	62	10	7											0	
13446-007	5	55	10	8											0	
13446-007	6	121	10	4											0	
13446-007	7	61	10	7											0	
13446-007	8	2	10	6											0	
13446-003	1	125	10	10											0	
13446-003	2	46	10	10											0	
13446-003	3	96	10	7											0	
13446-003	4	98	10	10											0	
13446-003	5	92	10	8											0	
13446-003	6	59	10	9											0	
13446-003	7	135	10	9											0	
13446-003	8	16	10	9											0	
13446-006	1	136	10	9											0	
13446-006	2	43	10	9											0	
13446-006	3	75	10	6											0	
13446-006	4	84	10	10											0	
13446-006	5	67	10	9											0	
13446-006	6	45	10	9											0	
13446-006	7	29	10	9											0	

CETIS Data Worksheet

Report Date: 29 Jul-05 9:33 PM
Link: 13-3830-0274

| Conc-µg/L | Rep | Pos | Exposed | Survivd | Survivd | Survivd

CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:11 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunnett's Multiple Comparison	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Bartlett	3.10161	13.27671	0.54097	Equal Variances
Distribution	Shapiro-Wilk W	0.98536	0.91882	0.91960	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.539851	1.134963	4	78.50	0.00000	Significant Effect
Error	0.5060562	0.0144588	35			
Total	5.04590696	1.1494214	39			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-013	-1.032	2.23857	> 0.0500	0.13459	Non-Significant Effect
13446-012		13446-016	14.2641	2.23857	<= 0.0500	0.13459	Significant Effect
13446-012		13446-017	2.09889	2.23857	> 0.0500	0.13459	Non-Significant Effect
13446-012		13446-018	0.91338	2.23857	> 0.0500	0.13459	Non-Significant Effect

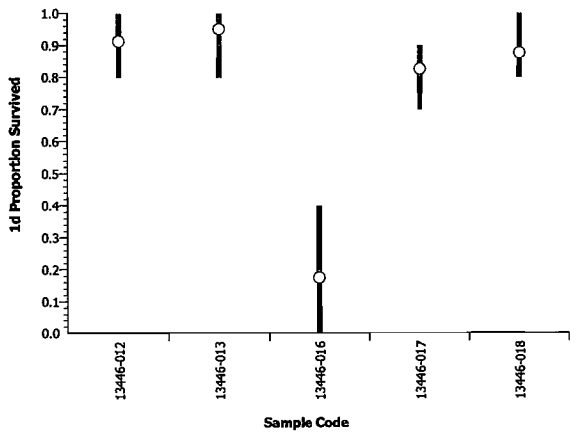
Data Summary

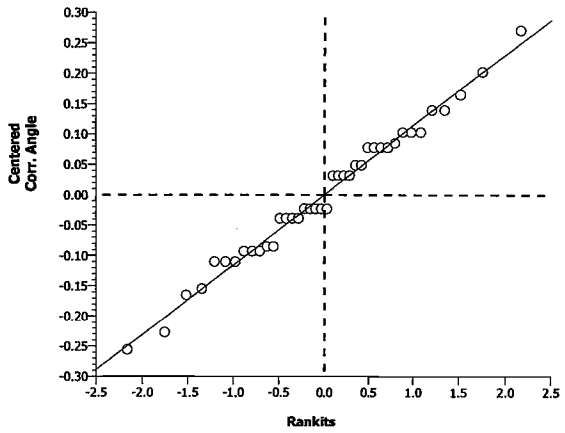
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		

Graphics





CETIS Test Summary

Report Date: 19 Oct-05 3:31 PM
Link: 11-9871-1008

Sample No:	09-4449-7974	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:00 AM	**Code:**	13446-012	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	14d 1h (4 °C)	**Station:**	T05BL-001 - 13446-012 - Riverine Ref		
Sample No:	08-9678-2866	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:30 AM	**Code:**	13446-013	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	14d 0h (4 °C)	**Station:**	T05BL-002 - 13446-013 - Riverine Ref		
Sample No:	15-3550-8902	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 02:30 PM	**Code:**	13446-014	**Project:**	Ecologcal Risk Assessment
Receive Date:	23 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 21h (4 °C)	**Station:**	T05BL-003 - 13446-014 - Pond Refere		
Sample No:	08-7654-4935	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:50 PM	**Code:**	13446-016	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 19h (4 °C)	**Station:**	T05BL-005 - 13446-016 - Riverine Ref		
Sample No:	12-3605-9504	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:00 PM	**Code:**	13446-017	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 19h (4 °C)	**Station:**	T05BL-006 - 13446-017 - Riverine Ref		
Sample No:	04-4912-0227	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:30 PM	**Code:**	13446-018	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 18h (4 °C)	**Station:**	TO5BL-007 - 13446-018 - Riverine Ref		

Ash Free Dry Weight - mg Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000	8	1.79125	1.55000	2.01000	0.05995	0.16957	9.47%
13446-012	8	2.20000	1.73000	3.43000	0.19927	0.56361	25.62%
13446-013	8	1.42375	1.19000	1.68000	0.06296	0.17808	12.51%
13446-016	8	1.22375	0.89000	1.63000	0.08621	0.24383	19.93%
13446-017	8	1.47625	1.12000	2.13000	0.11738	0.33200	22.49%
13446-018	8	1.56500	0.81000	2.00000	0.14131	0.39968	25.54%
13446-014	8	1.39000	1.08000	1.89000	0.08944	0.25298	18.20%
13346-015	8	1.56125	1.34000	2.03000	0.07855	0.22216	14.23%
13446-001	8	1.68625	1.41000	1.85000	0.05217	0.14755	8.75%
13446-002	8	1.81000	1.54000	2.30000	0.09791	0.27692	15.30%
13446-004	8	1.47000	1.07000	1.97000	0.10309	0.29160	19.84%
13446-007	8	1.62750	0.62000	2.15000	0.16938	0.47907	29.44%
13446-003	8	2.02875	1.34000	3.09000	0.19738	0.55827	27.52%
13446-006	8	1.39875	0.76000	1.81000	0.13014	0.36810	26.32%
13446-009	8	1.20375	0.75000	1.65000	0.10879	0.30771	25.56%
13446-010	8	1.84500	1.36000	2.72000	0.15093	0.42688	23.14%
13446-011	8	2.02750	1.59000	2.46000	0.11689	0.33062	16.31%

CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	7.23712	8.88539	0.01814	Equal Variances
Distribution	Shapiro-Wilk W	0.88027	0.84420	0.03863	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1660562	0.1660562	1	1.27	0.27846	Non-Significant Effect
Error	1.828537	0.1306098	14			
Total	1.99459371	0.2966661	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-007	-1.1276	1.76131	0.8608	0.31827	Non-Significant Effect

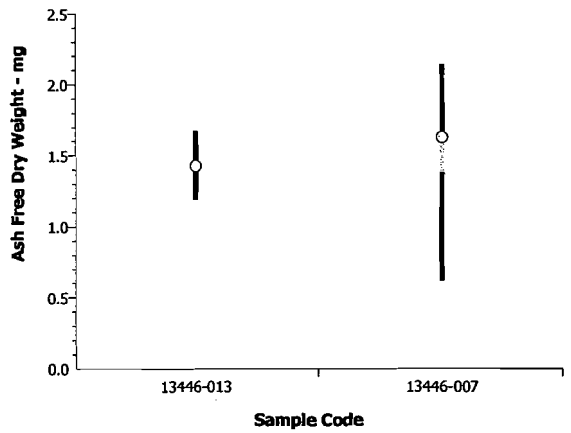
Data Summary

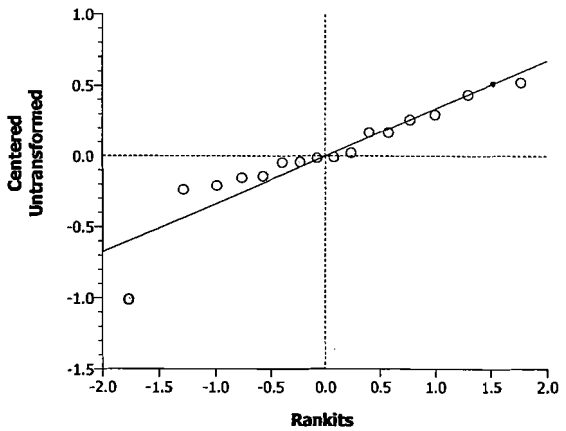
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-007	8	1.62750	0.62000	2.15000	0.47907				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.73111	8.88539	0.20837	Equal Variances
Distribution	Shapiro-Wilk W	0.98246	0.84420	0.96509	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.855625	0.855625	1	21.07	0.00042	Significant Effect
Error	0.5685751	0.0406125	14			
Total	1.42420012	0.8962375	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-001	-4.59	1.76131	0.9998	0.17747	Non-Significant Effect

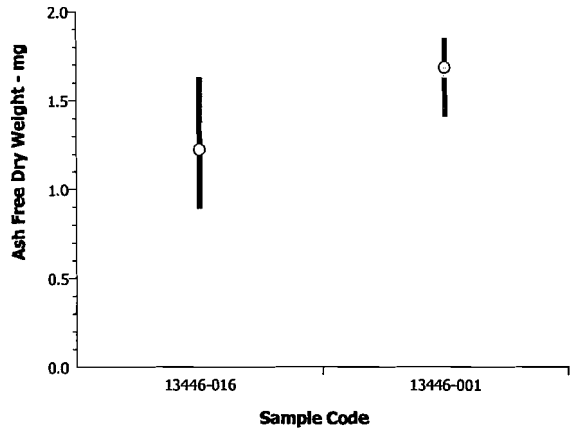
Data Summary

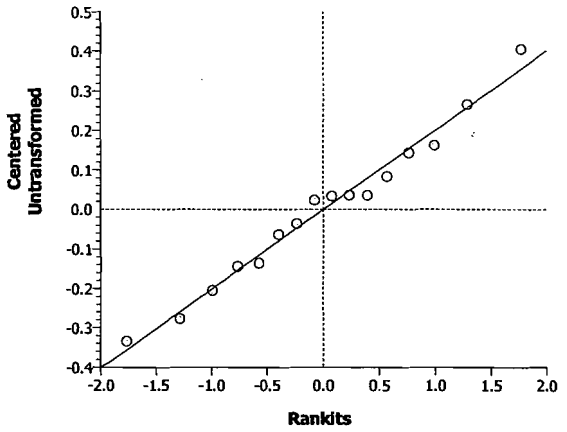
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-001	8	1.68625	1.41000	1.85000	0.14755				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.45673	8.88539	0.63201	Equal Variances
Distribution	Shapiro-Wilk W	0.95950	0.84420	0.62295	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.275625	0.275625	1	10.31	0.00629	Significant Effect
Error	0.374375	0.0267411	14			
Total	0.65000007	0.3023661	15			

Group Comparisons

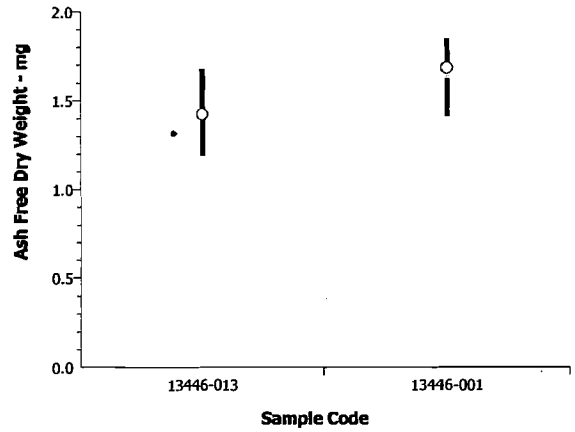
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-001	-3.2105	1.76131	0.9969	0.14401	Non-Significant Effect

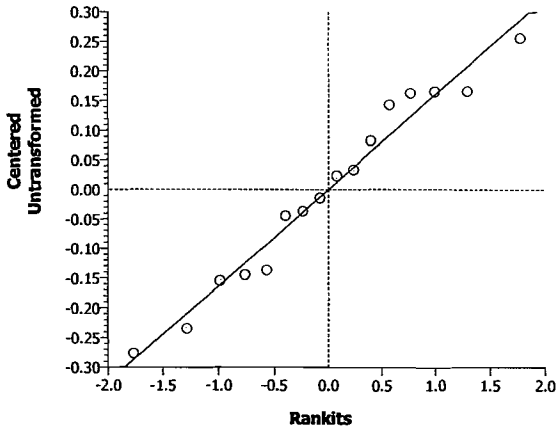
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-001	8	1.68625	1.41000	1.85000	0.14755				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.43673	8.88539	0.64451	Equal Variances
Distribution	Shapiro-Wilk W	0.89747	0.84420	0.07335	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0156250	0.0156250	1	0.08	0.78106	Non-Significant Effect
Error	2.72475	0.194625	14			
Total	2.74037505	0.2102500	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-007	-0.2833	1.76131	0.6095	0.38851	Non-Significant Effect

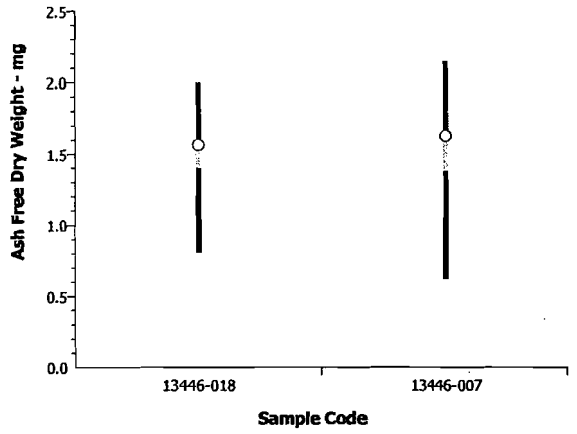
Data Summary

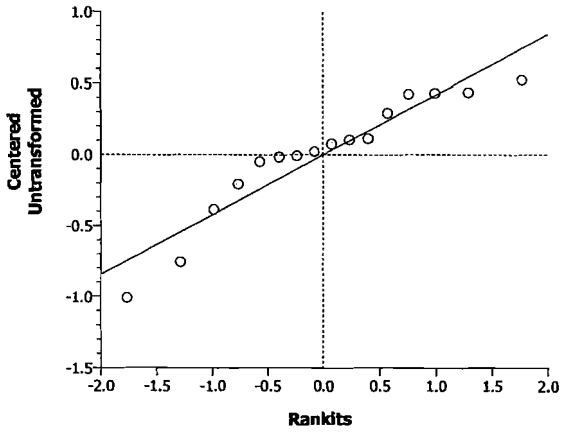
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-007	8	1.62750	0.62000	2.15000	0.47907				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:20 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.73589	8.88539	0.10330	Equal Variances
Distribution	Shapiro-Wilk W	0.86956	0.84420	0.02587	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.1316	2.1316	1	10.59	0.00577	Significant Effect
Error	2.8188	0.2013429	14			
Total	4.95040035	2.3329430	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-004	3.25375	1.76131	0.0029	0.39516	Significant Effect

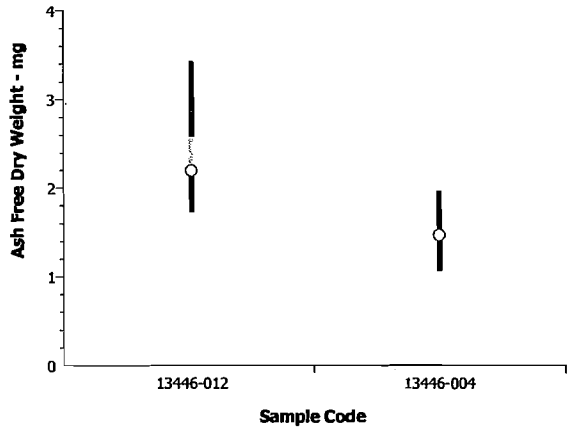
Data Summary

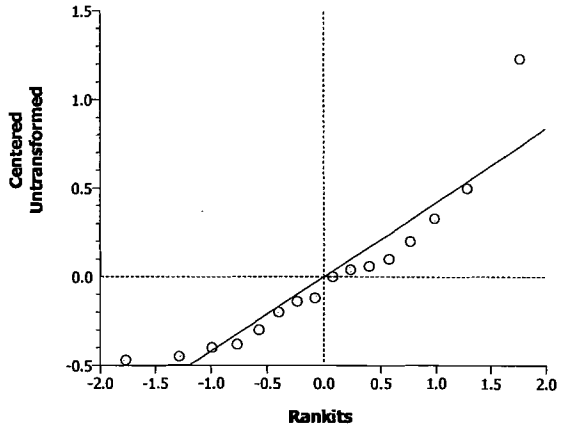
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-004	8	1.47000	1.07000	1.97000	0.29160				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:24 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.29635	8.88539	0.74072	Equal Variances
Distribution	Shapiro-Wilk W	0.94067	0.84420	0.34723	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0001563	0.0001563	1	0.00	0.96865	Non-Significant Effect
Error	1.366788	0.0976277	14			
Total	1.36694392	0.0977839	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-004	0.04001	1.76131	0.4843	0.27516	Non-Significant Effect

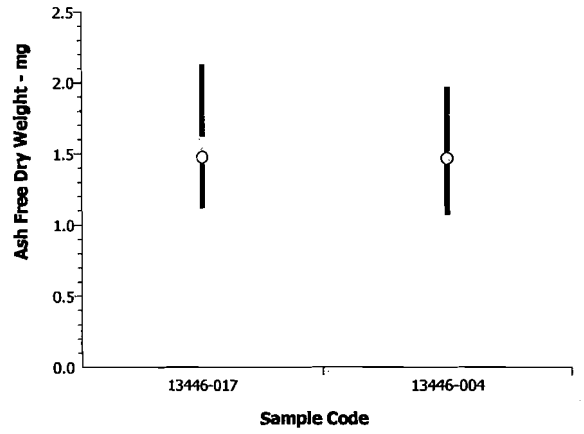
Data Summary

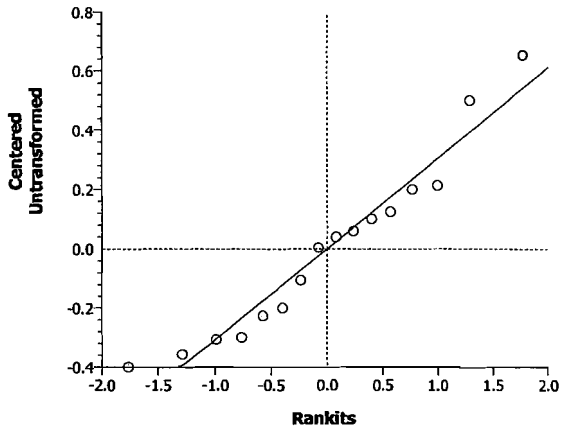
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-004	8	1.47000	1.07000	1.97000	0.29160				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.70792	8.88539	0.49683	Equal Variances
Distribution	Shapiro-Wilk W	0.95153	0.84420	0.49339	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.625625	1.625625	1	18.76	0.00069	Significant Effect
Error	1.21315	0.0866536	14			
Total	2.83877516	1.7122787	15			

Group Comparisons

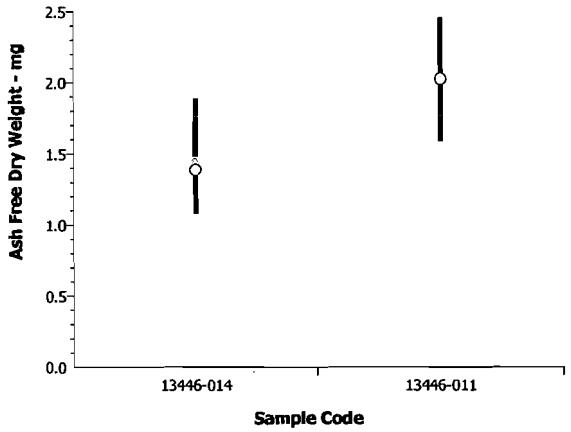
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-011	-4.3313	1.76131	0.9997	0.25924	Non-Significant Effect

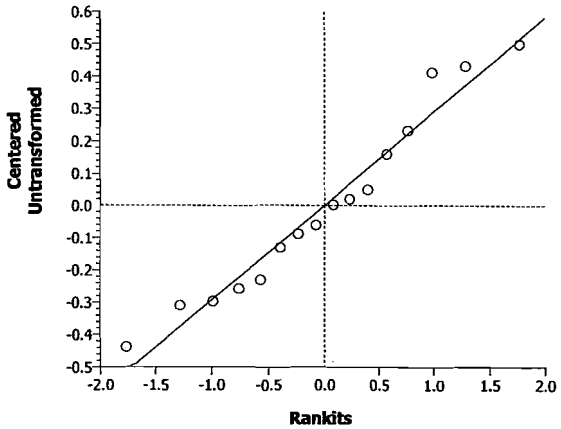
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-011	8	2.02750	1.59000	2.46000	0.33062				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	6.31481	8.88539	0.02661	Equal Variances
Distribution	Shapiro-Wilk W	0.90640	0.84420	0.10207	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.874225	0.874225	1	4.84	0.04504	Significant Effect
Error	2.527174	0.1805125	14			
Total	3.40139943	1.0547374	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-003	-2.2007	1.76131	0.9775	0.37416	Non-Significant Effect

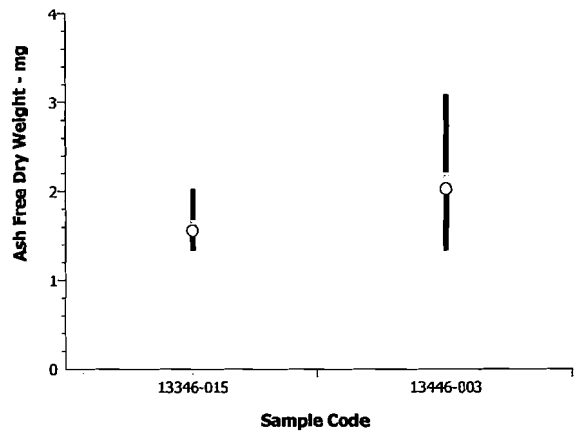
Data Summary

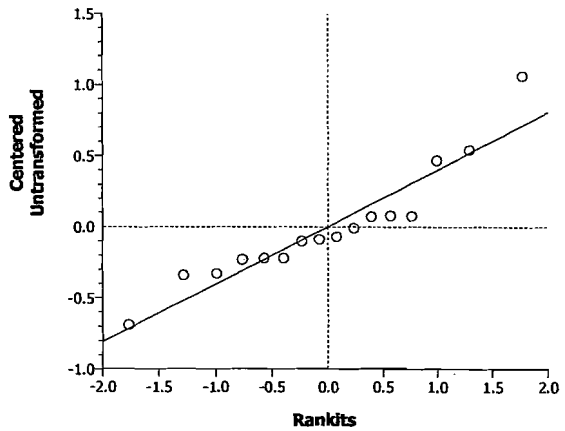
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-003	8	2.02875	1.34000	3.09000	0.55827				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.43012	8.88539	0.64871	Equal Variances
Distribution	Shapiro-Wilk W	0.96824	0.84420	0.77458	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2425563	0.2425563	1	3.36	0.08825	Non-Significant Effect
Error	1.011387	0.072242	14			
Total	1.25394373	0.3147982	15			

Group Comparisons

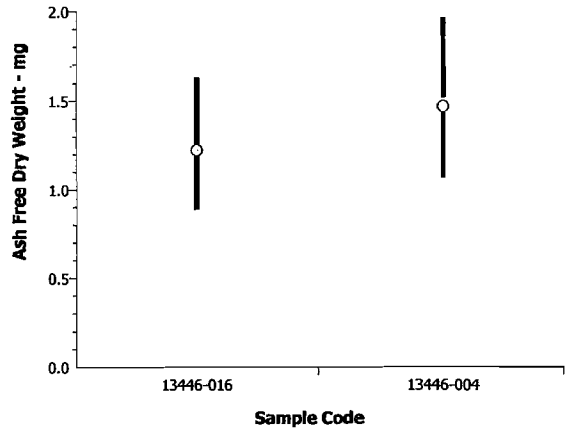
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-004	-1.8324	1.76131	0.9559	0.23670	Non-Significant Effect

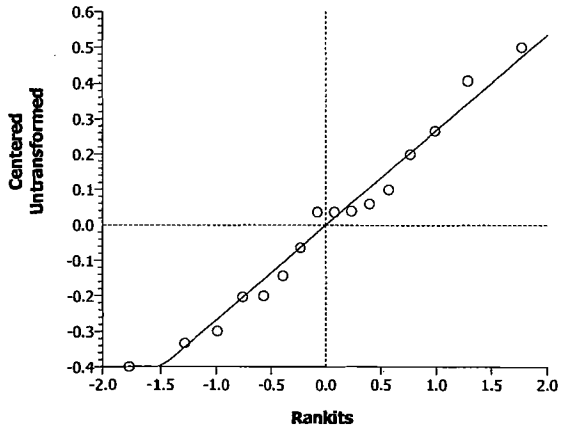
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-004	8	1.47000	1.07000	1.97000	0.29160				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:20 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.14233	8.88539	0.08042	Equal Variances
Distribution	Shapiro-Wilk W	0.85746	0.84420	0.01645	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.6084	0.6084	1	3.09	0.10083	Non-Significant Effect
Error	2.7604	0.1971714	14			
Total	3.36880010	0.8055715	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-002	1.7566	1.76131	0.0504	0.39105	Non-Significant Effect

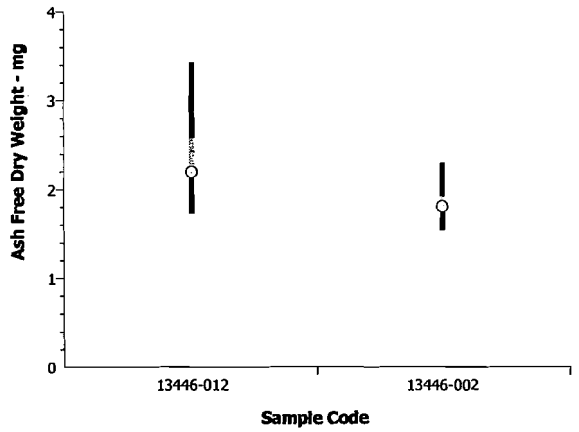
Data Summary

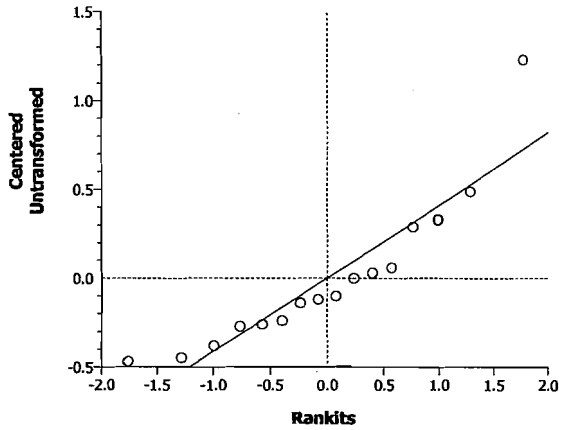
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-002	8	1.81000	1.54000	2.30000	0.27692				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.28980	8.88539	0.74559	Equal Variances
Distribution	Shapiro-Wilk W	0.93107	0.84420	0.24933	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.374756	1.374756	1	20.20	0.00050	Significant Effect
Error	0.9529874	0.0680705	14			
Total	2.32774365	1.4428267	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-002	-4.4940	1.76131	0.9997	0.22977	Non-Significant Effect

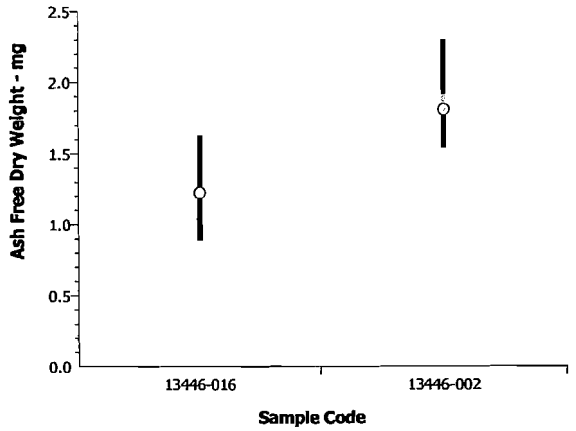
Data Summary

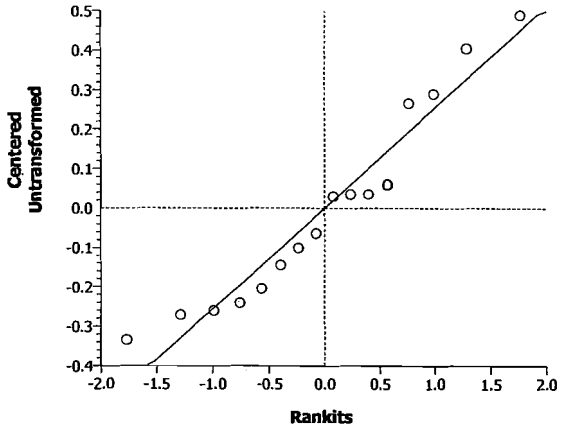
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-002	8	1.81000	1.54000	2.30000	0.27692				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.08309	8.88539	0.35391	Equal Variances
Distribution	Shapiro-Wilk W	0.95776	0.84420	0.59334	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2401	0.2401	1	2.03	0.17603	Non-Significant Effect
Error	1.655	0.1182143	14			
Total	1.8951	0.3583143	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-002	-1.4252	1.76131	0.9120	0.30279	Non-Significant Effect

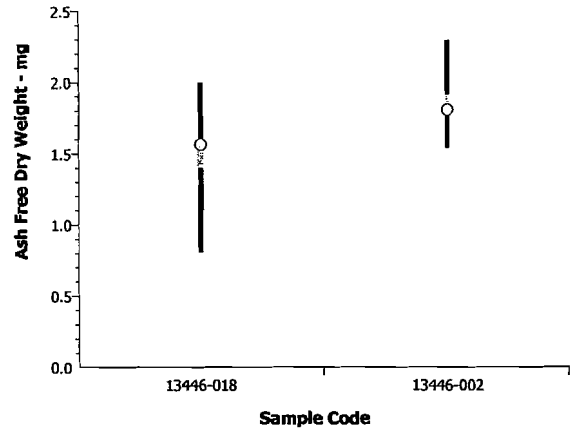
Data Summary

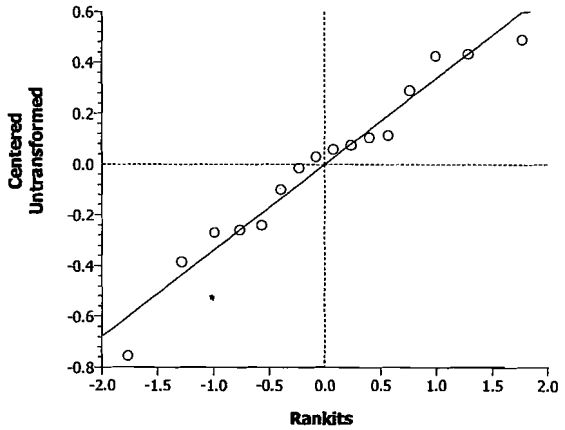
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-002	8	1.81000	1.54000	2.30000	0.27692				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:20 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.38408	8.88539	0.67882	Equal Variances
Distribution	Shapiro-Wilk W	0.95700	0.84420	0.58074	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.311025	1.311025	1	4.79	0.04603	Significant Effect
Error	3.83015	0.2735822	14			
Total	5.14117515	1.5846072	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-007	2.18908	1.76131	0.0230	0.46063	Significant Effect

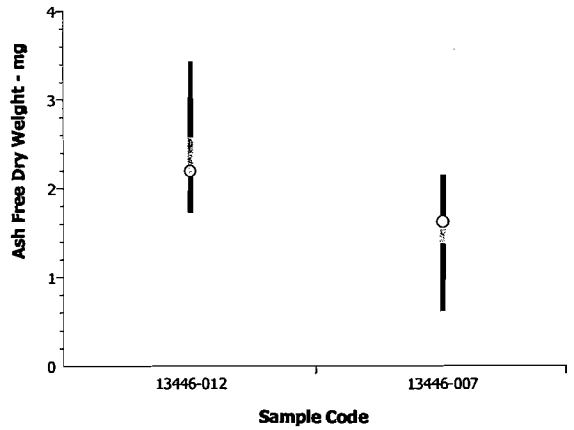
Data Summary

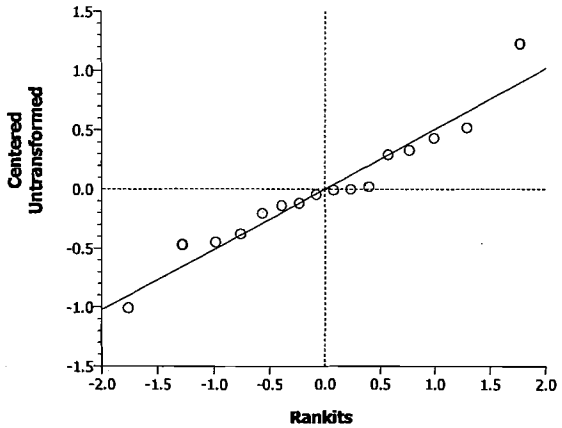
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-007	8	1.62750	0.62000	2.15000	0.47907				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:24 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.08214	8.88539	0.35421	Equal Variances
Distribution	Shapiro-Wilk W	0.95155	0.84420	0.49373	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0915062	0.0915062	1	0.54	0.47509	Non-Significant Effect
Error	2.378138	0.169867	14			
Total	2.46964405	0.2613732	15			

Group Comparisons

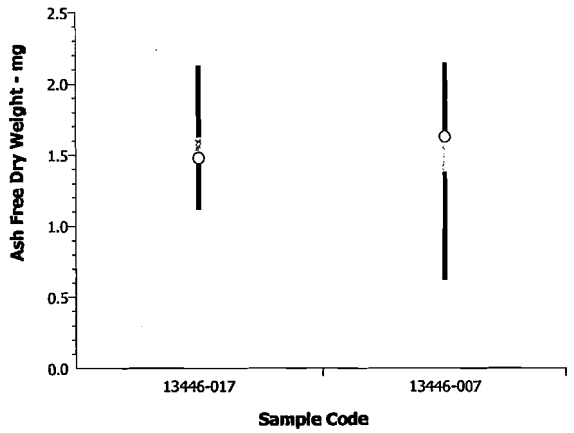
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-007	-0.734	1.76131	0.7625	0.36296	Non-Significant Effect

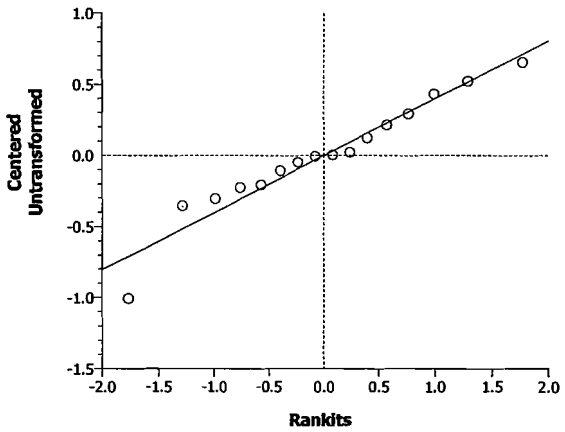
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-007	8	1.62750	0.62000	2.15000	0.47907				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.47944	8.88539	0.61815	Equal Variances
Distribution	Shapiro-Wilk W	0.97221	0.84420	0.83991	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1387562	0.1387562	1	1.75	0.20722	Non-Significant Effect
Error	1.110787	0.079342	14			
Total	1.24954364	0.2180982	15			

Group Comparisons

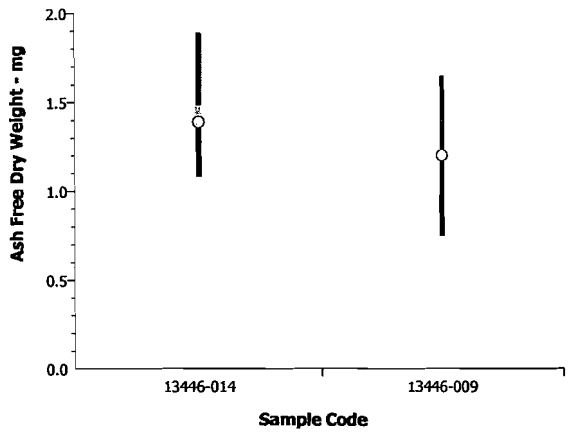
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-009	1.32244	1.76131	0.1036	0.24806	Non-Significant Effect

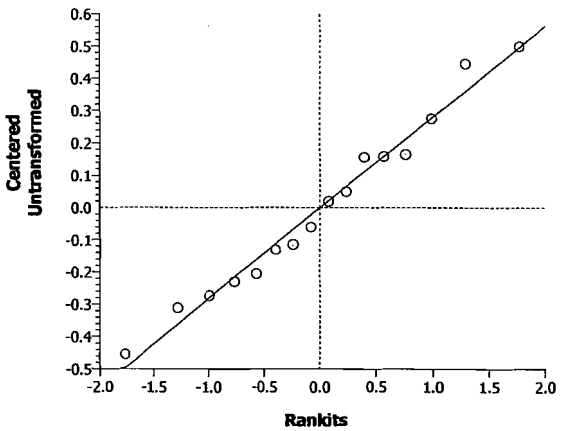
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-009	8	1.20375	0.75000	1.65000	0.30771				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:24 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.06332	8.88539	0.04825	Equal Variances
Distribution	Shapiro-Wilk W	0.92735	0.84420	0.21865	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1764	0.1764	1	2.67	0.12435	Non-Significant Effect
Error	0.9239752	0.0659982	14			
Total	1.10037519	0.2423982	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-001	-1.6349	1.76131	0.9378	0.22624	Non-Significant Effect

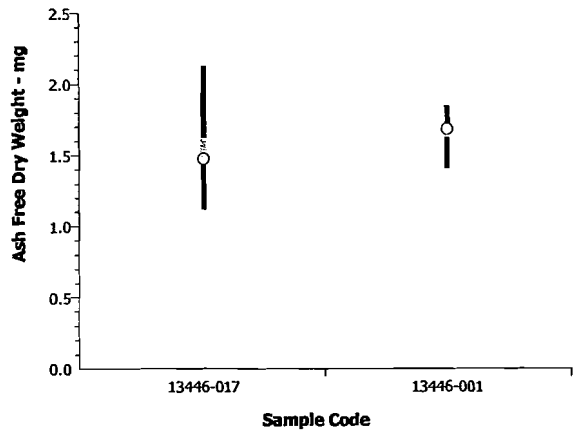
Data Summary

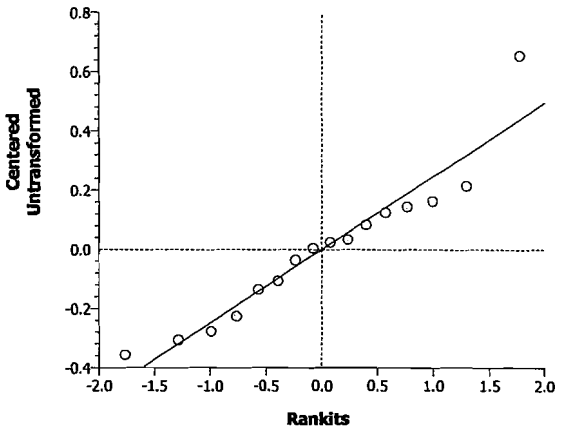
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-001	8	1.68625	1.41000	1.85000	0.14755				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.74536	8.88539	0.20612	Equal Variances
Distribution	Shapiro-Wilk W	0.95186	0.84420	0.49845	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.105625	0.105625	1	1.14	0.30315	Non-Significant Effect
Error	1.293975	0.0924268	14			
Total	1.39959989	0.1980518	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-006	1.06902	1.76131	0.1516	0.26773	Non-Significant Effect

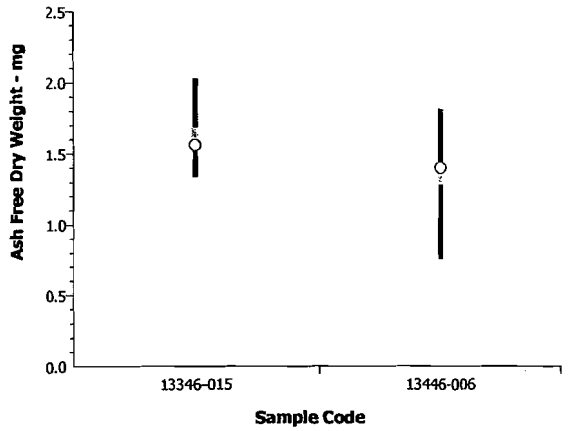
Data Summary

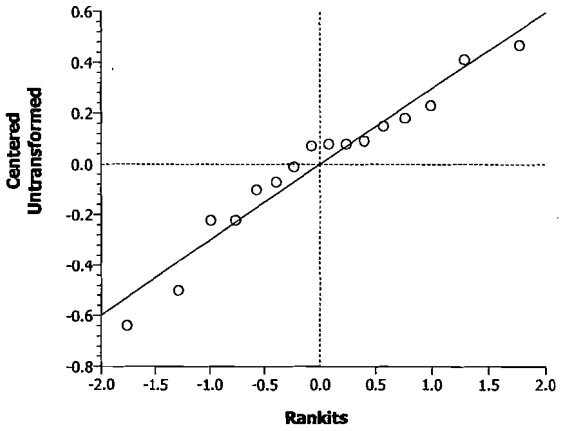
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-006	8	1.39875	0.76000	1.81000	0.36810				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.91841	8.88539	0.40948	Equal Variances
Distribution	Shapiro-Wilk W	0.96645	0.84420	0.74378	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.511225	0.511225	1	7.10	0.01851	Significant Effect
Error	1.008275	0.0720196	14			
Total	1.5194999	0.5832446	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-009	2.66428	1.76131	0.0093	0.23634	Significant Effect

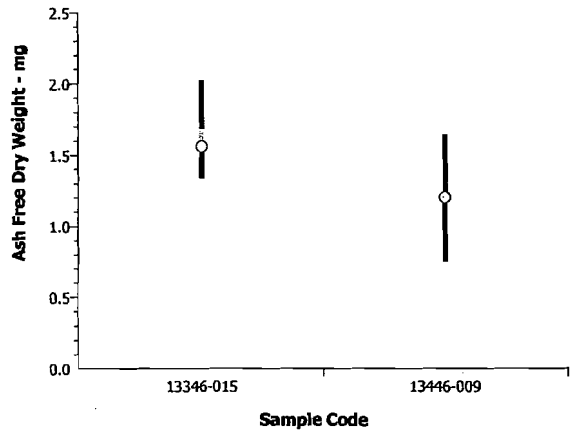
Data Summary

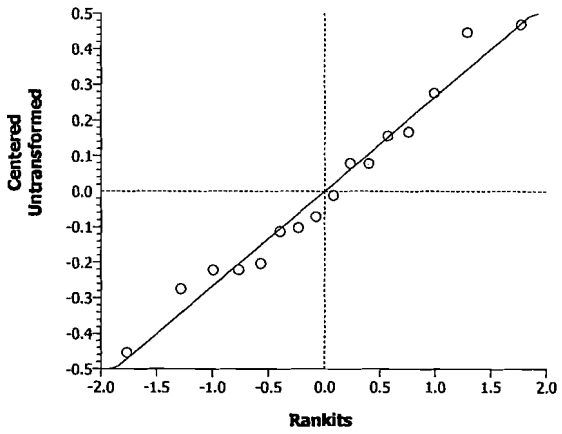
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-009	8	1.20375	0.75000	1.65000	0.30771				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.86984	8.88539	0.05341	Equal Variances
Distribution	Shapiro-Wilk W	0.92004	0.84420	0.16812	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.632006	1.632006	1	8.69	0.01060	Significant Effect
Error	2.629687	0.1878348	14			
Total	4.26169324	1.819841	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-003	-2.9476	1.76131	0.9947	0.38168	Non-Significant Effect

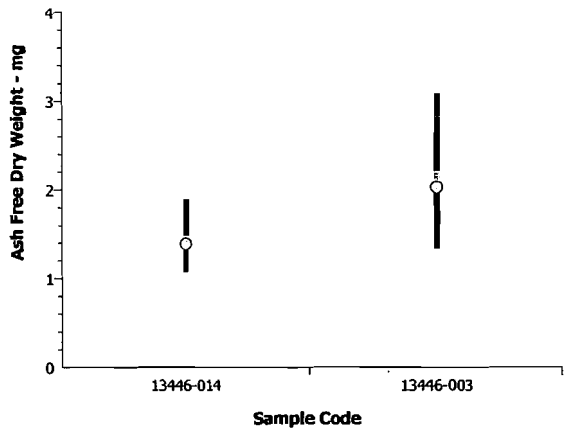
Data Summary

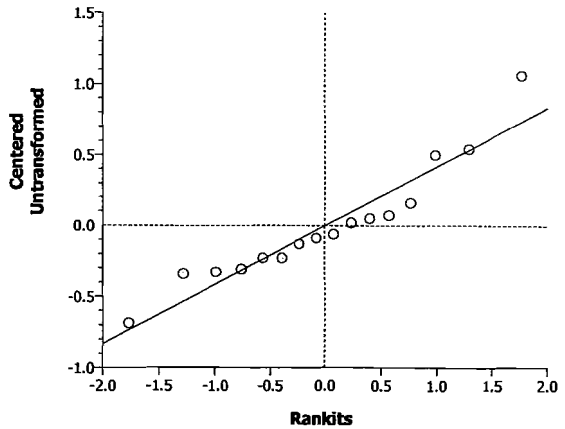
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-003	8	2.02875	1.34000	3.09000	0.55827				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.68123	8.88539	0.21653	Equal Variances
Distribution	Shapiro-Wilk W	0.98333	0.84420	0.97143	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0085563	0.0085563	1	0.15	0.70757	Non-Significant Effect
Error	0.8171875	0.0583705	14			
Total	0.82574374	0.0669268	15			

Group Comparisons

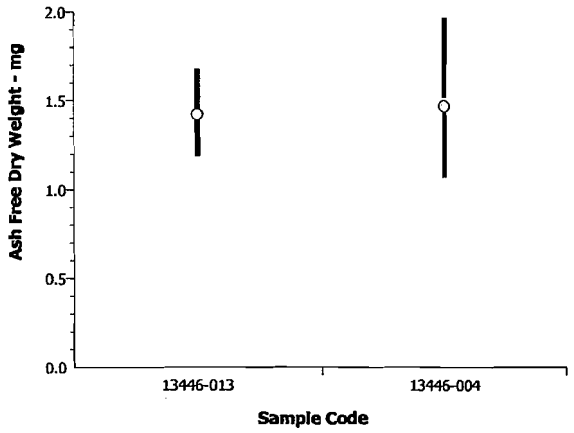
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-004	-0.3829	1.76131	0.6462	0.21277	Non-Significant Effect

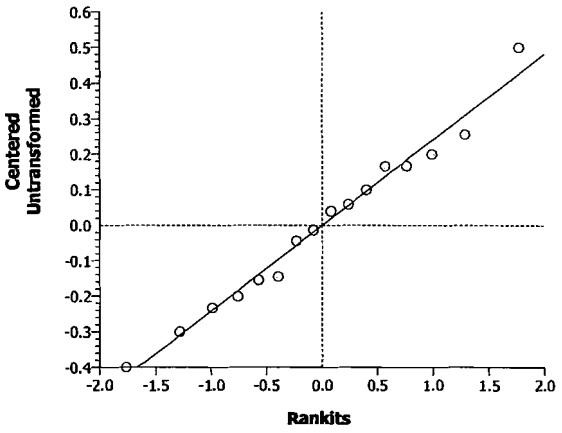
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-004	8	1.47000	1.07000	1.97000	0.29160				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:24 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.43738	8.88539	0.64410	Equal Variances
Distribution	Shapiro-Wilk W	0.92006	0.84420	0.16825	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.4455562	0.4455562	1	4.77	0.04652	Significant Effect
Error	1.308388	0.0934563	14			
Total	1.75394380	0.5390124	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-002	-2.1835	1.76131	0.9767	0.26922	Non-Significant Effect

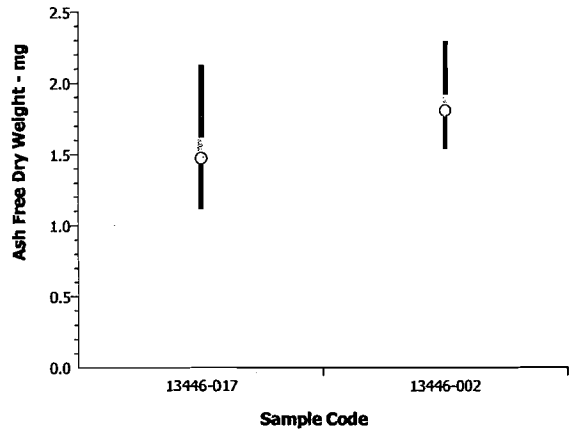
Data Summary

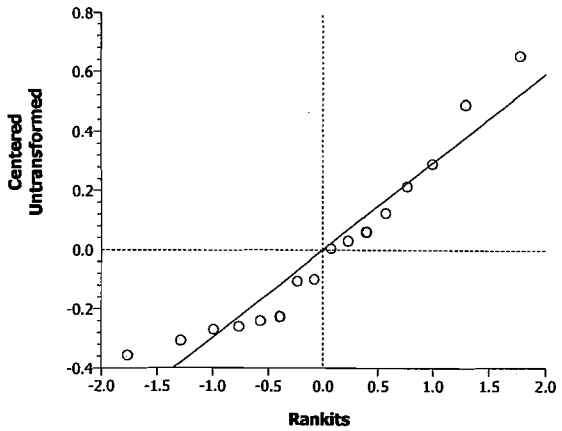
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-002	8	1.81000	1.54000	2.30000	0.27692				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.69217	8.88539	0.10623	Equal Variances
Distribution	Shapiro-Wilk W	0.91183	0.84420	0.12468	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3220563	0.3220563	1	2.78	0.11757	Non-Significant Effect
Error	1.621087	0.115792	14			
Total	1.9431437	0.4378482	15			

Group Comparisons

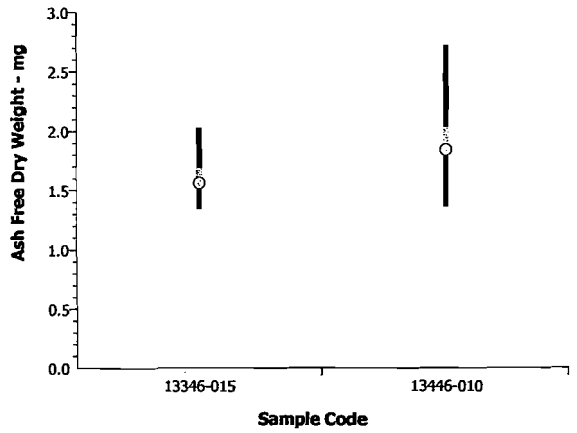
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-010	-1.6677	1.76131	0.9412	0.29967	Non-Significant Effect

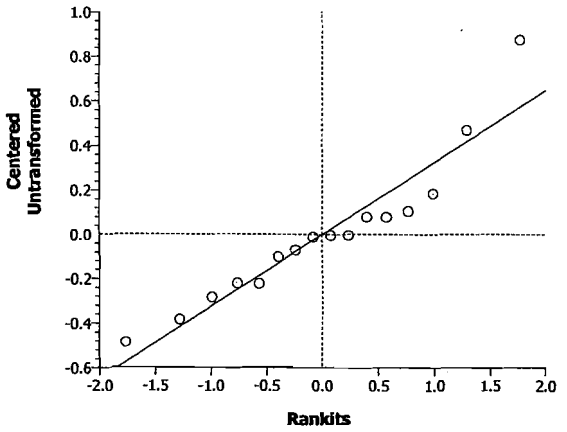
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-010	8	1.84500	1.36000	2.72000	0.42688				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.21470	8.88539	0.31604	Equal Variances
Distribution	Shapiro-Wilk W	0.94278	0.84420	0.37254	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8695563	0.8695563	1	10.96	0.00515	Significant Effect
Error	1.110637	0.0793313	14			
Total	1.98019373	0.9488876	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-011	-3.3108	1.76131	0.9974	0.24804	Non-Significant Effect

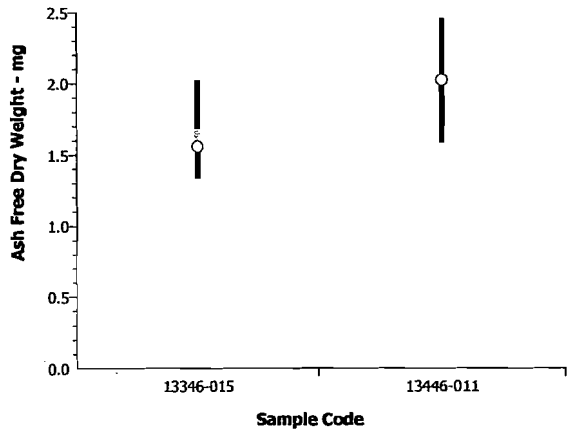
Data Summary

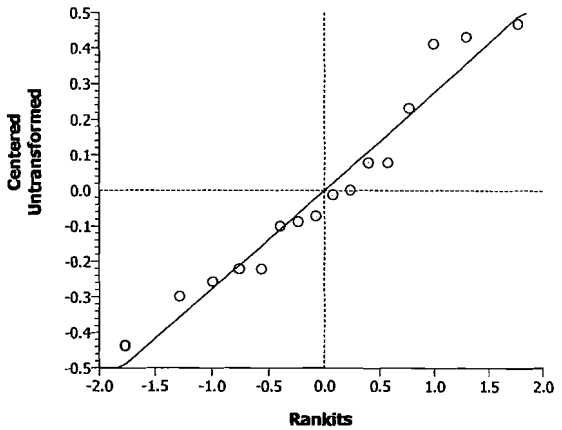
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-011	8	2.02750	1.59000	2.46000	0.33062				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:23 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.86016	8.88539	0.09551	Equal Variances
Distribution	Shapiro-Wilk W	0.90307	0.84420	0.09027	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.6520563	0.6520563	1	4.51	0.05193	Non-Significant Effect
Error	2.022738	0.1444813	14			
Total	2.67479378	0.7965375	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-007	-2.1244	1.76131	0.9740	0.33474	Non-Significant Effect

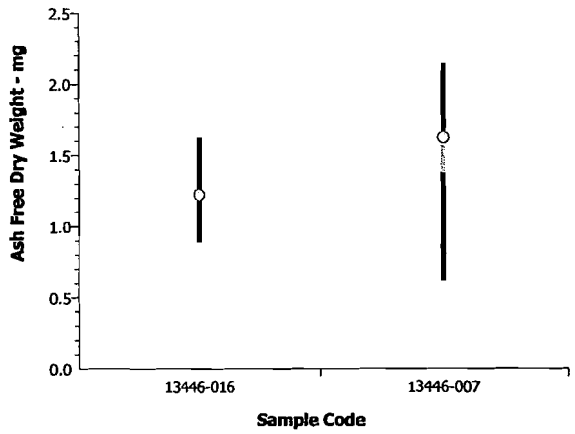
Data Summary

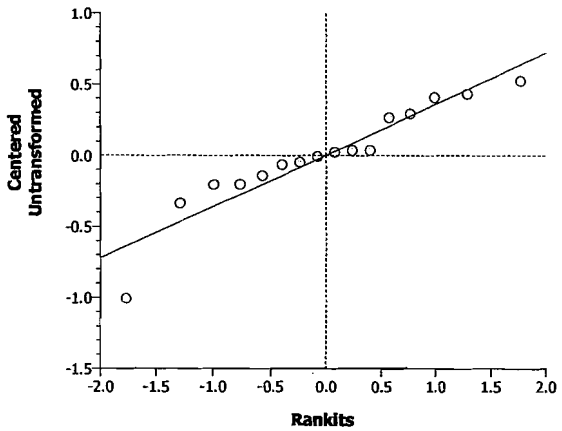
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-007	8	1.62750	0.62000	2.15000	0.47907				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:20 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	14.59174	8.88539	0.00219	Unequal Variances
Distribution	Shapiro-Wilk W	0.81711	0.84420	0.00361	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.055756	1.055756	1	6.22	0.02576	Significant Effect
Error	2.375988	0.1697134	14			
Total	3.43174398	1.2254696	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-012		13446-001	56		0.0052	0	Significant Effect

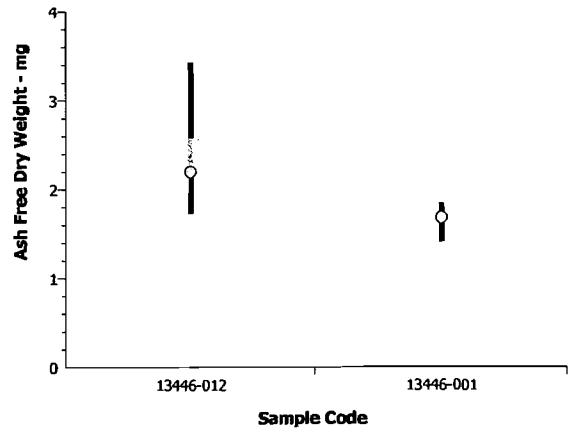
Data Summary

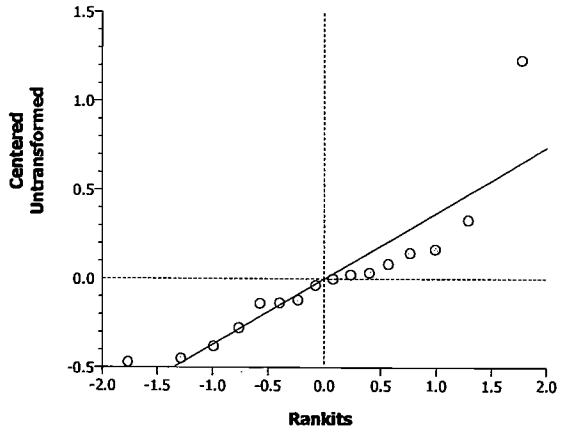
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-001	8	1.68625	1.41000	1.85000	0.14755				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	7.33787	8.88539	0.01744	Equal Variances
Distribution	Shapiro-Wilk W	0.90391	0.84420	0.09313	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0588063	0.0588063	1	0.65	0.43430	Non-Significant Effect
Error	1.270588	0.0907563	14			
Total	1.32939384	0.1495625	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-001	-0.805	1.76131	0.7828	0.26530	Non-Significant Effect

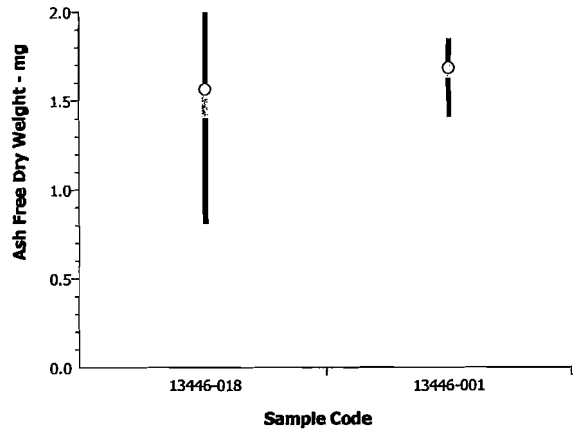
Data Summary

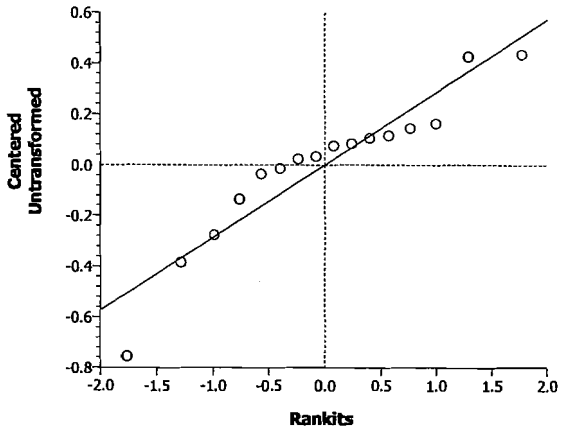
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-001	8	1.68625	1.41000	1.85000	0.14755				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.87870	8.88539	0.42445	Equal Variances
Distribution	Shapiro-Wilk W	0.94414	0.84420	0.38973	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0361	0.0361	1	0.29	0.59560	Non-Significant Effect
Error	1.7134	0.1223857	14			
Total	1.74949999	0.1584857	15			

Group Comparisons

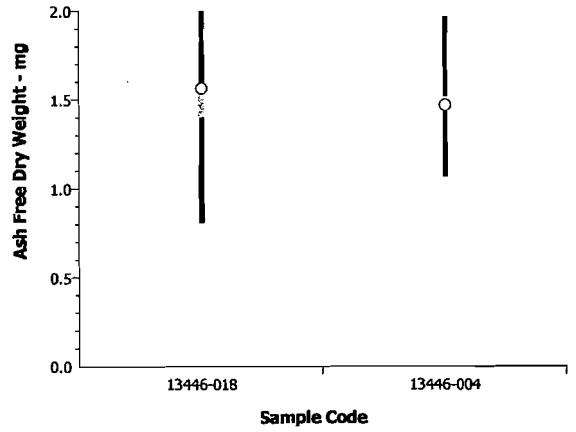
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-004	0.54311	1.76131	0.2978	0.30809	Non-Significant Effect

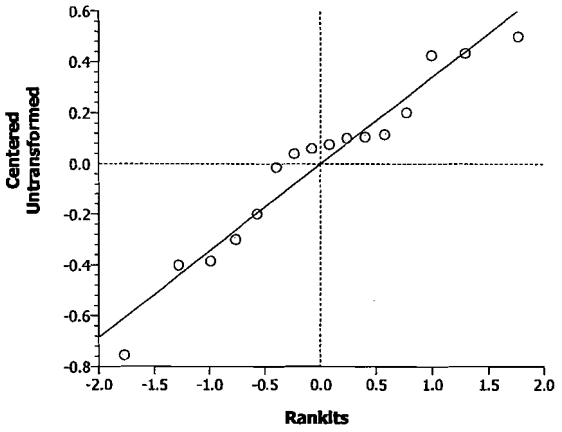
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-004	8	1.47000	1.07000	1.97000	0.29160				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.41815	8.88539	0.26684	Equal Variances
Distribution	Shapiro-Wilk W	0.93644	0.84420	0.30065	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5967562	0.5967562	1	11.01	0.00508	Significant Effect
Error	0.7587874	0.0541991	14			
Total	1.35554361	0.6509553	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-002	-3.3182	1.76131	0.9975	0.20502	Non-Significant Effect

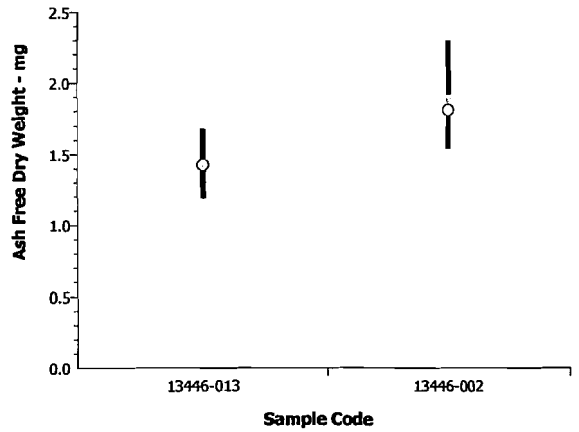
Data Summary

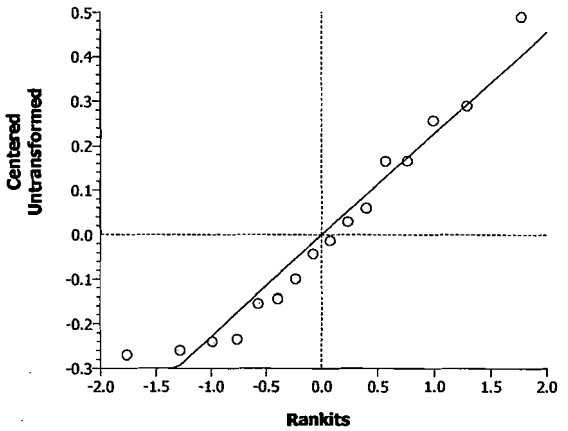
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-002	8	1.81000	1.54000	2.30000	0.27692				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.11716	8.88539	0.34359	Equal Variances
Distribution	Shapiro-Wilk W	0.96218	0.84420	0.66925	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0003062	0.0003062	1	0.00	0.95660	Non-Significant Effect
Error	1.396487	0.0997491	14			
Total	1.39679372	0.1000554	15			

Group Comparisons

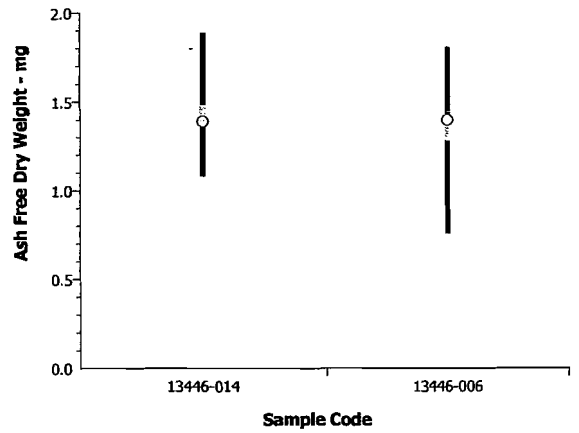
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-006	-0.0554	1.76131	0.5217	0.27814	Non-Significant Effect

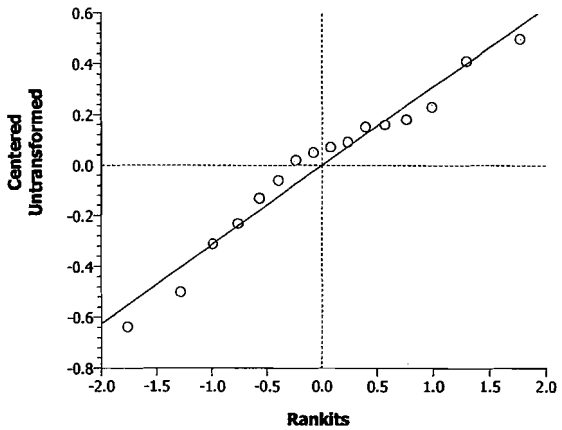
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-006	8	1.39875	0.76000	1.81000	0.36810				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.84732	8.88539	0.19081	Equal Variances
Distribution	Shapiro-Wilk W	0.92280	0.84420	0.18575	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8281	0.8281	1	6.73	0.02124	Significant Effect
Error	1.7236	0.1231143	14			
Total	2.55170006	0.9512143	15			

Group Comparisons

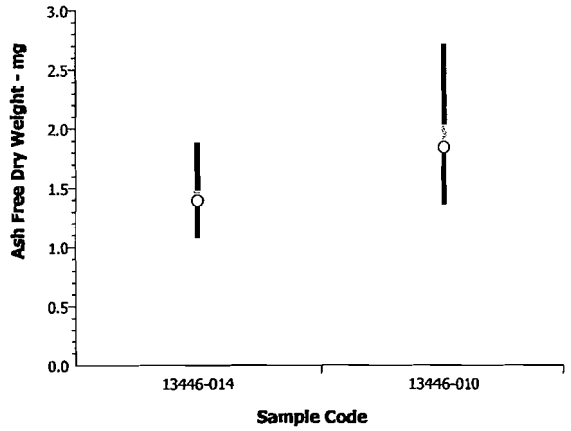
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-010	-2.5935	1.76131	0.9894	0.30900	Non-Significant Effect

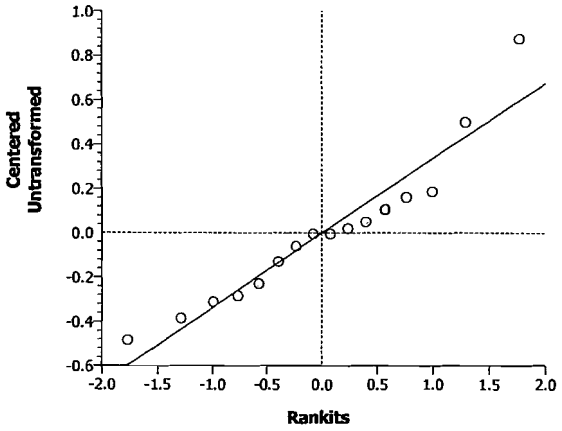
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-010	8	1.84500	1.36000	2.72000	0.42688				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000		

Graphics







Aquatic Research Organisms

DATA SHEET

I. **Organism History**

Species: Hyalella azteca

Source: Lab reared ✓ Hatchery reared _____ Field collected _____

Hatch date 6/29/05 Receipt date _____

Lot number 062905HA Strain AKO

Brood Origination USFWS MO

II. **Water Quality**

Temperature 24 °C Salinity — ppt DO SAT

pH 7.2 Hardness ~120 ppm

III. **Culture Conditions**

System: FW SPATIRRENEW

Diet: Flake Food ✓ Phytoplankton _____ Trout Chow ✓

Brine Shrimp _____ Rotifers _____ Other _____

Prophylactic Treatments: _____

Comments: _____

IV. **Shipping Information**

Client: ESI # of Organisms: 1400

Carrier: PICK UP Date Shipped: 7-1-05

Biologist: Stan Leather

1 - 800 - 927 - 1650

PO Box 1271 • One Lafayette Road • Hampton, NH 03842 • (603) 926-1650

LABORATORY SAMPLE RECEIVING LOG

ESI Project Number: 13446 Date/Time Received: 6/24/05 1200

Client Name and Address: BBL, Inc. 6723 Towpath Road Syracuse, NY 13214

Method of Shipment/ Pick Up: From: Client

Via: Client

Description of Shipping / Packing Containers(s) 9 coolers
(Number, Type, Size)

Sample ID	ESI #	# Containers/Vol/Wt	Other	Sampled
T05PA-001		2 x 1 gal		6/21/05
T05PD-002				
T05BR-001				
T05BA~~B~~PA-003				
T05BR-002				
T05BR-003				
T05PF-004				
T05BR-004				6/22/05
T05BR-005				
T05BR-006				
T05BR-007				6/23/05
T05BL-001				
T05BL-002				
T05BL-003				
T05BL-004				
T05BL-005				
T05BL-006				
T05BL-007				

Sample Storage Location and Required Storage Conditions Refrigerator "F" Locked, 4°C & Dark

Signature: [signature] Date: 6/24/05

Notes:

Date and Description of Final Sample Removal / Disposal:

ESI EnviroSystems, Inc.
1 Lafayette Road
Hampton, N.H. 03842

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 13476

CHAIN OF CUSTODY DOCUMENTATION

Client: Peterson Puritan	Contact: Dave Buys, BBL, Inc.	Project Name: Blackstone River	Page 1 of 2
Report to:	Address: 6723 Towpath Rd.	Project Number: 37902.008	
Invoice to:	Address: Syracuse, NY 13214	Project Manager: Helen Douglas of BBL	
Voice:	Fax:	email:	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or comp-osit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preser-vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions: HOLD SAMPLES UNTIL NOTICE
-001	T05PA-001	6/21/05	1100	DJB	G	two 1 gal.	P	NONE	S	L	1 gallon for 28-day Hyalella toxicity 1 gallon for 28-day Chironomus toxicity
-002	T05PD-002		1230	DJB							
-003	T05BR-001		1500	JTG							
-004	T05PA-003		1530	DJB							
-005	T05BR-002		1645	JTG							
-006	T05BR-003		1830	JTG							
-007	T05PF-004		1830	DJB							
-008	T05BR-004	6/22/05	0900	JTG							
-009	T05BR-005		1100	DJB							
-010	T05BR-006		1045	JTG							
-011	T05BR-007	6/23/05	1320	JTG							
-012	T05BL-001		1100	JTG							

Relinquished By: Date: 6/24/05 Time: 1200 Received By: Date: 6/24/05 Time: 1200

Relinquished By: Date: Time: Received at Lab By: Date: Time:

Comments:

Sample Delivery Group No: Page of

No: Nº 1354

ESI

EnviroSystems, Inc.
1 Lafayette Road
Hampton, N.H. 03842

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 13446

CHAIN OF CUSTODY DOCUMENTATION

Client: Peterson Puritan	Contact: Dave Buys, BBL, Inc.	Project Name: Blackstone River	Page 2 of 2
Report to:	Address: 6723 Towpath Rd	Project Number: 37902.008	
Invoice to:	Address: Syracuse, NY 13214	Project Manager: Helen Douglas of BBL	
Voice:	Fax:	email:	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions: HOLD UNTIL FURTHER NOTICE
-013	T05BL-002	6/23/05	1130	JTG	G	Two 1 gal.	P	None	S	L	1 gallon for 28-day Hyalella toxicity; 1 gallon for 20-day Chironomus toxicity
-014	T05BL-003		1430	DJB							
-015	T05BL-004		1600	DJB							
-016	T05BL-005		1650	JTG							
-017	T05BL-006		1700	DJB							
-018	T05BL-007		1730	JTG							

Relinquished By: [signature] Date: 6/24/05 Time: 1200

Received By: [signature] Date: 6/24/05 Time: 1200

Relinquished By: Date: Time:

Received at Lab By: Date: Time:

Comments:

No: № 1355

Sample Delivery Group No: Page of

CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.11209	8.88539	0.89214	Equal Variances
Distribution	Shapiro-Wilk W	0.92131	0.84420	0.17603	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2889985	0.2889985	1	16.67	0.00112	Significant Effect
Error	0.2427659	0.0173404	14			
Total	0.53176434	0.3063389	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-007	4.08242	1.76131	0.0006	0.11597	Significant Effect

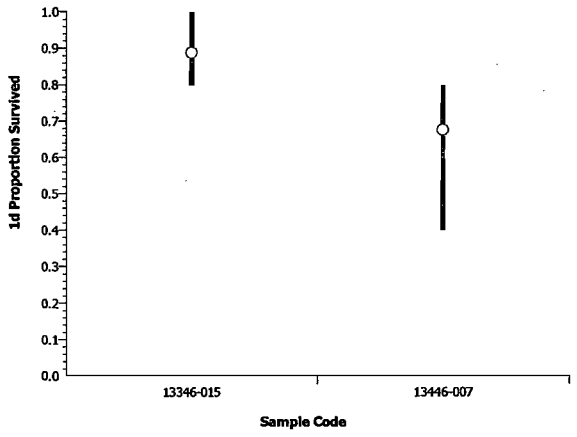
Data Summary

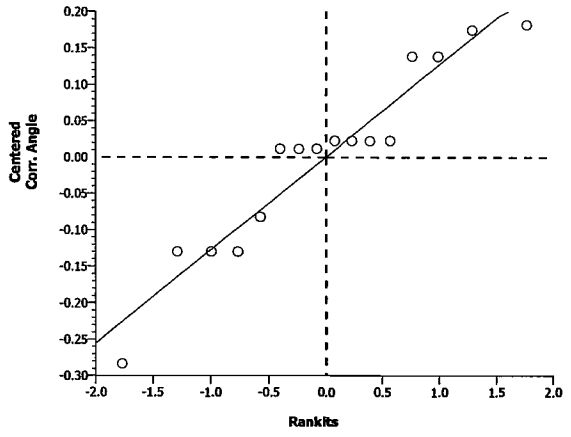
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-007	8	0.67500	0.40000	0.80000	0.12817	0.96872	0.68472	1.10715	0.13513

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-007	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000	0.70000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.51516	8.88539	0.59705	Equal Variances
Distribution	Shapiro-Wilk W	0.95719	0.84420	0.58377	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.101797	3.101797	1	133.25	0.00000	Significant Effect
Error	0.3258913	0.023278	14			
Total	3.42768797	3.1250746	15			

Group Comparisons

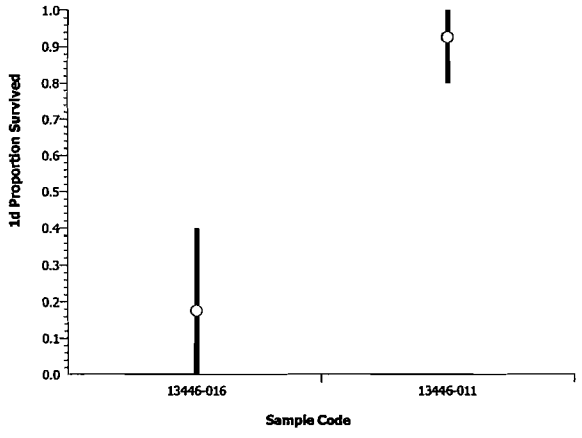
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-011	-11.543	1.76131	1.0000	0.13436	Non-Significant Effect

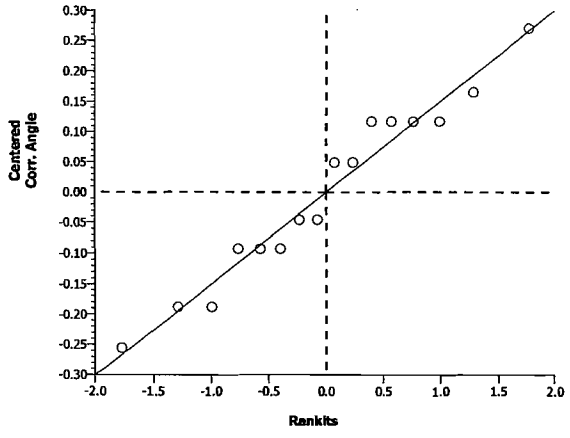
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-011	8	0.92500	0.80000	1.00000	0.08864	1.29506	1.10715	1.41202	0.13605

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:09 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.03351	8.88539	0.36961	Equal Variances
Distribution	Shapiro-Wilk W	0.94845	0.84420	0.44796	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0074131	0.0074131	1	0.42	0.52703	Non-Significant Effect
Error	0.2466277	0.0176163	14			
Total	0.25404086	0.0250294	15			

Group Comparisons

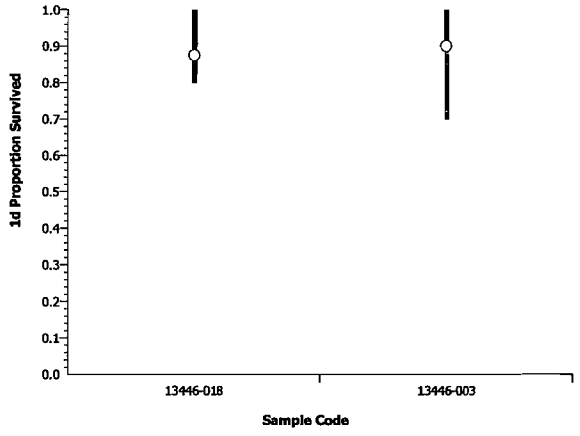
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-003	-0.6487	1.76131	0.7365	0.11689	Non-Significant Effect

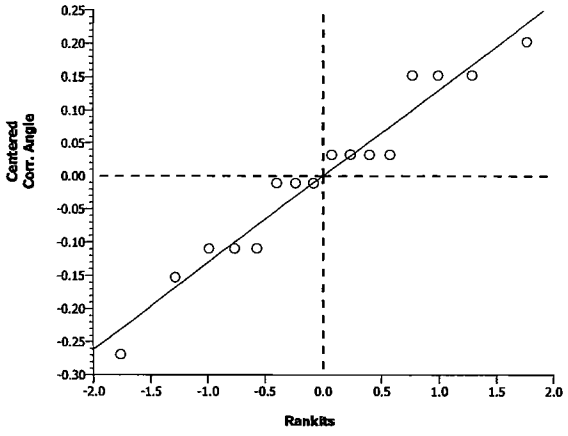
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-003	8	0.90000	0.70000	1.00000	0.10690	1.26019	0.99116	1.41202	0.15368

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.96993	8.88539	0.17425	Equal Variances
Distribution	Shapiro-Wilk W	0.68468	0.84420	0.00002	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.777719	4.777719	1	725.00	0.00000	Significant Effect
Error	0.0922589	0.0065899	14			
Total	4.86997787	4.7843089	15			

Group Comparisons

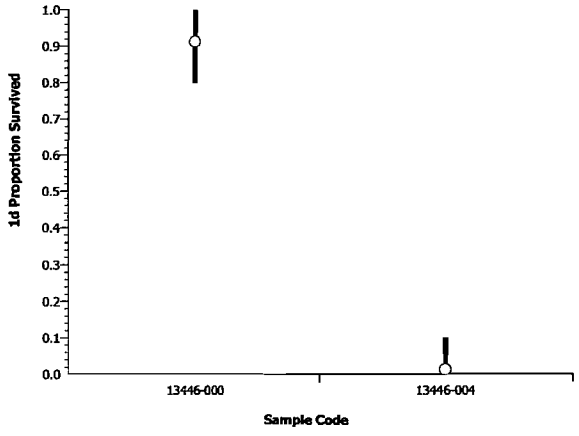
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-004	64		0.0001	3	Significant Effect

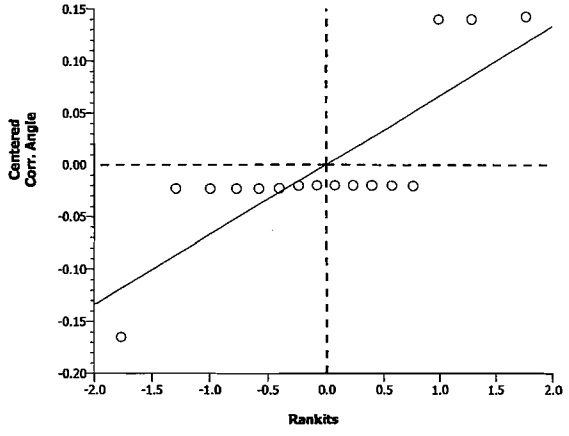
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-004	8	0.01250	0.00000	0.10000	0.03536	0.17915	0.15878	0.32175	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.66534	8.88539	0.51714	Equal Variances
Distribution	Shapiro-Wilk W	0.89938	0.84420	0.07873	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.004773	0.004773	1	0.36	0.55635	Non-Significant Effect
Error	0.1839604	0.0131400	14			
Total	0.18873334	0.017913	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13346-015	0.60269	1.76131	0.2782	0.10095	Non-Significant Effect

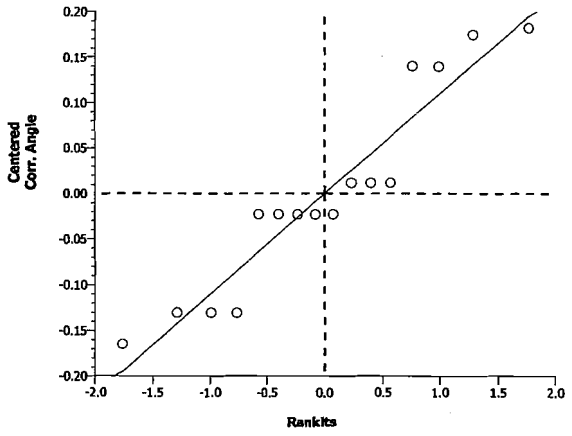
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.55298	8.88539	0.57563	Equal Variances
Distribution	Shapiro-Wilk W	0.76521	0.84420	0.00050	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.582225	3.582225	1	493.09	0.00000	Significant Effect
Error	0.1017083	0.0072649	14			
Total	3.68393292	3.5894895	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-017		13446-010	64		0.0001	4	Significant Effect

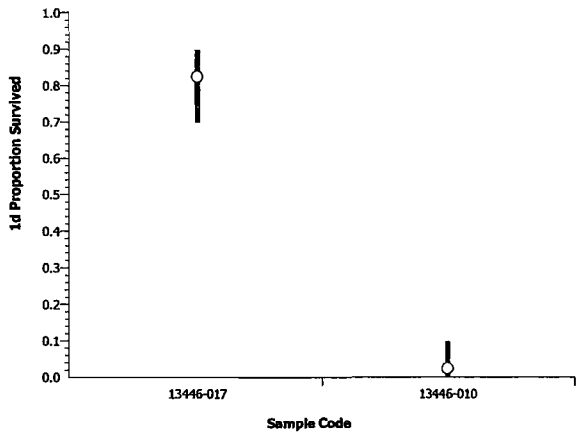
Data Summary

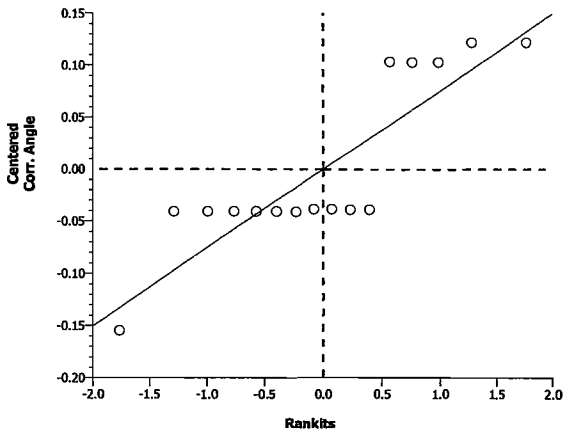
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-010	8	0.02500	0.00000	0.10000	0.04629	0.19952	0.15878	0.32175	0.07544

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-010	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000	0.10000	0.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:09 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.01771	8.88539	0.37480	Equal Variances
Distribution	Shapiro-Wilk W	0.88964	0.84420	0.05481	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0006549	0.0006549	1	0.04	0.84949	Non-Significant Effect
Error	0.2453426	0.0175245	14			
Total	0.24599751	0.0181794	15			

Group Comparisons

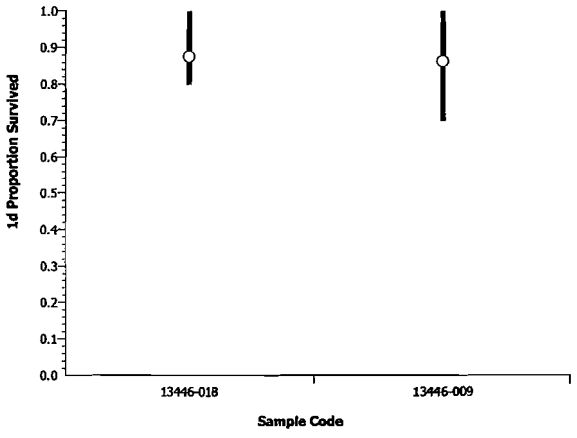
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-009	0.19332	1.76131	0.4247	0.11658	Non-Significant Effect

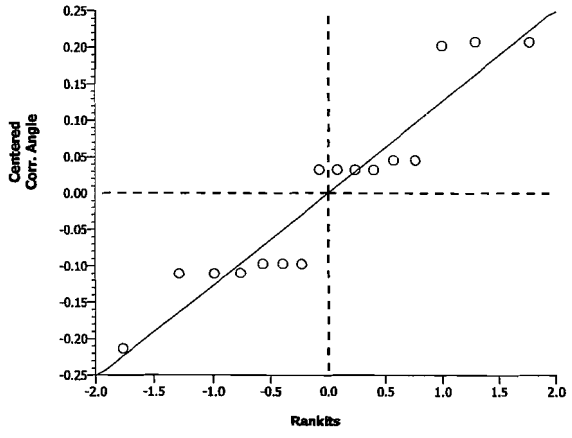
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-009	8	0.86250	0.70000	1.00000	0.10607	1.20434	0.99116	1.41202	0.15308

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-009	0.90000	0.90000	0.80000	1.00000	0.80000	1.00000	0.70000	0.80000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.92785	8.88539	0.05179	Equal Variances
Distribution	Shapiro-Wilk W	0.93011	0.84420	0.24109	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1847933	0.1847933	1	10.95	0.00516	Significant Effect
Error	0.2361595	0.0168685	14			
Total	0.4209528	0.2016618	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-010	3.30982	1.76131	0.0026	0.11438	Significant Effect

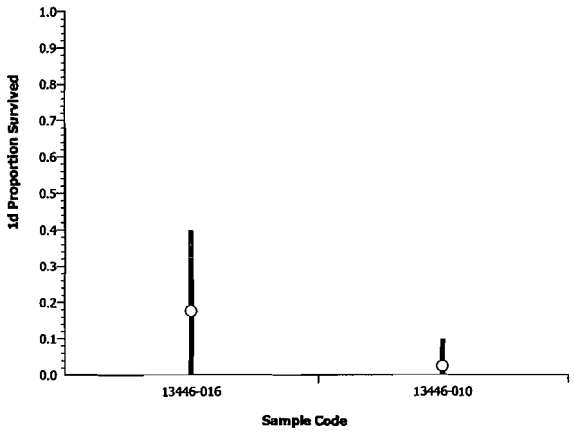
Data Summary

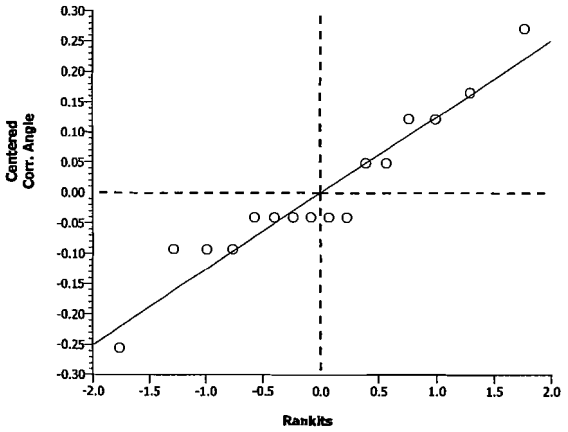
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-010	8	0.02500	0.00000	0.10000	0.04629	0.19952	0.15878	0.32175	0.07544

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-010	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000	0.10000	0.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:09 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00967	8.88539	0.99020	Equal Variances
Distribution	Shapiro-Wilk W	0.89172	0.84420	0.05922	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.996954	0.996954	1	100.63	0.00000	Significant Effect
Error	0.1387062	0.0099076	14			
Total	1.13566020	1.0068616	15			

Group Comparisons

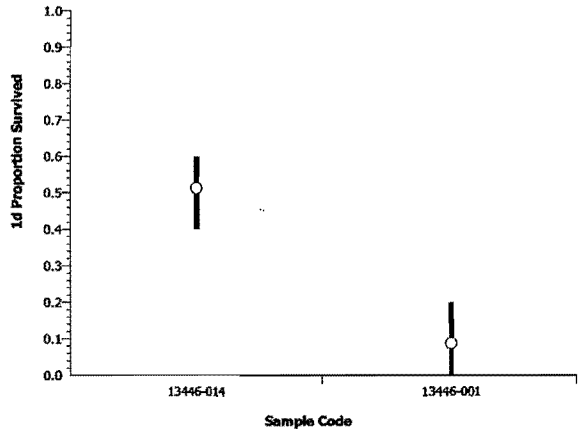
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-001	10.0312	1.76131	0.0000	0.08766	Significant Effect

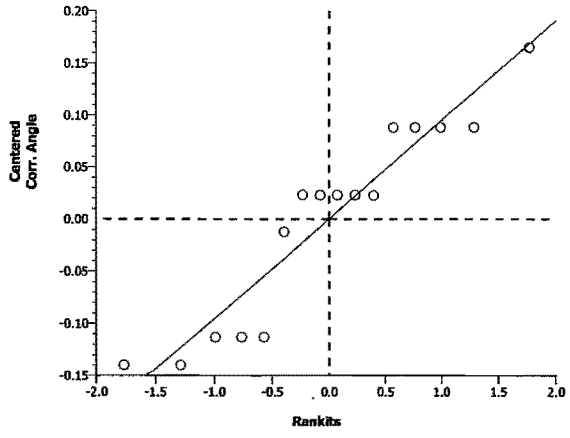
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-001	8	0.08750	0.00000	0.20000	0.06409	0.29875	0.15878	0.46365	0.09930

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.10000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.85201	8.88539	0.43487	Equal Variances
Distribution	Shapiro-Wilk W	0.88093	0.84420	0.03959	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3680514	0.3680514	1	26.18	0.00016	Significant Effect
Error	0.1968444	0.0140603	14			
Total	0.56489579	0.3821118	15			

Group Comparisons

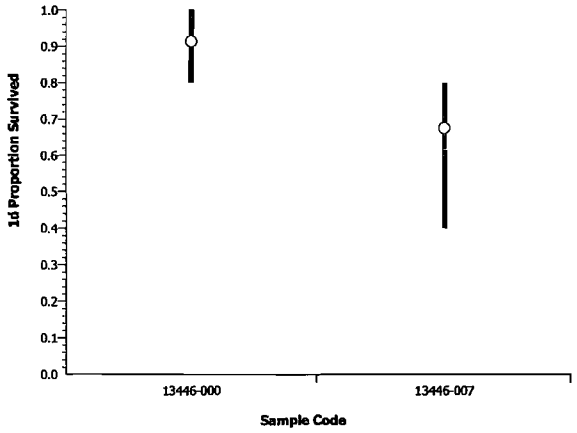
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-007	5.11631	1.76131	0.0001	0.10442	Significant Effect

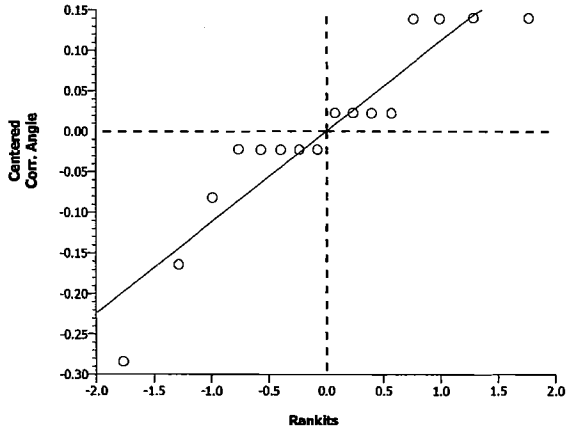
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-007	8	0.67500	0.40000	0.80000	0.12817	0.96872	0.68472	1.10715	0.13513

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-007	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000	0.70000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:07 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.91949	8.88539	0.40909	Equal Variances
Distribution	Shapiro-Wilk W	0.86506	0.84420	0.02186	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0315047	0.0315047	1	1.55	0.23375	Non-Significant Effect
Error	0.2847844	0.0203417	14			
Total	0.31628914	0.0518465	15			

Group Comparisons

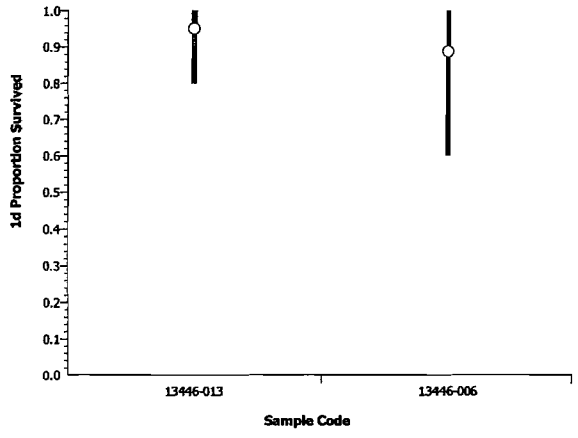
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-006	1.2445	1.76131	0.1169	0.12560	Non-Significant Effect

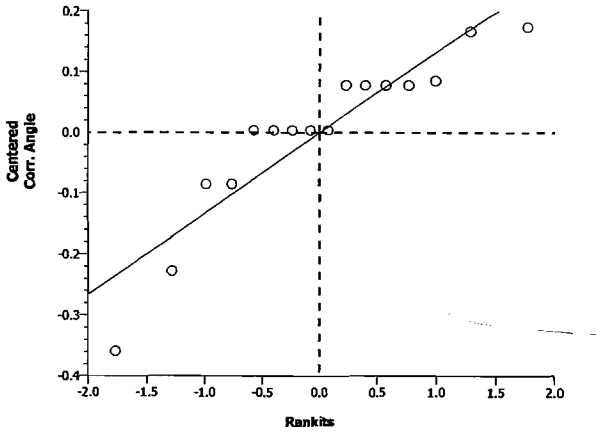
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-006	8	0.88750	0.60000	1.00000	0.12464	1.24535	0.88608	1.41946	0.16355

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:06 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.87731	8.88539	0.42498	Equal Variances
Distribution	Shapiro-Wilk W	0.86285	0.84420	0.02012	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0021170	0.0021170	1	0.15	0.70507	Non-Significant Effect
Error	0.1985903	0.0141850	14			
Total	0.20070728	0.0163020	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-011	-0.3863	1.76131	0.6475	0.10489	Non-Significant Effect

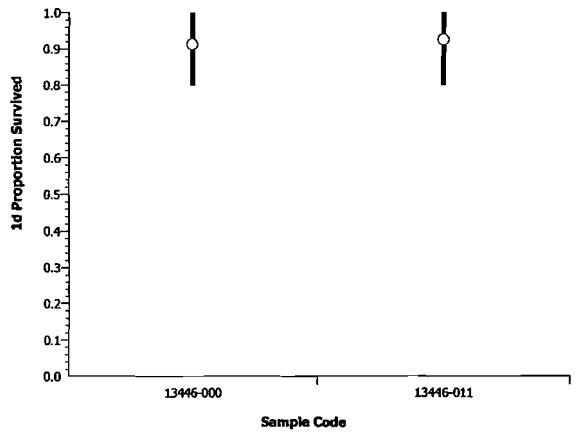
Data Summary

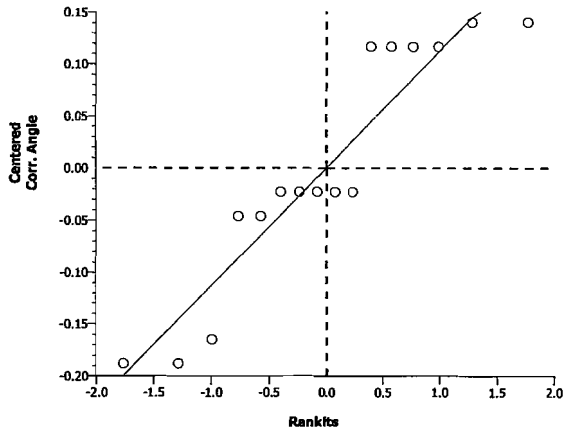
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-011	8	0.92500	0.80000	1.00000	0.08864	1.29506	1.10715	1.41202	0.13605

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:12 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Tukey-Kramer	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Bartlett	3.10161	13.27671	0.54097	Equal Variances
Distribution	Shapiro-Wilk W	0.98536	0.91882	0.91960	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.539851	1.134963	4	78.50	0.00000	Significant Effect
Error	0.5060562	0.0144588	35			
Total	5.04590696	1.1494214	39			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-013	0.06204	0.17286	> 0.0500	0.17286	Non-Significant Effect
13446-012		13446-016	0.85759	0.17286	<= 0.0500	0.17286	Significant Effect
13446-012		13446-017	0.12619	0.17286	> 0.0500	0.17286	Non-Significant Effect
13446-012		13446-018	0.05491	0.17286	> 0.0500	0.17286	Non-Significant Effect
13446-013		13446-016	0.91964	0.17286	<= 0.0500	0.17286	Significant Effect
13446-013		13446-017	0.18824	0.17286	<= 0.0500	0.17286	Significant Effect
13446-013		13446-018	0.11696	0.17286	> 0.0500	0.17286	Non-Significant Effect
13446-016		13446-017	0.73140	0.17286	<= 0.0500	0.17286	Significant Effect
13446-016		13446-018	0.80268	0.17286	<= 0.0500	0.17286	Significant Effect
13446-017		13446-018	0.07128	0.17286	> 0.0500	0.17286	Non-Significant Effect

Data Summary

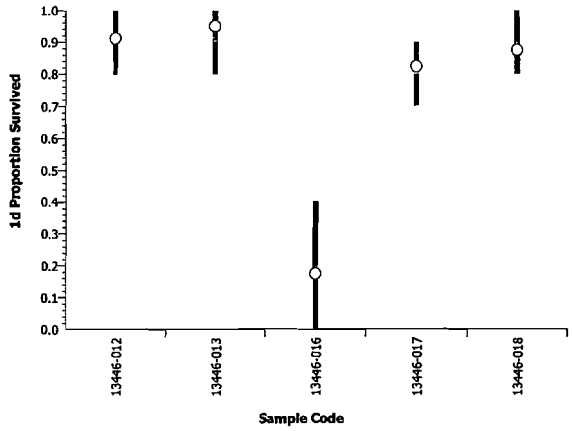
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777

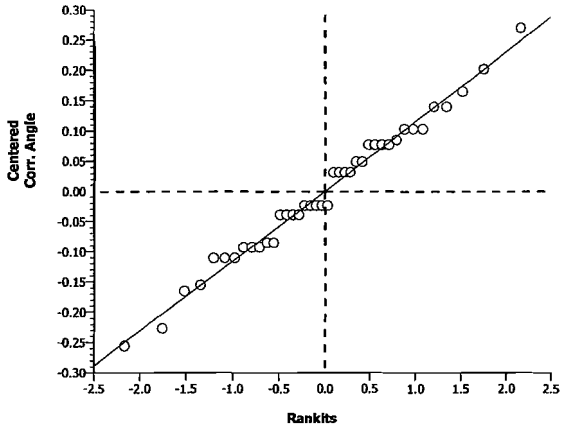
Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		

CETIS Analysis Detail

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:06 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.37674	8.88539	0.27604	Equal Variances
Distribution	Shapiro-Wilk W	0.94168	0.84420	0.35909	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0183388	0.0183388	1	1.10	0.31169	Non-Significant Effect
Error	0.233061	0.0166472	14			
Total	0.25139979	0.0349860	15			

Group Comparisons

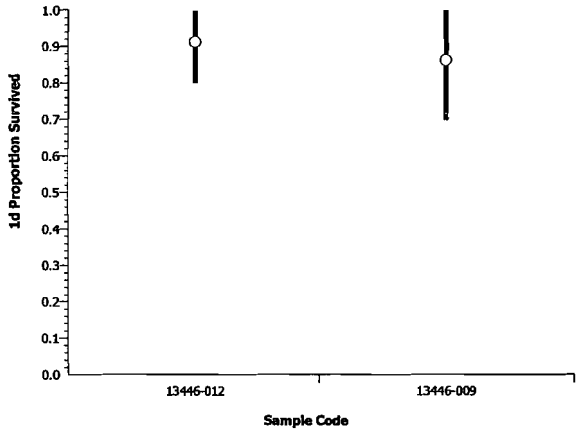
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-009	1.04958	1.76131	0.1558	0.11363	Non-Significant Effect

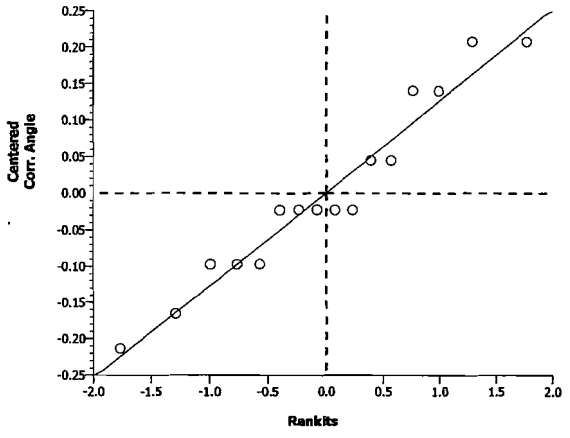
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-009	8	0.86250	0.70000	1.00000	0.10607	1.20434	0.99116	1.41202	0.15308

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-009	0.90000	0.90000	0.80000	1.00000	0.80000	1.00000	0.70000	0.80000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.65142	8.88539	0.22160	Equal Variances
Distribution	Shapiro-Wilk W	0.95179	0.84420	0.49733	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0136795	0.0136795	1	0.85	0.37279	Non-Significant Effect
Error	0.2259109	0.0161365	14			
Total	0.23959037	0.029816	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-009	-0.9207	1.76131	0.8136	0.11187	Non-Significant Effect

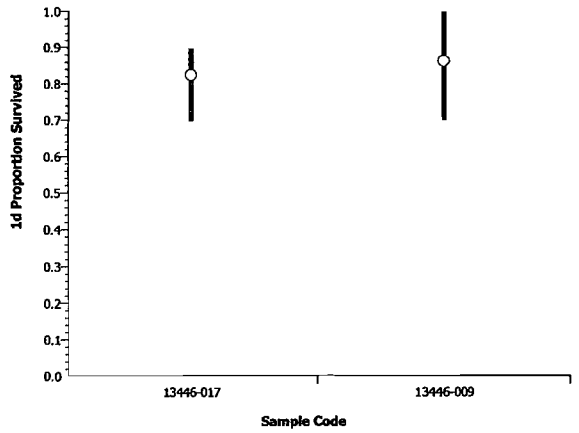
Data Summary

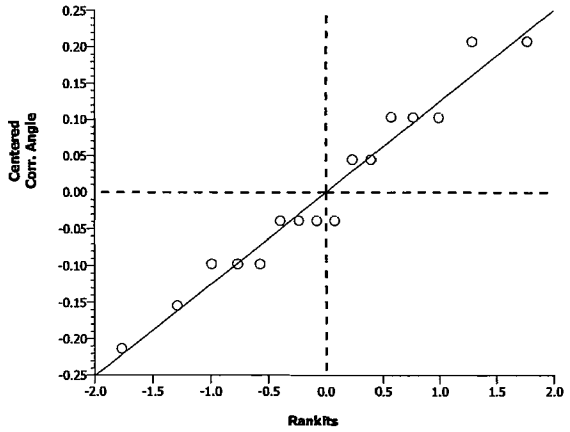
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-009	8	0.86250	0.70000	1.00000	0.10607	1.20434	0.99116	1.41202	0.15308

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-009	0.90000	0.90000	0.80000	1.00000	0.80000	1.00000	0.70000	0.80000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:09 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.04074	8.88539	0.36727	Equal Variances
Distribution	Shapiro-Wilk W	0.89383	0.84420	0.06405	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.142151	4.142151	1	478.70	0.00000	Significant Effect
Error	0.12114	0.0086529	14			
Total	4.26329139	4.1508042	15			

Group Comparisons

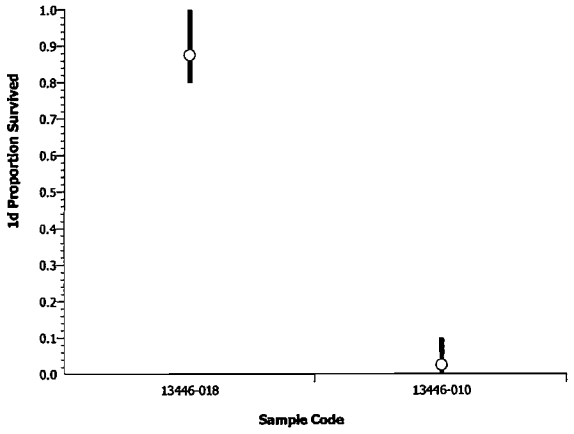
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-010	21.8793	1.76131	0.0000	0.08192	Significant Effect

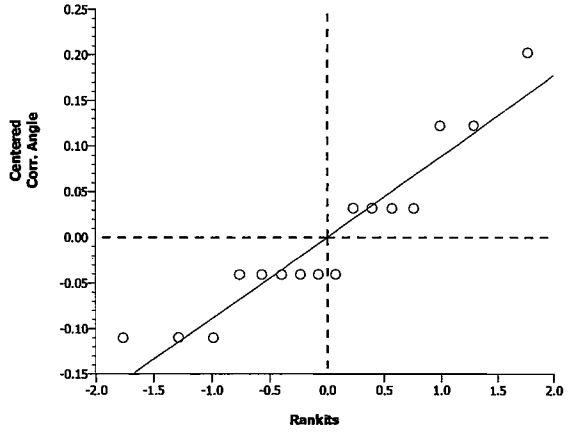
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-010	8	0.02500	0.00000	0.10000	0.04629	0.19952	0.15878	0.32175	0.07544

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-010	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000	0.10000	0.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.02635	8.88539	0.16724	Equal Variances
Distribution	Shapiro-Wilk W	0.86238	0.84420	0.01977	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0395908	0.0395908	1	2.23	0.15798	Non-Significant Effect
Error	0.2491078	0.0177934	14			
Total	0.28869853	0.0573842	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-006	-1.4917	1.76131	0.9210	0.11747	Non-Significant Effect

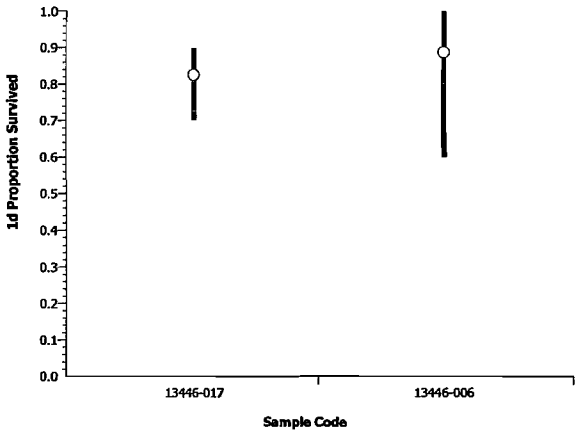
Data Summary

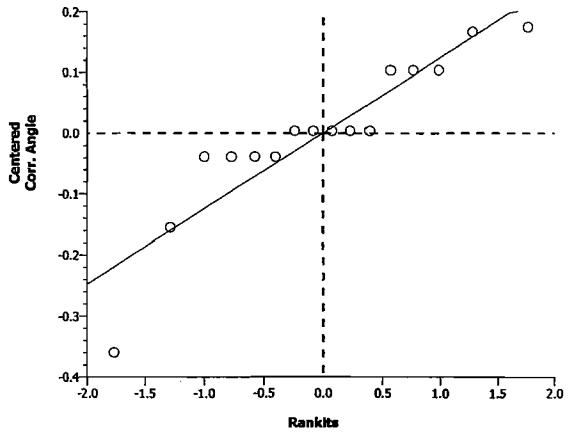
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-006	8	0.88750	0.60000	1.00000	0.12464	1.24535	0.88608	1.41946	0.16355

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.67219	8.88539	0.21805	Equal Variances
Distribution	Shapiro-Wilk W	0.90896	0.84420	0.11217	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0522811	0.0522811	1	3.22	0.09429	Non-Significant Effect
Error	0.227196	0.0162283	14			
Total	0.27947708	0.0685094	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-003	-1.7949	1.76131	0.9529	0.11219	Non-Significant Effect

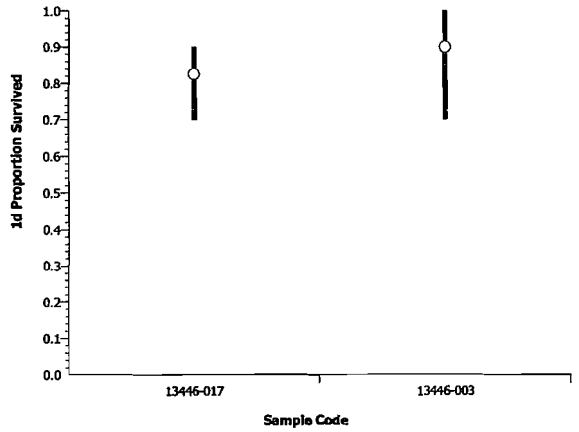
Data Summary

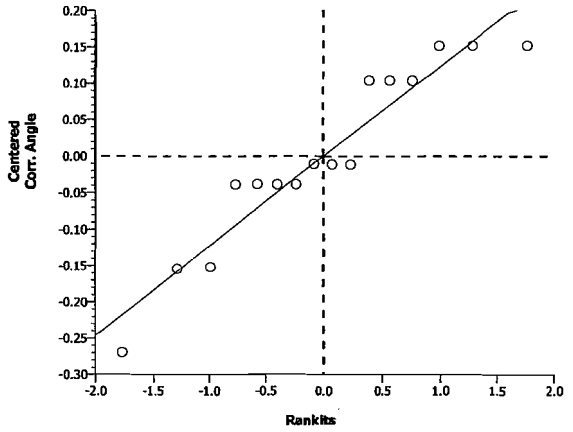
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-003	8	0.90000	0.70000	1.00000	0.10690	1.26019	0.99116	1.41202	0.15368

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.18747	8.88539	0.82647	Equal Variances
Distribution	Shapiro-Wilk W	0.95805	0.84420	0.59834	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.861007	2.861007	1	110.75	0.00000	Significant Effect
Error	0.3616472	0.0258319	14			
Total	3.22265440	2.8868392	15			

Group Comparisons

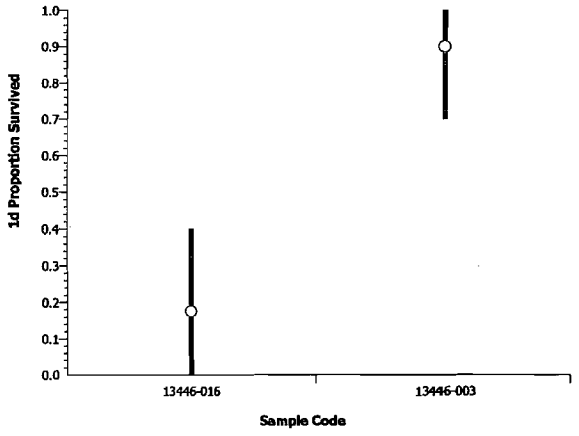
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-003	-10.524	1.76131	1.0000	0.14154	Non-Significant Effect

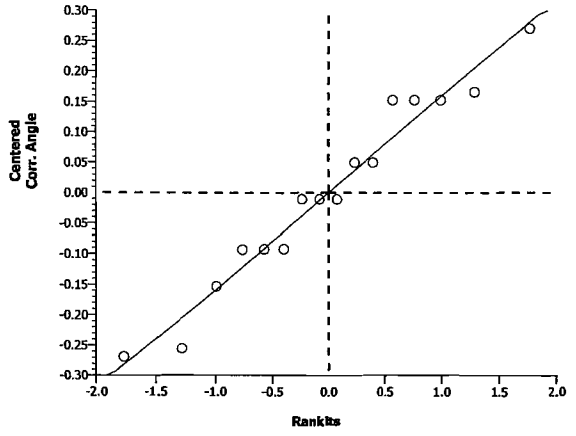
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-003	8	0.90000	0.70000	1.00000	0.10690	1.26019	0.99116	1.41202	0.15368

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.64939	8.88539	0.52499	Equal Variances
Distribution	Shapiro-Wilk W	0.88021	0.84420	0.03854	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.7727284	0.7727284	1	58.59	0.00000	Significant Effect
Error	0.1846277	0.0131877	14			
Total	0.95735613	0.7859161	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13346-015	-7.6547	1.76131	1.0000	0.10113	Non-Significant Effect

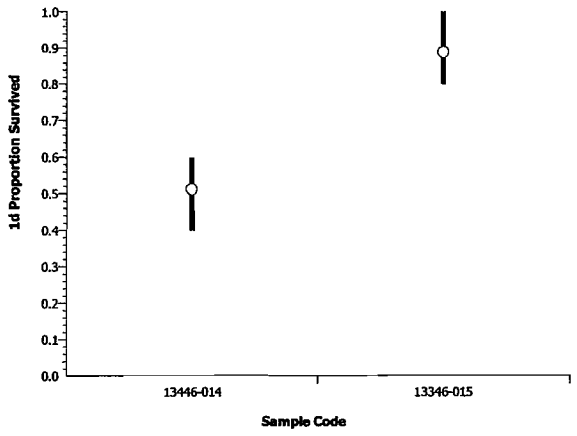
Data Summary

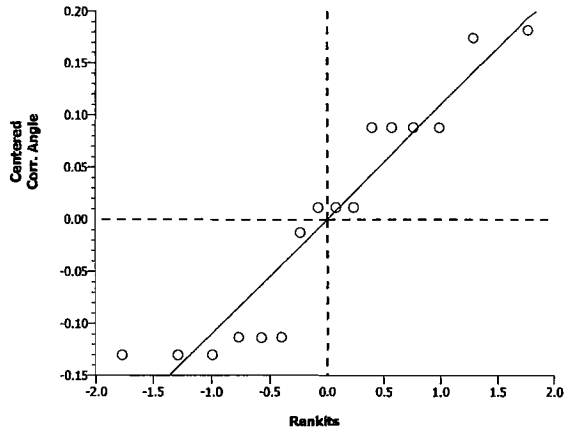
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:07 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.69486	8.88539	0.50296	Equal Variances
Distribution	Shapiro-Wilk W	0.90172	0.84420	0.08586	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0218506	0.0218506	1	1.16	0.29893	Non-Significant Effect
Error	0.2628727	0.0187766	14			
Total	0.28472323	0.0406272	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-003	1.07876	1.76131	0.1495	0.12067	Non-Significant Effect

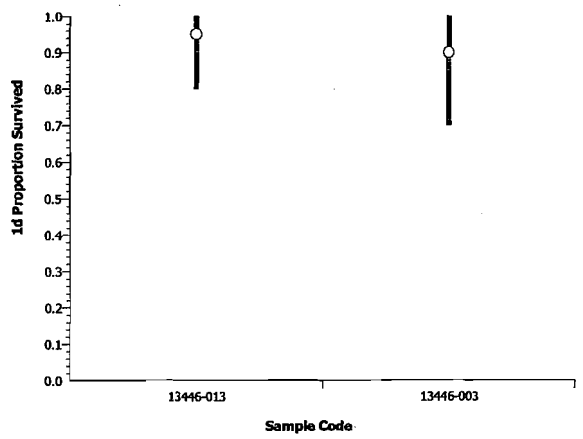
Data Summary

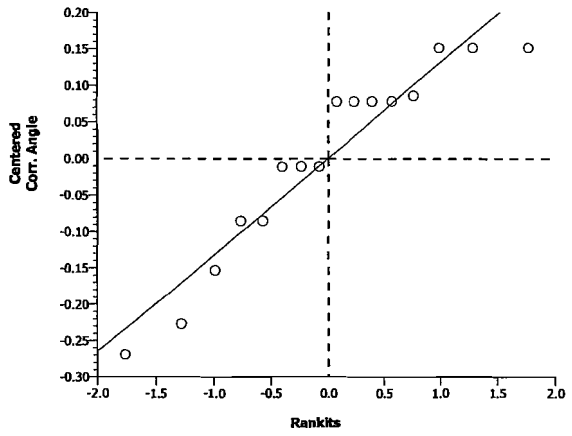
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-003	8	0.90000	0.70000	1.00000	0.10690	1.26019	0.99116	1.41202	0.15368

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:06 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.71284	8.88539	0.21132	Equal Variances
Distribution	Shapiro-Wilk W	0.82423	0.84420	0.00472	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0028522	0.0028522	1	0.16	0.69898	Non-Significant Effect
Error	0.2562579	0.0183041	14			
Total	0.25911009	0.0211563	15			

Group Comparisons

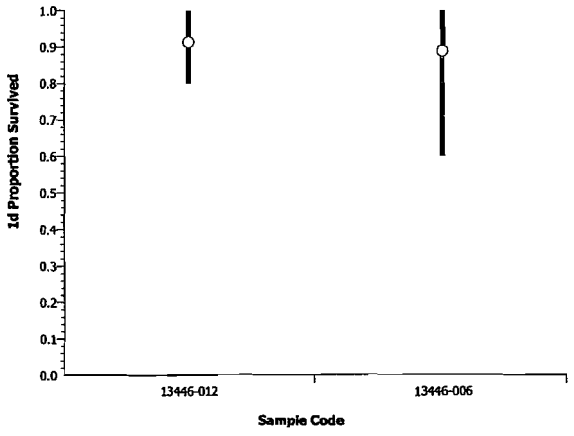
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-012		13446-006	31.5		0.4796	2	Non-Significant Effect

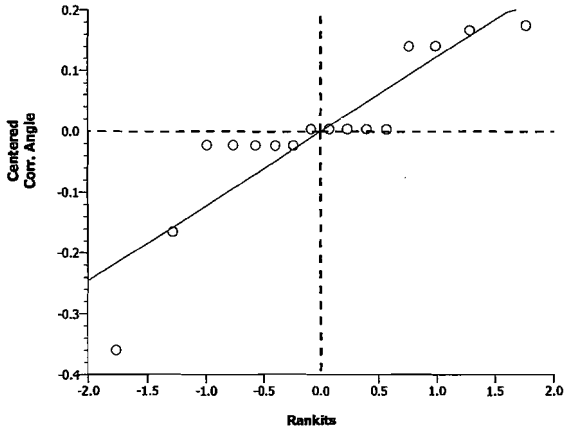
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-006	8	0.88750	0.60000	1.00000	0.12464	1.24535	0.88608	1.41946	0.16355

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:04 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00000	8.88539	1.00000	Equal Variances
Distribution	Shapiro-Wilk W	0.77523	0.84420	0.00074	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0	0	1	0.00	1.00000	Non-Significant Effect
Error	0.1380389	0.0098599	14			
Total	0.13803886	0.0098599	15			

Group Comparisons

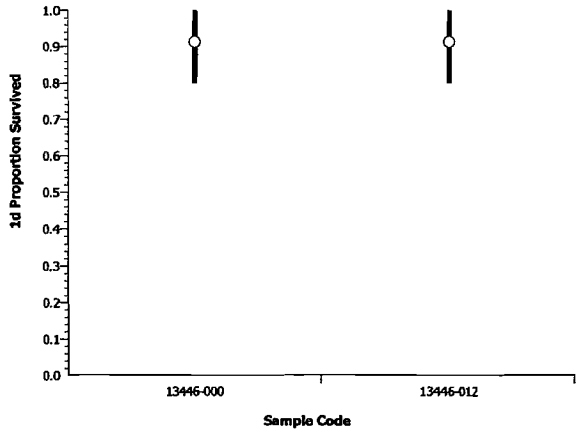
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-012	32		0.4796	3	Non-Significant Effect

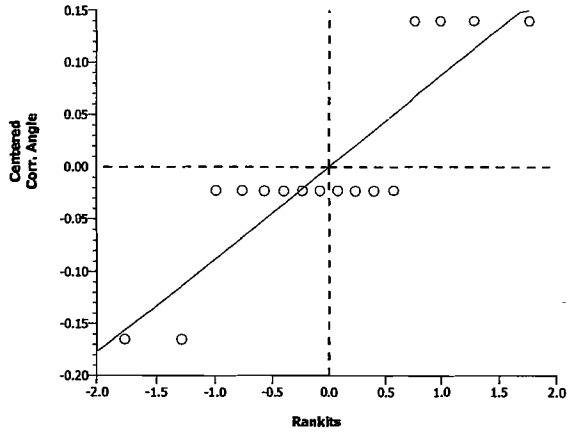
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:06 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.73246	8.88539	0.48557	Equal Variances
Distribution	Shapiro-Wilk W	0.78154	0.84420	0.00094	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.601269	4.601269	1	591.76	0.00000	Significant Effect
Error	0.1088584	0.0077756	14			
Total	4.7101272	4.6090444	15			

Group Comparisons

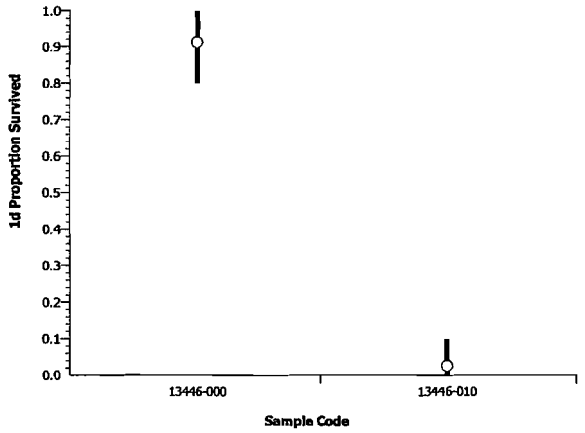
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-010	64		0.0001	4	Significant Effect

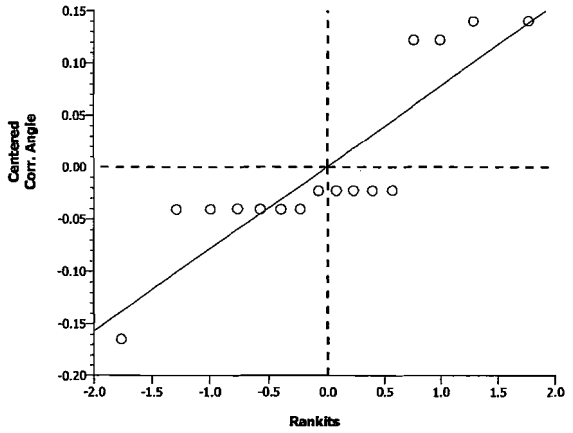
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-010	8	0.02500	0.00000	0.10000	0.04629	0.19952	0.15878	0.32175	0.07544

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-010	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000	0.10000	0.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.83428	8.88539	0.44197	Equal Variances
Distribution	Shapiro-Wilk W	0.89744	0.84420	0.07327	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1165976	0.1165976	1	8.26	0.01224	Significant Effect
Error	0.1975117	0.014108	14			
Total	0.3141093	0.1307056	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-007	-2.8748	1.76131	0.9939	0.10460	Non-Significant Effect

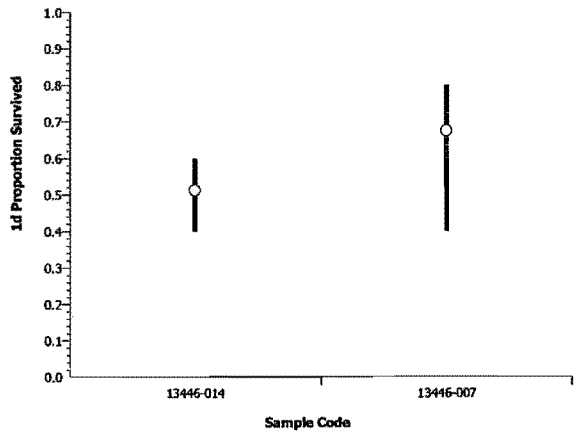
Data Summary

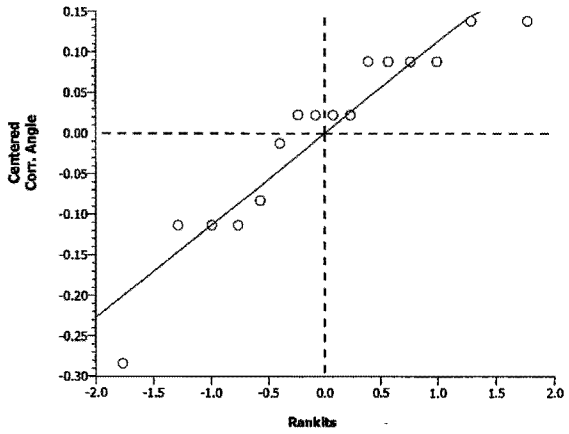
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-007	8	0.67500	0.40000	0.80000	0.12817	0.96872	0.68472	1.10715	0.13513

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-007	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000	0.70000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:06 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.39536	8.88539	0.27185	Equal Variances
Distribution	Shapiro-Wilk W	0.86856	0.84420	0.02493	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0005631	0.0005631	1	0.03	0.85710	Non-Significant Effect
Error	0.2343461	0.0167390	14			
Total	0.23490922	0.0173021	15			

Group Comparisons

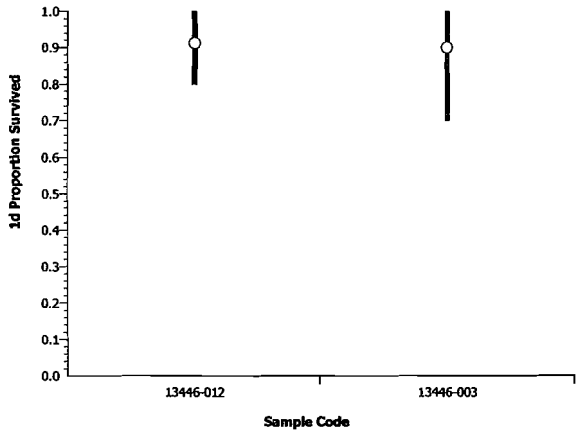
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-003	0.18341	1.76131	0.4286	0.11394	Non-Significant Effect

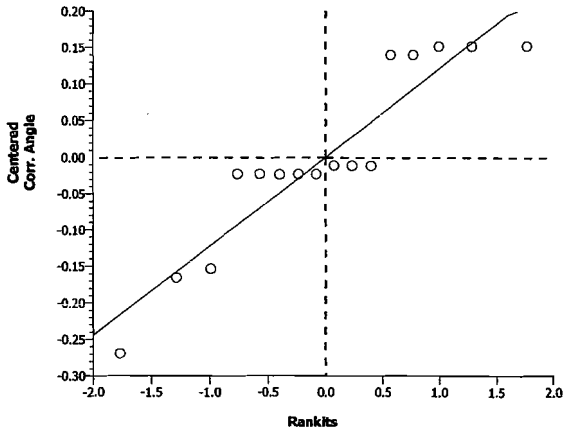
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-003	8	0.90000	0.70000	1.00000	0.10690	1.26019	0.99116	1.41202	0.15368

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.71284	8.88539	0.21132	Equal Variances
Distribution	Shapiro-Wilk W	0.82423	0.84420	0.00472	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0028522	0.0028522	1	0.16	0.69898	Non-Significant Effect
Error	0.2562579	0.0183041	14			
Total	0.25911009	0.0211563	15			

Group Comparisons

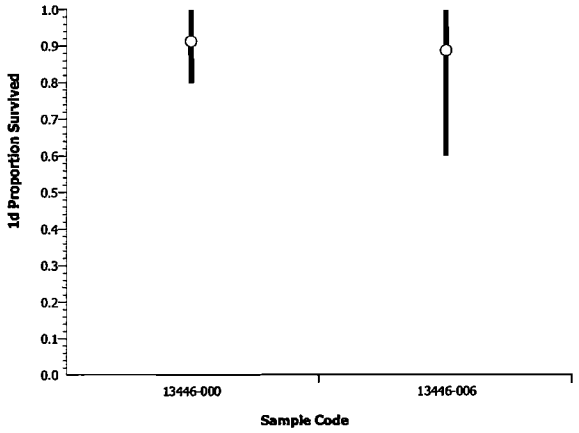
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-006	31.5		0.4796	2	Non-Significant Effect

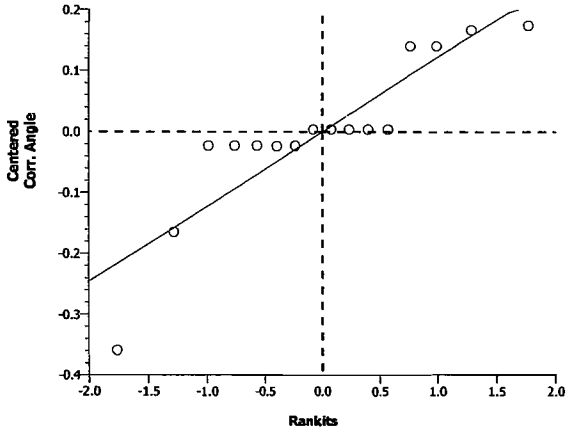
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-006	8	0.88750	0.60000	1.00000	0.12464	1.24535	0.88608	1.41946	0.16355

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.45980	8.88539	0.25797	Equal Variances
Distribution	Shapiro-Wilk W	0.95674	0.84420	0.57629	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.04216	3.04216	1	178.36	0.00000	Significant Effect
Error	0.2387934	0.0170567	14			
Total	3.28095368	3.0592169	15			

Group Comparisons

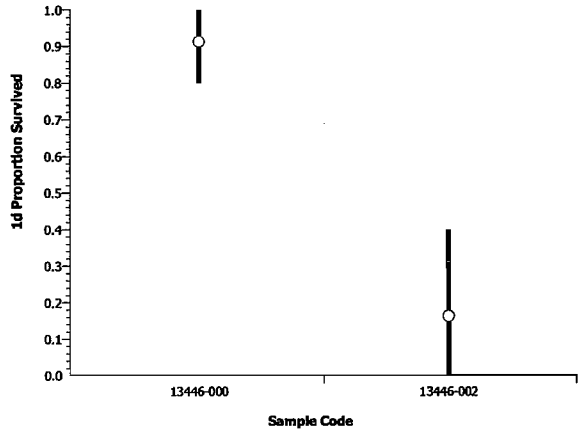
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-002	13.355	1.76131	0.0000	0.11501	Significant Effect

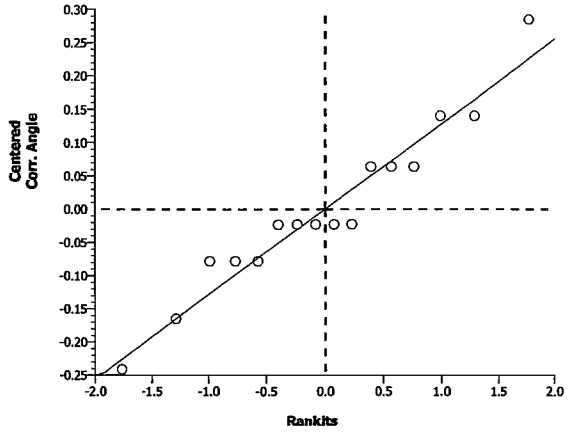
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-002	8	0.16250	0.00000	0.40000	0.11877	0.39996	0.15878	0.68472	0.15574

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:09 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.30303	8.88539	0.29341	Equal Variances
Distribution	Shapiro-Wilk W	0.86968	0.84420	0.02599	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0031836	0.0031836	1	0.17	0.68988	Non-Significant Effect
Error	0.2685395	0.0191814	14			
Total	0.27172307	0.022365	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-006	-0.4074	1.76131	0.6551	0.12197	Non-Significant Effect

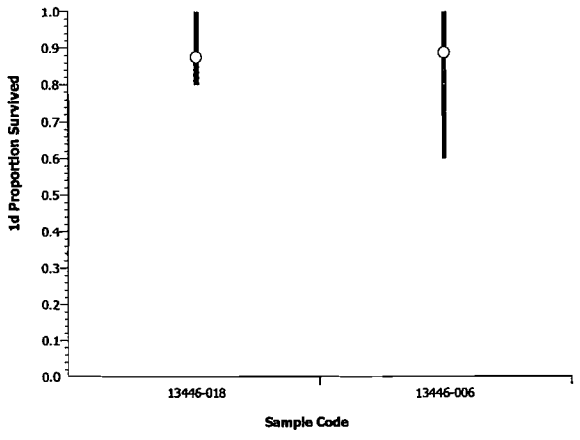
Data Summary

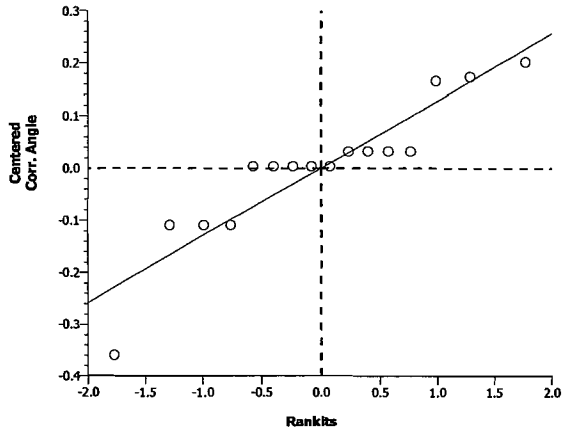
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-006	8	0.88750	0.60000	1.00000	0.12464	1.24535	0.88608	1.41946	0.16355

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.04851	8.88539	0.95179	Equal Variances
Distribution	Shapiro-Wilk W	0.93918	0.84420	0.33007	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.761496	2.761496	1	100.80	0.00000	Significant Effect
Error	0.383559	0.0273971	14			
Total	3.14505479	2.7888929	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-006	-10.04	1.76131	1.0000	0.14577	Non-Significant Effect

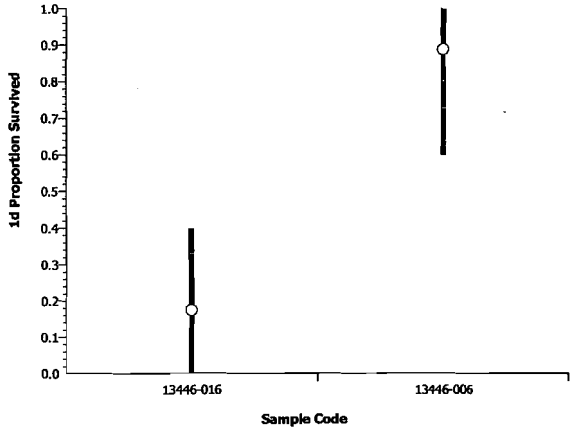
Data Summary

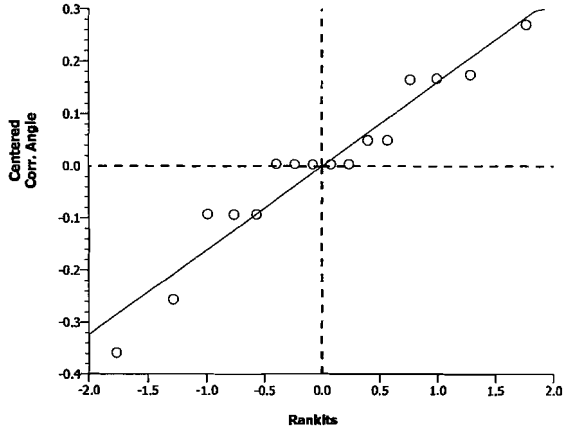
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-006	8	0.88750	0.60000	1.00000	0.12464	1.24535	0.88608	1.41946	0.16355

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.43625	8.88539	0.26294	Equal Variances
Distribution	Shapiro-Wilk W	0.92328	0.84420	0.18900	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.6336838	0.6336838	1	37.05	0.00003	Significant Effect
Error	0.2394607	0.0171043	14			
Total	0.87314452	0.6507881	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-002	6.08672	1.76131	0.0000	0.11518	Significant Effect

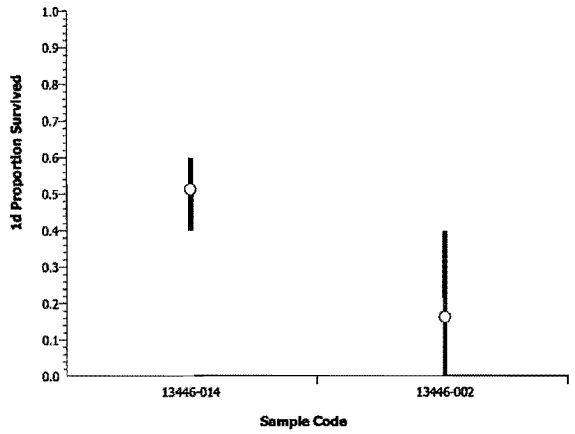
Data Summary

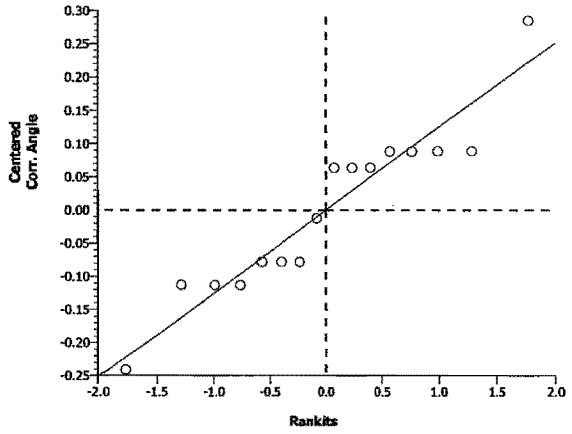
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-002	8	0.16250	0.00000	0.40000	0.11877	0.39996	0.15878	0.68472	0.15574

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.37674	8.88539	0.27604	Equal Variances
Distribution	Shapiro-Wilk W	0.94168	0.84420	0.35909	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0183388	0.0183388	1	1.10	0.31169	Non-Significant Effect
Error	0.233061	0.0166472	14			
Total	0.25139979	0.0349860	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-009	1.04958	1.76131	0.1558	0.11363	Non-Significant Effect

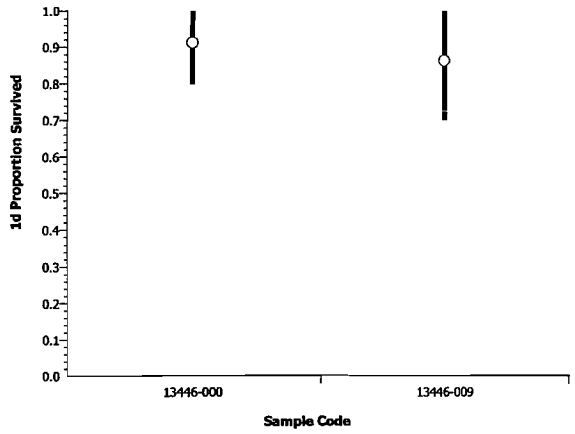
Data Summary

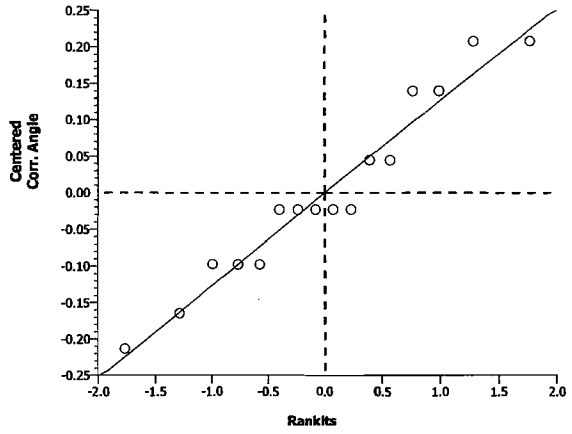
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-009	8	0.86250	0.70000	1.00000	0.10607	1.20434	0.99116	1.41202	0.15308

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-009	0.90000	0.90000	0.80000	1.00000	0.80000	1.00000	0.70000	0.80000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.94595	8.88539	0.05130	Equal Variances
Distribution	Shapiro-Wilk W	0.84167	0.84420	0.00910	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.480473	4.480473	1	453.95	0.00000	Significant Effect
Error	0.1381804	0.0098700	14			
Total	4.61865340	4.4903431	15			

Group Comparisons

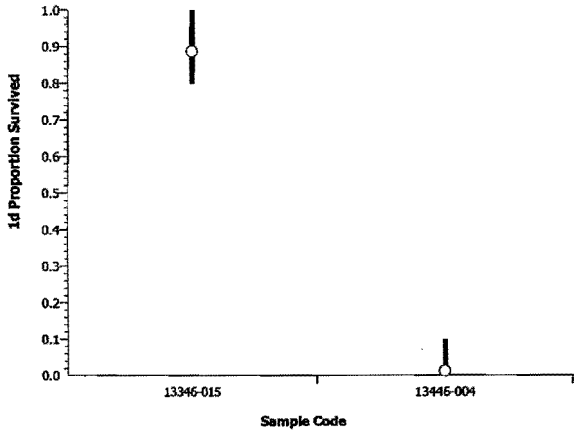
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13346-015		13446-004	64		0.0001	3	Significant Effect

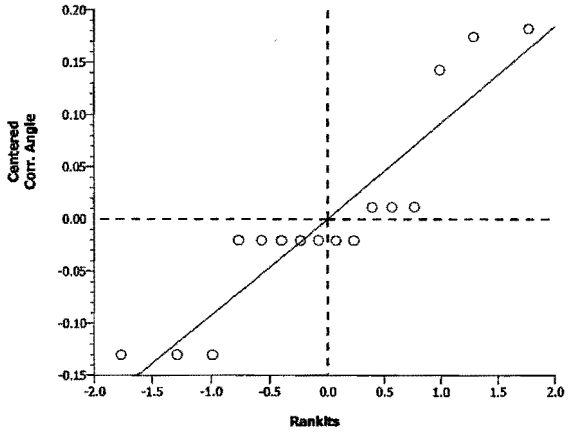
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-004	8	0.01250	0.00000	0.10000	0.03536	0.17915	0.15878	0.32175	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:07 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.87731	8.88539	0.42498	Equal Variances
Distribution	Shapiro-Wilk W	0.86285	0.84420	0.02012	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0021170	0.0021170	1	0.15	0.70507	Non-Significant Effect
Error	0.1985903	0.0141850	14			
Total	0.20070728	0.0163020	15			

Group Comparisons

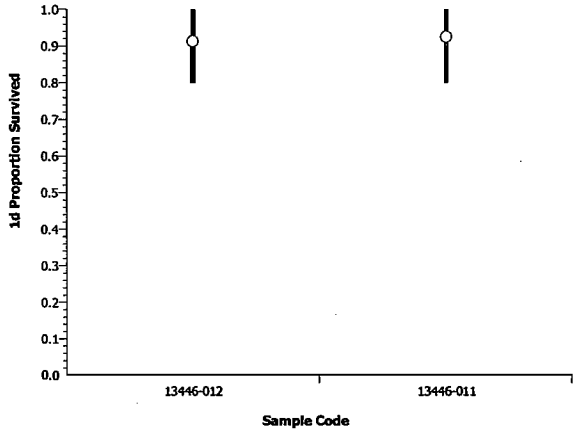
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-011	-0.3863	1.76131	0.6475	0.10489	Non-Significant Effect

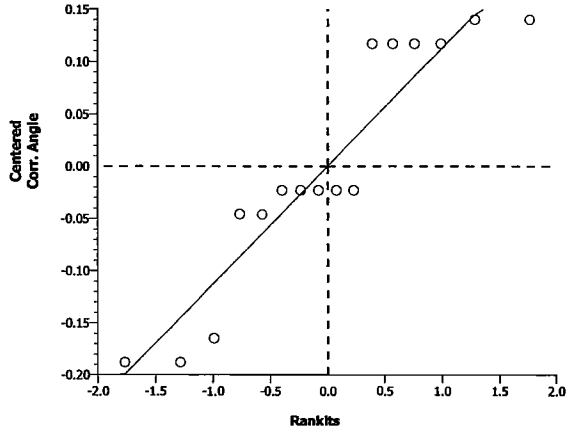
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-011	8	0.92500	0.80000	1.00000	0.08864	1.29506	1.10715	1.41202	0.13605

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.09427	8.88539	0.35049	Equal Variances
Distribution	Shapiro-Wilk W	0.83073	0.84420	0.00603	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0890373	0.0890373	1	6.51	0.02304	Significant Effect
Error	0.1914402	0.0136743	14			
Total	0.28047743	0.1027116	15			

Group Comparisons

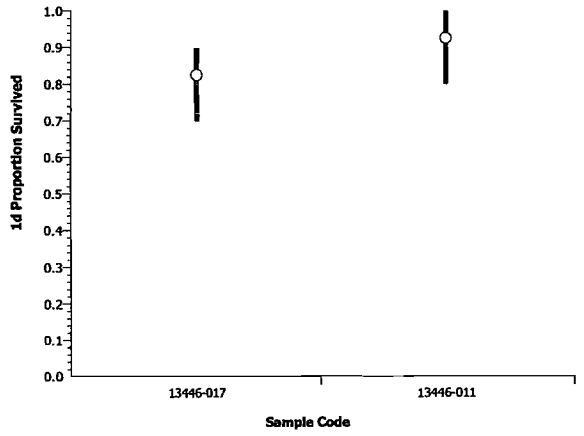
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-017		13446-011	13		0.9751	3	Non-Significant Effect

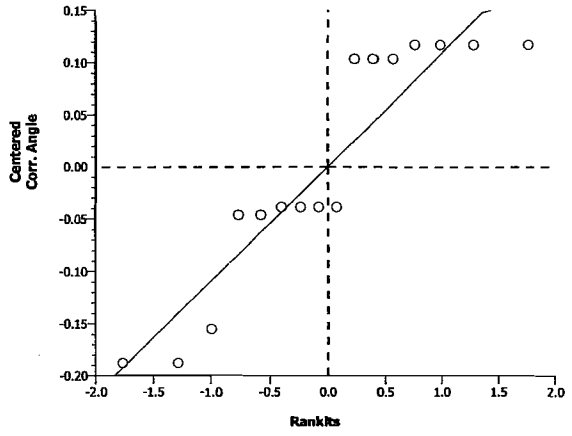
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-011	8	0.92500	0.80000	1.00000	0.08864	1.29506	1.10715	1.41202	0.13605

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00967	8.88539	0.99020	Equal Variances
Distribution	Shapiro-Wilk W	0.90918	0.84420	0.11310	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8989626	0.8989626	1	90.73	0.00000	Significant Effect
Error	0.1387062	0.0099076	14			
Total	1.03766879	0.9088702	15			

Group Comparisons

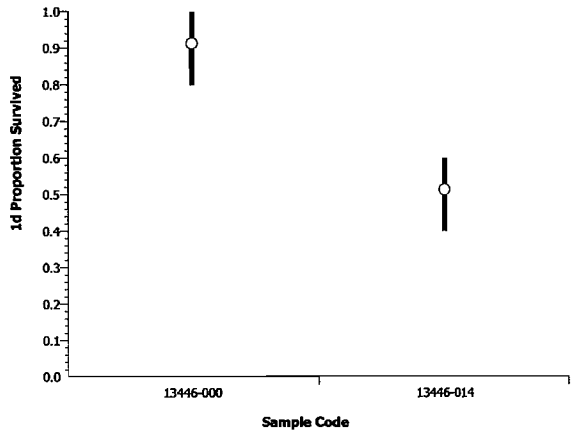
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-014	9.52548	1.76131	0.0000	0.08766	Significant Effect

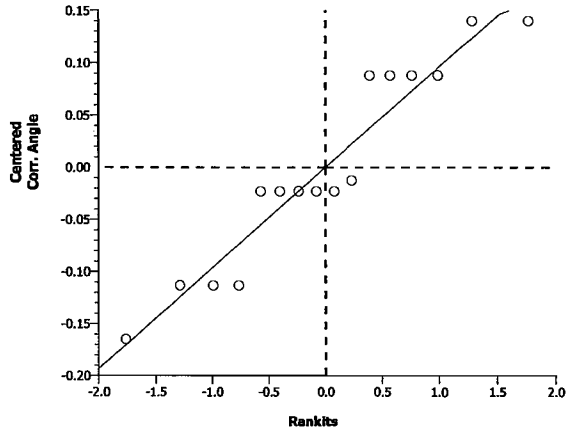
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00000	8.88539	1.00000	Equal Variances
Distribution	Shapiro-Wilk W	0.90399	0.84420	0.09339	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.789299	3.789299	1	384.31	0.00000	Significant Effect
Error	0.1380389	0.0098599	14			
Total	3.92733811	3.7991592	15			

Group Comparisons

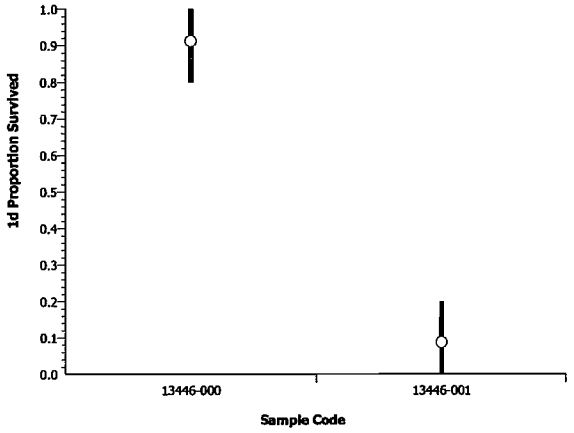
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-001	19.6039	1.76131	0.0000	0.08745	Significant Effect

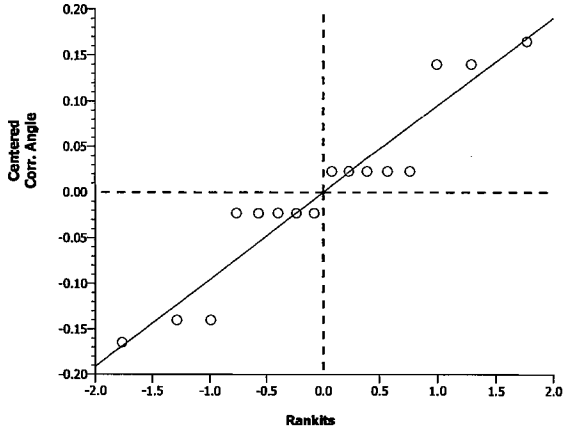
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-001	8	0.08750	0.00000	0.20000	0.06409	0.29875	0.15878	0.46365	0.09930

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.10000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.99864	8.88539	0.17064	Equal Variances
Distribution	Shapiro-Wilk W	0.86724	0.84420	0.02372	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.53181	1.53181	1	230.78	0.00000	Significant Effect
Error	0.0929262	0.0066376	14			
Total	1.62473596	1.5384474	15			

Group Comparisons

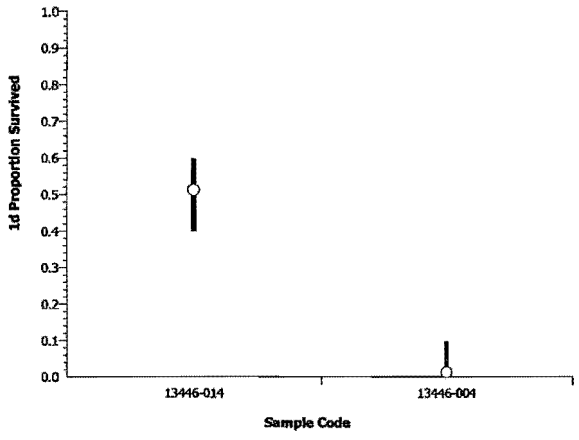
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-004	15.1914	1.76131	0.0000	0.07175	Significant Effect

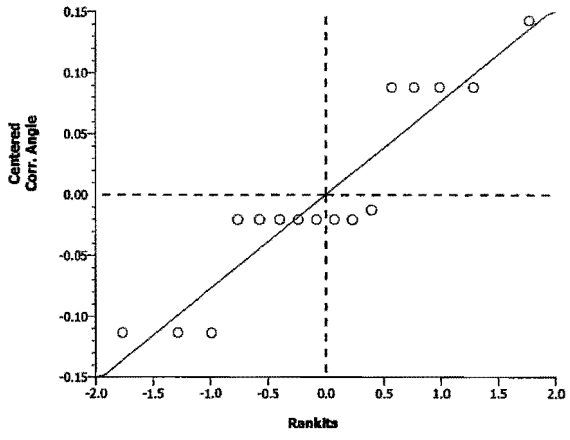
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-004	8	0.01250	0.00000	0.10000	0.03536	0.17915	0.15878	0.32175	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:07 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.73246	8.88539	0.48557	Equal Variances
Distribution	Shapiro-Wilk W	0.78154	0.84420	0.00094	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.601269	4.601269	1	591.76	0.00000	Significant Effect
Error	0.1088584	0.0077756	14			
Total	4.7101272	4.6090444	15			

Group Comparisons

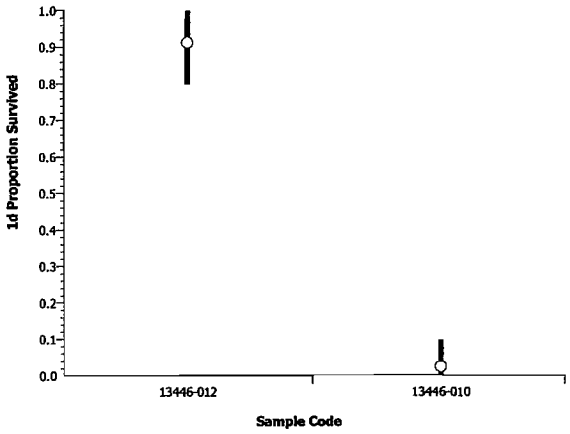
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-012		13446-010	64		0.0001	4	Significant Effect

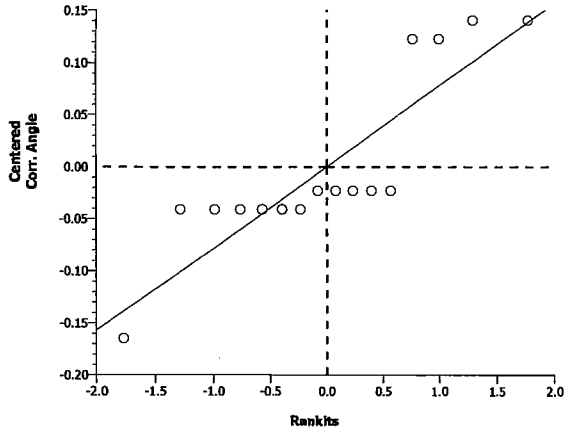
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-010	8	0.02500	0.00000	0.10000	0.04629	0.19952	0.15878	0.32175	0.07544

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-010	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000	0.10000	0.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.47705	8.88539	0.61959	Equal Variances
Distribution	Shapiro-Wilk W	0.96168	0.84420	0.66062	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.805934	2.805934	1	137.97	0.00000	Significant Effect
Error	0.2847149	0.0203368	14			
Total	3.09064934	2.8262712	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-002	11.7462	1.76131	0.0000	0.12559	Significant Effect

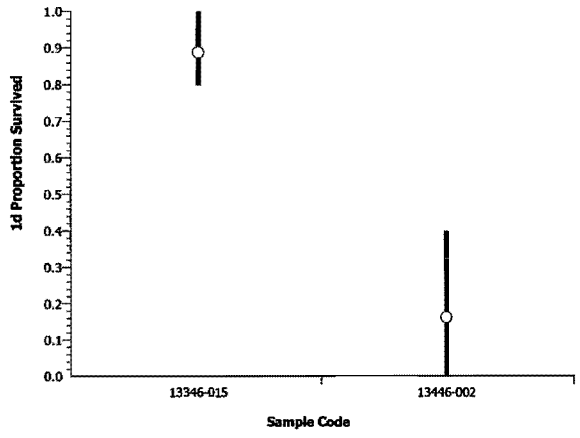
Data Summary

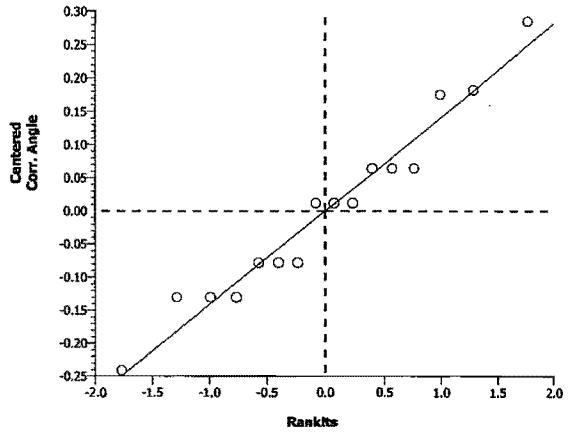
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-002	8	0.16250	0.00000	0.40000	0.11877	0.39996	0.15878	0.68472	0.15574

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:09 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.59372	8.88539	0.55356	Equal Variances
Distribution	Shapiro-Wilk W	0.93534	0.84420	0.28941	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0242861	0.0242861	1	1.61	0.22486	Non-Significant Effect
Error	0.2108719	0.0150623	14			
Total	0.23515802	0.0393484	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-011	-1.2698	1.76131	0.8876	0.10808	Non-Significant Effect

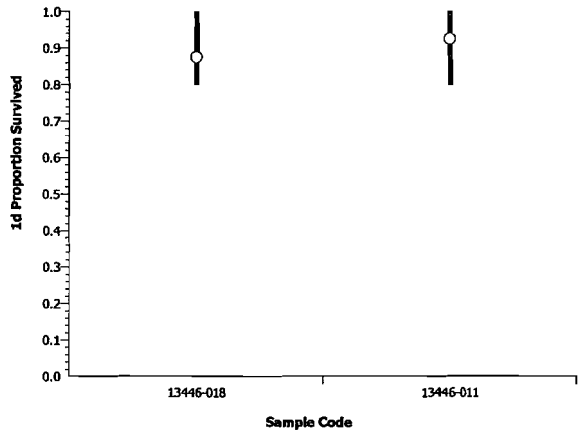
Data Summary

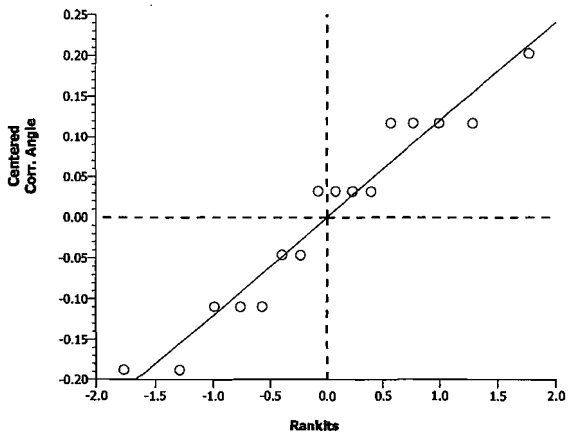
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-011	8	0.92500	0.80000	1.00000	0.08864	1.29506	1.10715	1.41202	0.13605

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.66534	8.88539	0.51714	Equal Variances
Distribution	Shapiro-Wilk W	0.84663	0.84420	0.01095	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.525102	3.525102	1	268.27	0.00000	Significant Effect
Error	0.1839604	0.0131400	14			
Total	3.70906276	3.5382424	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-001	16.3790	1.76131	0.0000	0.10095	Significant Effect

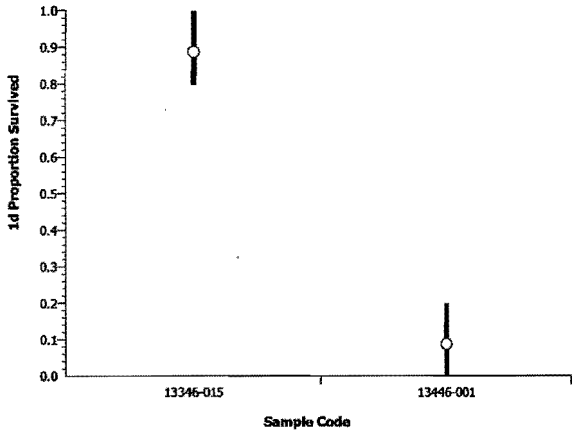
Data Summary

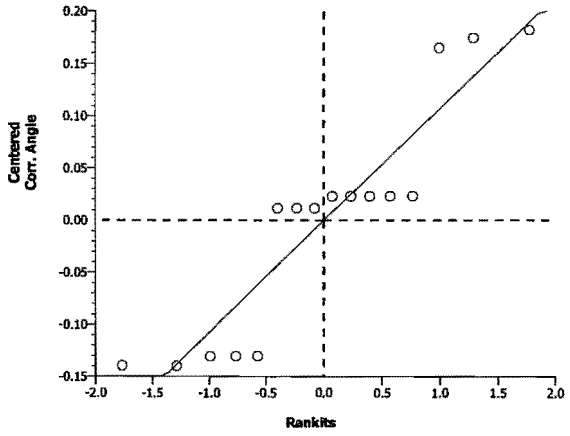
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-001	8	0.08750	0.00000	0.20000	0.06409	0.29875	0.15878	0.46365	0.09930

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.10000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:05 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.39536	8.88539	0.27185	Equal Variances
Distribution	Shapiro-Wilk W	0.86856	0.84420	0.02493	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0005631	0.0005631	1	0.03	0.85710	Non-Significant Effect
Error	0.2343461	0.0167390	14			
Total	0.23490922	0.0173021	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-003	0.18341	1.76131	0.4286	0.11394	Non-Significant Effect

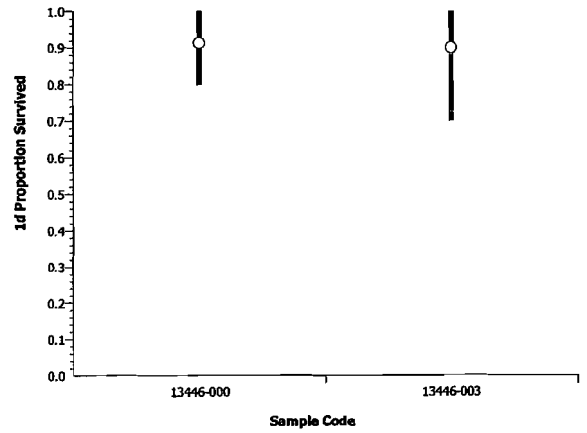
Data Summary

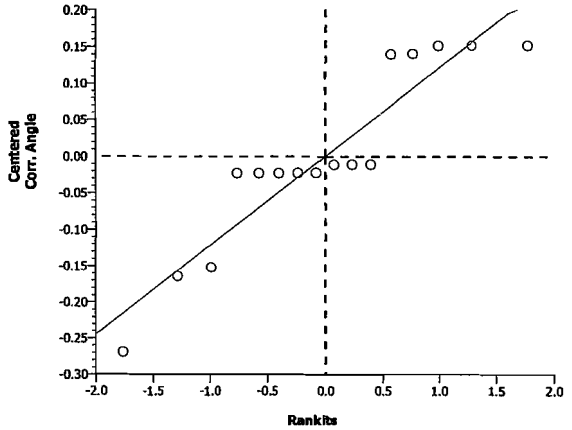
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-003	8	0.90000	0.70000	1.00000	0.10690	1.26019	0.99116	1.41202	0.15368

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.90000	0.90000	0.90000	0.80000	0.90000	1.00000	1.00000	0.90000		
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:07 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.32831	8.88539	0.71746	Equal Variances
Distribution	Shapiro-Wilk W	0.83190	0.84420	0.00630	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0060963	0.0060963	1	0.38	0.54970	Non-Significant Effect
Error	0.2271168	0.0162226	14			
Total	0.23321311	0.0223189	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-013		13446-011	39		0.2527	3	Non-Significant Effect

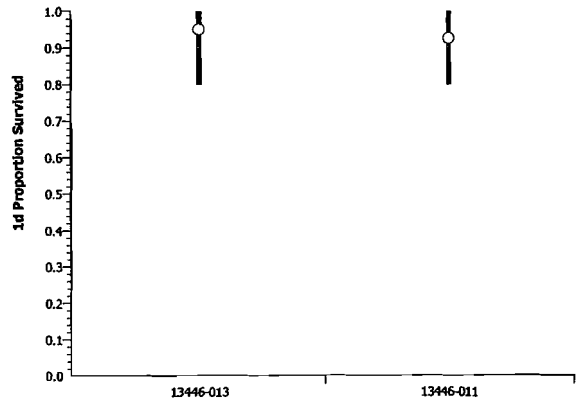
Data Summary

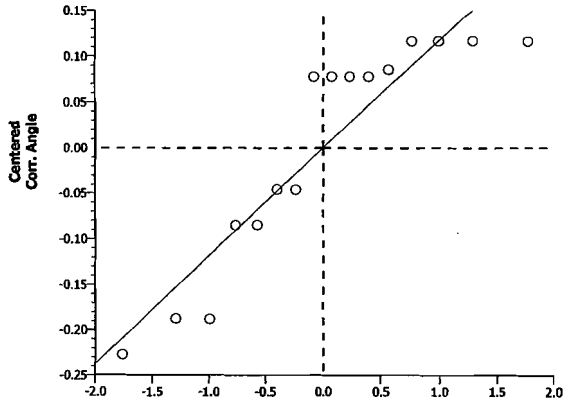
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-011	8	0.92500	0.80000	1.00000	0.08864	1.29506	1.10715	1.41202	0.13605

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
1d Proportion Survived	Comparison	13-3830-0274	13-3830-0274	29 Jul-05 10:08 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.19677	8.88539	0.81874	Equal Variances
Distribution	Shapiro-Wilk W	0.92834	0.84420	0.22642	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.495642	2.495642	1	96.96	0.00000	Significant Effect
Error	0.3603621	0.0257402	14			
Total	2.856004	2.5213821	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-009	-9.8466	1.76131	1.0000	0.14129	Non-Significant Effect

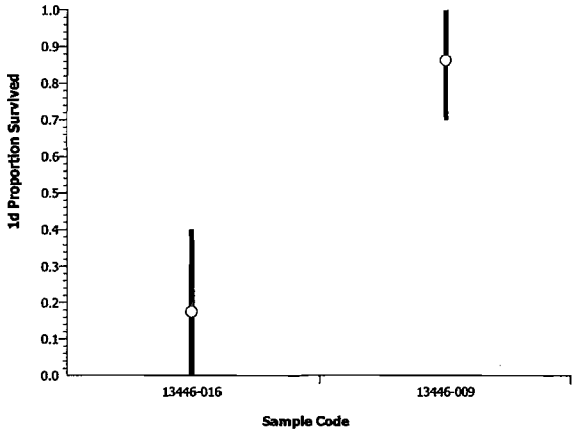
Data Summary

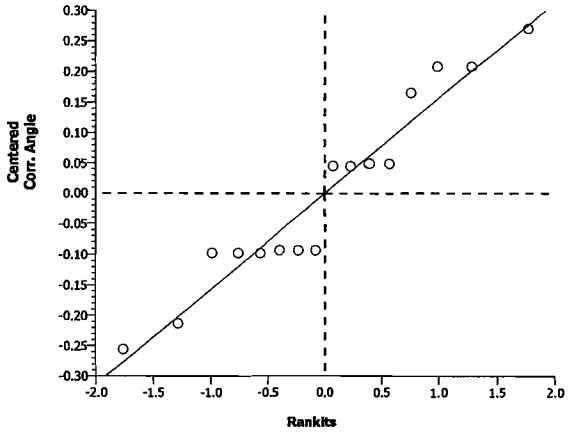
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-009	8	0.86250	0.70000	1.00000	0.10607	1.20434	0.99116	1.41202	0.15308

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-009	0.90000	0.90000	0.80000	1.00000	0.80000	1.00000	0.70000	0.80000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:39 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	8.44774	8.88539	0.01160	Equal Variances
Distribution	Shapiro-Wilk W	0.91274	0.84420	0.12886	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2214818	0.2214818	1	14.12	0.00212	Significant Effect
Error	0.2195599	0.0156829	14			
Total	0.44104169	0.2371646	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-004	3.758	1.76131	0.0011	0.11029	Significant Effect

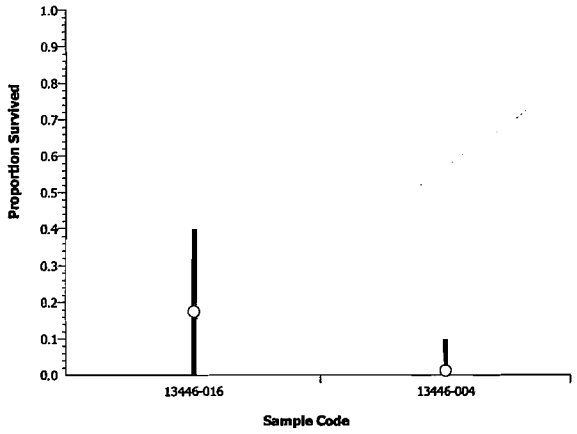
Data Summary

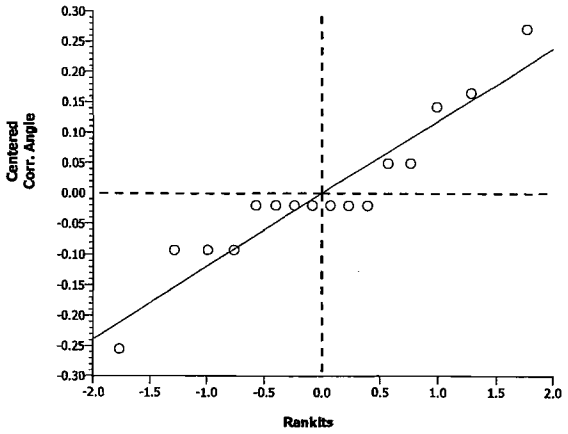
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-004	8	0.01250	0.00000	0.10000	0.03536	0.17915	0.15878	0.32175	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:40 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.74407	8.88539	0.20632	Equal Variances
Distribution	Shapiro-Wilk W	0.94778	0.84420	0.43856	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.225463	2.225463	1	134.50	0.00000	Significant Effect
Error	0.2316433	0.016546	14			
Total	2.45710668	2.2420093	15			

Group Comparisons

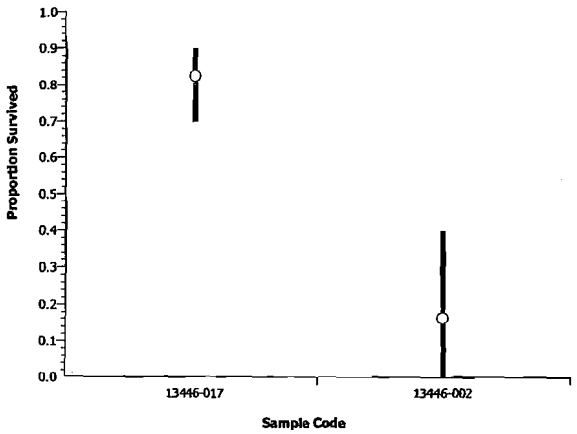
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-002	11.5975	1.76131	0.0000	0.11328	Significant Effect

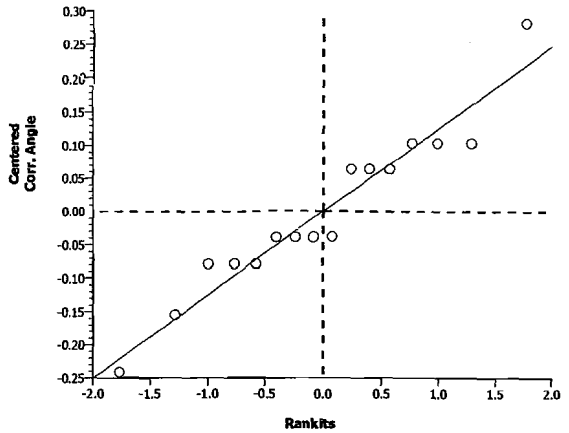
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-002	8	0.16250	0.00000	0.40000	0.11877	0.39996	0.15878	0.68472	0.15574

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:44 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.12728	8.88539	0.87847	Equal Variances
Distribution	Shapiro-Wilk W	0.91160	0.84420	0.12362	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0132474	0.0132474	1	0.76	0.39848	Non-Significant Effect
Error	0.2445118	0.0174651	14			
Total	0.25775923	0.0307126	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-011	-0.8709	1.76131	0.8008	0.11638	Non-Significant Effect

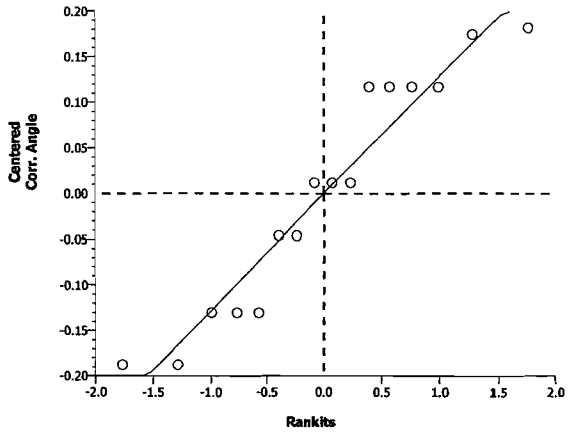
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-011	8	0.92500	0.80000	1.00000	0.08864	1.29506	1.10715	1.41202	0.13605

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:42 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.37243	8.88539	0.27702	Equal Variances
Distribution	Shapiro-Wilk W	0.91650	0.84420	0.14785	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8545277	0.8545277	1	50.91	0.00001	Significant Effect
Error	0.2350134	0.0167867	14			
Total	1.08954115	0.8713144	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-003	-7.1348	1.76131	1.0000	0.11410	Non-Significant Effect

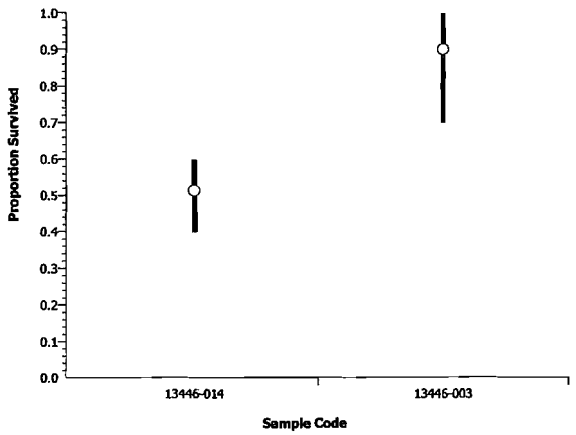
Data Summary

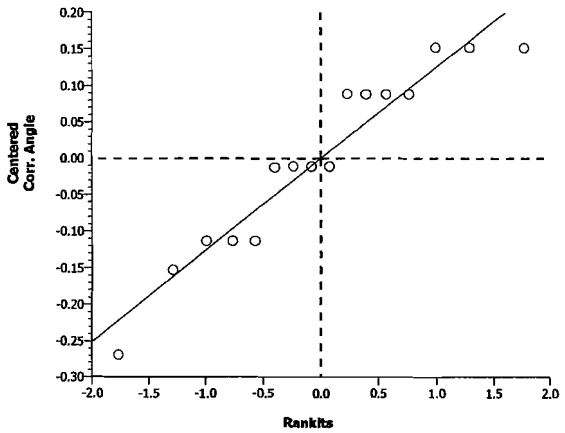
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-003	8	0.90000	0.70000	1.00000	0.10690	1.26019	0.99116	1.41202	0.15368

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:40 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.06605	8.88539	0.35922	Equal Variances
Distribution	Shapiro-Wilk W	0.90654	0.84420	0.10262	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1255229	0.1255229	1	9.26	0.00876	Significant Effect
Error	0.1896942	0.0135496	14			
Total	0.31521717	0.1390725	15			

Group Comparisons

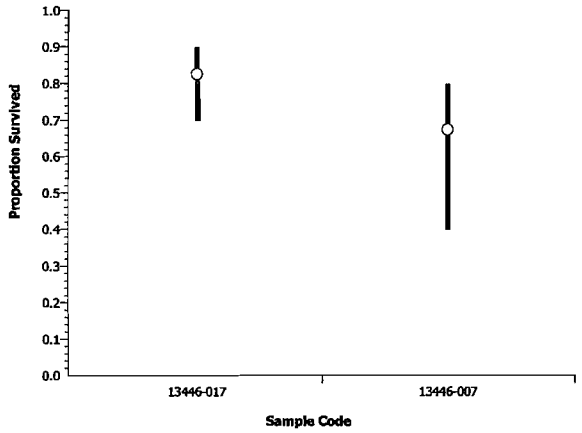
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-007	3.04368	1.76131	0.0044	0.10251	Significant Effect

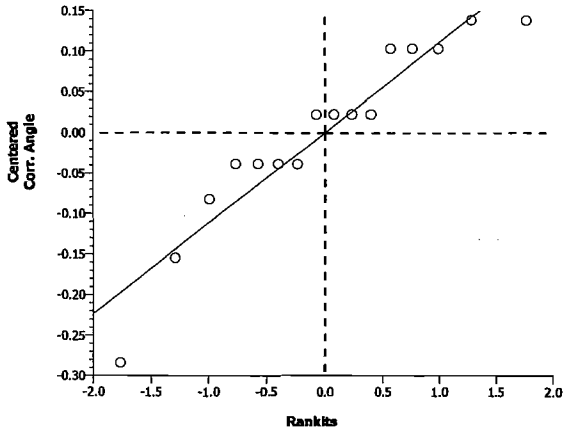
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-007	8	0.67500	0.40000	0.80000	0.12817	0.96872	0.68472	1.10715	0.13513

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-007	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000	0.70000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.85933	8.88539	0.43198	Equal Variances
Distribution	Shapiro-Wilk W	0.84224	0.84420	0.00929	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.9883288	0.9883288	1	69.44	0.00000	Significant Effect
Error	0.1992576	0.0142327	14			
Total	1.1875864	1.0025615	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-014		13446-011	0		0.9999	5	Non-Significant Effect

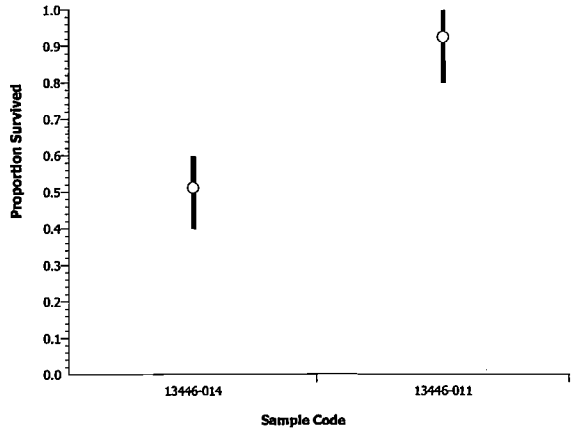
Data Summary

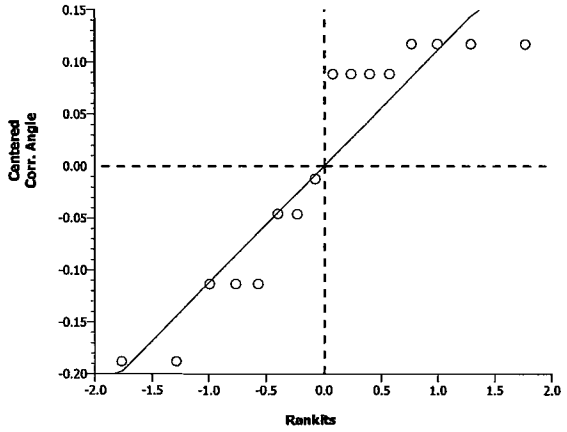
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-011	8	0.92500	0.80000	1.00000	0.08864	1.29506	1.10715	1.41202	0.13605

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-011	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.74921	8.88539	0.47805	Equal Variances
Distribution	Shapiro-Wilk W	0.85238	0.84420	0.01359	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.432619	1.432619	1	183.12	0.00000	Significant Effect
Error	0.1095257	0.0078233	14			
Total	1.54214436	1.4404419	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-010	13.5323	1.76131	0.0000	0.07789	Significant Effect

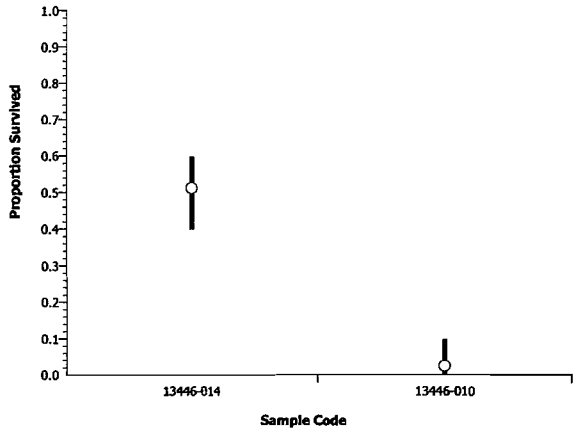
Data Summary

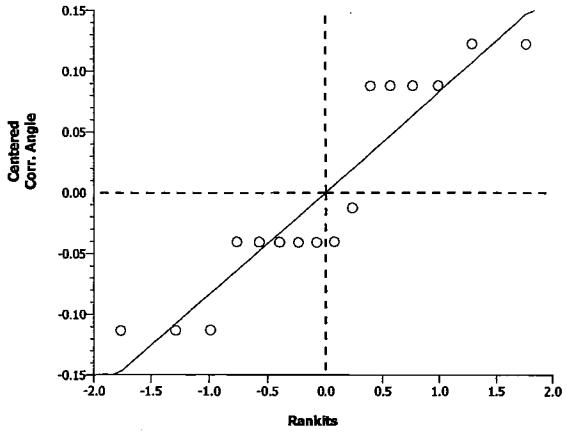
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-010	8	0.02500	0.00000	0.10000	0.04629	0.19952	0.15878	0.32175	0.07544

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-010	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000	0.10000	0.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.62900	8.88539	0.53525	Equal Variances
Distribution	Shapiro-Wilk W	0.86306	0.84420	0.02028	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0002459	0.0002459	1	0.01	0.91652	Non-Significant Effect
Error	0.3021794	0.0215842	14			
Total	0.30242528	0.0218301	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-006	-0.1067	1.76131	0.5417	0.12938	Non-Significant Effect

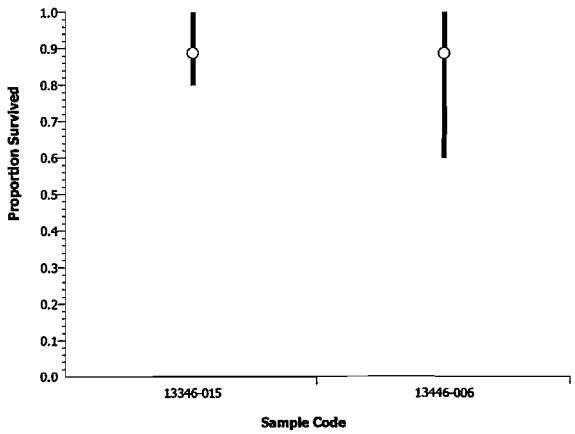
Data Summary

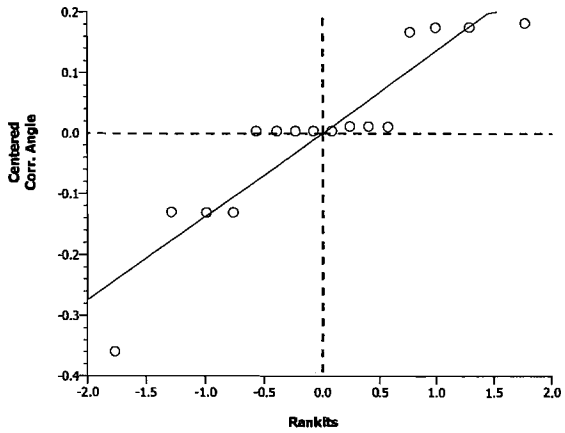
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-006	8	0.88750	0.60000	1.00000	0.12464	1.24535	0.88608	1.41946	0.16355

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:39 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.53585	8.88539	0.58522	Equal Variances
Distribution	Shapiro-Wilk W	0.95220	0.84420	0.50366	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.228791	1.228791	1	53.07	0.00000	Significant Effect
Error	0.3241454	0.0231532	14			
Total	1.55293652	1.2519444	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-007	-7.2851	1.76131	1.0000	0.13400	Non-Significant Effect

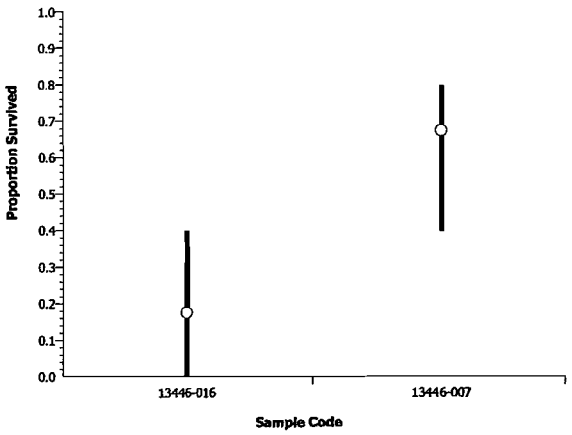
Data Summary

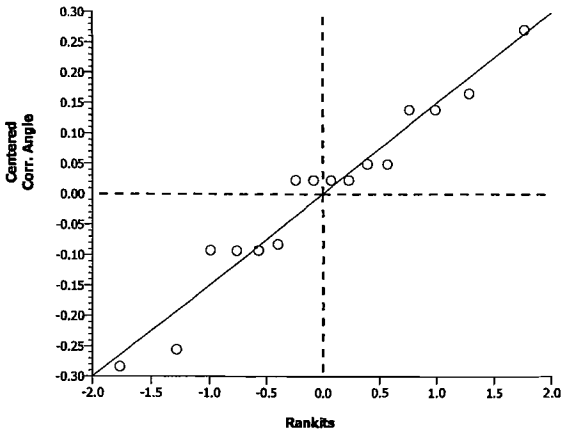
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-007	8	0.67500	0.40000	0.80000	0.12817	0.96872	0.68472	1.10715	0.13513

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-007	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000	0.70000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:42 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.35399	8.88539	0.28126	Equal Variances
Distribution	Shapiro-Wilk W	0.91777	0.84420	0.15485	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.6605066	0.6605066	1	39.56	0.00002	Significant Effect
Error	0.2337283	0.0166949	14			
Total	0.8942349	0.6772015	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-009	-6.2899	1.76131	1.0000	0.11379	Non-Significant Effect

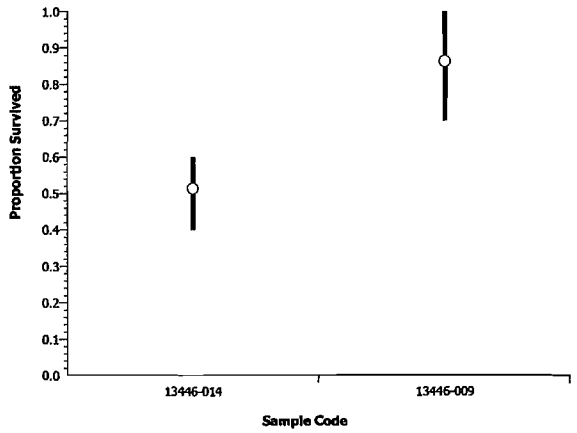
Data Summary

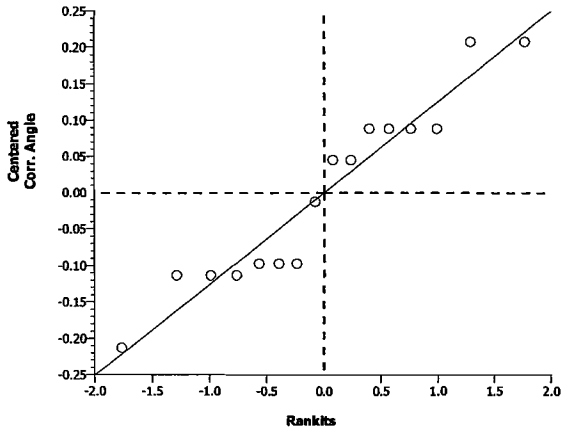
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-009	8	0.86250	0.70000	1.00000	0.10607	1.20434	0.99116	1.41202	0.15308

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-009	0.90000	0.90000	0.80000	1.00000	0.80000	1.00000	0.70000	0.80000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.42718	8.88539	0.65058	Equal Variances
Distribution	Shapiro-Wilk W	0.90722	0.84420	0.10522	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0044002	0.0044002	1	0.22	0.64566	Non-Significant Effect
Error	0.2789825	0.0199273	14			
Total	0.28338272	0.0243275	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-009	0.46991	1.76131	0.3228	0.12432	Non-Significant Effect

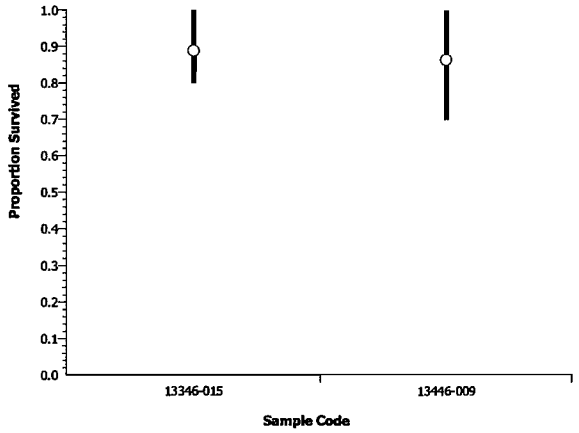
Data Summary

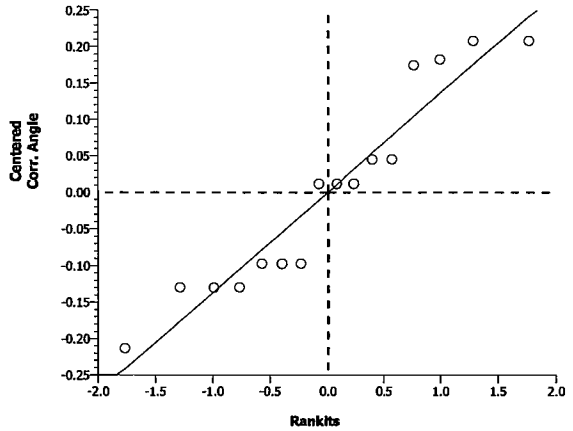
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-009	8	0.86250	0.70000	1.00000	0.10607	1.20434	0.99116	1.41202	0.15308

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-009	0.90000	0.90000	0.80000	1.00000	0.80000	1.00000	0.70000	0.80000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:42 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.68686	8.88539	0.21559	Equal Variances
Distribution	Shapiro-Wilk W	0.87682	0.84420	0.03395	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8005425	0.8005425	1	43.62	0.00001	Significant Effect
Error	0.2569252	0.0183518	14			
Total	1.05746767	0.8188943	15			

Group Comparisons

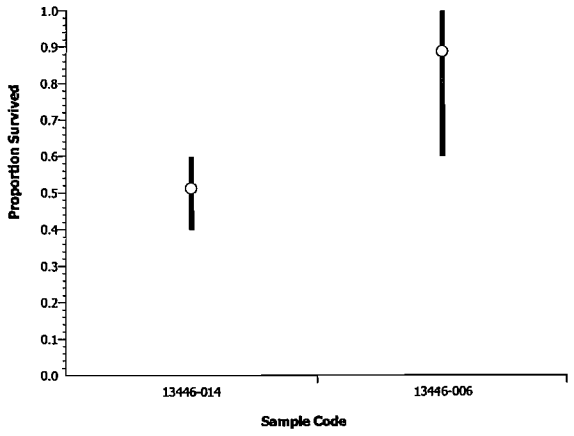
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-006	-6.6047	1.76131	1.0000	0.11930	Non-Significant Effect

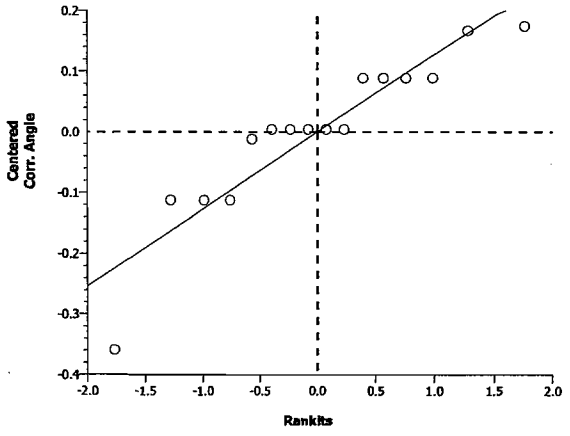
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978
13446-006	8	0.88750	0.60000	1.00000	0.12464	1.24535	0.88608	1.41946	0.16355

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		
13446-006	0.90000	0.90000	0.60000	1.00000	0.90000	0.90000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:37 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.19744	8.88539	0.07784	Equal Variances
Distribution	Shapiro-Wilk W	0.88612	0.84420	0.04806	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	5.335588	5.335588	1	618.44	0.00000	Significant Effect
Error	0.1207854	0.0086275	14			
Total	5.45637289	5.3442150	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-004	24.8684	1.76131	0.0000	0.0818	Significant Effect

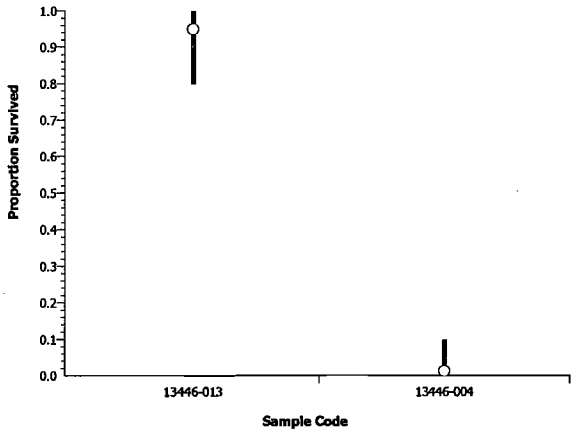
Data Summary

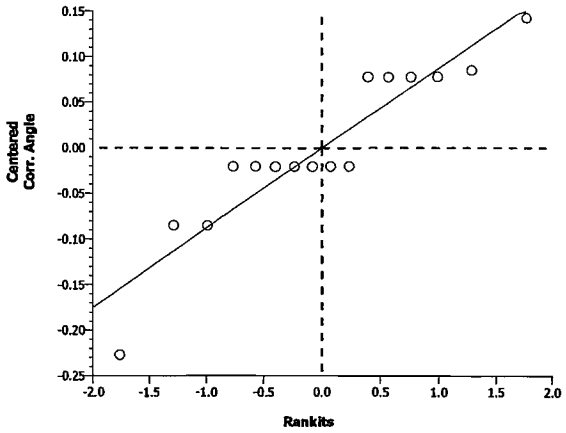
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-004	8	0.01250	0.00000	0.10000	0.03536	0.17915	0.15878	0.32175	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.88514	8.88539	0.18550	Equal Variances
Distribution	Shapiro-Wilk W	0.88164	0.84420	0.04065	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.309652	4.309652	1	389.81	0.00000	Significant Effect
Error	0.1547799	0.0110557	14			
Total	4.46443227	4.3207080	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-010	19.7437	1.76131	0.0000	0.0926	Significant Effect

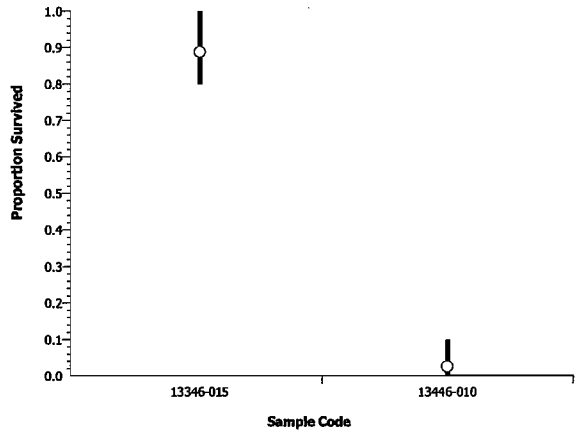
Data Summary

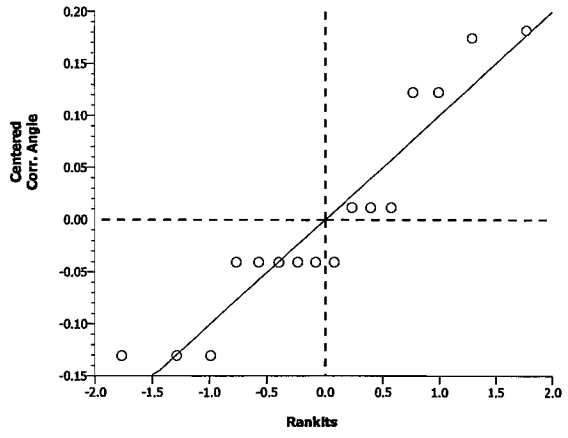
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-010	8	0.02500	0.00000	0.10000	0.04629	0.19952	0.15878	0.32175	0.07544

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-010	0.00000	0.00000	0.00000	0.10000	0.00000	0.00000	0.10000	0.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:35 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.96993	8.88539	0.17425	Equal Variances
Distribution	Shapiro-Wilk W	0.68468	0.84420	0.00002	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.777719	4.777719	1	725.00	0.00000	Significant Effect
Error	0.0922589	0.0065899	14			
Total	4.86997787	4.7843089	15			

Group Comparisons

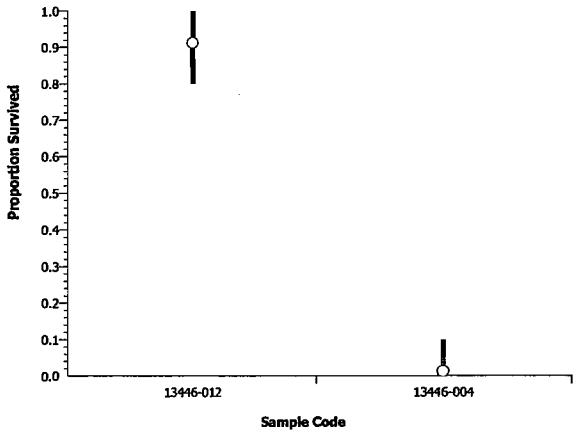
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-012		13446-004	64		0.0001	3	Significant Effect

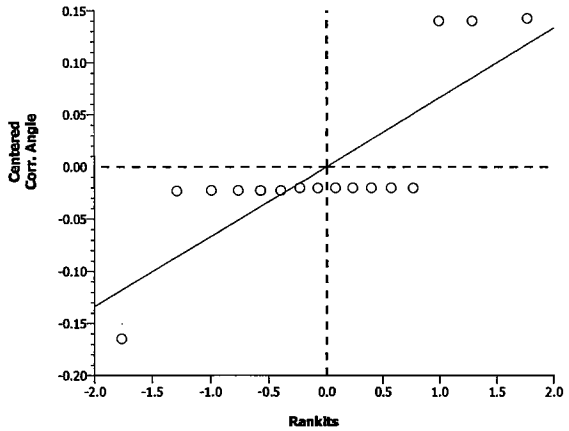
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-004	8	0.01250	0.00000	0.10000	0.03536	0.17915	0.15878	0.32175	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.49841	8.88539	0.12056	Equal Variances
Distribution	Shapiro-Wilk W	0.85940	0.84420	0.01768	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.309652	4.309652	1	577.15	0.00000	Significant Effect
Error	0.1045405	0.0074672	14			
Total	4.41419278	4.3171195	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-004	24.0239	1.76131	0.0000	0.0761	Significant Effect

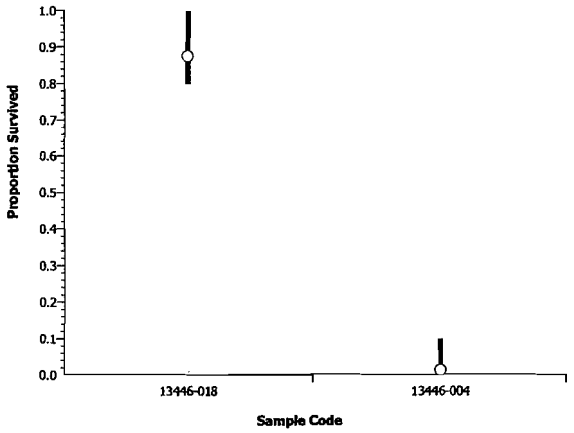
Data Summary

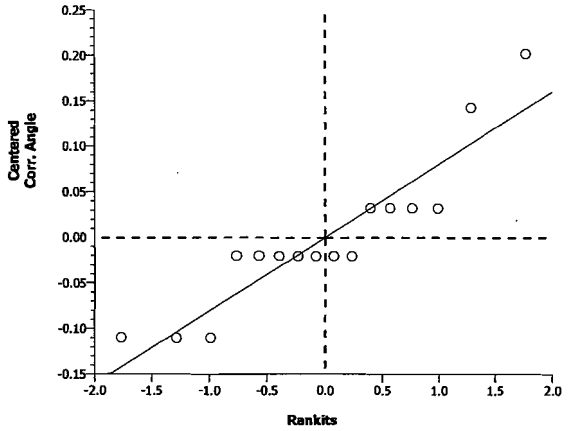
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-004	8	0.01250	0.00000	0.10000	0.03536	0.17915	0.15878	0.32175	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:35 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.45980	8.88539	0.25797	Equal Variances
Distribution	Shapiro-Wilk W	0.95674	0.84420	0.57629	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.04216	3.04216	1	178.36	0.00000	Significant Effect
Error	0.2387934	0.0170567	14			
Total	3.28095368	3.0592169	15			

Group Comparisons

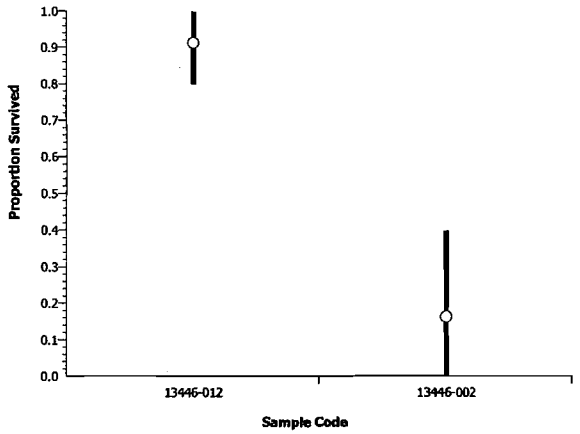
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-002	13.355	1.76131	0.0000	0.11501	Significant Effect

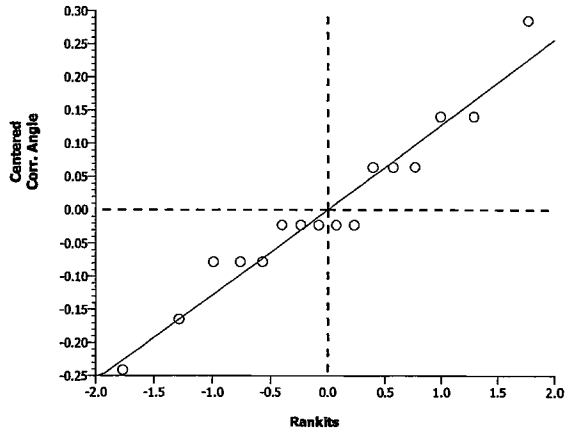
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-002	8	0.16250	0.00000	0.40000	0.11877	0.39996	0.15878	0.68472	0.15574

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:39 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.15636	8.88539	0.85292	Equal Variances
Distribution	Shapiro-Wilk W	0.93094	0.84420	0.24823	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0008409	0.0008409	1	0.03	0.86025	Non-Significant Effect
Error	0.3660945	0.0261496	14			
Total	0.36693536	0.0269905	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-002	0.17932	1.76131	0.4301	0.14241	Non-Significant Effect

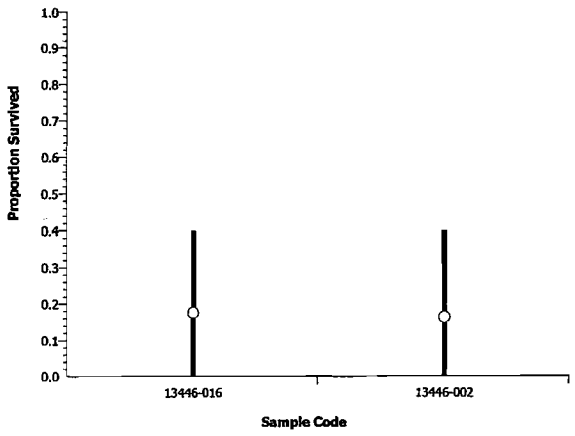
Data Summary

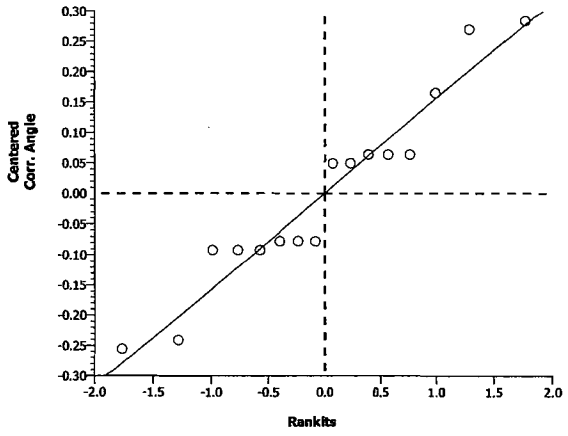
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-002	8	0.16250	0.00000	0.40000	0.11877	0.39996	0.15878	0.68472	0.15574

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:37 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.74045	8.88539	0.48196	Equal Variances
Distribution	Shapiro-Wilk W	0.89104	0.84420	0.05773	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.490428	3.490428	1	182.80	0.00000	Significant Effect
Error	0.2673199	0.0190943	14			
Total	3.75774768	3.5095220	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-002	13.5203	1.76131	0.0000	0.12169	Significant Effect

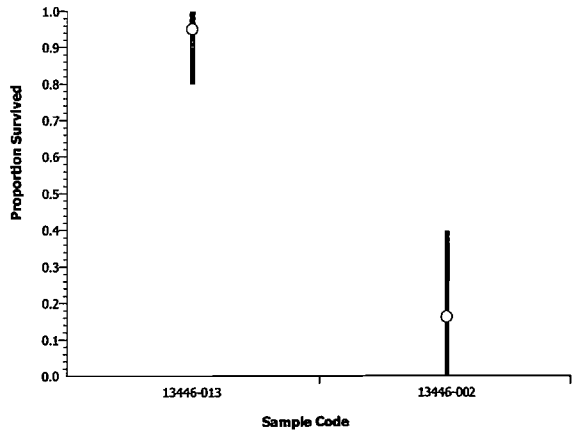
Data Summary

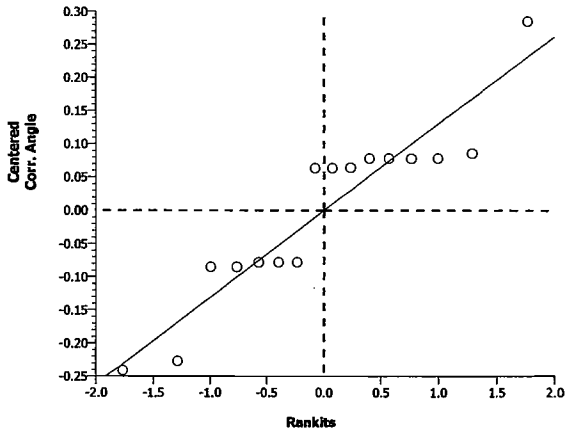
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-002	8	0.16250	0.00000	0.40000	0.11877	0.39996	0.15878	0.68472	0.15574

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.08821	8.88539	0.35234	Equal Variances
Distribution	Shapiro-Wilk W	0.93399	0.84420	0.27621	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.671099	2.671099	1	148.94	0.00000	Significant Effect
Error	0.251075	0.0179339	14			
Total	2.92217419	2.6890331	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-002	12.2041	1.76131	0.0000	0.11794	Significant Effect

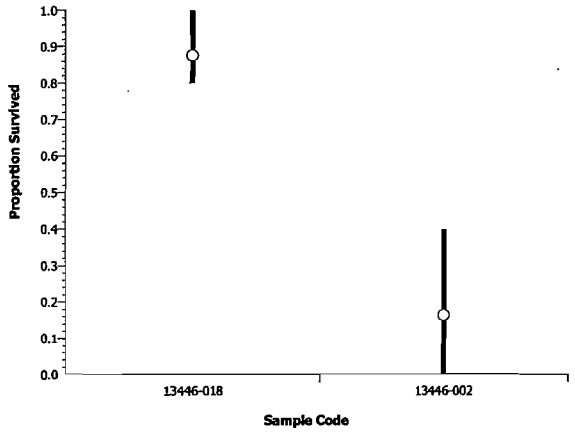
Data Summary

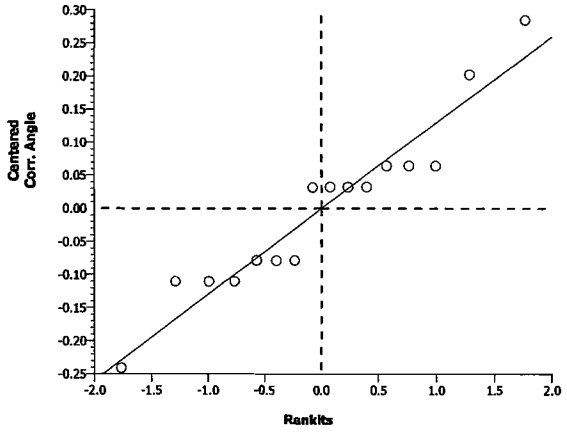
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-002	8	0.16250	0.00000	0.40000	0.11877	0.39996	0.15878	0.68472	0.15574

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-002	0.20000	0.00000	0.10000	0.40000	0.20000	0.10000	0.10000	0.20000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:40 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.36999	8.88539	0.68835	Equal Variances
Distribution	Shapiro-Wilk W	0.93946	0.84420	0.33331	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.010137	3.010137	1	287.40	0.00000	Significant Effect
Error	0.1466297	0.0104736	14			
Total	3.15676658	3.0206104	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-001	16.953	1.76131	0.0000	0.09013	Significant Effect

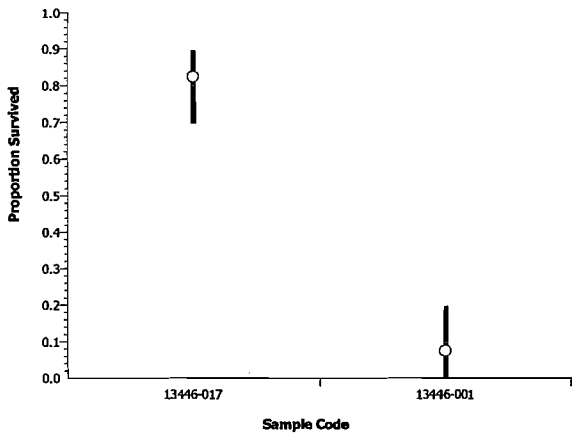
Data Summary

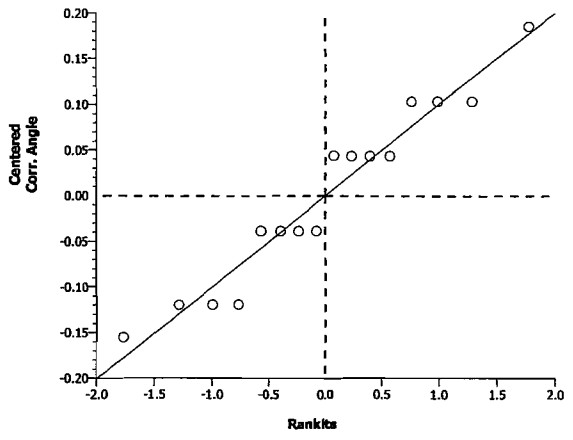
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-001	8	0.07500	0.00000	0.20000	0.07071	0.27837	0.15878	0.46365	0.11004

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.00000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:37 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.15084	8.88539	0.85771	Equal Variances
Distribution	Shapiro-Wilk W	0.89485	0.84420	0.06654	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	4.458198	4.458198	1	342.36	0.00000	Significant Effect
Error	0.1823064	0.0130219	14			
Total	4.64050400	4.4712195	15			

Group Comparisons

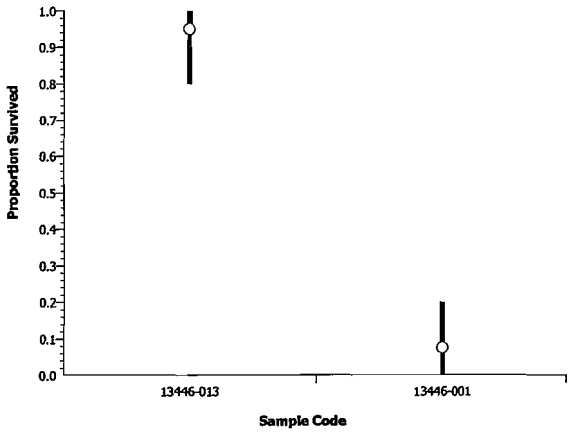
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-001	18.5030	1.76131	0.0000	0.10049	Significant Effect

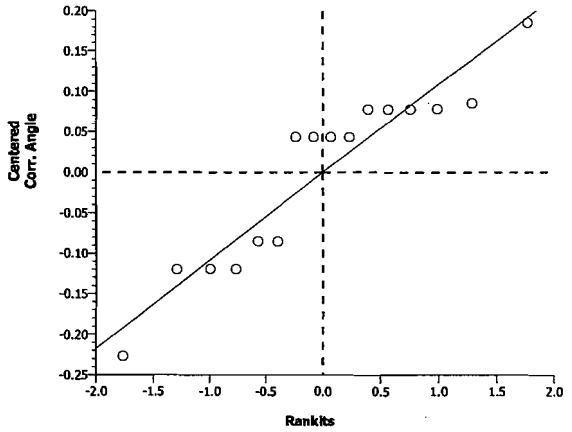
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-001	8	0.07500	0.00000	0.20000	0.07071	0.27837	0.15878	0.46365	0.11004

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.00000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:40 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.66226	8.88539	0.21974	Equal Variances
Distribution	Shapiro-Wilk W	0.81235	0.84420	0.00302	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.73811	3.73811	1	614.90	0.00000	Significant Effect
Error	0.0851087	0.0060792	14			
Total	3.82321855	3.7441890	15			

Group Comparisons

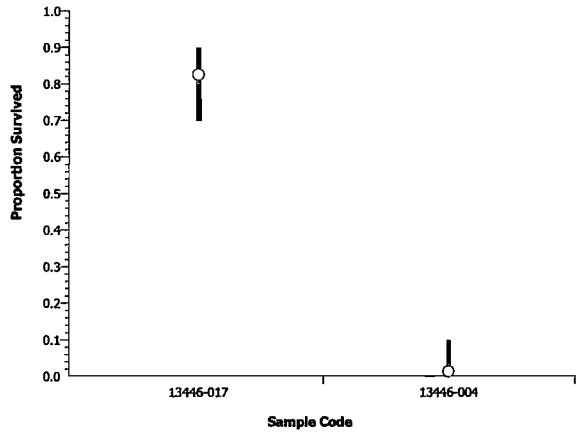
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-017		13446-004	64		0.0001	3	Significant Effect

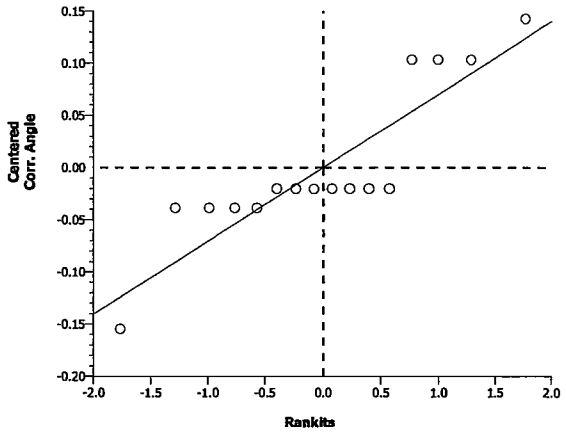
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-004	8	0.01250	0.00000	0.10000	0.03536	0.17915	0.15878	0.32175	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z
Equal Variance t	C > T	Angular (Corrected)	

NOEL	LOEL	Toxic Units	ChV	MSDp
		N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.57224	8.88539	0.56507	Equal Variances
Distribution	Shapiro-Wilk W	0.90835	0.84420	0.10970	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2468532	0.2468532	1	16.53	0.00116	Significant Effect
Error	0.209126	0.0149376	14			
Total	0.45597912	0.2617907	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-007	4.06518	1.76131	0.0006	0.10763	Significant Effect

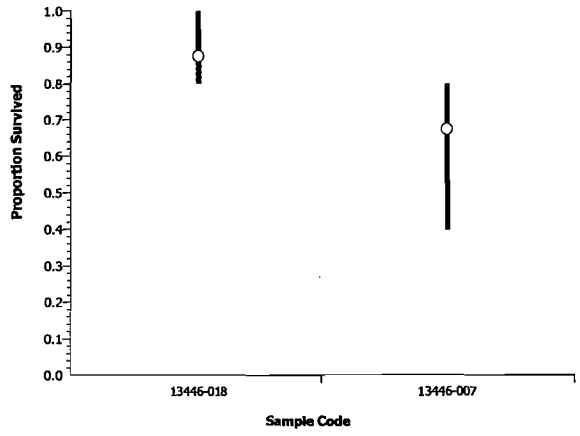
Data Summary

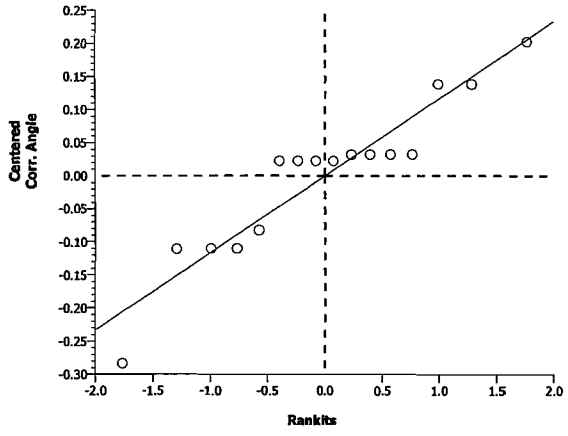
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-007	8	0.67500	0.40000	0.80000	0.12817	0.96872	0.68472	1.10715	0.13513

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-007	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000	0.70000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:39 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.31618	8.88539	0.29021	Equal Variances
Distribution	Shapiro-Wilk W	0.93632	0.84420	0.29939	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0740786	0.0740786	1	3.69	0.07535	Non-Significant Effect
Error	0.2810809	0.0200772	14			
Total	0.35515956	0.0941558	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-001	1.92086	1.76131	0.0377	0.12478	Significant Effect

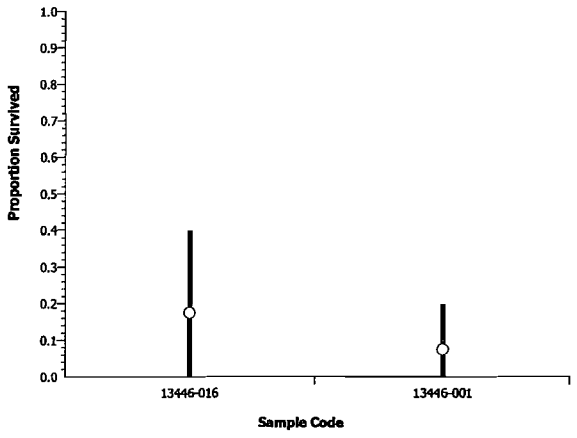
Data Summary

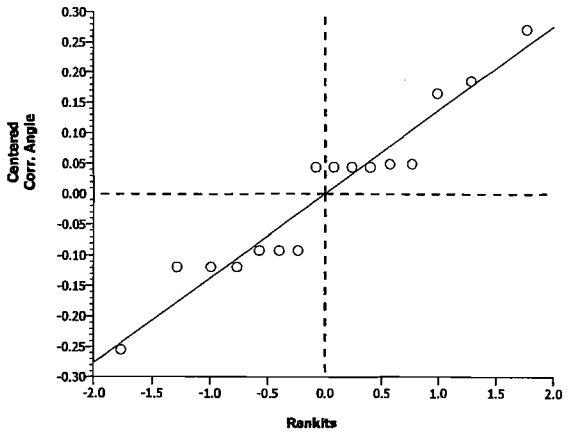
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-001	8	0.07500	0.00000	0.20000	0.07071	0.27837	0.15878	0.46365	0.11004

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.00000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.04255	8.88539	0.95758	Equal Variances
Distribution	Shapiro-Wilk W	0.83105	0.84420	0.00610	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.525102	3.525102	1	297.19	0.00000	Significant Effect
Error	0.1660615	0.0118615	14			
Total	3.69116384	3.5369639	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-018		13446-001	64		0.0001	4	Significant Effect

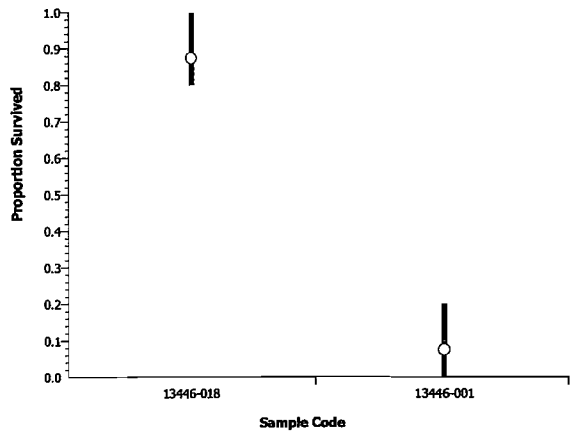
Data Summary

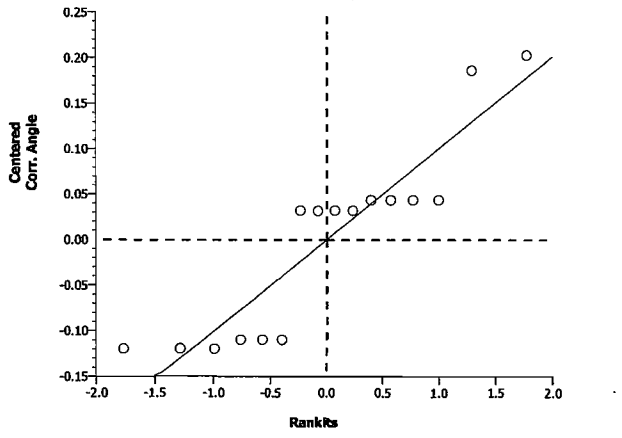
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-001	8	0.07500	0.00000	0.20000	0.07071	0.27837	0.15878	0.46365	0.11004

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.00000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:37 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.31041	8.88539	0.73038	Equal Variances
Distribution	Shapiro-Wilk W	0.86079	0.84420	0.01863	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5340132	0.5340132	1	33.17	0.00005	Significant Effect
Error	0.2253709	0.0160979	14			
Total	0.7593841	0.5501111	15			

Group Comparisons

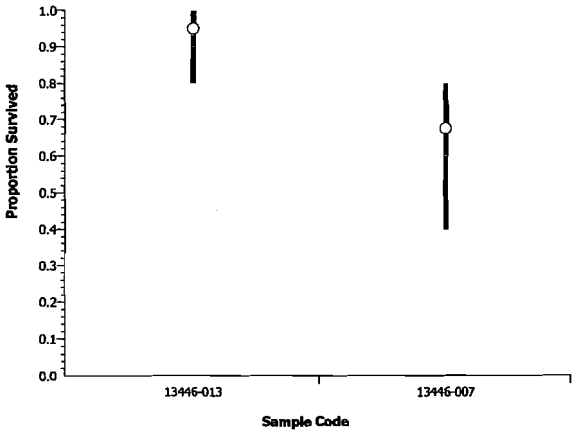
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-007	5.75958	1.76131	0.0000	0.11174	Significant Effect

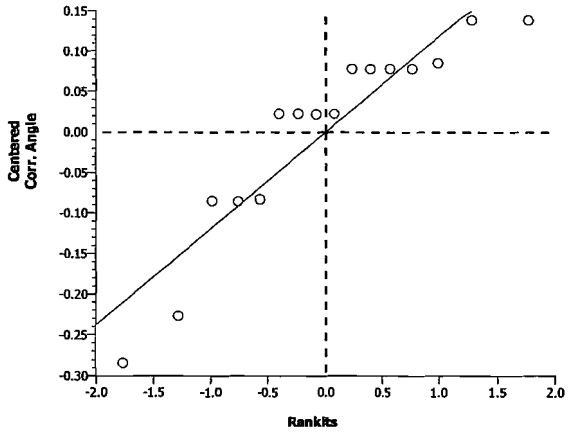
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-007	8	0.67500	0.40000	0.80000	0.12817	0.96872	0.68472	1.10715	0.13513

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-007	0.80000	0.70000	0.70000	0.70000	0.80000	0.40000	0.70000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.04255	8.88539	0.95758	Equal Variances
Distribution	Shapiro-Wilk W	0.83105	0.84420	0.00610	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.525102	3.525102	1	297.19	0.00000	Significant Effect
Error	0.1660615	0.0118615	14			
Total	3.69116384	3.5369639	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-018		13446-001	64		0.0001	4	Significant Effect

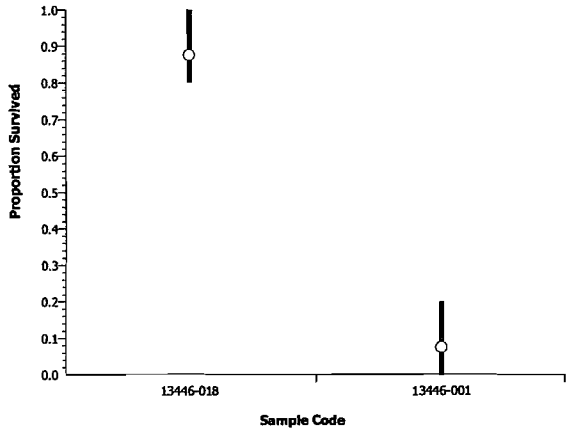
Data Summary

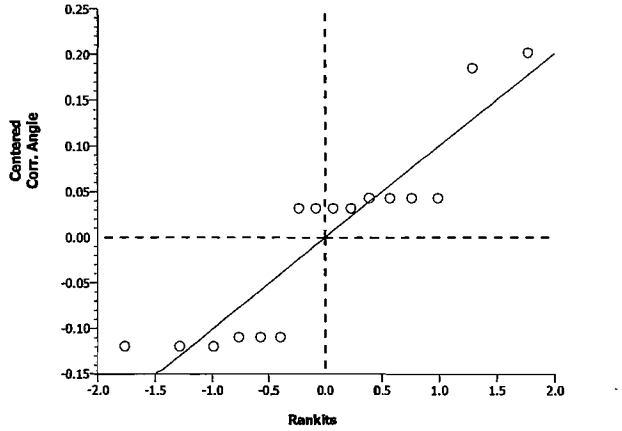
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-001	8	0.07500	0.00000	0.20000	0.07071	0.27837	0.15878	0.46365	0.11004

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.00000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:35 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.22807	8.88539	0.79328	Equal Variances
Distribution	Shapiro-Wilk W	0.93748	0.84420	0.31156	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.949579	3.949579	1	359.57	0.00000	Significant Effect
Error	0.1537799	0.0109843	14			
Total	4.10335910	3.9605635	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-001	18.9622	1.76131	0.0000	0.0923	Significant Effect

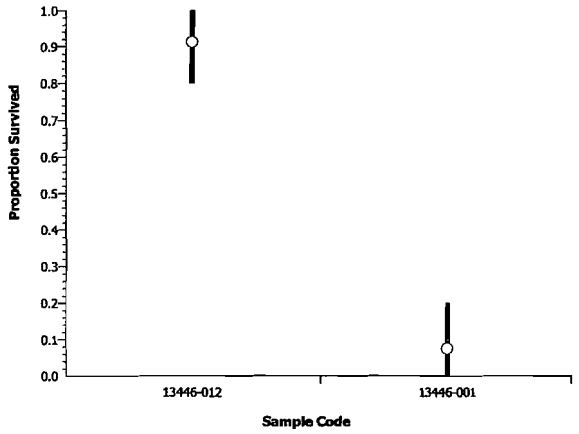
Data Summary

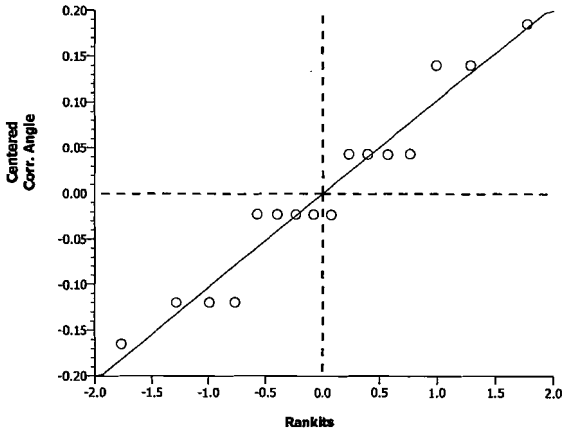
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-001	8	0.07500	0.00000	0.20000	0.07071	0.27837	0.15878	0.46365	0.11004

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-001	0.00000	0.10000	0.10000	0.10000	0.00000	0.00000	0.20000	0.10000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.43836	8.88539	0.64348	Equal Variances
Distribution	Shapiro-Wilk W	0.91549	0.84420	0.14249	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0020573	0.0020573	1	0.10	0.75327	Non-Significant Effect
Error	0.2802676	0.0200191	14			
Total	0.28232488	0.0220764	15			

Group Comparisons

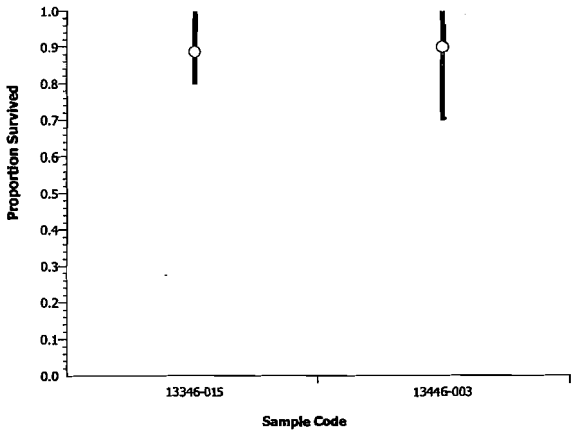
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-003	-0.3206	1.76131	0.6234	0.12460	Non-Significant Effect

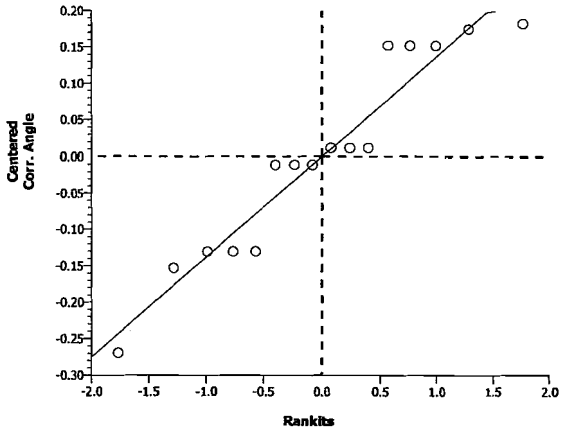
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814
13446-003	8	0.90000	0.70000	1.00000	0.10690	1.26019	0.99116	1.41202	0.15368

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		
13446-003	1.00000	1.00000	0.70000	1.00000	0.80000	0.90000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.70801	8.88539	0.49679	Equal Variances
Distribution	Shapiro-Wilk W	0.95008	0.84420	0.47159	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.709626	2.709626	1	121.87	0.00000	Significant Effect
Error	0.3112614	0.022233	14			
Total	3.02088788	2.7318594	15			

Group Comparisons

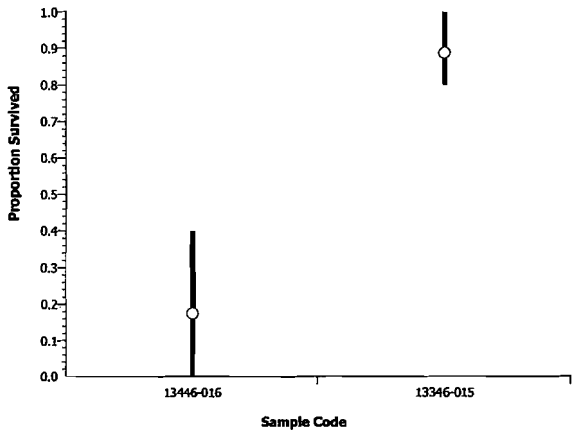
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13346-015	11.0397	1.76131	0.0000	0.13131	Significant Effect

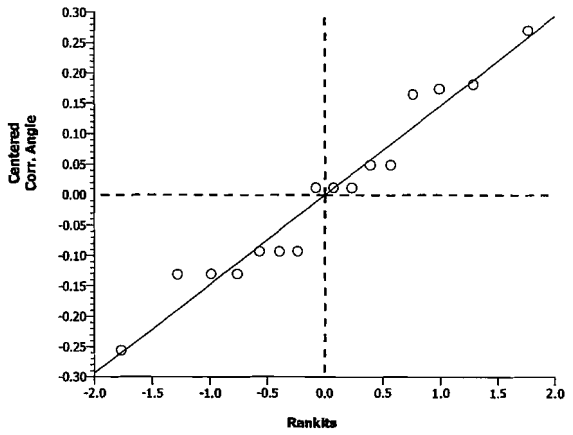
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00967	8.88539	0.99020	Equal Variances
Distribution	Shapiro-Wilk W	0.90918	0.84420	0.11310	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8989626	0.8989626	1	90.73	0.00000	Significant Effect
Error	0.1387062	0.0099076	14			
Total	1.03766879	0.9088702	15			

Group Comparisons

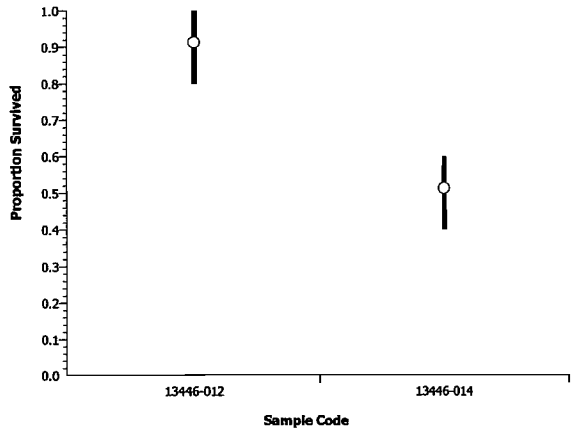
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-014	-9.5255	1.76131	1.0000	0.08766	Non-Significant Effect

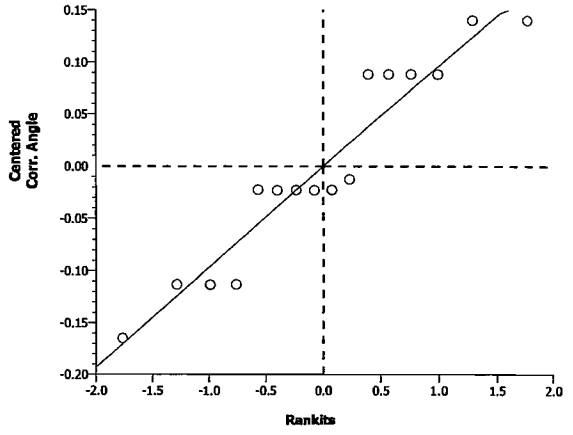
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.17833	8.88539	0.83416	Equal Variances
Distribution	Shapiro-Wilk W	0.93491	0.84420	0.28518	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0373171	0.0373171	1	2.46	0.13920	Non-Significant Effect
Error	0.2124869	0.0151776	14			
Total	0.24980398	0.0524947	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13346-015	1.56802	1.76131	0.0696	0.10849	Non-Significant Effect

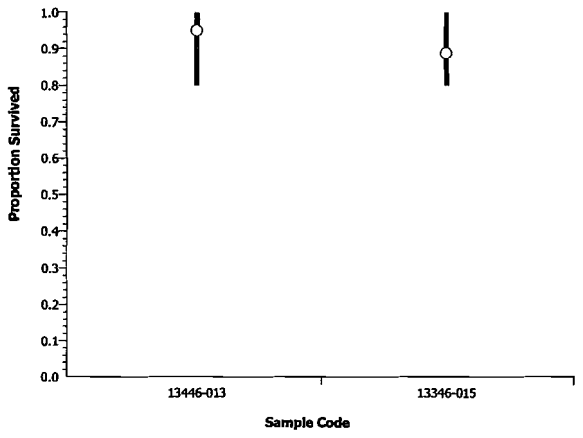
Data Summary

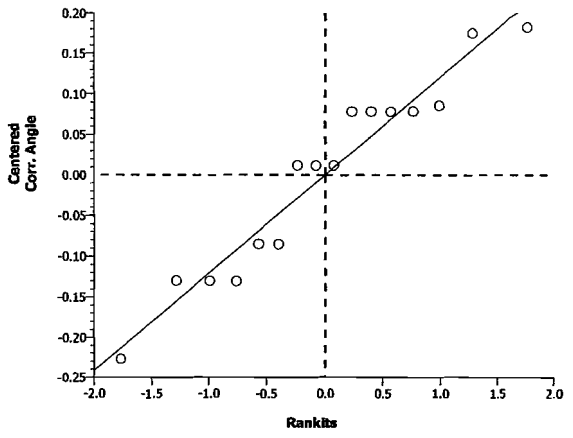
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.16666	8.88539	0.84407	Equal Variances
Distribution	Shapiro-Wilk W	0.86093	0.84420	0.01873	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.7027589	0.7027589	1	65.16	0.00000	Significant Effect
Error	0.1509878	0.0107848	14			
Total	0.85374668	0.7135437	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-014	-8.0723	1.76131	1.0000	0.09146	Non-Significant Effect

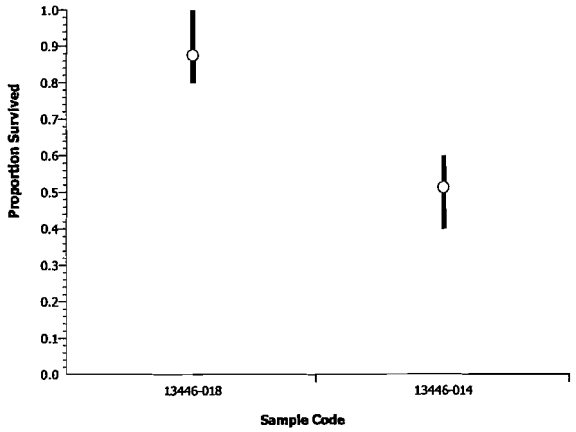
Data Summary

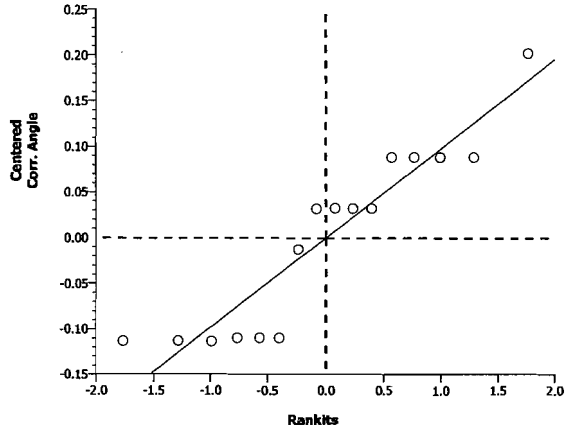
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.41377	8.88539	0.65922	Equal Variances
Distribution	Shapiro-Wilk W	0.86216	0.84420	0.01961	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.00166	0.00166	1	0.12	0.73587	Non-Significant Effect
Error	0.196242	0.0140173	14			
Total	0.19790193	0.0156772	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13346-015	0.34413	1.76131	0.3679	0.10426	Non-Significant Effect

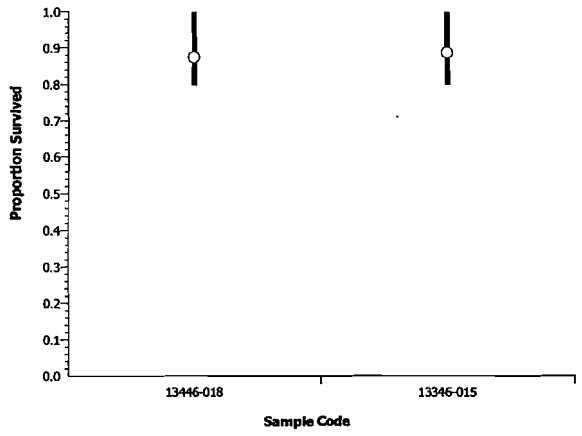
Data Summary

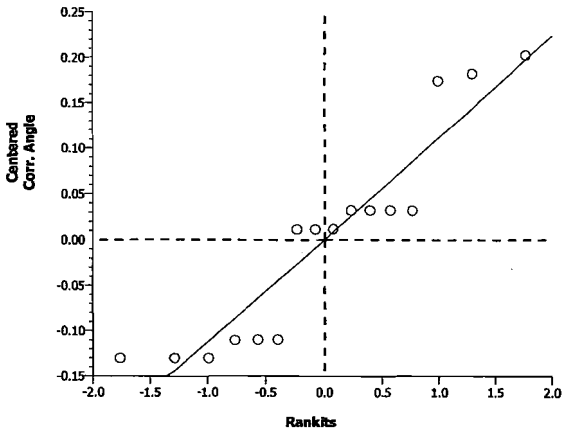
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.39978	8.88539	0.66838	Equal Variances
Distribution	Shapiro-Wilk W	0.78249	0.84420	0.00097	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.149669	1.149669	1	96.25	0.00000	Significant Effect
Error	0.1672327	0.0119452	14			
Total	1.31690140	1.1616139	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-013		13446-014	0		0.9999	4	Non-Significant Effect

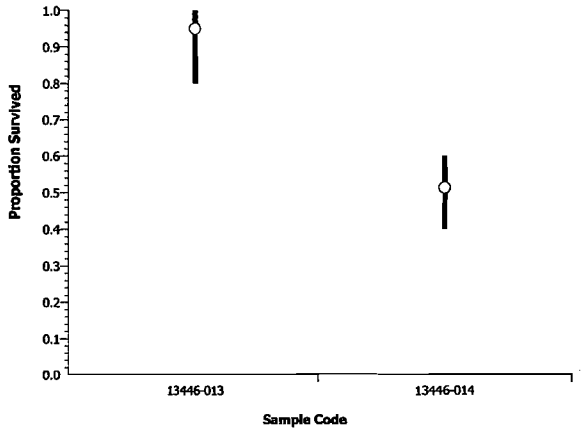
Data Summary

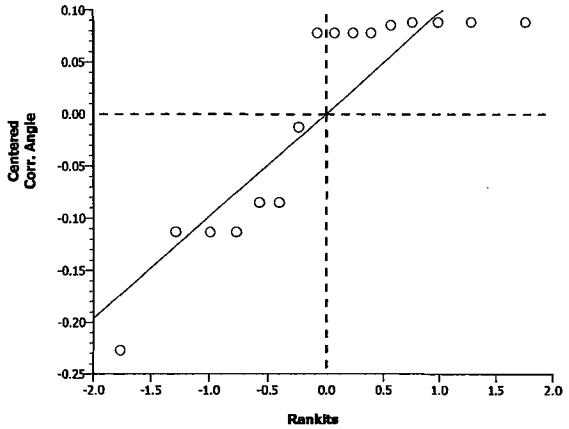
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.66534	8.88539	0.51714	Equal Variances
Distribution	Shapiro-Wilk W	0.89938	0.84420	0.07873	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.004773	0.004773	1	0.36	0.55635	Non-Significant Effect
Error	0.1839604	0.0131400	14			
Total	0.18873334	0.017913	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13346-015	-0.6027	1.76131	0.7218	0.10095	Non-Significant Effect

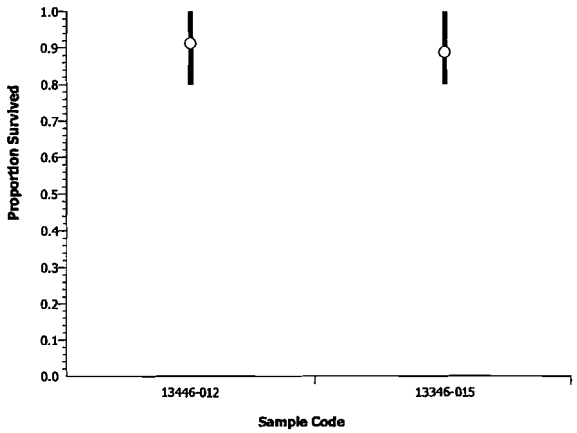
Data Summary

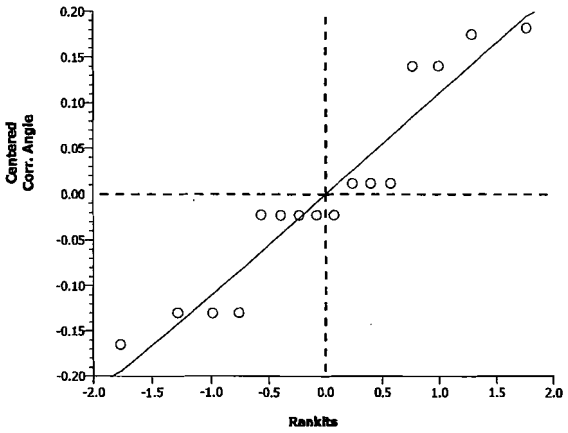
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.16666	8.88539	0.84407	Equal Variances
Distribution	Shapiro-Wilk W	0.86093	0.84420	0.01873	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.7027589	0.7027589	1	65.16	0.00000	Significant Effect
Error	0.1509878	0.0107848	14			
Total	0.85374668	0.7135437	15			

Group Comparisons

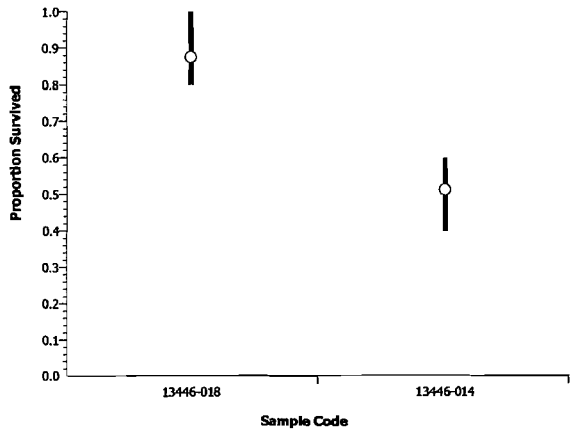
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-014	8.07228	1.76131	0.0000	0.09146	Significant Effect

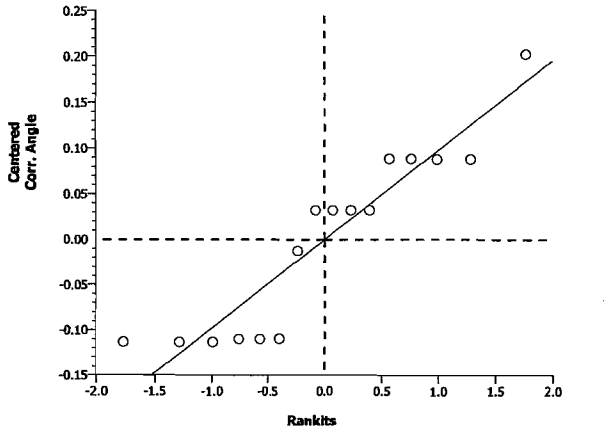
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.17833	8.88539	0.83416	Equal Variances
Distribution	Shapiro-Wilk W	0.93491	0.84420	0.28518	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0373171	0.0373171	1	2.46	0.13920	Non-Significant Effect
Error	0.2124869	0.0151776	14			
Total	0.24980398	0.0524947	15			

Group Comparisons

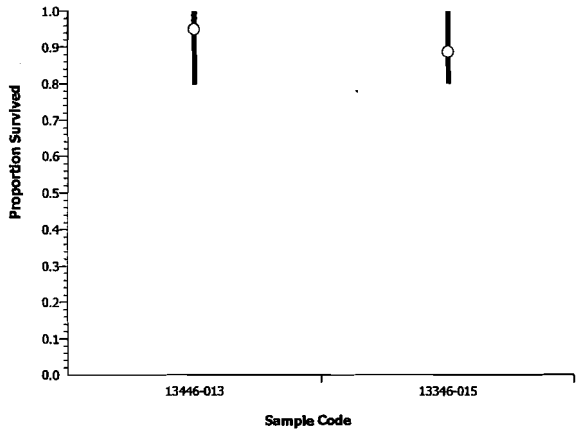
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13346-015	-1.5680	1.76131	0.9304	0.10849	Non-Significant Effect

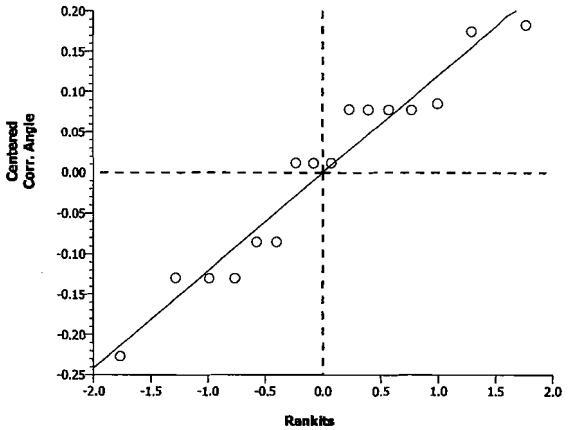
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.81719	8.88539	0.19518	Equal Variances
Distribution	Shapiro-Wilk W	0.94467	0.84420	0.39648	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5883573	0.5883573	1	30.97	0.00007	Significant Effect
Error	0.2660072	0.0190005	14			
Total	0.85436457	0.6073578	15			

Group Comparisons

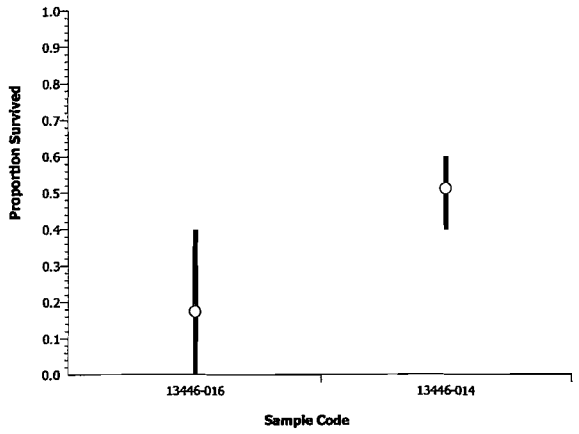
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-014	5.56465	1.76131	0.0000	0.12139	Significant Effect

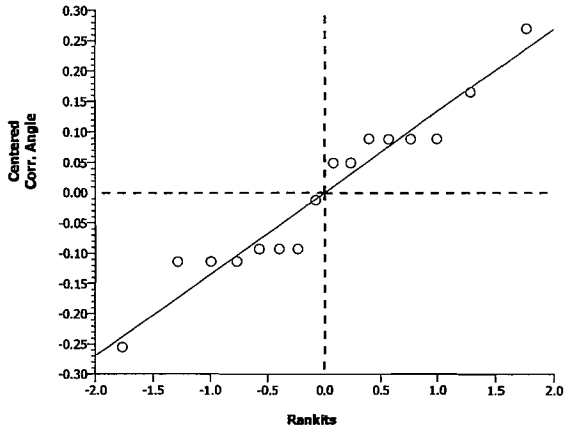
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.70801	8.88539	0.49679	Equal Variances
Distribution	Shapiro-Wilk W	0.95008	0.84420	0.47159	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.709626	2.709626	1	121.87	0.00000	Significant Effect
Error	0.3112614	0.022233	14			
Total	3.02088788	2.7318594	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13346-015	-11.04	1.76131	1.0000	0.13131	Non-Significant Effect

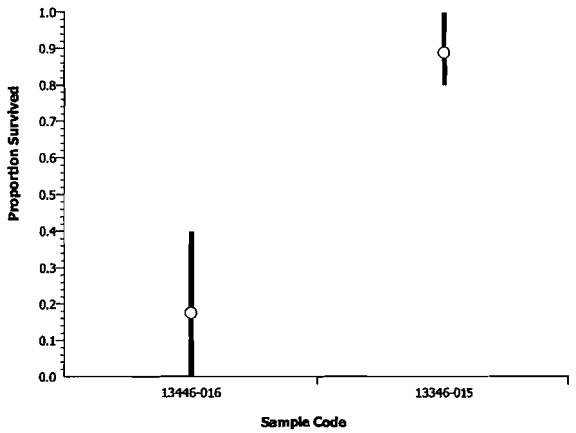
Data Summary

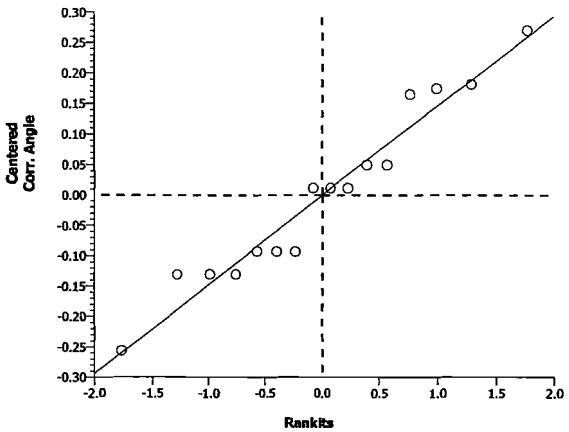
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.12635	8.88539	0.87930	Equal Variances
Distribution	Shapiro-Wilk W	0.84967	0.84420	0.01228	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.4840766	0.4840766	1	51.51	0.00000	Significant Effect
Error	0.131556	0.0093969	14			
Total	0.61563264	0.4934734	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-014	-7.1774	1.76131	1.0000	0.08537	Non-Significant Effect

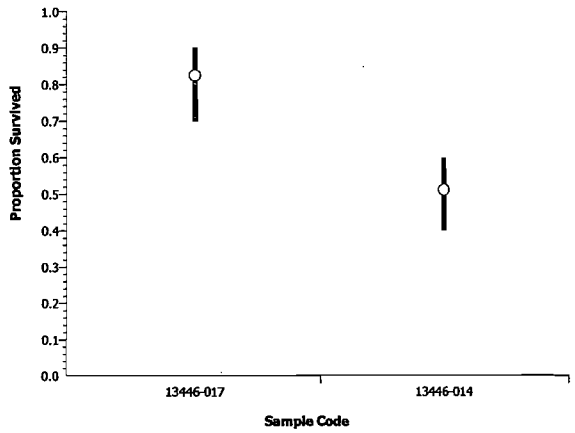
Data Summary

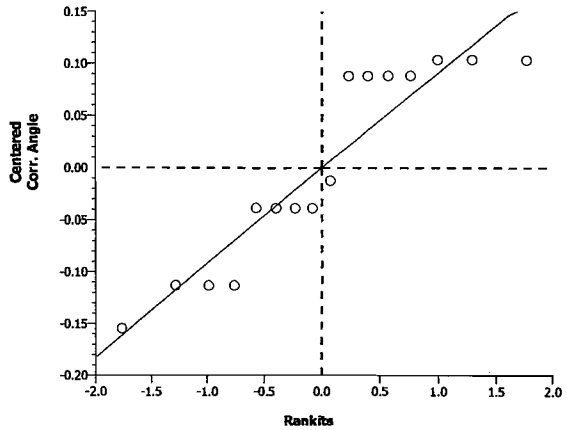
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.85780	8.88539	0.43259	Equal Variances
Distribution	Shapiro-Wilk W	0.92414	0.84420	0.19493	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0335966	0.0335966	1	2.66	0.12517	Non-Significant Effect
Error	0.1768102	0.0126293	14			
Total	0.21040680	0.0462259	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13346-015	1.63101	1.76131	0.0626	0.09897	Non-Significant Effect

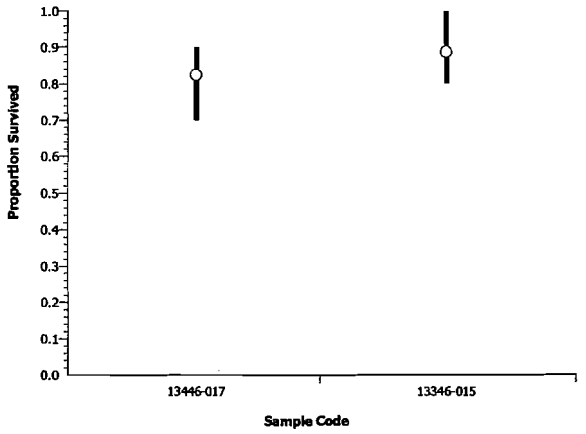
Data Summary

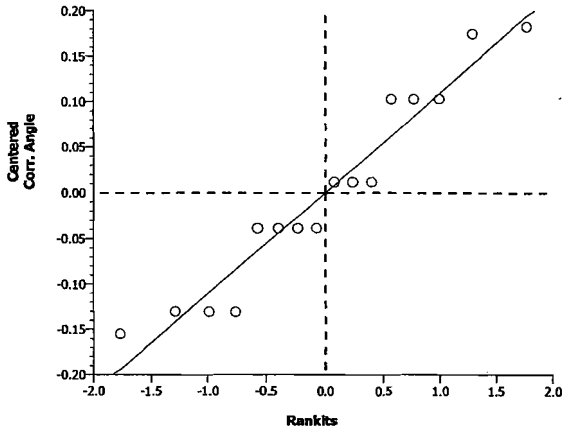
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.39978	8.88539	0.66838	Equal Variances
Distribution	Shapiro-Wilk W	0.78249	0.84420	0.00097	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.149669	1.149669	1	96.25	0.00000	Significant Effect
Error	0.1672327	0.0119452	14			
Total	1.31690140	1.1616139	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-013		13446-014	64		0.0001	4	Significant Effect

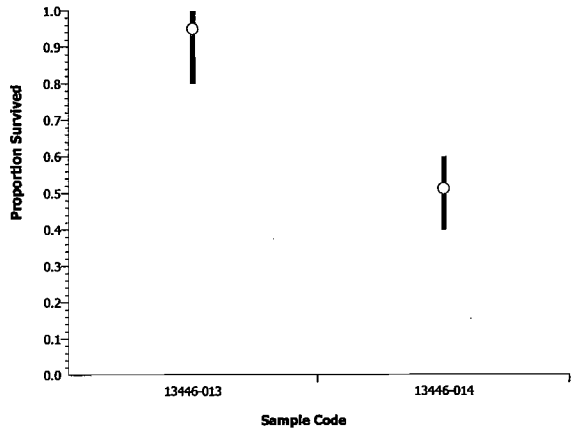
Data Summary

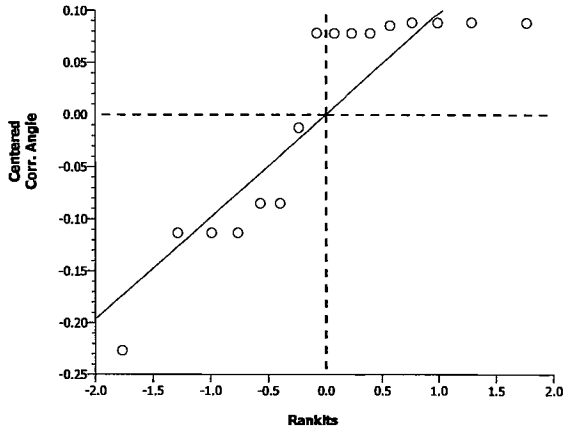
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.95000	0.80000	1.00000	0.07559	1.33410	1.10715	1.41946	0.11805
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	1.00000	1.00000	1.00000	1.00000	0.80000	0.90000	1.00000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.12635	8.88539	0.87930	Equal Variances
Distribution	Shapiro-Wilk W	0.84967	0.84420	0.01228	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.4840766	0.4840766	1	51.51	0.00000	Significant Effect
Error	0.131556	0.0093969	14			
Total	0.61563264	0.4934734	15			

Group Comparisons

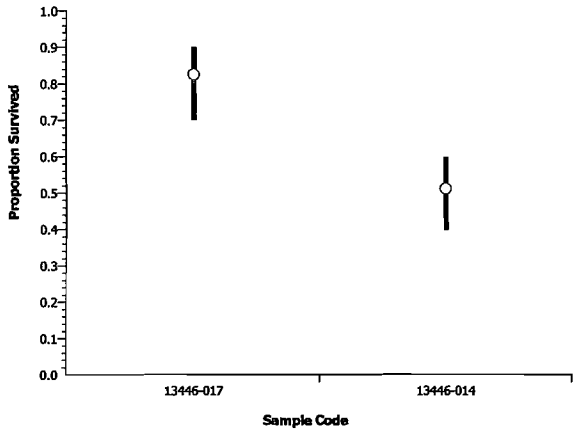
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-014	7.17738	1.76131	0.0000	0.08537	Significant Effect

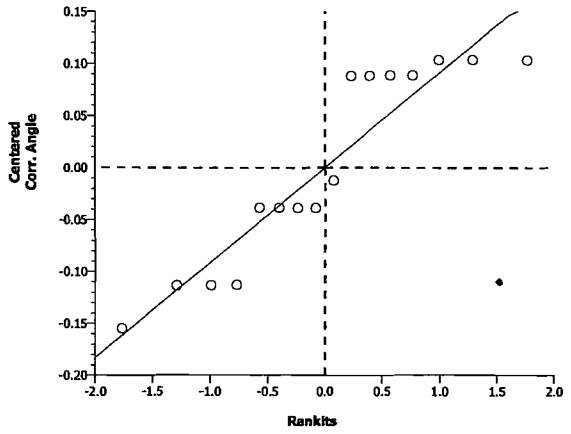
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.66534	8.88539	0.51714	Equal Variances
Distribution	Shapiro-Wilk W	0.89938	0.84420	0.07873	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.004773	0.004773	1	0.36	0.55635	Non-Significant Effect
Error	0.1839604	0.0131400	14			
Total	0.18873334	0.017913	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13346-015	0.60269	1.76131	0.2782	0.10095	Non-Significant Effect

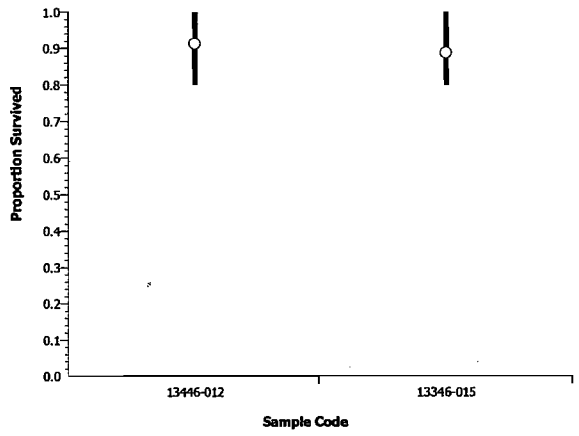
Data Summary

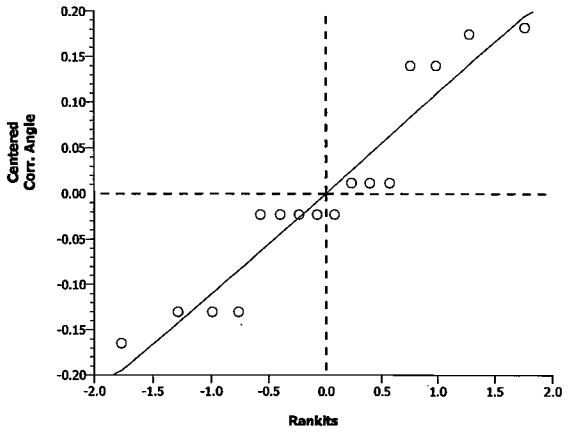
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.85780	8.88539	0.43259	Equal Variances
Distribution	Shapiro-Wilk W	0.92414	0.84420	0.19493	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0335966	0.0335966	1	2.66	0.12517	Non-Significant Effect
Error	0.1768102	0.0126293	14			
Total	0.21040680	0.0462259	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13346-015	-1.6310	1.76131	0.9374	0.09897	Non-Significant Effect

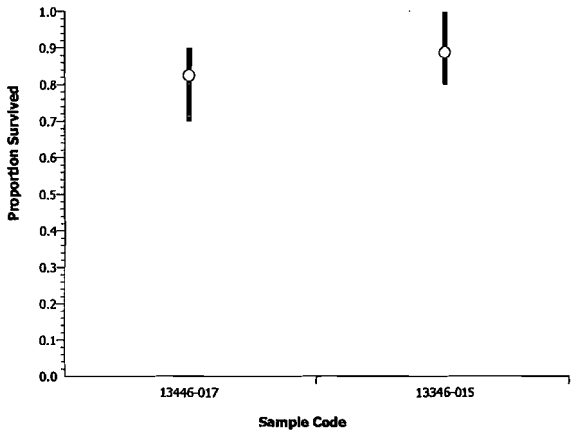
Data Summary

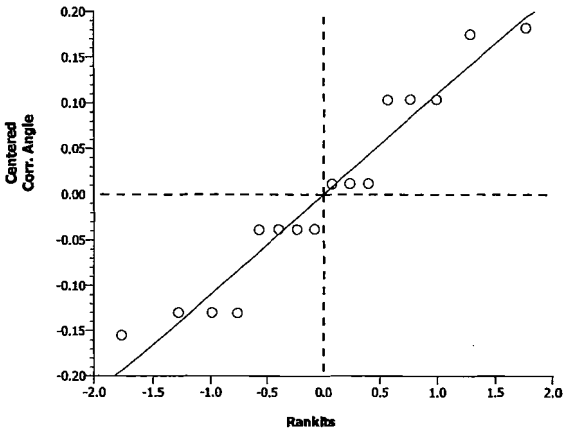
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.82500	0.70000	0.90000	0.07071	1.14586	0.99116	1.24905	0.09401
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.80000	0.90000	0.80000	0.90000	0.70000	0.90000	0.80000	0.80000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.81719	8.88539	0.19518	Equal Variances
Distribution	Shapiro-Wilk W	0.94467	0.84420	0.39648	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5883573	0.5883573	1	30.97	0.00007	Significant Effect
Error	0.2660072	0.0190005	14			
Total	0.85436457	0.6073578	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-014	-5.5647	1.76131	1.0000	0.12139	Non-Significant Effect

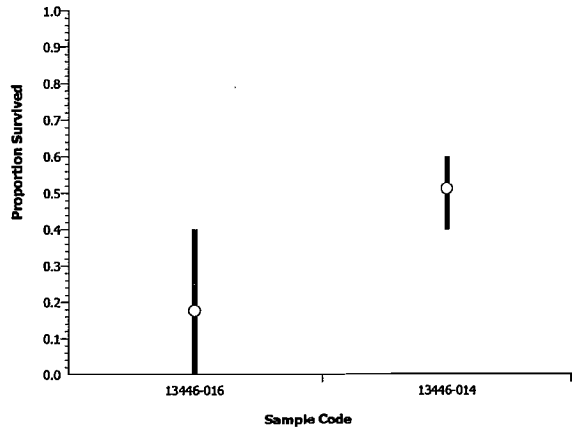
Data Summary

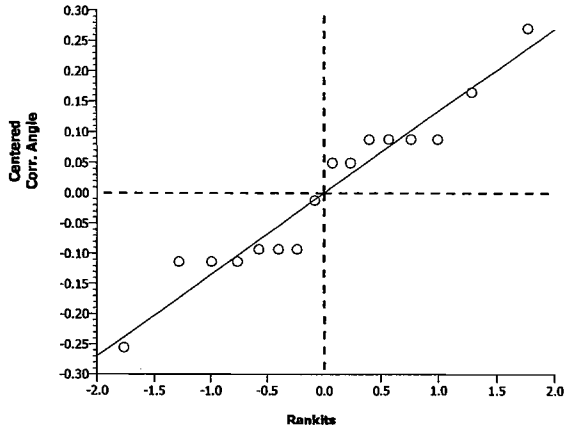
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.17500	0.00000	0.40000	0.12817	0.41446	0.15878	0.68472	0.16747
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.10000	0.20000	0.20000	0.10000	0.30000	0.00000	0.40000	0.10000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.41377	8.88539	0.65922	Equal Variances
Distribution	Shapiro-Wilk W	0.86216	0.84420	0.01961	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.00166	0.00166	1	0.12	0.73587	Non-Significant Effect
Error	0.196242	0.0140173	14			
Total	0.19790193	0.0156772	15			

Group Comparisons

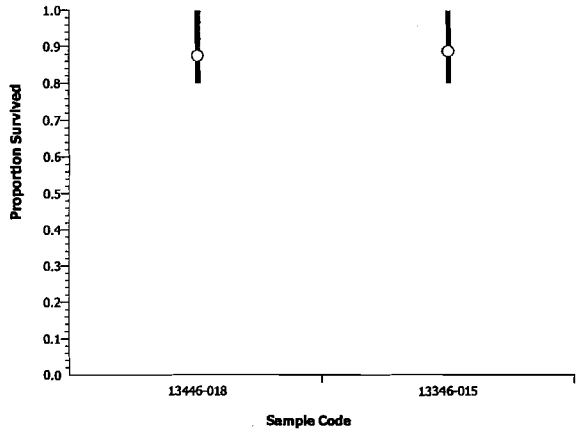
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13346-015	-0.3441	1.76131	0.6321	0.10426	Non-Significant Effect

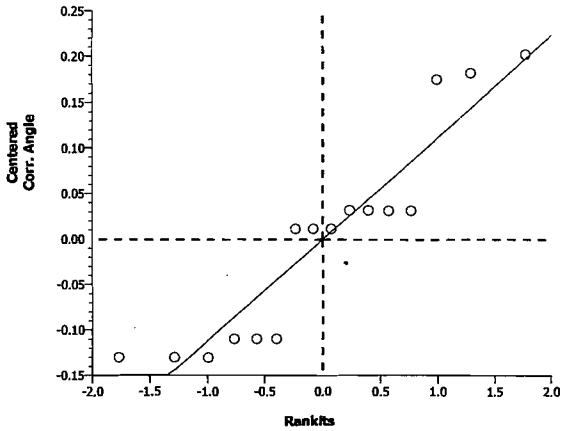
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.87500	0.80000	1.00000	0.07071	1.21714	1.10715	1.41946	0.10777
13346-015	8	0.88750	0.80000	1.00000	0.08345	1.23751	1.10715	1.41946	0.12814

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.90000	0.80000	0.90000	1.00000	0.80000	0.90000	0.80000	0.90000		
13346-015	1.00000	0.80000	0.90000	0.90000	0.80000	0.80000	0.90000	1.00000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00967	8.88539	0.99020	Equal Variances
Distribution	Shapiro-Wilk W	0.90918	0.84420	0.11310	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8989626	0.8989626	1	90.73	0.00000	Significant Effect
Error	0.1387062	0.0099076	14			
Total	1.03766879	0.9088702	15			

Group Comparisons

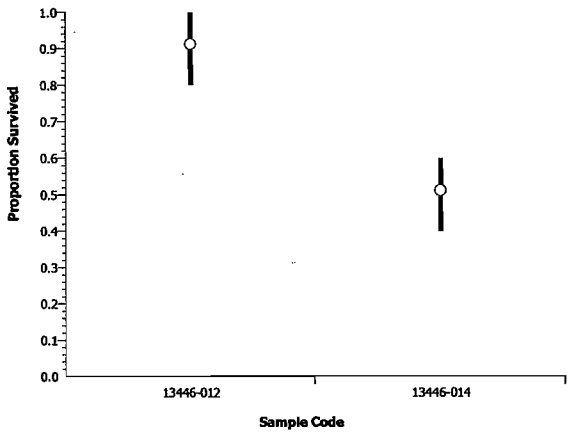
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-014	9.52548	1.76131	0.0000	0.08766	Significant Effect

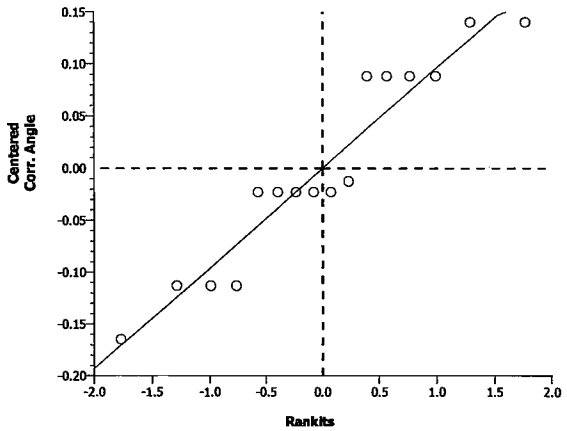
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.91250	0.80000	1.00000	0.06409	1.27205	1.10715	1.41202	0.09930
13446-014	8	0.51250	0.40000	0.60000	0.09910	0.79798	0.68472	0.88608	0.09978

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	1.00000	0.90000		
13446-014	0.50000	0.60000	0.40000	0.60000	0.40000	0.60000	0.40000	0.60000		

Graphics





CETIS Test Summary

Report Date: 01 Aug-05 8:21 PM
Link: 13-3830-0274

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-8161-5537	**Test Type:**	Growth-Survival (10d)	**Duration:**	28d 0h
Start Date:	01 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	29 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Research Organisms, NH
Setup Date:	01 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	15-2759-3311	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:00 PM	**Code:**	13346-015	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 20h (4 °C)	**Station:**	T05BL-004 - 13446-015 - Pond Refere		
Sample No:	06-2942-1705	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	06 Jul-05 12:00 PM	**Code:**	13446-000	**Project:**	Ecologcal Risk Assessment
Receive Date:	06 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Lab Control		
Sample No:	03-5574-1378	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 11:00 AM	**Code:**	13446-001	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	10d 1h (4 °C)	**Station:**	T05PA-001 - 13446-001 - Pond		
Sample No:	06-2098-4840	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 12:30 PM	**Code:**	13446-002	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 23h (4 °C)	**Station:**	T05PD-002 - 13446-002 - Pond		
Sample No:	02-7805-4131	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:00 PM	**Code:**	13446-003	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 21h (4 °C)	**Station:**	T05BR-001 - 13446-003 - Riverine		
Sample No:	07-4822-9464	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:30 PM	**Code:**	13446-004	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 20h (4 °C)	**Station:**	T05PA-003 - 13446-004 - Pond		
Sample No:	09-5133-3778	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-006	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 17h (4 °C)	**Station:**	T05BR-003 - 13446-006 - Riverine		
Sample No:	14-6644-4706	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-007	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 17h (4 °C)	**Station:**	T05PF-004 - 13446-007 - Pond		
Sample No:	11-7563-0513	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 11:00 AM	**Code:**	13446-009	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 1h (4 °C)	**Station:**	T05BR-005 - 13446-009 - Riverine		
Sample No:	10-0504-8146	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 10:45 AM	**Code:**	13446-010	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	9d 1h (4 °C)	**Station:**	T05BR-006 - 13446-010 - Riverine		
Sample No:	09-8620-6643	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 01:20 PM	**Code:**	13446-011	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 22h (4 °C)	**Station:**	T05BR-011 - 13446-011 - Riverine		

CETIS Test Summary

Report Date: 01 Aug-05 8:21 PM
Link: 13-3830-0274

Sample No:	09-4449-7974	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:00 AM	**Code:**	13446-012	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	8d 1h (4 °C)	**Station:**	T05BL-001 - 13446-012 - Riverine Ref		
Sample No:	08-9678-2866	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:30 AM	**Code:**	13446-013	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	8d 0h (4 °C)	**Station:**	T05BL-002 - 13446-013 - Riverine Ref		
Sample No:	15-3550-8902	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 02:30 PM	**Code:**	13446-014	**Project:**	Ecologcal Risk Assessment
Receive Date:	23 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 21h (4 °C)	**Station:**	T05BL-003 - 13446-014 - Pond Refere		
Sample No:	08-7654-4935	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:50 PM	**Code:**	13446-016	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 19h (4 °C)	**Station:**	T05BL-005 - 13446-016 - Riverine Ref		
Sample No:	12-3605-9504	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:00 PM	**Code:**	13446-017	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 19h (4 °C)	**Station:**	T05BL-006 - 13446-017 - Riverine Ref		
Sample No:	04-4912-0227	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:30 PM	**Code:**	13446-018	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	7d 18h (4 °C)	**Station:**	TO5BL-007 - 13446-018 - Riverine Ref		

Mean Dry Weight-mg Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000	8	0.59500	0.54000	0.71000	0.02070	0.05855	9.84%
13446-012	8	0.47500	0.40000	0.52000	0.01658	0.04690	9.87%
13446-013	8	0.35375	0.25000	0.42000	0.02078	0.05878	16.62%
13446-016	8	0.31571	0.15000	0.40000	0.03085	0.08162	25.85%
13446-017	8	0.28250	0.19000	0.36000	0.01750	0.04950	17.52%
13446-018	8	0.39875	0.28000	0.48000	0.02423	0.06854	17.19%
13446-014	8	0.23625	0.13000	0.30000	0.01889	0.05344	22.62%
13346-015	8	0.28875	0.22000	0.34000	0.01368	0.03871	13.40%
13446-001	8	0.30000	0.08000	0.49000	0.08515	0.19039	63.46%
13446-002	8	0.52714	0.28000	0.95000	0.08552	0.22625	42.92%
13446-004	8	0.08000	0.08000	0.08000			
13446-007	8	0.43875	0.23000	0.58000	0.04244	0.12005	27.36%
13446-003	8	0.41750	0.18000	0.58000	0.04220	0.11937	28.59%
13446-006	8	0.40000	0.22000	0.48000	0.03311	0.09366	23.41%
13446-009	8	0.31500	0.18000	0.43000	0.02970	0.08401	26.67%
13446-010	8	0.14000	0.09000	0.19000	0.05000	0.07071	50.51%
13446-011	8	0.49375	0.40000	0.56000	0.02345	0.06632	13.43%

CETIS Test Summary

Report Date: 01 Aug-05 8:21 PM
Link: 13-3830-0274

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000
13446-012	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000
13446-013	0.25000	0.34000	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000
13446-016	0.35000	0.29000	0.40000	0.31000	0.37000	N/A	0.15000	0.34000
13446-017	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000	0.28000
13446-018	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000
13446-014	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000
13346-015	0.31000	0.29000	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000
13446-001	N/A	0.08000	0.49000	0.11000	N/A	N/A	0.40000	0.42000
13446-002	0.60000	N/A	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000
13446-004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.08000
13446-007	0.45000	0.23000	0.58000	0.47000	0.51000	0.56000	0.32000	0.39000
13446-003	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000
13446-006	0.48000	0.42000	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000
13446-009	0.36000	0.29000	0.32000	0.29000	0.24000	0.43000	0.41000	0.18000
13446-010	N/A	N/A	N/A	0.09000	N/A	N/A	0.19000	N/A
13446-011	0.54000	0.56000	0.40000	0.55000	0.44000	0.54000	0.41000	0.51000

CETIS Data Worksheet

Report Date: 01 Aug-05 8:06 PM
Link: 13-3830-0274

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Start Date: 01 Jul-05 12:00 PM
Ending Date: 29 Jul-05 12:00 PM
Sample Date: 06 Jul-05 12:00 PM
Species: Hyalella azteca
Protocol: EPA/600/R-99/064 (2000)
Material: Freshwater Sedment
Sample Code: 13446-000
Sample Source: Blackstone River
Sample Station: Lab Control

Sample Code	Rep	Pos	Exposed	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Total Weight-m	are Weight-m	Pan Coun
13446-000	1	103	10	9										0.71	0	1
13446-000	2	100	10	9										0.57	0	1
13446-000	3	89	10	9										0.61	0	1
13446-000	4	58	10	8										0.56	0	1
13446-000	5	127	10	9										0.57	0	1
13446-000	6	77	10	10										0.54	0	1
13446-000	7	72	10	10										0.55	0	1
13446-000	8	14	10	9										0.65	0	1
13446-012	1	47	10	9										0.47	0	1
13446-012	2	33	10	9										0.4	0	1
13446-012	3	104	10	9										0.44	0	1
13446-012	4	8	10	8										0.43	0	1
13446-012	5	109	10	10										0.52	0	1
13446-012	6	27	10	9										0.51	0	1
13446-012	7	35	10	10										0.51	0	1
13446-012	8	90	10	9										0.52	0	1
13446-013	1	9	10	9										0.25	0	1
13446-013	2	60	10	10										0.34	0	1
13446-013	3	42	10	10										0.4	0	1
13446-013	4	6	10	10										0.32	0	1
13446-013	5	63	10	10										0.32	0	1
13446-013	6	110	10	8										0.42	0	1
13446-013	7	133	10	9										0.36	0	1
13446-013	8	17	11	11										0.42	0	1
13446-016	1	26	10	1										0.35	0	1
13446-016	2	23	10	2										0.29	0	1
13446-016	3	105	10	2										0.4	0	1
13446-016	4	71	10	1										0.31	0	1
13446-016	5	13	10	3										0.37	0	1
13446-016	6	50	10	0											0	
13446-016	7	53	10	4										0.15	0	1
13446-016	8	130	10	1										0.34	0	1
13446-017	1	119	10	8										0.27	0	1
13446-017	2	20	10	9										0.28	0	1
13446-017	3	22	10	8										0.27	0	1
13446-017	4	111	10	9										0.36	0	1
13446-017	5	10	10	7										0.28	0	1
13446-017	6	32	10	9										0.33	0	1
13446-017	7	7	10	8										0.19	0	1
13446-017	8	4	10	8										0.28	0	1
13446-018	1	117	10	9										0.38	0	1
13446-018	2	113	10	8										0.44	0	1
13446-018	3	88	10	9										0.4	0	1
13446-018	4	15	11	11										0.34	0	1
13446-018	5	73	10	8										0.48	0	1
13446-018	6	70	10	9										0.28	0	1
13446-018	7	107	10	8										0.39	0	1
13446-018	8	51	10	9										0.48	0	1
13446-014	1	101	10	5										0.26	0	1
13446-014	2	120	10	6										0.19	0	1
13446-014	3	124	10	4										0.13	0	1
13446-014	4	106	10	6										0.26	0	1
13446-014	5	93	10	4										0.27	0	1

CETIS Data Worksheet

Report Date: 01 Aug-05 8:06 PM
Link: 13-3830-0274

Sample Code	Rep	Pos	Exposed	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Total Weight-mg	are Weight-mg	Pan Coun
13446-014	6	128	10	6										0.23	0	1
13446-014	7	38	10	4										0.25	0	1
13446-014	8	57	10	6										0.3	0	1
13346-015	1	87	10	10										0.31	0	1
13346-015	2	64	10	8										0.29	0	1
13346-015	3	94	10	9										0.28	0	1
13346-015	4	134	10	9										0.34	0	1
13346-015	5	86	10	8										0.22	0	1
13346-015	6	126	10	8										0.25	0	1
13346-015	7	66	10	9										0.32	0	1
13346-015	8	95	11	11										0.3	0	1
13446-001	1	82	10	0											0	
13446-001	2	3	10	1										0.08	0	1
13446-001	3	54	10	1										0.49	0	1
13446-001	4	28	10	1										0.11	0	1
13446-001	5	69	10	1											0	
13446-001	6	49	10	0											0	
13446-001	7	41	10	2										0.4	0	1
13446-001	8	25	10	1										0.42	0	1
13446-002	1	5	10	2										0.6	0	1
13446-002	2	80	10	0											0	
13446-002	3	65	10	1										0.65	0	1
13446-002	4	81	10	4										0.41	0	1
13446-002	5	36	10	2										0.42	0	1
13446-002	6	12	10	1										0.95	0	1
13446-002	7	115	10	1										0.28	0	1
13446-002	8	116	10	2										0.38	0	1
13446-004	1	68	10	0											0	
13446-004	2	34	10	0											0	
13446-004	3	123	10	0											0	
13446-004	4	83	10	0											0	
13446-004	5	129	10	0											0	
13446-004	6	37	10	0											0	
13446-004	7	19	10	0											0	
13446-004	8	40	10	1										0.08	0	1
13446-007	1	112	10	8										0.45	0	1
13446-007	2	114	10	7										0.23	0	1
13446-007	3	102	10	7										0.58	0	1
13446-007	4	62	10	7										0.47	0	1
13446-007	5	55	10	8										0.51	0	1
13446-007	6	121	10	4										0.56	0	1
13446-007	7	61	10	7										0.32	0	1
13446-007	8	2	10	6										0.39	0	1
13446-003	1	125	10	10										0.43	0	1
13446-003	2	46	10	10										0.58	0	1
13446-003	3	96	10	7										0.45	0	1
13446-003	4	98	10	10										0.52	0	1
13446-003	5	92	10	8										0.36	0	1
13446-003	6	59	10	9										0.18	0	1
13446-003	7	135	10	9										0.38	0	1
13446-003	8	16	10	9										0.44	0	1
13446-006	1	136	10	9										0.48	0	1
13446-006	2	43	10	9										0.42	0	1
13446-006	3	75	10	6										0.3	0	1
13446-006	4	84	10	10										0.43	0	1
13446-006	5	67	10	9										0.47	0	1
13446-006	6	45	10	9										0.4	0	1
13446-006	7	29	10	9										0.48	0	1

CETIS Data Worksheet

Report Date: 01 Aug-05 8:06 PM
Link: 13-3830-0274

Sample Code	Rep	Pos	Exposed	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Survivd	Total Weight-m	are Weight-m	Pan Coun
13446-006	8	91	11	11										0.22	0	1
13446-009	1	52	10	9										0.36	0	1
13446-009	2	56	10	9										0.29	0	1
13446-009	3	76	10	8										0.32	0	1
13446-009	4	85	10	10										0.29	0	1
13446-009	5	99	10	8										0.24	0	1
13446-009	6	31	10	10										0.43	0	1
13446-009	7	48	10	7										0.41	0	1
13446-009	8	39	10	8										0.18	0	1
13446-010	1	108	10	0											0	
13446-010	2	24	10	0											0	
13446-010	3	21	10	0											0	
13446-010	4	11	10	1										0.09	0	1
13446-010	5	1	10	0											0	
13446-010	6	97	10	0											0	
13446-010	7	18	10	1										0.19	0	1
13446-010	8	74	10	0											0	
13446-011	1	118	10	10										0.54	0	1
13446-011	2	131	10	10										0.56	0	1
13446-011	3	44	10	8										0.4	0	1
13446-011	4	78	10	10										0.55	0	1
13446-011	5	30	10	9										0.44	0	1
13446-011	6	122	10	8										0.54	0	1
13446-011	7	132	10	9										0.41	0	1
13446-011	8	79	10	10										0.51	0	1

STUDY: 13446
CLIENT: BBL
PROJECT: Blackstone River, RI
TASK: Hyalella azteca 28 Day Exposure Assay
DATA: Growth Data
START DATE: 07/07/05
DATE ENDED: 07/27/05

Project Site			Replicat	Mean Dry Weight (mg)	Site Mean Dry Weight (mg)		
Lab Control	13446-000		A	0.71	0.597	0.0597	10.01%
			B	0.57			
			C	0.61			
			D	0.56			
			E	0.57			
			F	0.54			
			G	0.55			
			H	0.65			
T05PA-001	13446-001	Pond	A		0.300	0.1904	63.46%
			B	0.08			
			C	0.49			
			D	0.11			
			E				
			F				
			G	0.40			
			H	0.42			
T05PD-002	13446-002	Pond	A	0.60	0.528	0.2265	42.91%
			B				
			C	0.65			
			D	0.41			
			E	0.42			
			F	0.95			
			G	0.28			
			H	0.38			
T05BR-001	13446-003	Riverine	A	0.43	0.416	0.1189	28.59%
			B	0.58			
			C	0.45			
			D	0.52			
			E	0.36			
			F	0.18			
			G	0.38			
			H	0.44			
T05PA-003	13446-004	Pond	A		0.080	0.0000	0.00%
			B				
			C				
			D				
			E				
			F				
			G				
			H	0.08			
T05BR-003	13446-006	Riverine	A	0.48	0.401	0.0935	23.28%
			B	0.42			

			C	0.30			
			D	0.43			
			E	0.47			
			F	0.40			
			G	0.48			
			H	0.22			
T05PF-004	13446-007	Pond	A	0.45	0.439	0.1196	27.24%
			B	0.23			
			C	0.58			
			D	0.47			
			E	0.51			
			F	0.56			
			G	0.32			
			H	0.39			
T05BR-005	13446-009	Riverine	A	0.36	0.314	0.0838	26.68%
			B	0.29			
			C	0.32			
			D	0.29			
			E	0.24			
			F	0.43			
			G	0.41			
			H	0.18			
T05BR-006	13446-010	Riverine	A		0.140	0.0707	50.51%
			B				
			C				
			D	0.09			
			E				
			F				
			G	0.19			
			H				
T05BR-007	13446-011	Riverine	A	0.54	0.494	0.0664	13.46%
			B	0.56			
			C	0.40			
			D	0.55			
			E	0.44			
			F	0.54			
			G	0.41			
			H	0.51			
T05BL-001	13446-012	Reference	A	0.47	0.475	0.0474	9.99%
			B	0.40			
			C	0.44			
			D	0.43			
			E	0.52			
			F	0.51			
			G	0.51			
			H	0.52			
T05BL-002	13446-013	Reference	A	0.25	0.352	0.0601	17.06%
			B	0.34			
			C	0.40			
			D	0.32			
			E	0.32			
			F	0.42			
			G	0.36			
			H	0.42			

T05BL-003	13446-014	Reference	A	0.26	0.237	0.0532	22.44%
			B	0.19			
			C	0.13			
			D	0.26			
			E	0.27			
			F	0.23			
			G	0.25			
			H	0.30			
T05BL-004	13446-015	Reference	A	0.31	0.290	0.0394	13.61%
			B	0.29			
			C	0.28			
			D	0.34			
			E	0.22			
			F	0.25			
			G	0.32			
			H	0.30			
T05BL-005	13446-016	Reference	A	0.35	0.315	0.0804	25.57%
			B	0.29			
			C	0.40			
			D	0.31			
			E	0.37			
			F				
			G	0.15			
			H	0.34			
T05BL-006	13446-017	Reference	A	0.27	0.282	0.0506	17.92%
			B	0.28			
			C	0.27			
			D	0.36			
			E	0.28			
			F	0.33			
			G	0.19			
			H	0.28			
T05BL-007	13446-018	Reference	A	0.38	0.399	0.0684	17.15%
			B	0.44			
			C	0.40			
			D	0.34			
			E	0.48			
			F	0.28			
			G	0.39			
			H	0.48			

STUDY: 13446
CLIENT: BBL
PROJECT: Blackstone River, RI
TASK: Hyalella azteca 28 Day Exposure Assay
DATA: Growth Data
START DATE: 07/07/05
DATE ENDED: 07/27/05

Project Site			Replicat	Tare Weight	Total Weight	Total Dry Weight
Lab Control	13446-000		A	0.20735	0.21378	0.00643
			B	0.21093	0.21609	0.00516
			C	0.20872	0.21423	0.00551
			D	0.20752	0.21203	0.00451
			E	0.20846	0.21356	0.00510
			F	0.20763	0.21305	0.00542
			G	0.20796	0.21345	0.00549
			H	0.20860	0.21447	0.00587
T05PA-001	13446-001	Pond	A			
			B	0.20899	0.20907	0.00008
			C	0.20861	0.20910	0.00049
			D	0.20810	0.20821	0.00011
			E			
			F			
			G	0.20697	0.20777	0.00080
			H	0.20849	0.20891	0.00042
T05PD-002	13446-002	Pond	A	0.20788	0.20909	0.00121
			B			
			C	0.20800	0.20865	0.00065
			D	0.20759	0.20923	0.00164
			E	0.20796	0.20880	0.00084
			F	0.20793	0.20888	0.00095
			G	0.20942	0.20970	0.00028
			H	0.20766	0.20842	0.00076
T05BR-001	13446-003	Riverine	A	0.20722	0.21149	0.00427
			B	0.20836	0.21410	0.00574
			C	0.20766	0.21078	0.00312
			D	0.20767	0.21286	0.00519
			E	0.20624	0.20914	0.00290
			F	0.20830	0.20990	0.00160
			G	0.21308	0.21646	0.00338
			H	0.20845	0.21244	0.00399
T05PA-003	13446-004	Pond	A			
			B			
			C			
			D			
			E			
			F			
			G			
			H	0.20937	0.20945	0.00008
T05BR-003	13446-006	Riverine	A	0.20888	0.21317	0.00429
			B	0.21102	0.21484	0.00382

			C	0.20987	0.21169	0.00182
			D	0.20972	0.21405	0.00433
			E	0.20928	0.21350	0.00422
			F	0.20744	0.21105	0.00361
			G	0.20888	0.21324	0.00436
			H	0.20829	0.21071	0.00242
T05PF-004	13446-007	Pond	A	0.21058	0.21419	0.00361
			B	0.20980	0.21141	0.00161
			C	0.20980	0.21385	0.00405
			D	0.21049	0.21376	0.00327
			E	0.20790	0.21198	0.00408
			F	0.20834	0.21059	0.00225
			G	0.20925	0.21152	0.00227
			H	0.20809	0.21042	0.00233
T05BR-005	13446-009	Riverine	A	0.20906	0.21228	0.00322
			B	0.20724	0.20981	0.00257
			C	0.20807	0.21062	0.00255
			D	0.20759	0.21046	0.00287
			E	0.20880	0.21076	0.00196
			F	0.20855	0.21287	0.00432
			G	0.21066	0.21351	0.00285
			H	0.20988	0.21131	0.00143
T05BR-006	13446-010	Riverine	A			
			B			
			C			
			D	0.21003	0.21012	0.00009
			E			
			F			
			G	0.20818	0.20837	0.00019
			H			
T05BR-007	13446-011	Riverine	A	0.21075	0.21611	0.00536
			B	0.20735	0.21298	0.00563
			C	0.20898	0.21221	0.00323
			D	0.21089	0.21641	0.00552
			E	0.20909	0.21301	0.00392
			F	0.20586	0.21019	0.00433
			G	0.20875	0.21244	0.00369
			H	0.20815	0.21322	0.00507
T05BL-001	13446-012	Reference	A	0.20859	0.21281	0.00422
			B	0.20796	0.21158	0.00362
			C	0.20850	0.21213	0.00363
			D	0.20821	0.21163	0.00342
			E	0.20871	0.21390	0.00519
			F	0.20791	0.21253	0.00462
			G	0.20678	0.21191	0.00513
			H	0.20844	0.21310	0.00466
T05BL-002	13446-013	Reference	A	0.20759	0.20981	0.00222
			B	0.20778	0.21118	0.00340
			C	0.20549	0.20949	0.00400
			D	0.20579	0.20895	0.00316
			E	0.20847	0.21163	0.00316
			F	0.20818	0.21153	0.00335
			G	0.20782	0.21107	0.00325
			H	0.21134	0.21596	0.00462

T05BL-003	13446-014	Reference	A	0.20983	0.21112	0.00129
			B	0.20898	0.21012	0.00114
			C	0.20880	0.20932	0.00052
			D	0.20846	0.21005	0.00159
			E	0.20837	0.20945	0.00108
			F	0.20757	0.20897	0.00140
			G	0.20815	0.20916	0.00101
			H	0.20916	0.21094	0.00178
T05BL-004	13446-015	Reference	A	0.20856	0.21166	0.00310
			B	0.20818	0.21047	0.00229
			C	0.20833	0.21083	0.00250
			D	0.20767	0.21075	0.00308
			E	0.20841	0.21016	0.00175
			F	0.20838	0.21042	0.00204
			G	0.20834	0.21125	0.00291
			H	0.20868	0.21201	0.00333
T05BL-005	13446-016	Reference	A	0.20880	0.20915	0.00035
			B	0.20803	0.20861	0.00058
			C	0.20820	0.20899	0.00079
			D	0.20892	0.20923	0.00031
			E	0.20916	0.21026	0.00110
			F			
			G	0.20787	0.20847	0.00060
			H	0.20837	0.20871	0.00034
T05BL-006	13446-017	Reference	A	0.20907	0.21122	0.00215
			B	0.20799	0.21053	0.00254
			C	0.20843	0.21056	0.00213
			D	0.20772	0.21095	0.00323
			E	0.20874	0.21071	0.00197
			F	0.20860	0.21160	0.00300
			G	0.20783	0.20933	0.00150
			H	0.20839	0.21063	0.00224
T05BL-007	13446-018	Reference	A	0.20952	0.21297	0.00345
			B	0.21031	0.21382	0.00351
			C	0.20894	0.21256	0.00362
			D	0.20815	0.21187	0.00372
			E	0.20877	0.21259	0.00382
			F	0.20899	0.21148	0.00249
			G	0.20901	0.21217	0.00316
			H	0.20966	0.21395	0.00429

CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.27287	8.88539	0.75835	Equal Variances
Distribution	Shapiro-Wilk W	0.88927	0.84420	0.05406	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0784000	0.0784000	1	19.97	0.00053	Significant Effect
Error	0.054975	0.0039268	14			
Total	0.13337501	0.0823268	15			

Group Comparisons

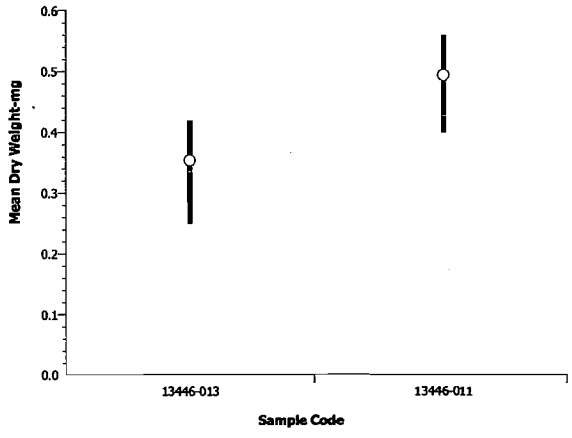
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-011	-4.4683	1.76131	0.9997	0.05519	Non-Significant Effect

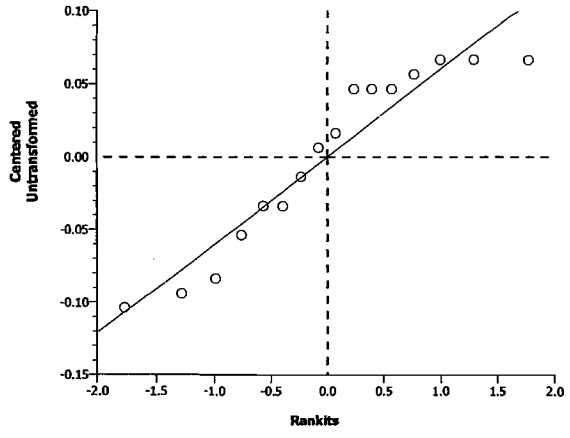
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35375	0.25000	0.42000	0.05878				
13446-011	8	0.49375	0.40000	0.56000	0.06632				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.25000	0.34000	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000		
13446-011	0.54000	0.56000	0.40000	0.55000	0.44000	0.54000	0.41000	0.51000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.86697	8.88539	0.42899	Equal Variances
Distribution	Shapiro-Wilk W	0.89308	0.84420	0.06230	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	6.250E-06	6.250E-06	1	0.00	0.97613	Non-Significant Effect
Error	0.0942875	0.0067348	14			
Total	0.09429374	0.0067411	15			

Group Comparisons

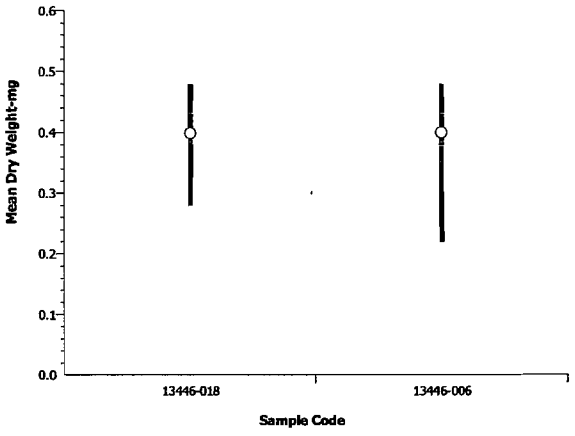
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-006	-0.0305	1.76131	0.5119	0.07227	Non-Significant Effect

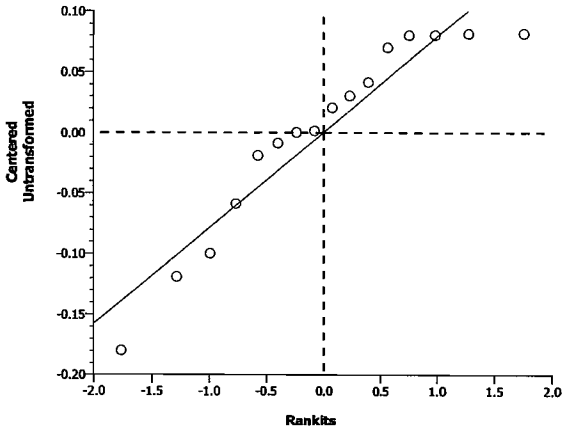
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39875	0.28000	0.48000	0.06854				
13446-006	8	0.40000	0.22000	0.48000	0.09366				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000		
13446-006	0.48000	0.42000	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.55844	8.88539	0.57261	Equal Variances
Distribution	Shapiro-Wilk W	0.93878	0.84420	0.32561	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0576	0.0576	1	20.47	0.00048	Significant Effect
Error	0.0394	0.0028143	14			
Total	0.09699999	0.0604143	15			

Group Comparisons

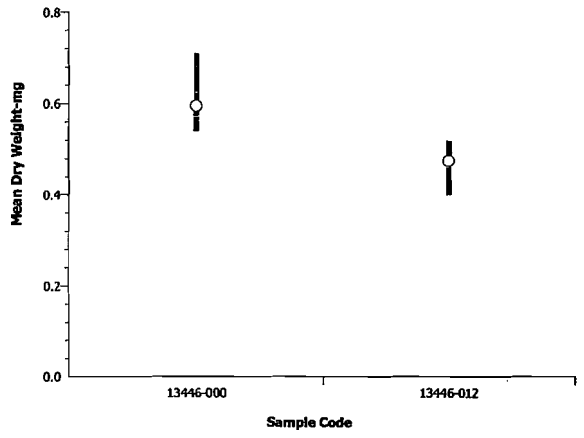
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-012	4.52405	1.76131	0.0002	0.04672	Significant Effect

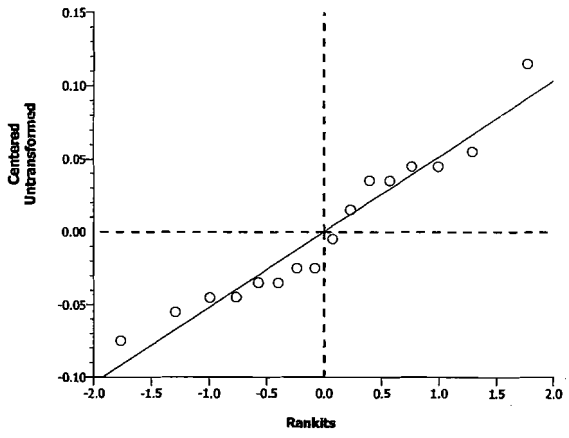
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-012	8	0.47500	0.40000	0.52000	0.04690				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-012	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.53850	8.88539	0.24219	Equal Variances
Distribution	Shapiro-Wilk W	0.89459	0.84420	0.06590	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0085563	0.0085563	1	1.40	0.25649	Non-Significant Effect
Error	0.0855875	0.0061134	14			
Total	0.09414374	0.0146696	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-006	-1.1830	1.76131	0.8718	0.06886	Non-Significant Effect

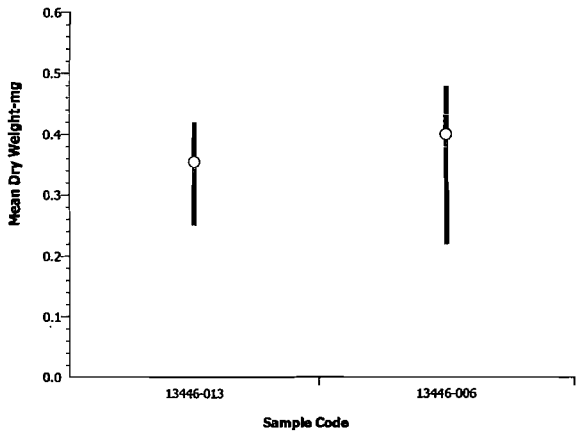
Data Summary

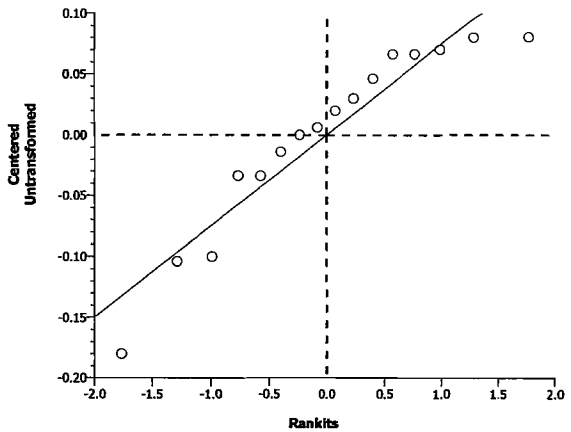
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35375	0.25000	0.42000	0.05878				
13446-006	8	0.40000	0.22000	0.48000	0.09366				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.25000	0.34000	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000		
13446-006	0.48000	0.42000	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	34.16766	9.15534	0.00015	Unequal Variances
Distribution	Shapiro-Wilk W	0.88817	0.83526	0.06497	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2121696	0.2121696	1	8.68	0.01134	Significant Effect
Error	0.3176304	0.0244331	13			
Total	0.52979998	0.2366027	14			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-002	-2.7527	1.94318	0.9834	0.16829	Non-Significant Effect

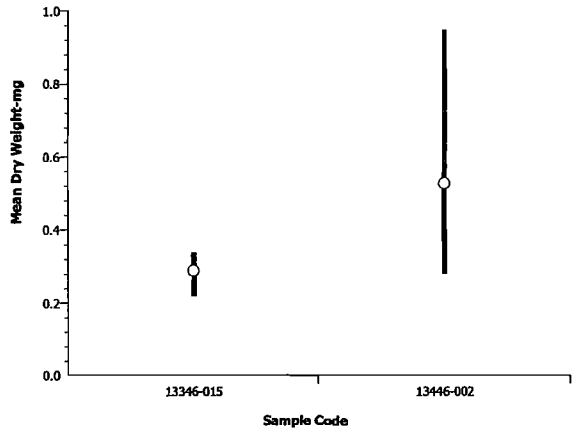
Data Summary

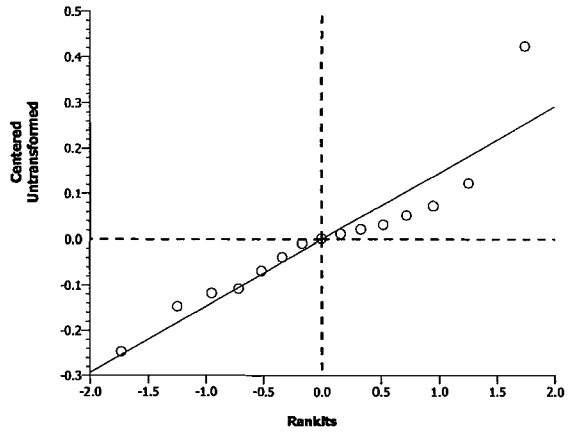
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28875	0.22000	0.34000	0.03871				
13446-002	7	0.52714	0.28000	0.95000	0.22625				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.29000	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000		
13446-002	0.60000	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:11 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.39942	8.88539	0.66862	Equal Variances
Distribution	Shapiro-Wilk W	0.95800	0.84420	0.59752	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.390625	0.390625	1	132.90	0.00000	Significant Effect
Error	0.04115	0.0029393	14			
Total	0.43177496	0.3935643	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-017	11.5281	1.76131	0.0000	0.04774	Significant Effect

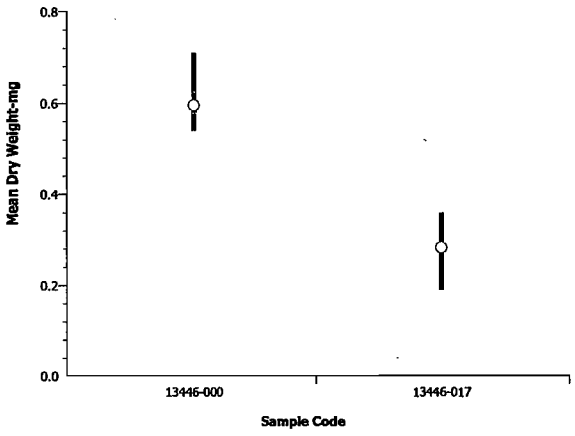
Data Summary

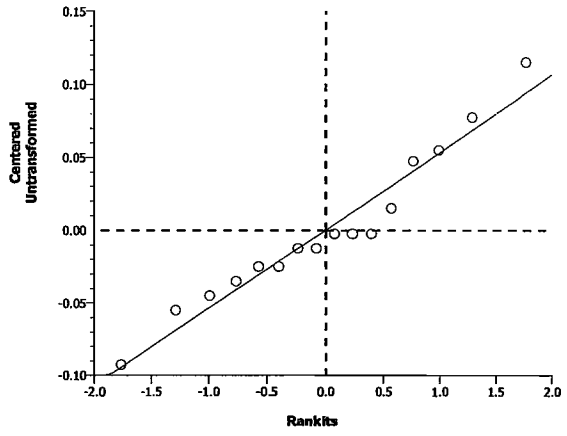
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-017	8	0.28250	0.19000	0.36000	0.04950				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-017	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000	0.28000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunn-Sidak Adj t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Distribution	Shapiro-Wilk W	0.96034	0.76370	0.77768	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0387347	0.0387347	1	25.85	0.00142	Significant Effect
Error	0.0104875	0.0014982	7			
Total	0.04922222	0.0402329	8			

Group Comparisons

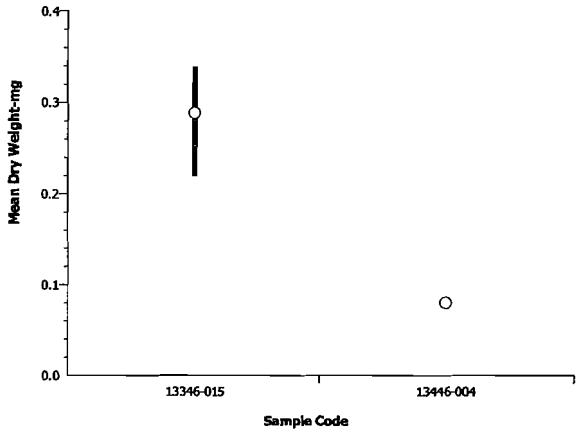
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-004	5.08468	1.89458	0.0007	0.07778	Significant Effect

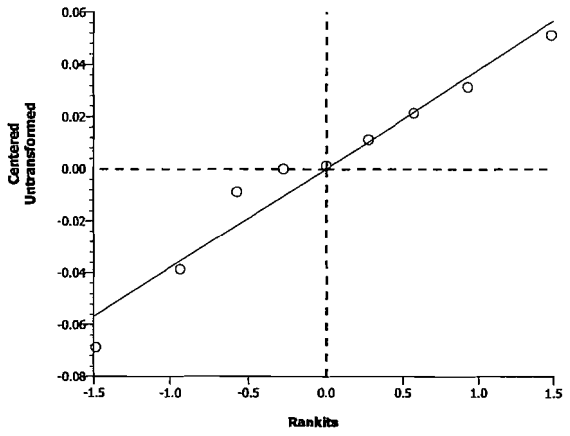
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28875	0.22000	0.34000	0.03871				
13446-004	1	0.08000	0.08000	0.08000					

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.29000	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000		
13446-004	0.08000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.79519	8.88539	0.45813	Equal Variances
Distribution	Shapiro-Wilk W	0.91345	0.84420	0.13225	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1785063	0.1785063	1	52.13	0.00000	Significant Effect
Error	0.0479375	0.0034241	14			
Total	0.22644376	0.1819304	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-011	-7.2203	1.76131	1.0000	0.05153	Non-Significant Effect

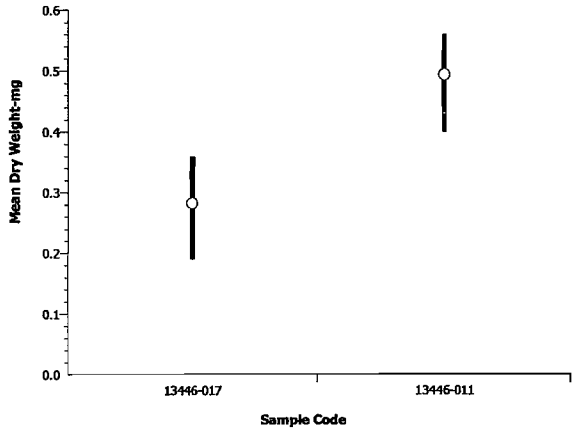
Data Summary

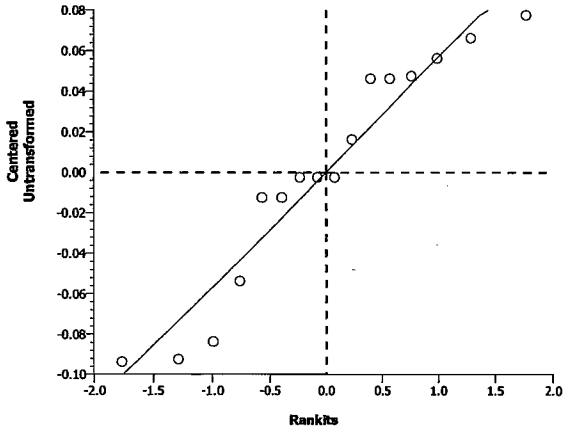
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28250	0.19000	0.36000	0.04950				
13446-011	8	0.49375	0.40000	0.56000	0.06632				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000	0.28000		
13446-011	0.54000	0.56000	0.40000	0.55000	0.44000	0.54000	0.41000	0.51000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:13 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.20365	8.88539	0.07755	Equal Variances
Distribution	Shapiro-Wilk W	0.96001	0.84420	0.63165	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0976563	0.0976563	1	10.95	0.00517	Significant Effect
Error	0.1248875	0.0089205	14			
Total	0.22254375	0.1065768	15			

Group Comparisons

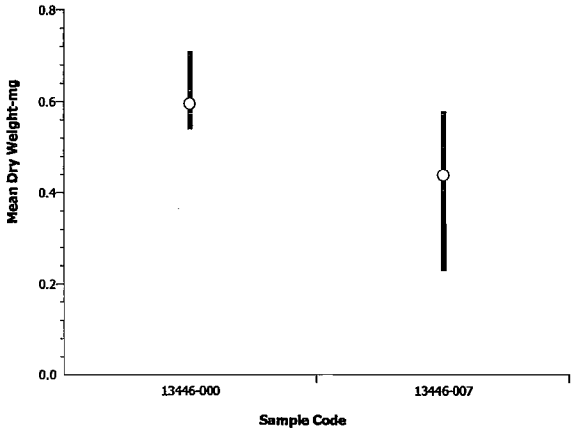
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-007	3.30868	1.76131	0.0026	0.08318	Significant Effect

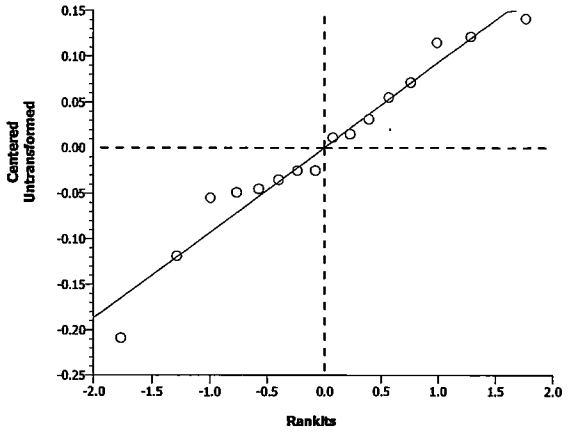
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-007	8	0.43875	0.23000	0.58000	0.12005				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-007	0.45000	0.23000	0.58000	0.47000	0.51000	0.56000	0.32000	0.39000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	9.61978	8.88539	0.00790	Unequal Variances
Distribution	Shapiro-Wilk W	0.95386	0.84420	0.52959	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.09	0.09	1	11.31	0.00464	Significant Effect
Error	0.111375	0.0079554	14			
Total	0.20137499	0.0979553	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-007	-3.3635	1.85955	0.9951	0.08293	Non-Significant Effect

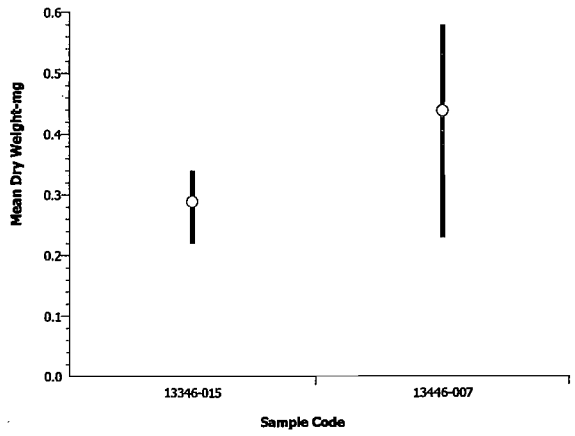
Data Summary

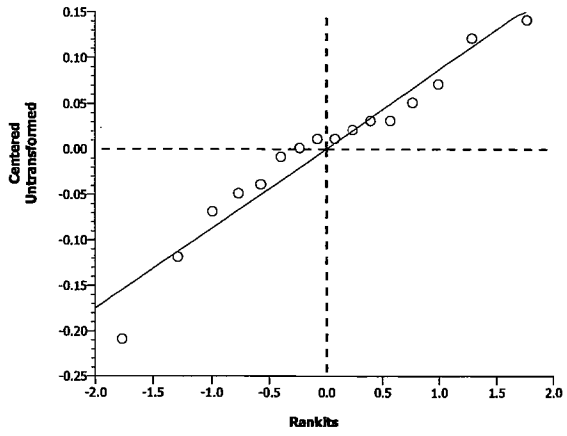
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28875	0.22000	0.34000	0.03871				
13446-007	8	0.43875	0.23000	0.58000	0.12005				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.29000	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000		
13446-007	0.45000	0.23000	0.58000	0.47000	0.51000	0.56000	0.32000	0.39000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.12403	8.88539	0.08131	Equal Variances
Distribution	Shapiro-Wilk W	0.94328	0.84420	0.37872	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0162563	0.0162563	1	1.84	0.19685	Non-Significant Effect
Error	0.1239375	0.0088527	14			
Total	0.14019373	0.0251089	15			

Group Comparisons

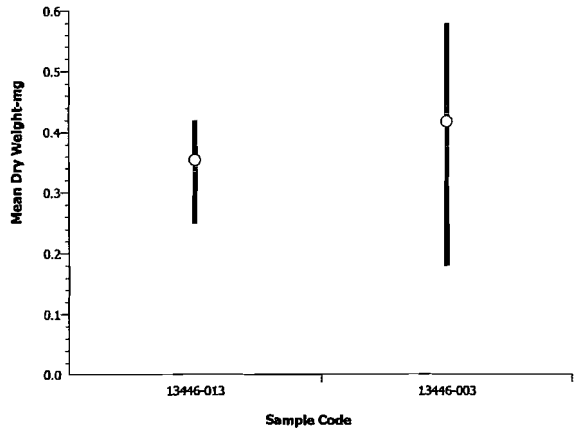
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-003	-1.3551	1.76131	0.9016	0.08286	Non-Significant Effect

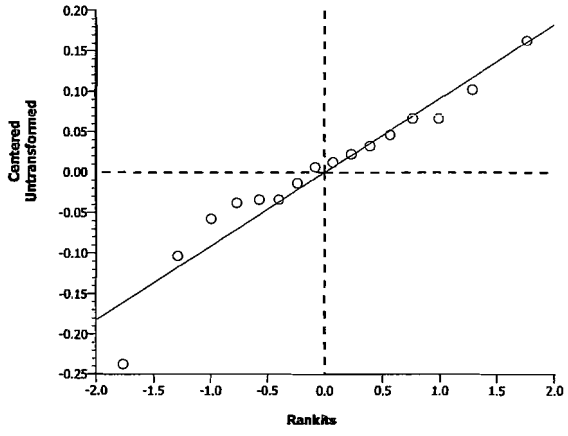
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35375	0.25000	0.42000	0.05878				
13446-003	8	0.41750	0.18000	0.58000	0.11937				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.25000	0.34000	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000		
13446-003	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:11 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	14.93056	9.15534	0.00226	Unequal Variances
Distribution	Shapiro-Wilk W	0.90235	0.83526	0.10653	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0171905	0.0171905	1	0.67	0.42617	Non-Significant Effect
Error	0.3311428	0.0254725	13			
Total	0.34833332	0.0426630	14			

Group Comparisons

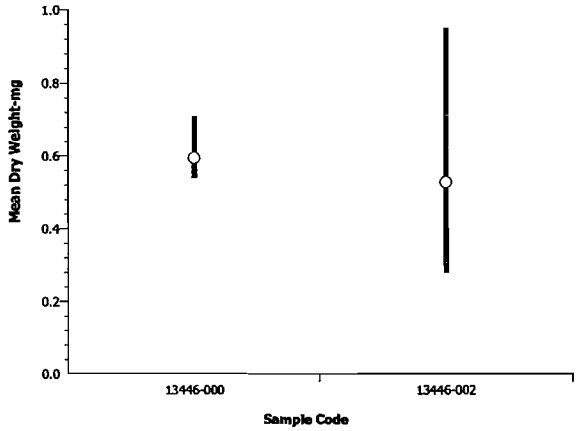
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-002	0.77123	1.94318	0.2349	0.17097	Non-Significant Effect

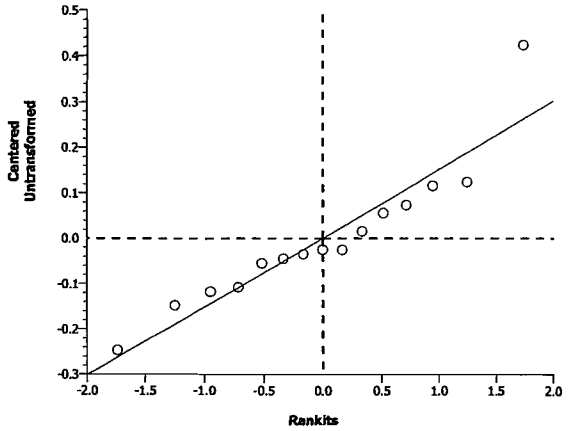
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-002	7	0.52714	0.28000	0.95000	0.22625				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-002	0.60000	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.27273	16.23556	0.35080	Equal Variances
Distribution	Shapiro-Wilk W	0.85976	0.78055	0.07919	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.17956	0.17956	1	70.42	0.00003	Significant Effect
Error	0.0204	0.00255	8			
Total	0.19995998	0.18211	9			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-010	8.39141	1.85955	0.0000	0.07424	Significant Effect

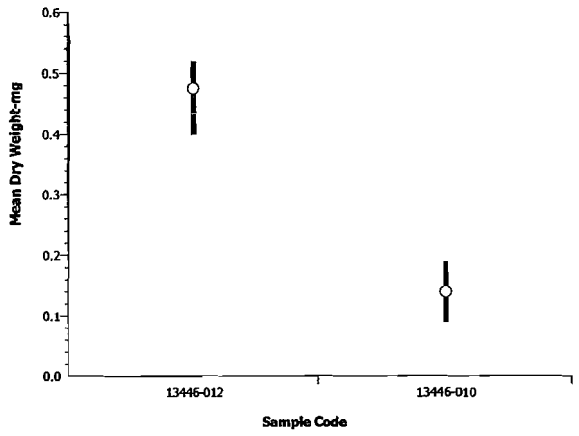
Data Summary

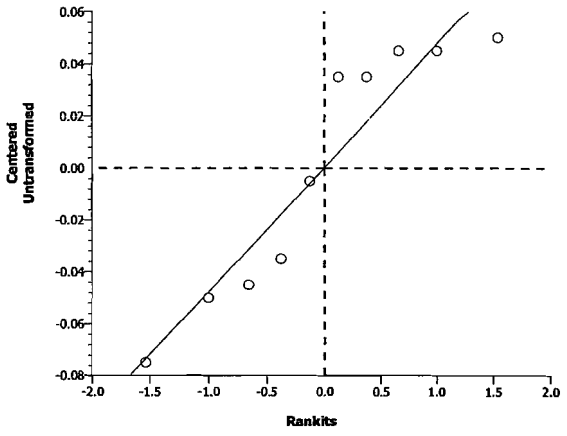
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47500	0.40000	0.52000	0.04690				
13446-010	2	0.14000	0.09000	0.19000	0.07071				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000		
13446-010	0.09000	0.19000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.06821	8.88539	0.93287	Equal Variances
Distribution	Shapiro-Wilk W	0.92788	0.84420	0.22281	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0361000	0.0361000	1	7.94	0.01371	Significant Effect
Error	0.063675	0.0045482	14			
Total	0.09977501	0.0406482	15			

Group Comparisons

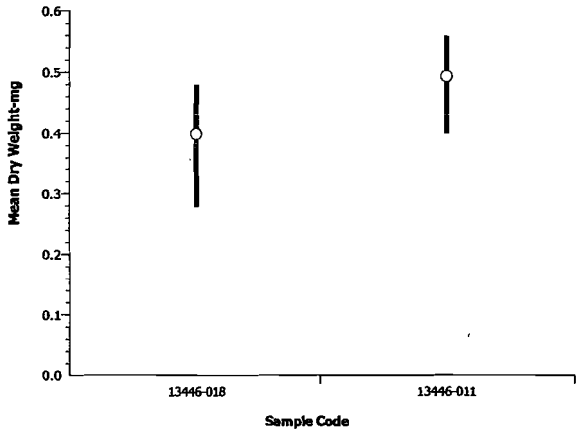
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-011	-2.8173	1.76131	0.9931	0.05939	Non-Significant Effect

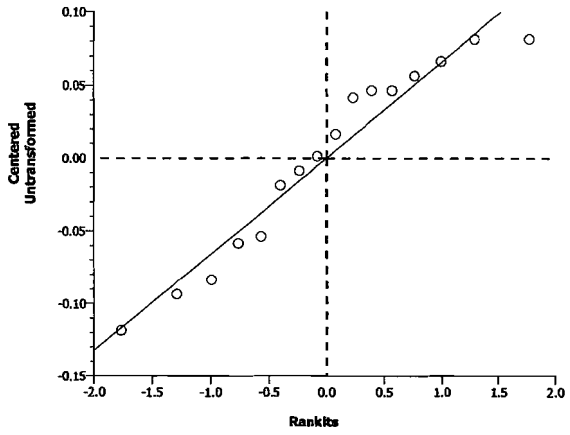
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39875	0.28000	0.48000	0.06854				
13446-011	8	0.49375	0.40000	0.56000	0.06632				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000		
13446-011	0.54000	0.56000	0.40000	0.55000	0.44000	0.54000	0.41000	0.51000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.06423	16.23556	0.67314	Equal Variances
Distribution	Shapiro-Wilk W	0.95289	0.78055	0.67307	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1071225	0.1071225	1	22.62	0.00143	Significant Effect
Error	0.0378875	0.0047359	8			
Total	0.14500999	0.1118584	9			

Group Comparisons

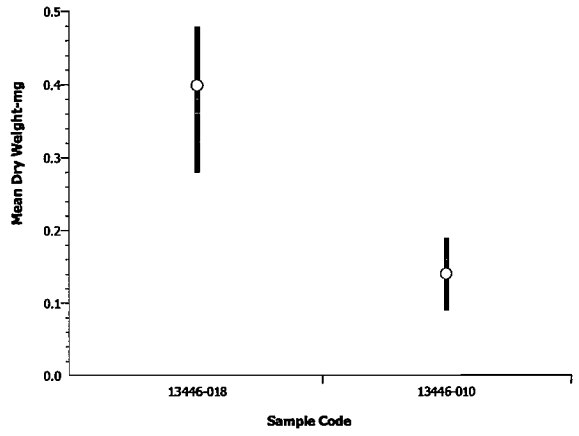
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-010	4.75595	1.85955	0.0007	0.10117	Significant Effect

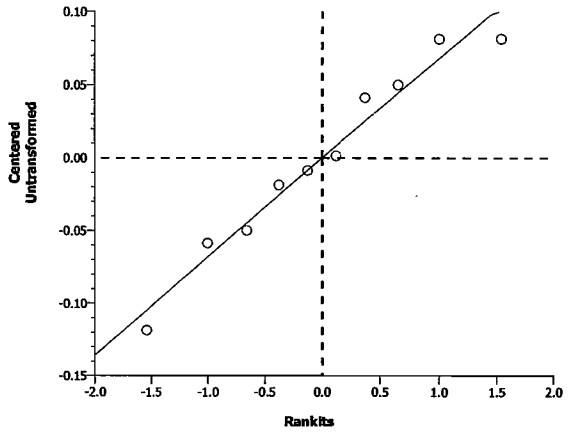
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39875	0.28000	0.48000	0.06854				
13446-010	2	0.14000	0.09000	0.19000	0.07071				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000		
13446-010	0.09000	0.19000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:13 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.15625	8.88539	0.07976	Equal Variances
Distribution	Shapiro-Wilk W	0.91829	0.84420	0.15781	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.126025	0.126025	1	14.26	0.00205	Significant Effect
Error	0.12375	0.0088393	14			
Total	0.24977499	0.1348643	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-003	3.77589	1.76131	0.0010	0.0828	Significant Effect

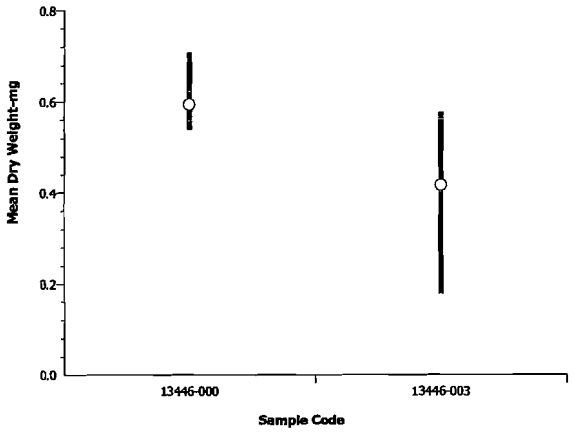
Data Summary

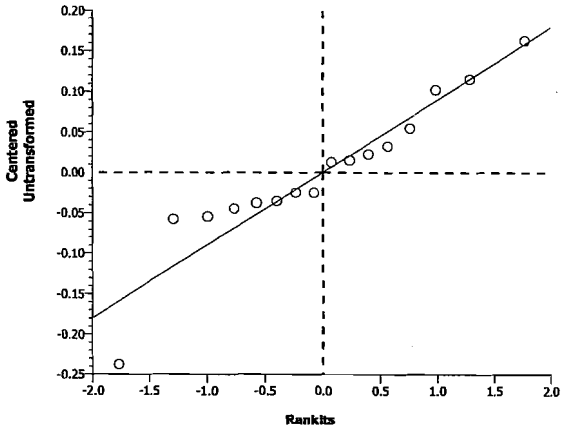
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-003	8	0.41750	0.18000	0.58000	0.11937				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-003	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:13 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.55833	8.88539	0.23841	Equal Variances
Distribution	Shapiro-Wilk W	0.95925	0.84420	0.61870	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1521	0.1521	1	24.93	0.00020	Significant Effect
Error	0.0854	0.0061	14			
Total	0.23749998	0.1582	15			

Group Comparisons

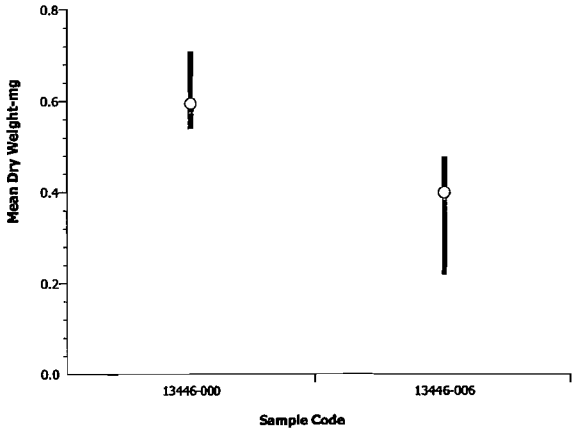
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-006	4.99344	1.76131	0.0001	0.06878	Significant Effect

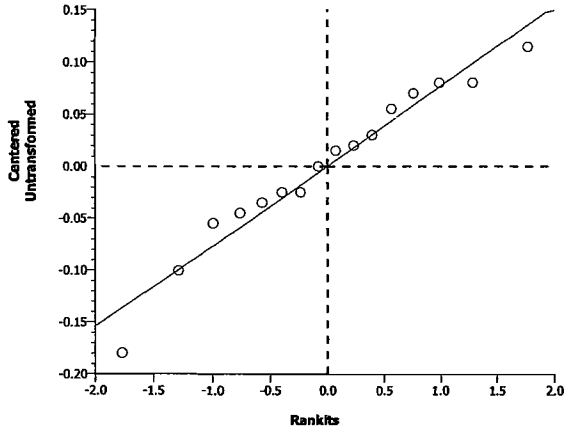
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-006	8	0.40000	0.22000	0.48000	0.09366				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-006	0.48000	0.42000	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	6.47727	8.88539	0.02479	Equal Variances
Distribution	Shapiro-Wilk W	0.91094	0.84420	0.12064	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.013225	0.013225	1	1.61	0.22547	Non-Significant Effect
Error	0.11515	0.008225	14			
Total	0.12837498	0.02145	15			

Group Comparisons

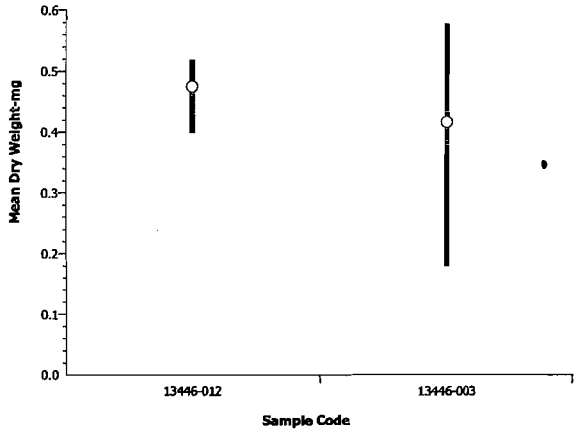
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-003	1.26803	1.76131	0.1127	0.07987	Non-Significant Effect

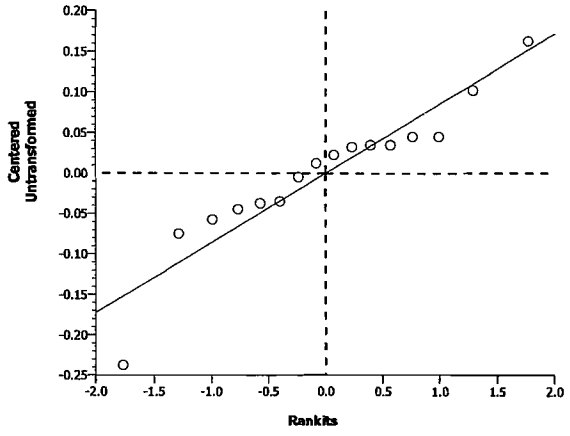
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47500	0.40000	0.52000	0.04690				
13446-003	8	0.41750	0.18000	0.58000	0.11937				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000		
13446-003	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.03307	8.88539	0.16643	Equal Variances
Distribution	Shapiro-Wilk W	0.95469	0.84420	0.54288	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0014063	0.0014063	1	0.15	0.70583	Non-Significant Effect
Error	0.1326375	0.0094741	14			
Total	0.13404374	0.0108804	15			

Group Comparisons

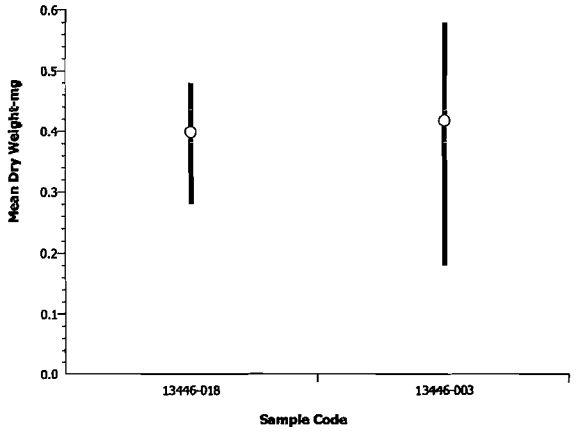
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-003	-0.3853	1.76131	0.6471	0.08572	Non-Significant Effect

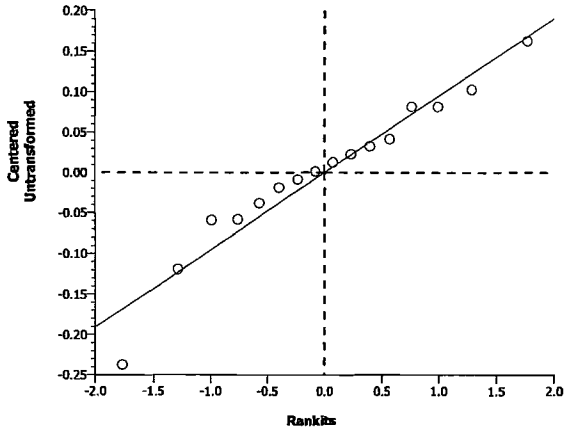
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39875	0.28000	0.48000	0.06854				
13446-003	8	0.41750	0.18000	0.58000	0.11937				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000		
13446-003	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.13903	10.78592	0.37311	Equal Variances
Distribution	Shapiro-Wilk W	0.92383	0.83526	0.22180	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0386786	0.0386786	1	3.60	0.08026	Non-Significant Effect
Error	0.1397214	0.0107478	13			
Total	0.17839998	0.0494264	14			

Group Comparisons

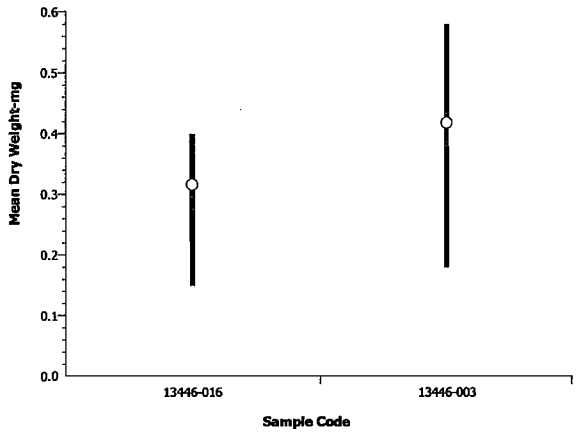
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-003	-1.8970	1.77093	0.9599	0.09502	Non-Significant Effect

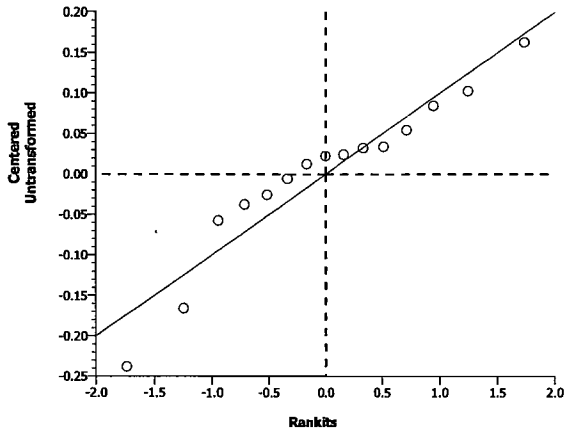
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31571	0.15000	0.40000	0.08162				
13446-003	8	0.41750	0.18000	0.58000	0.11937				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.40000	0.31000	0.37000	0.15000	0.34000			
13446-003	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:13 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	17.92787	9.15534	0.00127	Unequal Variances
Distribution	Shapiro-Wilk W	0.89209	0.83526	0.07452	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3159096	0.3159096	1	12.55	0.00360	Significant Effect
Error	0.3271303	0.0251639	13			
Total	0.64303997	0.3410735	14			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-002	-3.3215	1.94318	0.9920	0.17018	Non-Significant Effect

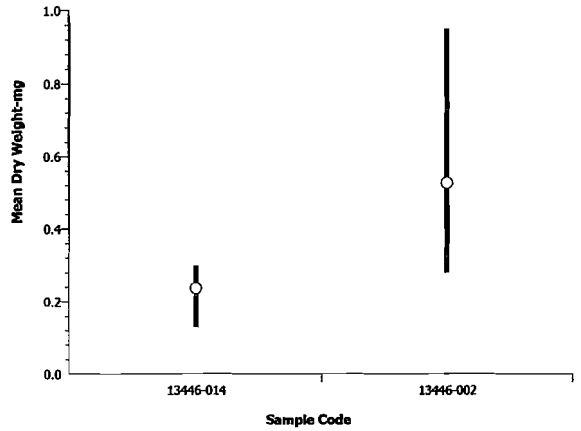
Data Summary

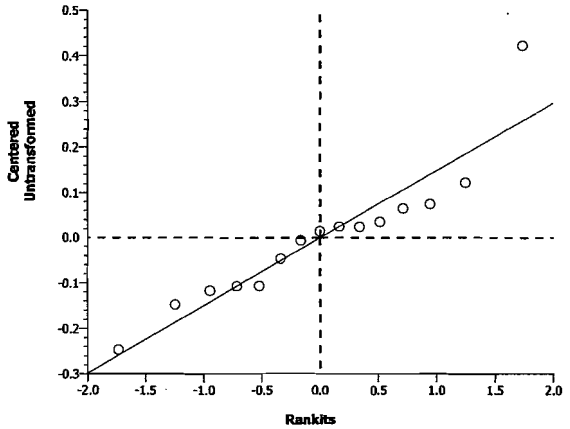
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23625	0.13000	0.30000	0.05344				
13446-002	7	0.52714	0.28000	0.95000	0.22625				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000		
13446-002	0.60000	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.51468	9.15534	0.59661	Equal Variances
Distribution	Shapiro-Wilk W	0.89715	0.83526	0.08894	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1183344	0.1183344	1	21.74	0.00044	Significant Effect
Error	0.0707589	0.005443	13			
Total	0.18909334	0.1237774	14			

Group Comparisons

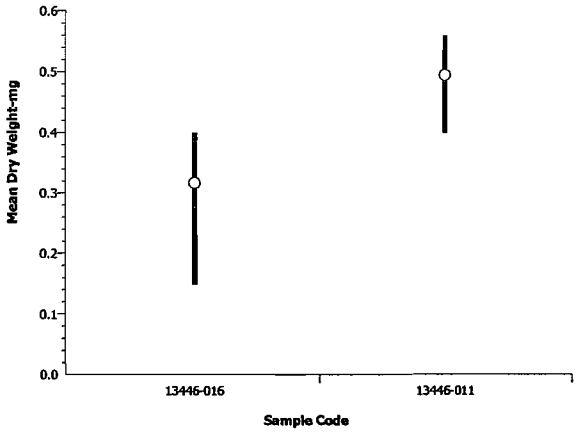
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-011	-4.6627	1.77093	0.9998	0.06762	Non-Significant Effect

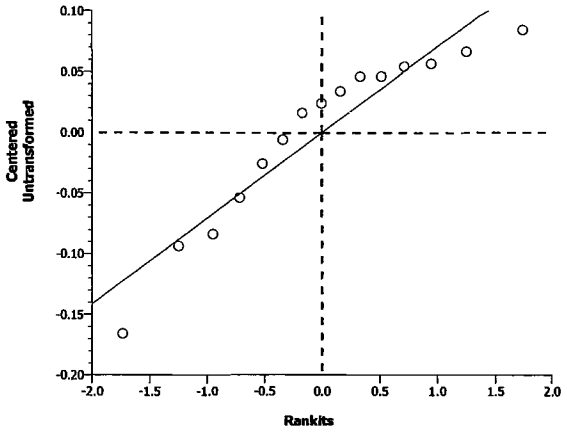
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31571	0.15000	0.40000	0.08162				
13446-011	8	0.49375	0.40000	0.56000	0.06632				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.40000	0.31000	0.37000	0.15000	0.34000			
13446-011	0.54000	0.56000	0.40000	0.55000	0.44000	0.54000	0.41000	0.51000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.58017	8.88539	0.11423	Equal Variances
Distribution	Shapiro-Wilk W	0.87964	0.84420	0.03773	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.055225	0.055225	1	9.84	0.00727	Significant Effect
Error	0.07855	0.0056107	14			
Total	0.13377499	0.0608357	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-006	-3.1373	1.76131	0.9964	0.06597	Non-Significant Effect

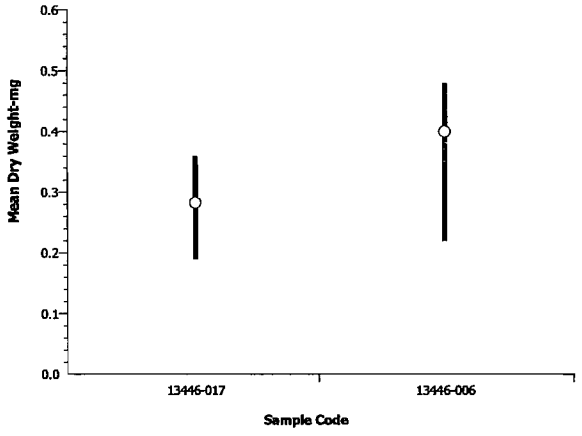
Data Summary

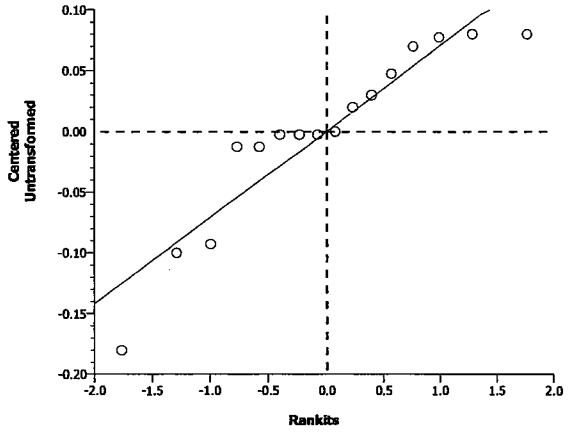
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28250	0.19000	0.36000	0.04950				
13446-006	8	0.40000	0.22000	0.48000	0.09366				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000	0.28000		
13446-006	0.48000	0.42000	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:11 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	10.57292	10.05049	0.00864	Unequal Variances
Distribution	Shapiro-Wilk W	0.94957	0.81445	0.56302	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2677692	0.2677692	1	17.43	0.00155	Significant Effect
Error	0.169	0.0153636	11			
Total	0.43676922	0.2831329	12			

Group Comparisons

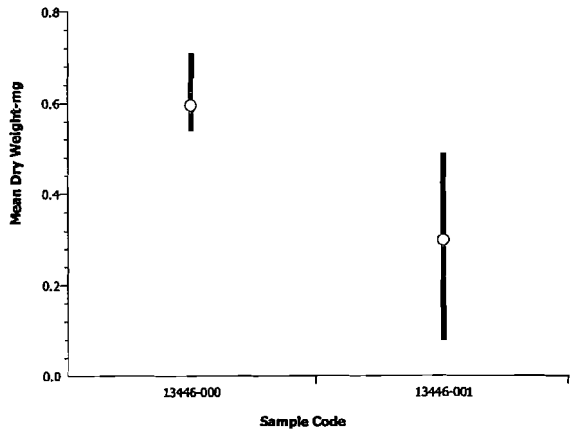
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-001	3.36653	2.13185	0.0141	0.18681	Significant Effect

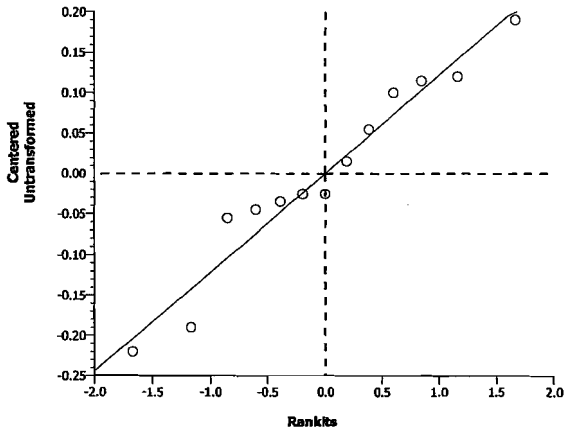
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-001	5	0.30000	0.08000	0.49000	0.19039				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-001	0.08000	0.49000	0.11000	0.40000	0.42000					

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:11 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.94306	9.15534	0.40503	Equal Variances
Distribution	Shapiro-Wilk W	0.94999	0.83526	0.50601	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2912019	0.2912019	1	59.18	0.00000	Significant Effect
Error	0.0639714	0.0049209	13			
Total	0.35517330	0.2961228	14			

Group Comparisons

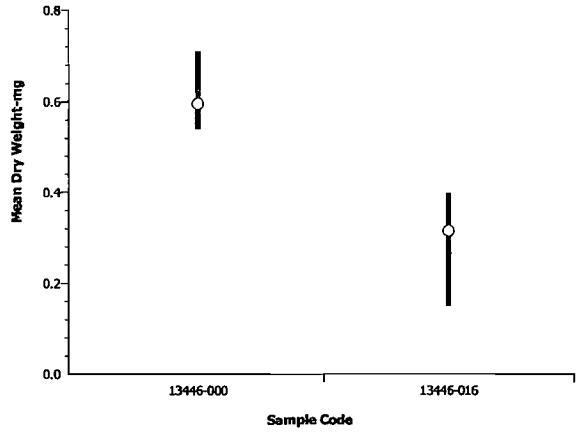
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-016	7.69265	1.77093	0.0000	0.06429	Significant Effect

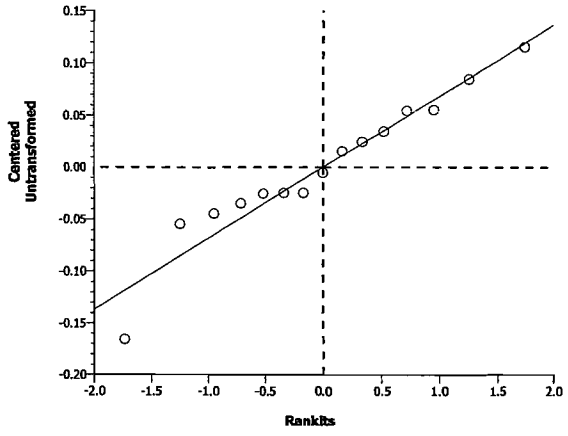
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-016	7	0.31571	0.15000	0.40000	0.08162				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-016	0.35000	0.29000	0.40000	0.31000	0.37000	0.15000	0.34000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:13 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.28281	8.88539	0.75082	Equal Variances
Distribution	Shapiro-Wilk W	0.95405	0.84420	0.53260	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0410062	0.0410062	1	10.48	0.00596	Significant Effect
Error	0.0547875	0.0039134	14			
Total	0.09579374	0.0449196	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-011	3.23704	1.76131	0.0030	0.05509	Significant Effect

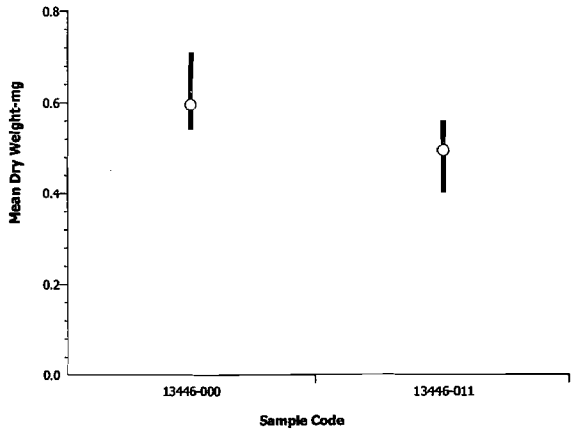
Data Summary

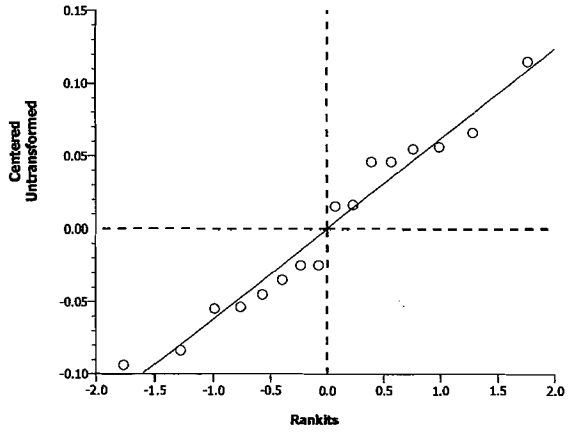
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-011	8	0.49375	0.40000	0.56000	0.06632				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-011	0.54000	0.56000	0.40000	0.55000	0.44000	0.54000	0.41000	0.51000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.50209	8.88539	0.60467	Equal Variances
Distribution	Shapiro-Wilk W	0.96403	0.84420	0.70164	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0280563	0.0280563	1	4.77	0.04640	Significant Effect
Error	0.0822875	0.0058777	14			
Total	0.11034374	0.0339339	15			

Group Comparisons

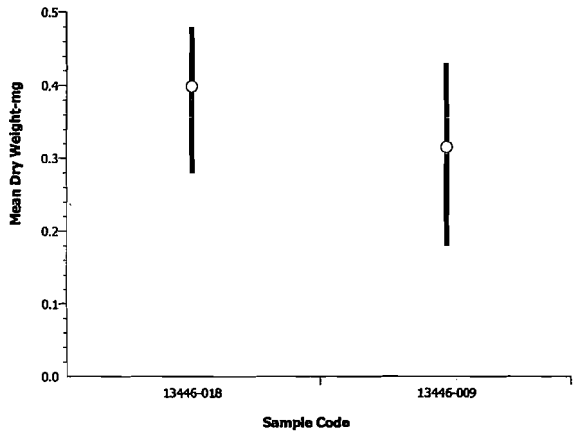
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-009	2.18480	1.76131	0.0232	0.06752	Significant Effect

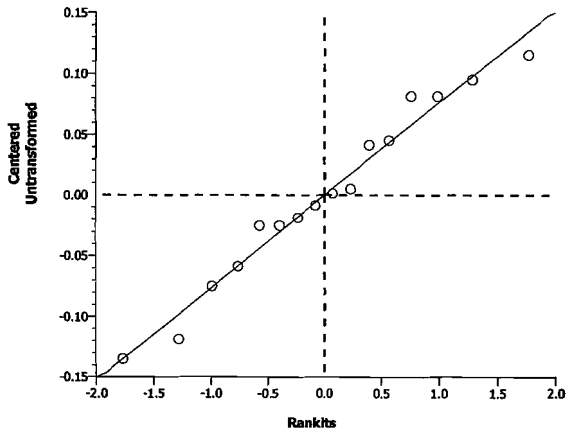
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39875	0.28000	0.48000	0.06854				
13446-009	8	0.31500	0.18000	0.43000	0.08401				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000		
13446-009	0.36000	0.29000	0.32000	0.29000	0.24000	0.43000	0.41000	0.18000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunn-Sidak Adj t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Distribution	Shapiro-Wilk W	0.90138	0.76370	0.25342	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0217014	0.0217014	1	7.60	0.02822	Significant Effect
Error	0.0199875	0.0028554	7			
Total	0.04168889	0.0245567	8			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-004	2.75685	1.89458	0.0141	0.10738	Significant Effect

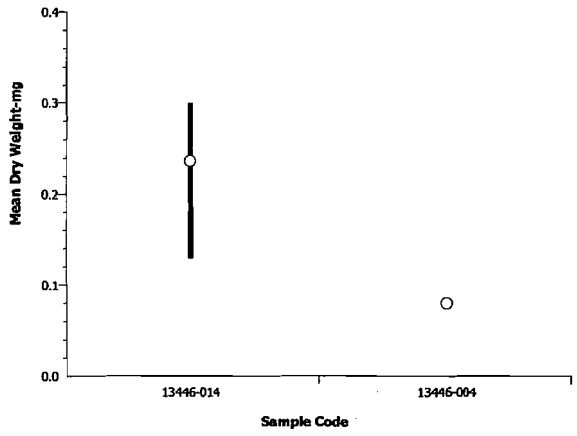
Data Summary

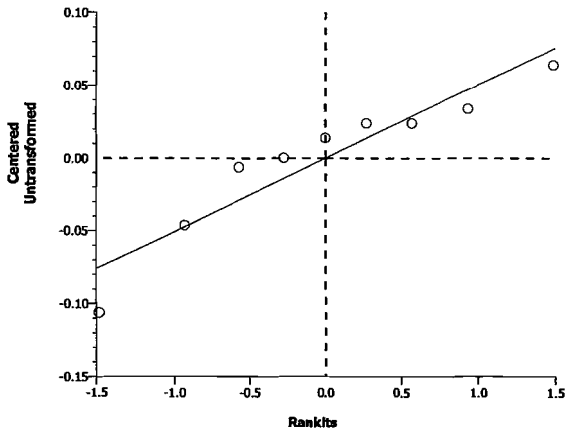
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23625	0.13000	0.30000	0.05344				
13446-004	1	0.08000	0.08000	0.08000					

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000		
13446-004	0.08000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.04238	8.88539	0.36674	Equal Variances
Distribution	Shapiro-Wilk W	0.97327	0.84420	0.85622	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0060063	0.0060063	1	1.14	0.30317	Non-Significant Effect
Error	0.0735875	0.0052563	14			
Total	0.07959375	0.0112625	15			

Group Comparisons

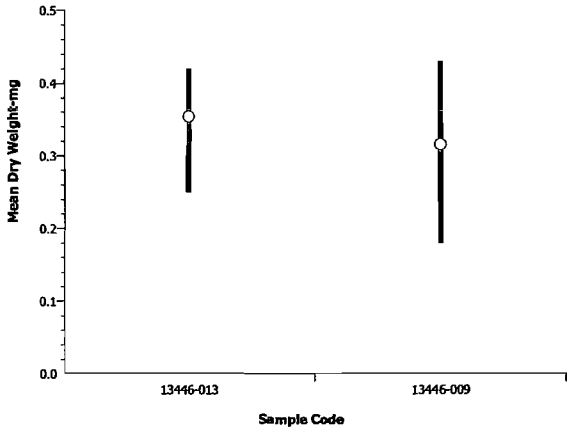
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-009	1.06897	1.76131	0.1516	0.06385	Non-Significant Effect

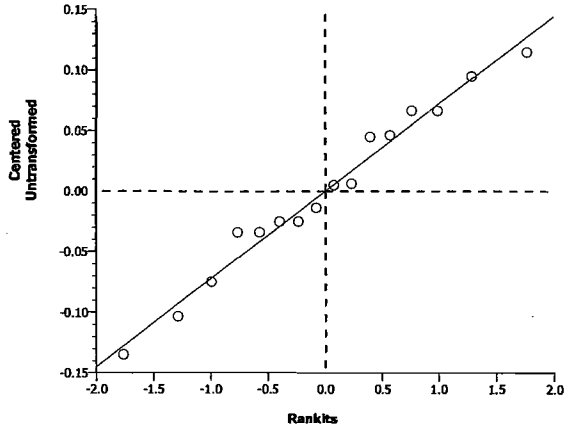
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35375	0.25000	0.42000	0.05878				
13446-009	8	0.31500	0.18000	0.43000	0.08401				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.25000	0.34000	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000		
13446-009	0.36000	0.29000	0.32000	0.29000	0.24000	0.43000	0.41000	0.18000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.33238	23437.11000	1.16081	Equal Variances
Distribution	Shapiro-Wilk W	0.88749	0.76370	0.18759	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0480286	0.0480286	1	7.48	0.02916	Significant Effect
Error	0.0449714	0.0064245	7			
Total	0.09300000	0.0544531	8			

Group Comparisons

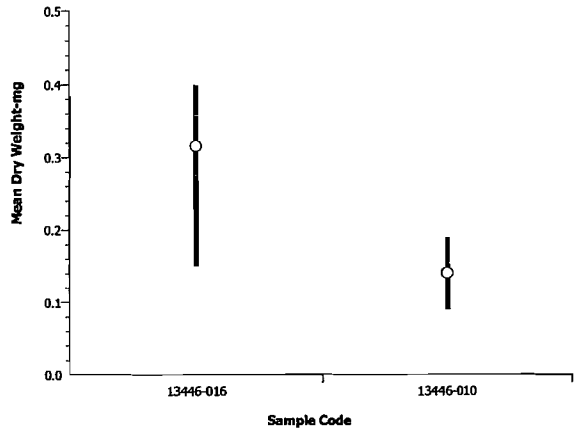
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-010	2.73420	1.89458	0.0146	0.12176	Significant Effect

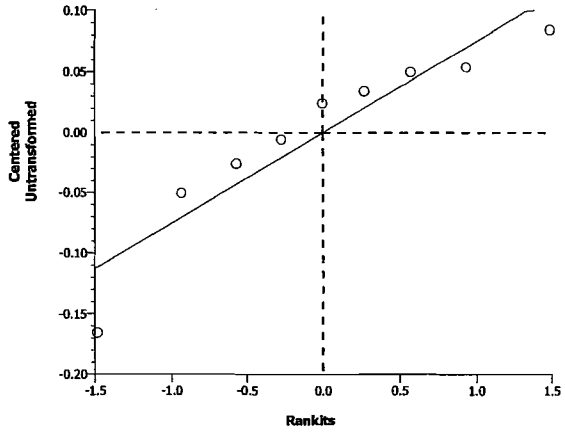
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31571	0.15000	0.40000	0.08162				
13446-010	2	0.14000	0.09000	0.19000	0.07071				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.40000	0.31000	0.37000	0.15000	0.34000			
13446-010	0.09000	0.19000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:11 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.37031	8.88539	0.68813	Equal Variances
Distribution	Shapiro-Wilk W	0.96903	0.84420	0.78799	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1540563	0.1540563	1	37.91	0.00002	Significant Effect
Error	0.0568875	0.0040634	14			
Total	0.21094374	0.1581196	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-018	6.15737	1.76131	0.0000	0.05614	Significant Effect

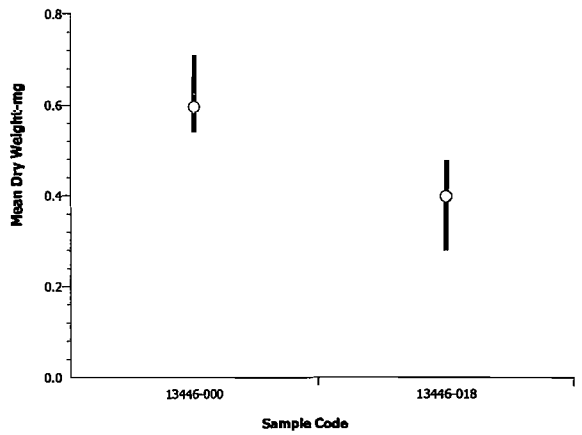
Data Summary

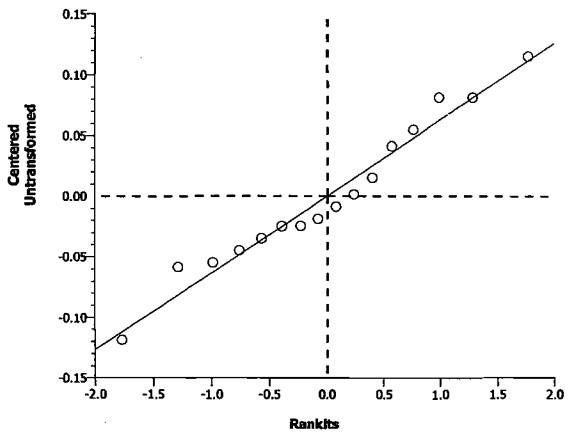
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-018	8	0.39875	0.28000	0.48000	0.06854				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-018	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:13 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.45833	16.23556	0.53282	Equal Variances
Distribution	Shapiro-Wilk W	0.86714	0.78055	0.09524	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.33124	0.33124	1	91.38	0.00001	Significant Effect
Error	0.029	0.003625	8			
Total	0.36023999	0.334865	9			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-010	9.55911	1.85955	0.0000	0.08851	Significant Effect

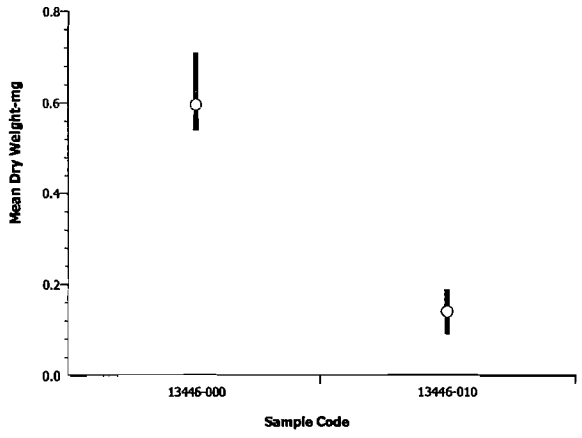
Data Summary

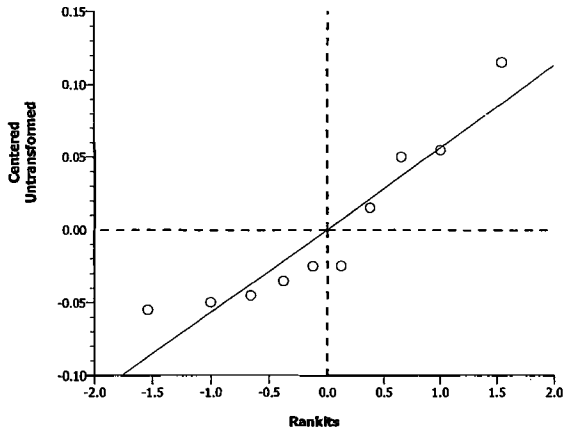
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-010	2	0.14000	0.09000	0.19000	0.07071				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-010	0.09000	0.19000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.04753	8.88539	0.04865	Equal Variances
Distribution	Shapiro-Wilk W	0.94942	0.84420	0.46192	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.164025	0.164025	1	19.00	0.00065	Significant Effect
Error	0.120875	0.0086339	14			
Total	0.28489999	0.1726589	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-007	-4.3586	1.76131	0.9997	0.08183	Non-Significant Effect

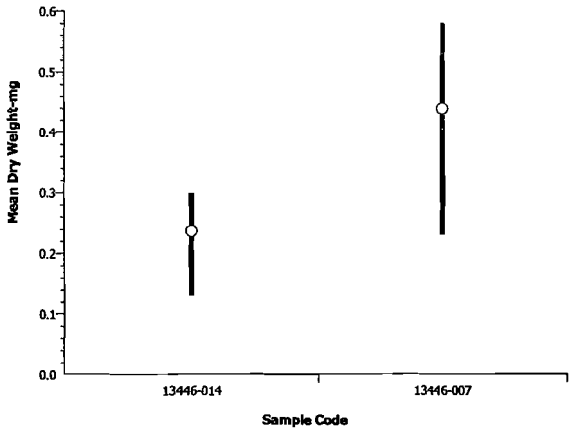
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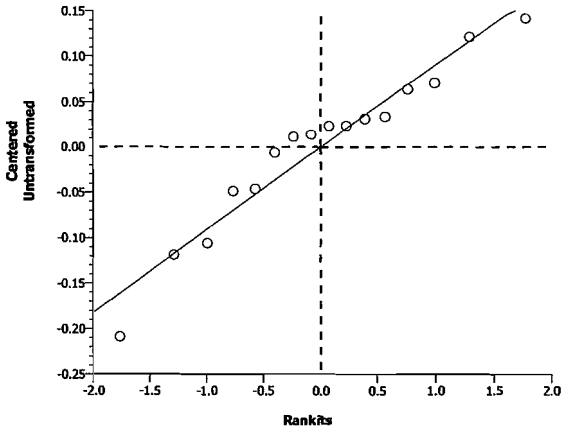
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23625	0.13000	0.30000	0.05344				
13446-007	8	0.43875	0.23000	0.58000	0.12005				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000		
13446-007	0.45000	0.23000	0.58000	0.47000	0.51000	0.56000	0.32000	0.39000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.31665	10.78592	0.75332	Equal Variances
Distribution	Shapiro-Wilk W	0.83992	0.83526	0.01180	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0265219	0.0265219	1	3.40	0.08805	Non-Significant Effect
Error	0.1013714	0.0077978	13			
Total	0.12789332	0.0343197	14			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-006	-1.8442	1.77093	0.9560	0.08094	Non-Significant Effect

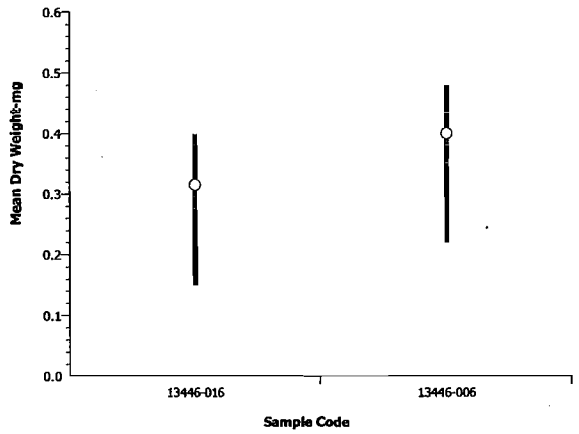
Data Summary

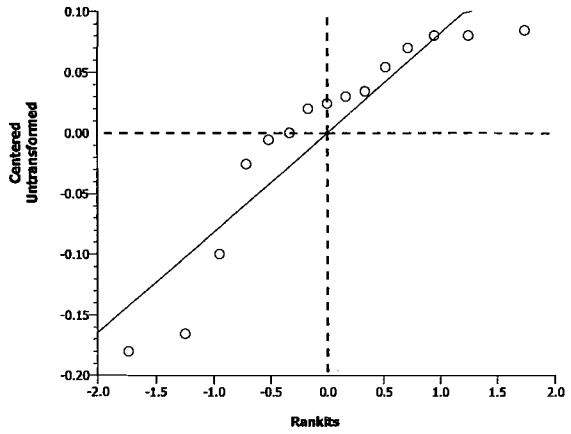
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31571	0.15000	0.40000	0.08162				
13446-006	8	0.40000	0.22000	0.48000	0.09366				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.40000	0.31000	0.37000	0.15000	0.34000			
13446-006	0.48000	0.42000	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:18 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.90584	8.88539	0.41415	Equal Variances
Distribution	Shapiro-Wilk W	0.92752	0.84420	0.21997	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.011025	0.011025	1	5.06	0.04101	Significant Effect
Error	0.030475	0.0021768	14			
Total	0.04150000	0.0132018	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13346-015	-2.2505	1.76131	0.9795	0.04109	Non-Significant Effect

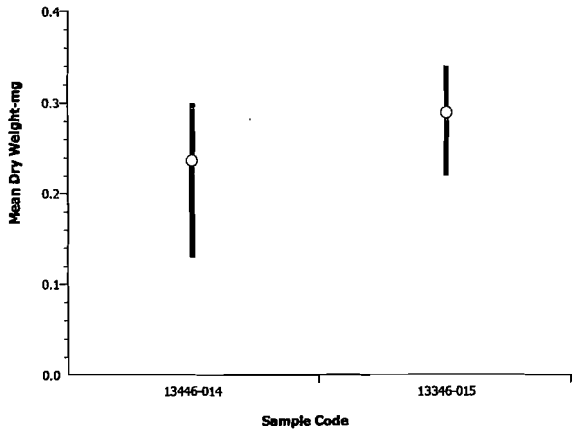
Data Summary

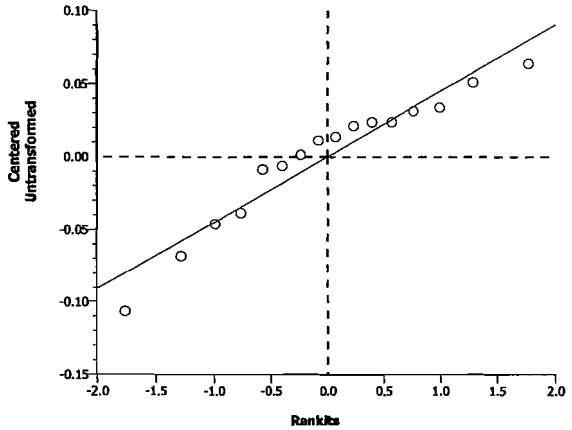
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23625	0.13000	0.30000	0.05344				
13346-015	8	0.28875	0.22000	0.34000	0.03871				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000		
13346-015	0.31000	0.29000	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:11 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.28844	8.88539	0.29700	Equal Variances
Distribution	Shapiro-Wilk W	0.95453	0.84420	0.54022	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3751563	0.3751563	1	152.29	0.00000	Significant Effect
Error	0.0344875	0.0024634	14			
Total	0.40964374	0.3776196	15			

Group Comparisons

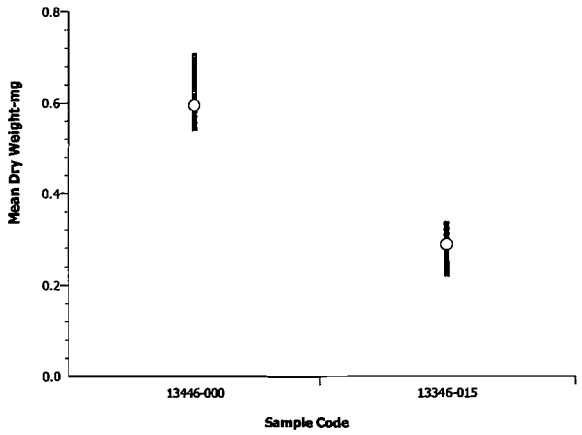
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13346-015	12.3407	1.76131	0.0000	0.04371	Significant Effect

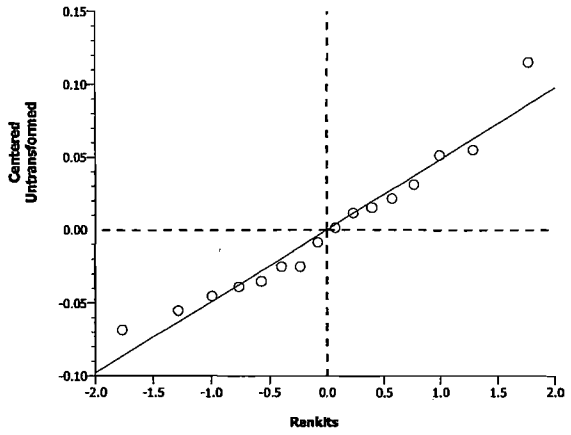
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13346-015	8	0.28875	0.22000	0.34000	0.03871				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13346-015	0.31000	0.29000	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	24.19547	10.05049	0.00068	Unequal Variances
Distribution	Shapiro-Wilk W	0.94999	0.81445	0.56879	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0003894	0.0003894	1	0.03	0.87118	Non-Significant Effect
Error	0.1554875	0.0141352	11			
Total	0.15587693	0.0145247	12			

Group Comparisons

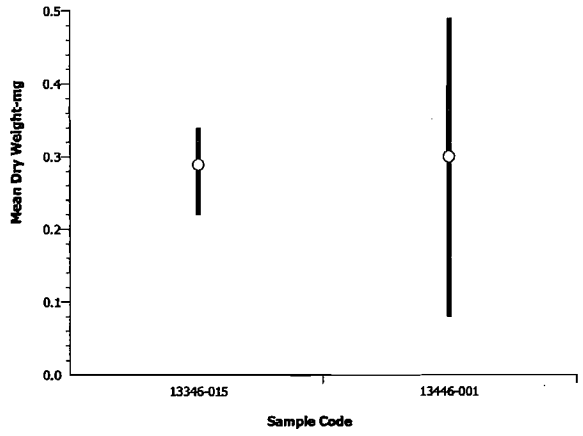
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-001	-0.1305	2.13185	0.5487	0.18385	Non-Significant Effect

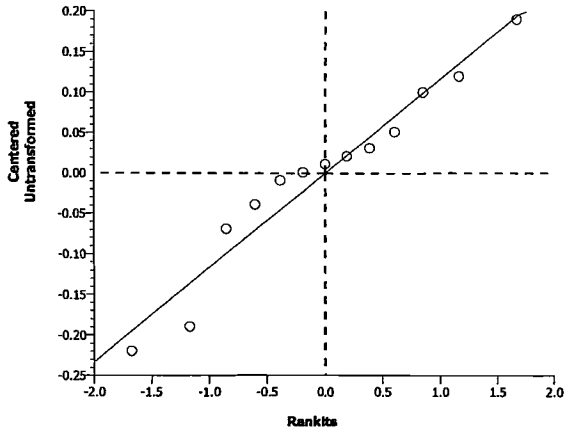
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28875	0.22000	0.34000	0.03871				
13446-001	5	0.30000	0.08000	0.49000	0.19039				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.29000	0.28000	0.34000	0.22000	0.25000	0.32000	0.30000		
13446-001	0.08000	0.49000	0.11000	0.40000	0.42000					

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:13 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.05833	8.88539	0.36165	Equal Variances
Distribution	Shapiro-Wilk W	0.94587	0.84420	0.41239	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3136	0.3136	1	59.81	0.00000	Significant Effect
Error	0.0734	0.0052429	14			
Total	0.38699999	0.3188429	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-009	7.734	1.76131	0.0000	0.06377	Significant Effect

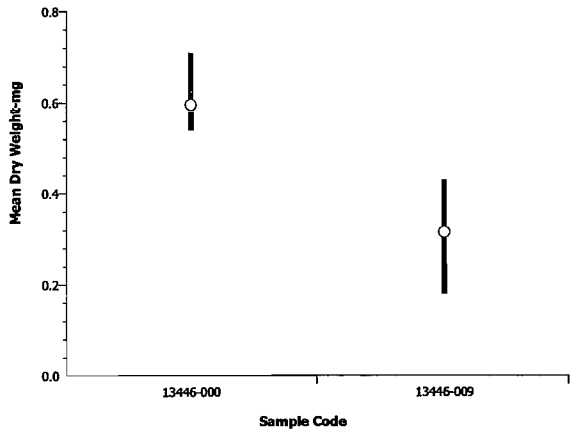
Data Summary

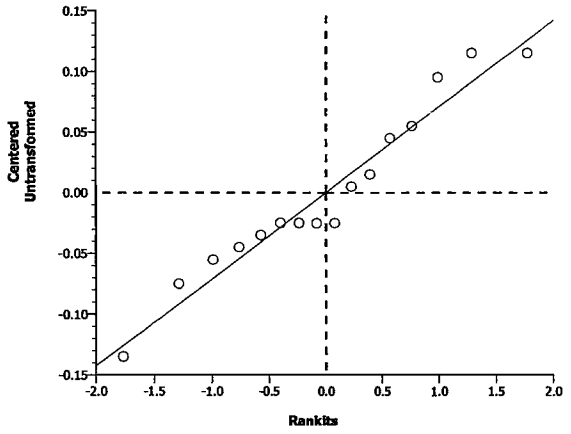
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-009	8	0.31500	0.18000	0.43000	0.08401				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-009	0.36000	0.29000	0.32000	0.29000	0.24000	0.43000	0.41000	0.18000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.44703	16.23556	0.53622	Equal Variances
Distribution	Shapiro-Wilk W	0.92533	0.78055	0.38217	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0731025	0.0731025	1	20.04	0.00207	Significant Effect
Error	0.0291875	0.0036484	8			
Total	0.10228999	0.0767509	9			

Group Comparisons

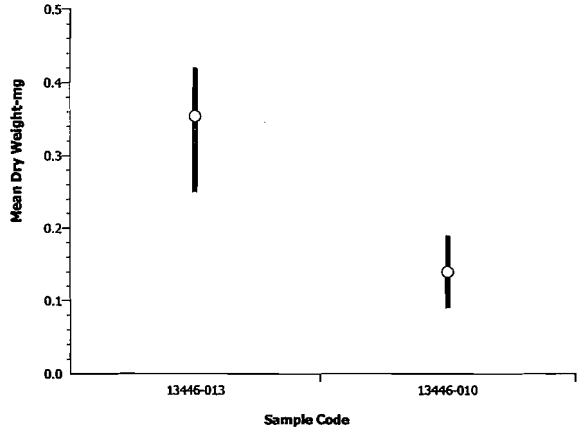
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-010	4.47623	1.85955	0.0010	0.0888	Significant Effect

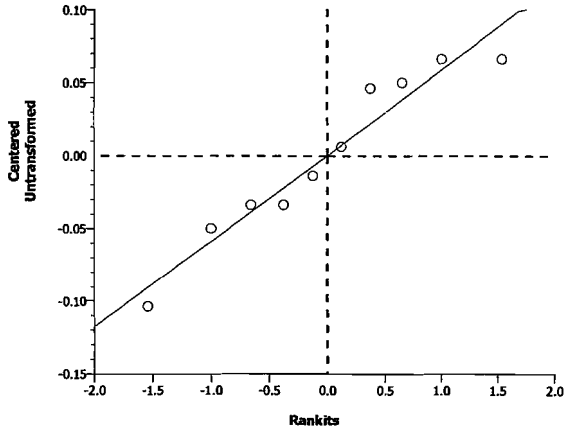
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35375	0.25000	0.42000	0.05878				
13446-010	2	0.14000	0.09000	0.19000	0.07071				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.25000	0.34000	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000		
13446-010	0.09000	0.19000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:11 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.20075	8.88539	0.81545	Equal Variances
Distribution	Shapiro-Wilk W	0.98253	0.84420	0.96560	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5148063	0.5148063	1	163.85	0.00000	Significant Effect
Error	0.0439875	0.003142	14			
Total	0.55879376	0.5179482	15			

Group Comparisons

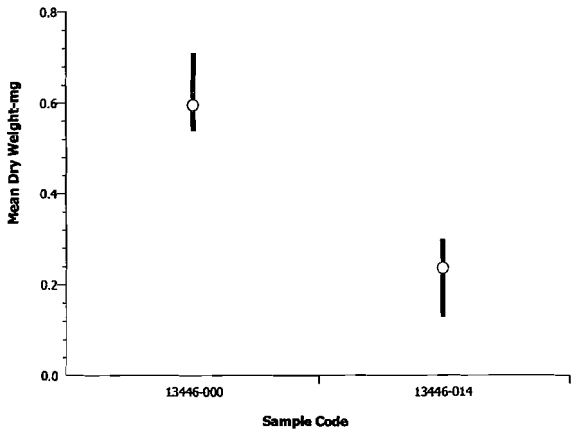
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-014	12.8003	1.76131	0.0000	0.04936	Significant Effect

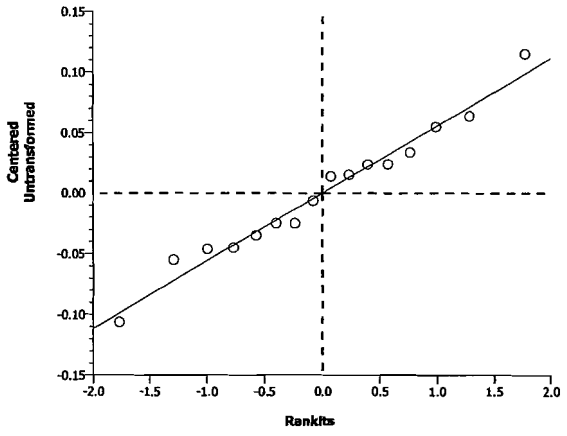
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-014	8	0.23625	0.13000	0.30000	0.05344				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-014	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:10 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00781	8.88539	0.99207	Equal Variances
Distribution	Shapiro-Wilk W	0.95515	0.84420	0.55027	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2328063	0.2328063	1	67.64	0.00000	Significant Effect
Error	0.0481875	0.003442	14			
Total	0.28099374	0.2362482	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-013	8.22421	1.76131	0.0000	0.05167	Significant Effect

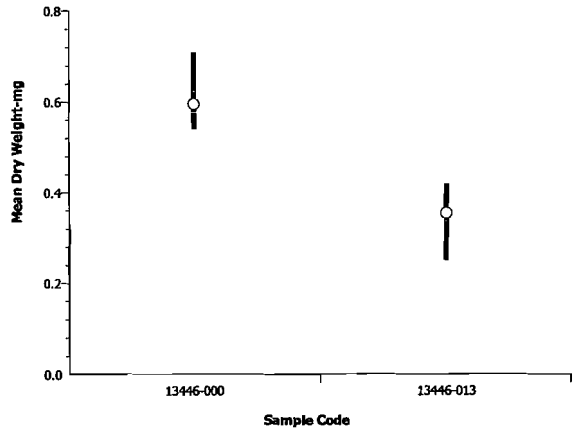
Data Summary

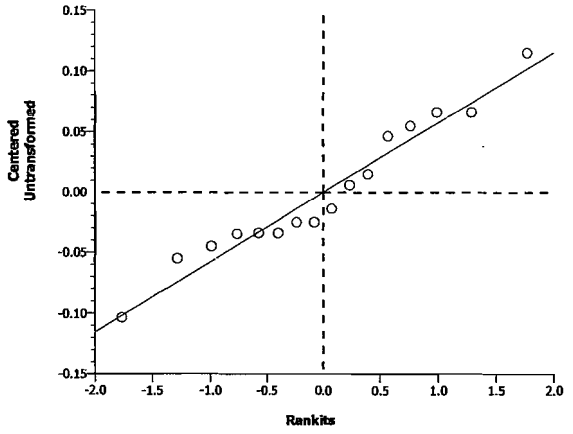
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-013	8	0.35375	0.25000	0.42000	0.05878				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-013	0.25000	0.34000	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:12 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunn-Sidak Adj t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Distribution	Shapiro-Wilk W	0.87343	0.76370	0.13744	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2357556	0.2357556	1	68.76	0.00007	Significant Effect
Error	0.024	0.0034286	7			
Total	0.25975555	0.2391841	8			

Group Comparisons

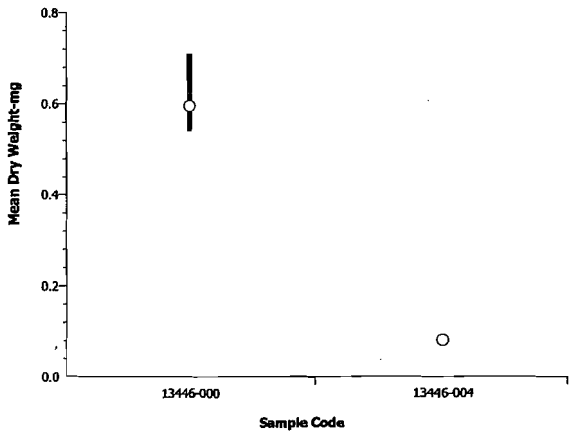
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-004	8.29229	1.89458	0.0000	0.11766	Significant Effect

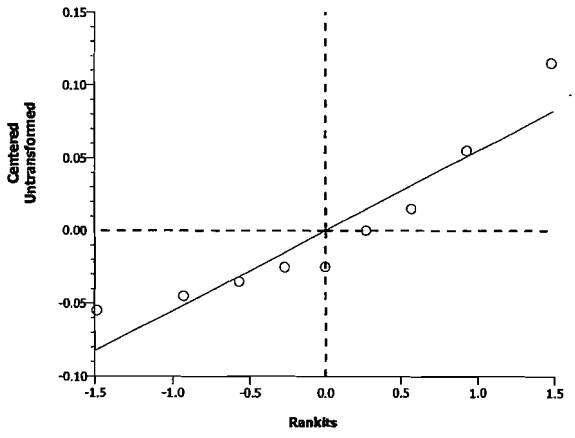
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.59500	0.54000	0.71000	0.05855				
13446-004	1	0.08000	0.08000	0.08000					

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.71000	0.57000	0.61000	0.56000	0.57000	0.54000	0.55000	0.65000		
13446-004	0.08000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.88047	8.88539	0.18615	Equal Variances
Distribution	Shapiro-Wilk W	0.96236	0.84420	0.67242	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.004225	0.004225	1	0.89	0.36179	Non-Significant Effect
Error	0.0665500	0.0047536	14			
Total	0.07077501	0.0089786	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-009	-0.9428	1.76131	0.8191	0.06072	Non-Significant Effect

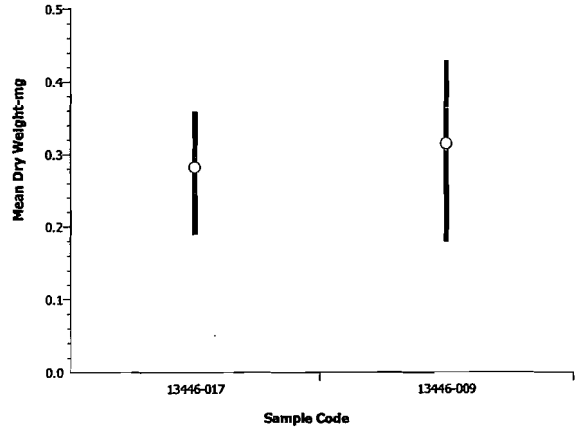
Data Summary

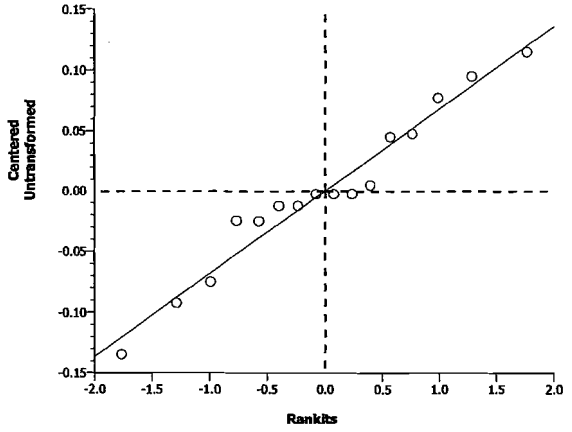
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28250	0.19000	0.36000	0.04950				
13446-009	8	0.31500	0.18000	0.43000	0.08401				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000	0.28000		
13446-009	0.36000	0.29000	0.32000	0.29000	0.24000	0.43000	0.41000	0.18000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.04082	16.23556	0.39238	Equal Variances
Distribution	Shapiro-Wilk W	0.94324	0.78055	0.55952	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.03249	0.03249	1	11.73	0.00901	Significant Effect
Error	0.02215	0.0027688	8			
Total	0.05464001	0.0352588	9			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-010	3.42557	1.85955	0.0045	0.07736	Significant Effect

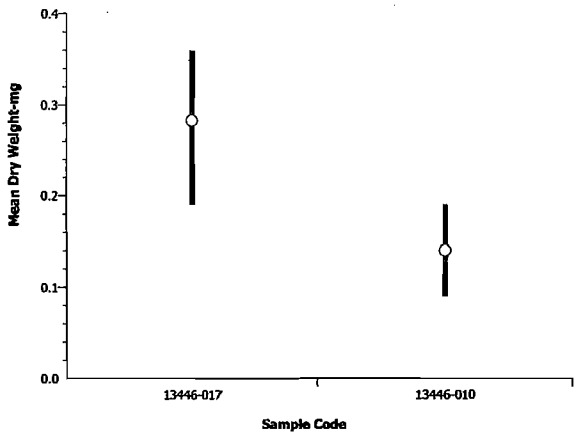
Data Summary

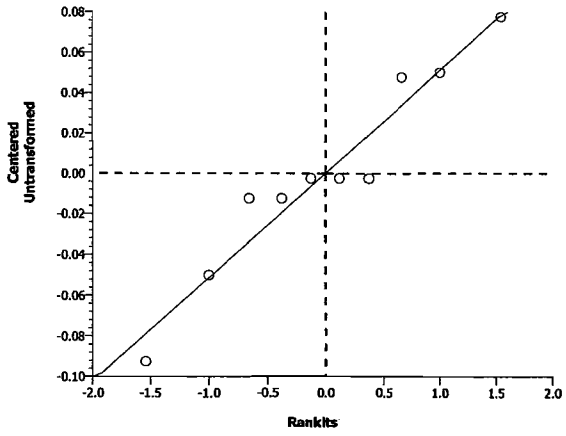
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28250	0.19000	0.36000	0.04950				
13446-010	2	0.14000	0.09000	0.19000	0.07071				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000	0.28000		
13446-010	0.09000	0.19000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:13 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	12.69543	10.05049	0.00504	Unequal Variances
Distribution	Shapiro-Wilk W	0.95169	0.81445	0.59219	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0125048	0.0125048	1	0.83	0.38078	Non-Significant Effect
Error	0.1649875	0.0149989	11			
Total	0.17749231	0.0275037	12			

Group Comparisons

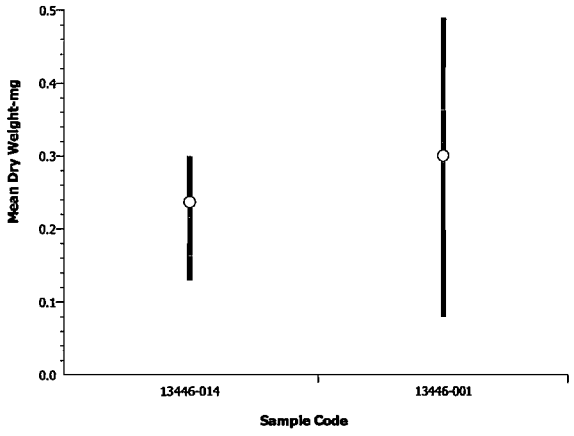
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-001	-0.7309	2.13185	0.7473	0.18593	Non-Significant Effect

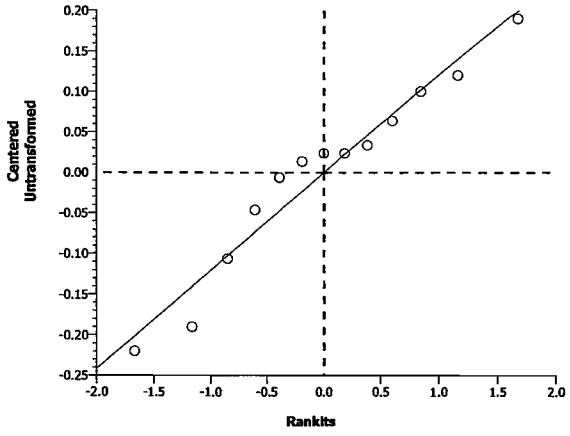
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23625	0.13000	0.30000	0.05344				
13446-001	5	0.30000	0.08000	0.49000	0.19039				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.26000	0.19000	0.13000	0.26000	0.27000	0.23000	0.25000	0.30000		
13446-001	0.08000	0.49000	0.11000	0.40000	0.42000					

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.05933	10.78592	0.96021	Equal Variances
Distribution	Shapiro-Wilk W	0.94986	0.83526	0.50400	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.905E-06	1.905E-06	1	0.00	0.98697	Non-Significant Effect
Error	0.0893714	0.0068747	13			
Total	0.08937333	0.0068766	14			

Group Comparisons

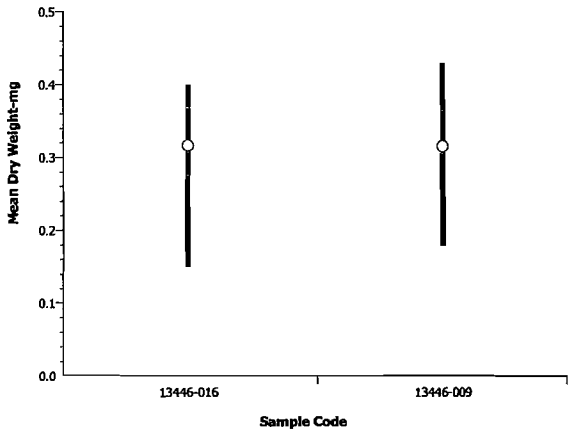
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-009	0.01665	1.77093	0.4935	0.07599	Non-Significant Effect

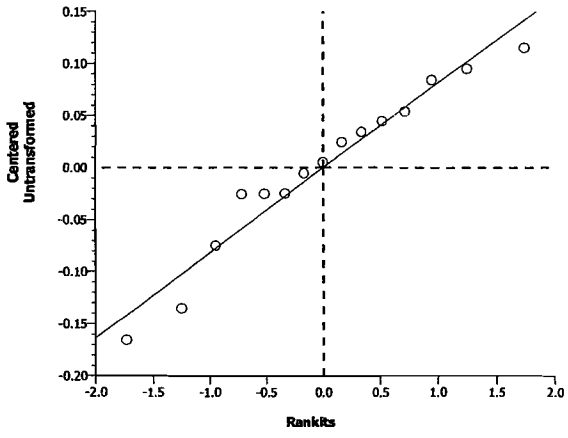
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31571	0.15000	0.40000	0.08162				
13446-009	8	0.31500	0.18000	0.43000	0.08401				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.40000	0.31000	0.37000	0.15000	0.34000			
13446-009	0.36000	0.29000	0.32000	0.29000	0.24000	0.43000	0.41000	0.18000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.20779	8.88539	0.14697	Equal Variances
Distribution	Shapiro-Wilk W	0.97528	0.84420	0.88567	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1024	0.1024	1	22.12	0.00034	Significant Effect
Error	0.0648	0.0046286	14			
Total	0.16719998	0.1070286	15			

Group Comparisons

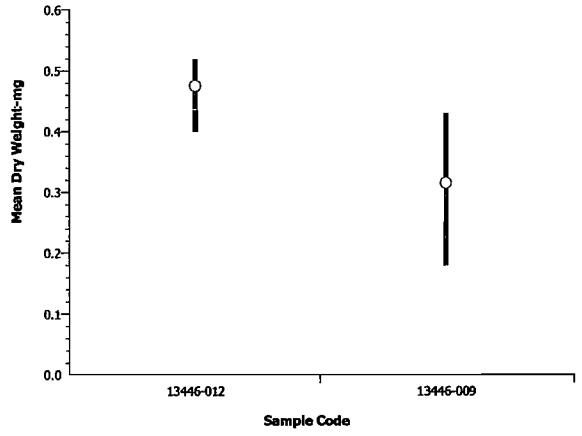
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-009	4.70356	1.76131	0.0002	0.05991	Significant Effect

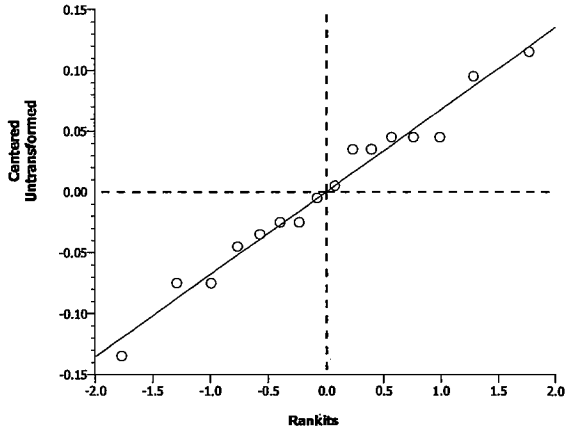
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47500	0.40000	0.52000	0.04690				
13446-009	8	0.31500	0.18000	0.43000	0.08401				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000		
13446-009	0.36000	0.29000	0.32000	0.29000	0.24000	0.43000	0.41000	0.18000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.81632	8.88539	0.03333	Equal Variances
Distribution	Shapiro-Wilk W	0.91935	0.84420	0.16397	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0729	0.0729	1	8.73	0.01045	Significant Effect
Error	0.1169	0.00835	14			
Total	0.18979998	0.08125	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-003	-2.9547	1.76131	0.9948	0.08047	Non-Significant Effect

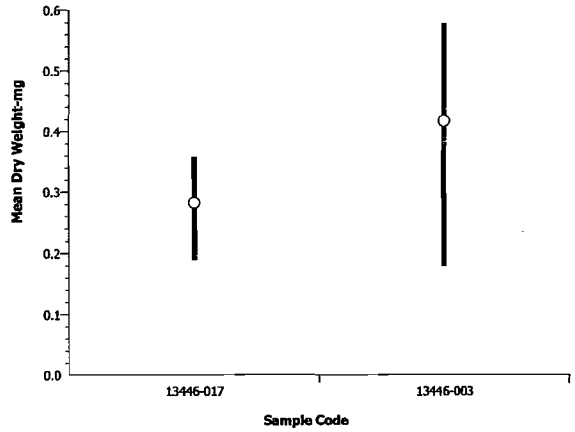
Data Summary

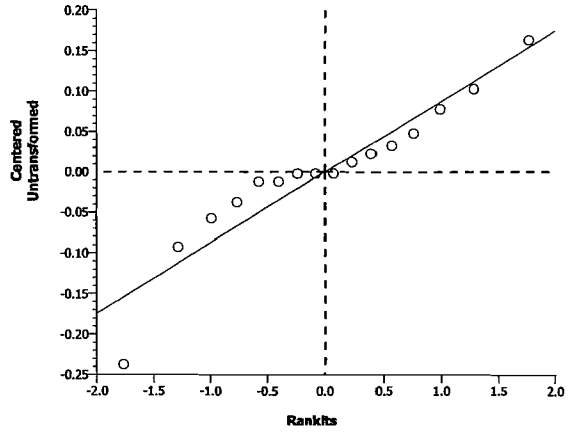
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28250	0.19000	0.36000	0.04950				
13446-003	8	0.41750	0.18000	0.58000	0.11937				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000	0.28000		
13446-003	0.43000	0.58000	0.45000	0.52000	0.36000	0.18000	0.38000	0.44000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:18 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Tukey-Kramer	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Bartlett	2.65726	13.27671	0.61671	Equal Variances
Distribution	Shapiro-Wilk W	0.94393	0.91742	0.07261	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.178301	0.0445753	4	11.69	0.00000	Significant Effect
Error	0.1295964	0.0038117	34			
Total	0.30789742	0.0483869	38			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-013	0.12125	0.08889	<= 0.0500	0.08889	Significant Effect
13446-012		13446-016	0.15929	0.09201	<= 0.0500	0.09201	Significant Effect
13446-012		13446-017	0.1925	0.08889	<= 0.0500	0.08889	Significant Effect
13446-012		13446-018	0.07625	0.08889	> 0.0500	0.08889	Non-Significant Effect
13446-013		13446-016	0.03804	0.09201	> 0.0500	0.09201	Non-Significant Effect
13446-013		13446-017	0.07125	0.08889	> 0.0500	0.08889	Non-Significant Effect
13446-013		13446-018	0.045	0.08889	> 0.0500	0.08889	Non-Significant Effect
13446-016		13446-017	0.03321	0.09201	> 0.0500	0.09201	Non-Significant Effect
13446-016		13446-018	0.08304	0.09201	> 0.0500	0.09201	Non-Significant Effect
13446-017		13446-018	0.11625	0.08889	<= 0.0500	0.08889	Significant Effect

Data Summary

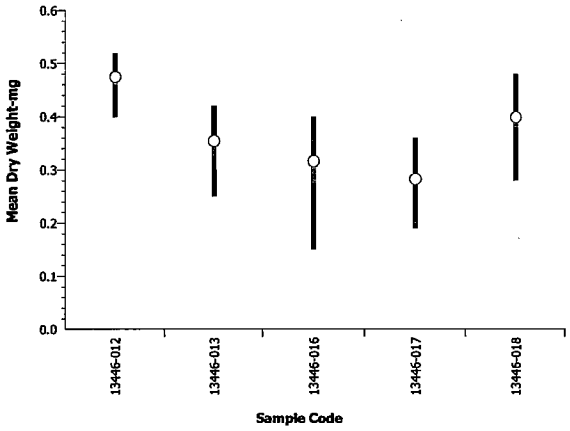
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47500	0.40000	0.52000	0.04690				
13446-013	8	0.35375	0.25000	0.42000	0.05878				
13446-016	7	0.31571	0.15000	0.40000	0.08162				
13446-017	8	0.28250	0.19000	0.36000	0.04950				
13446-018	8	0.39875	0.28000	0.48000	0.06854				

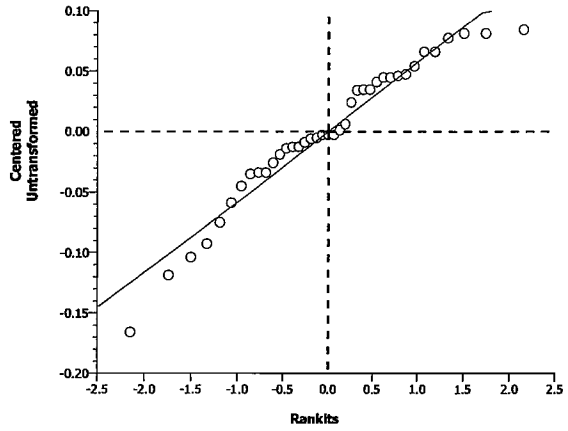
Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000		
13446-013	0.25000	0.34000	0.40000	0.32000	0.32000	0.42000	0.36000	0.42000		
13446-016	0.35000	0.29000	0.40000	0.31000	0.37000	0.15000	0.34000			
13446-017	0.27000	0.28000	0.27000	0.36000	0.28000	0.33000	0.19000	0.28000		
13446-018	0.38000	0.44000	0.40000	0.34000	0.48000	0.28000	0.39000	0.48000		

CETIS Analysis Detail

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.99919	8.88539	0.38099	Equal Variances
Distribution	Shapiro-Wilk W	0.87224	0.84420	0.02861	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0014063	0.0014063	1	0.43	0.52441	Non-Significant Effect
Error	0.0461875	0.0032991	14			
Total	0.04759375	0.0047054	15			

Group Comparisons

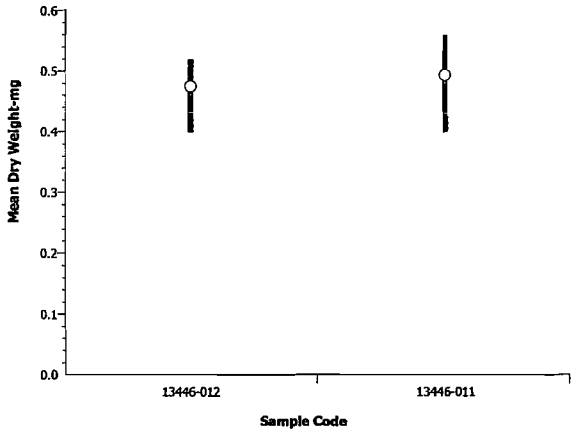
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-011	-0.6529	1.76131	0.7378	0.05058	Non-Significant Effect

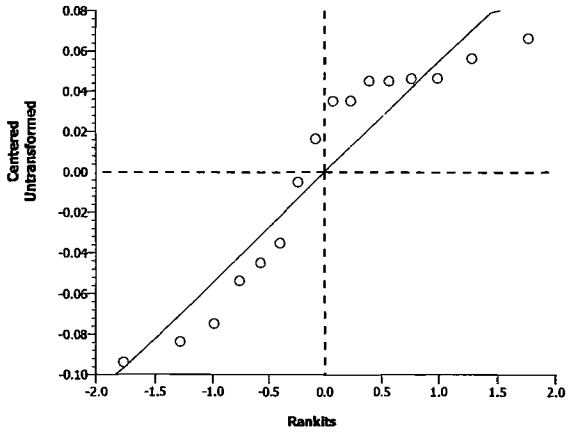
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47500	0.40000	0.52000	0.04690				
13446-011	8	0.49375	0.40000	0.56000	0.06632				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000		
13446-011	0.54000	0.56000	0.40000	0.55000	0.44000	0.54000	0.41000	0.51000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	13-3830-0274	13-3830-0274	01 Aug-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.98701	8.88539	0.08832	Equal Variances
Distribution	Shapiro-Wilk W	0.89755	0.84420	0.07357	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0225	0.0225	1	4.10	0.06235	Non-Significant Effect
Error	0.0768	0.0054857	14			
Total	0.09929999	0.0279857	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-006	2.02523	1.76131	0.0312	0.06523	Significant Effect

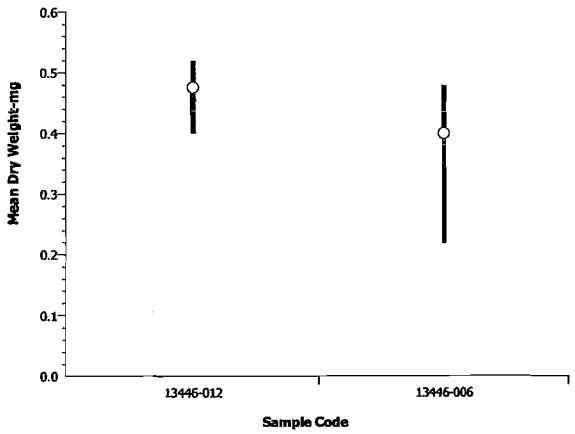
Data Summary

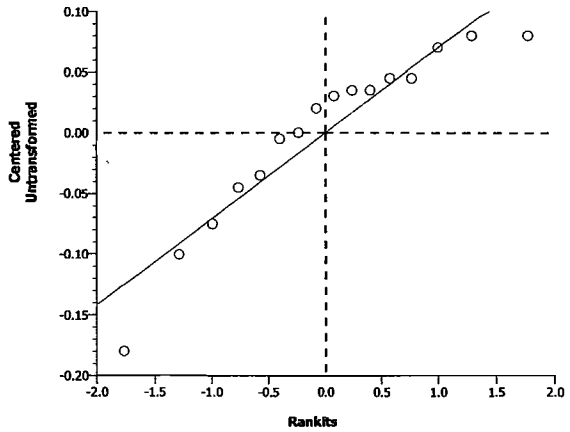
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47500	0.40000	0.52000	0.04690				
13446-006	8	0.40000	0.22000	0.48000	0.09366				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.47000	0.40000	0.44000	0.43000	0.52000	0.51000	0.51000	0.52000		
13446-006	0.48000	0.42000	0.30000	0.43000	0.47000	0.40000	0.48000	0.22000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:39 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.60670	12.02753	0.06332	Equal Variances
Distribution	Shapiro-Wilk W	0.92273	0.80465	0.30074	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0006152	0.0006152	1	0.03	0.85848	Non-Significant Effect
Error	0.1837929	0.0183793	10			
Total	0.18440810	0.0189945	11			

Group Comparisons

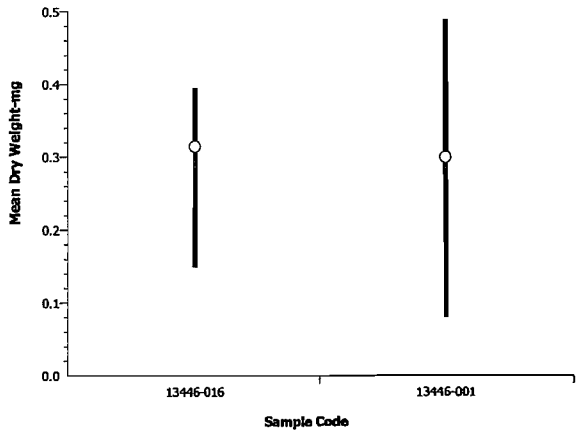
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-001	0.18296	1.81246	0.4292	0.14388	Non-Significant Effect

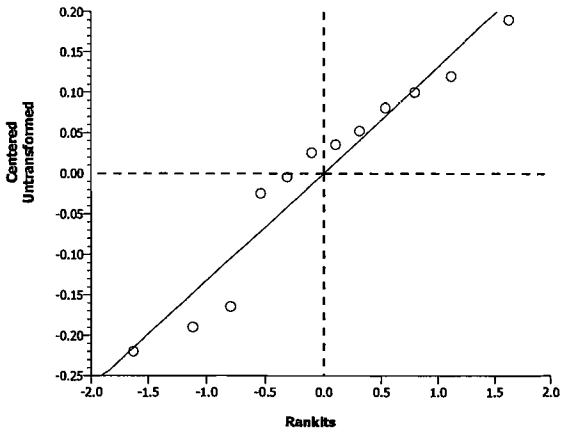
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31452	0.15000	0.39500	0.08041				
13446-001	5	0.30000	0.08000	0.49000	0.19039				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.39500	0.31000	0.36667	0.15000	0.34000			
13446-001	0.08000	0.49000	0.11000	0.40000	0.42000					

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:44 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.63077	8.88539	0.03639	Equal Variances
Distribution	Shapiro-Wilk W	0.89625	0.84420	0.07011	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0501568	0.0501568	1	9.75	0.00749	Significant Effect
Error	0.0720322	0.0051452	14			
Total	0.12218896	0.0553019	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-006	-3.1222	1.76131	0.9963	0.06317	Non-Significant Effect

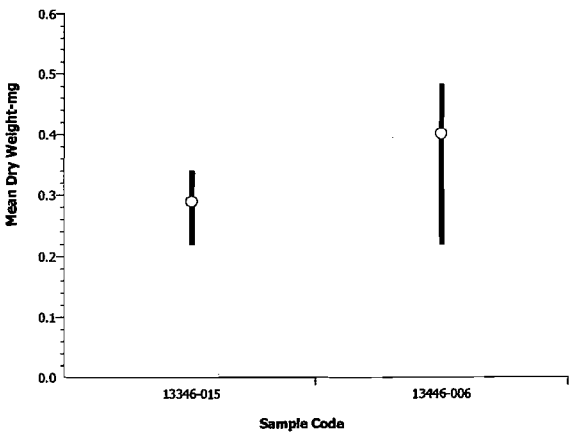
Data Summary

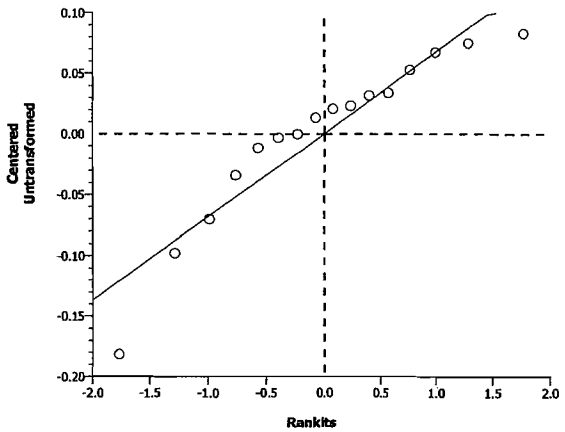
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28951	0.21875	0.34222	0.03939				
13446-006	8	0.40149	0.22000	0.48444	0.09348				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		
13446-006	0.47667	0.42444	0.30333	0.43300	0.46889	0.40111	0.48444	0.22000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:38 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunnett's Multiple Comparison	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Distribution	Shapiro-Wilk W	0.93737	0.76370	0.52668	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0659164	0.0659164	1	18.24	0.00370	Significant Effect
Error	0.0252969	0.0036138	7			
Total	0.09121332	0.0695303	8			

Group Comparisons

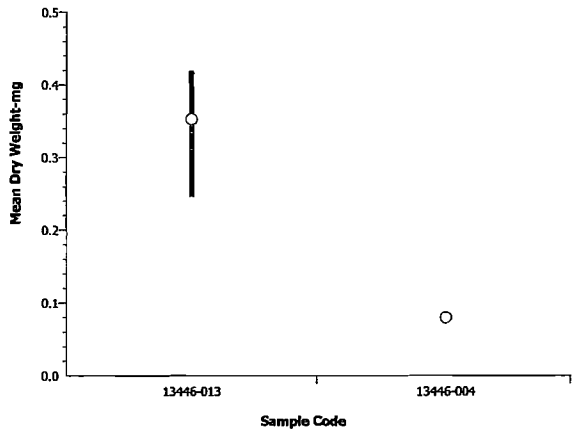
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-004	4.27083	1.89	<= 0.0500	0.12051	Significant Effect

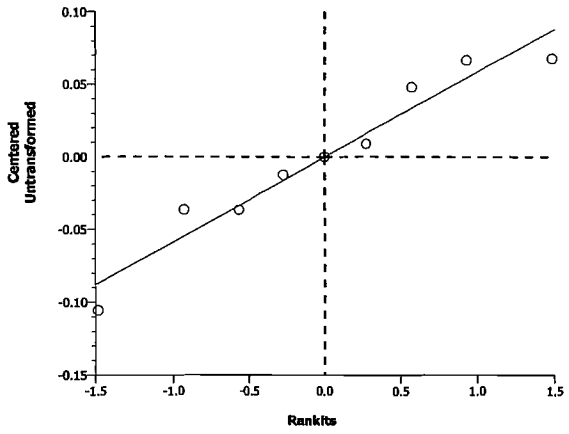
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35232	0.24667	0.42000	0.06012				
13446-004	1	0.08000	0.08000	0.08000					

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.24667	0.34000	0.40000	0.31600	0.31600	0.41875	0.36111	0.42000		
13446-004	0.08000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:38 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	14.19971	9.15534	0.00264	Unequal Variances
Distribution	Shapiro-Wilk W	0.90314	0.83526	0.10950	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1150415	0.1150415	1	4.49	0.05396	Non-Significant Effect
Error	0.3331897	0.02563	13			
Total	0.44823127	0.1406715	14			

Group Comparisons

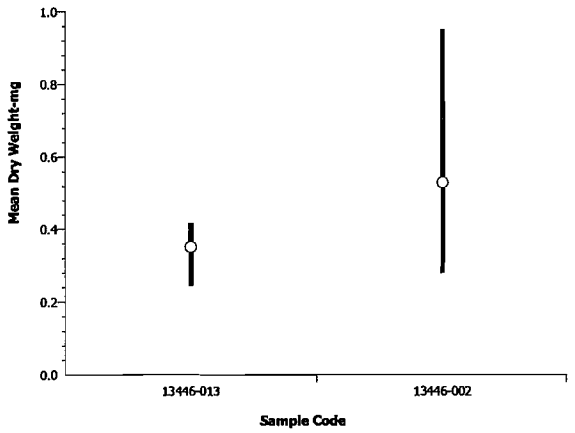
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-002	-1.9898	1.94318	0.9531	0.17142	Non-Significant Effect

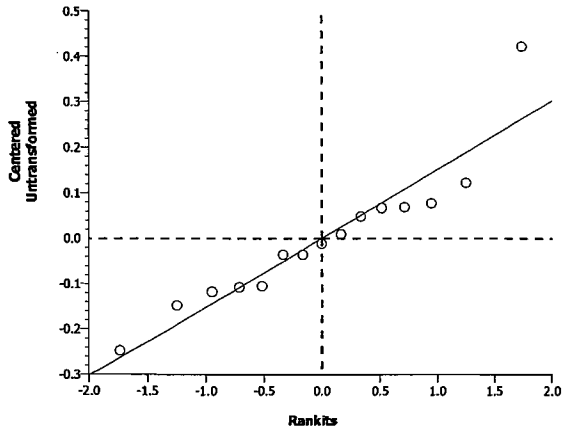
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35232	0.24667	0.42000	0.06012				
13446-002	7	0.52786	0.28000	0.95000	0.22653				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.24667	0.34000	0.40000	0.31600	0.31600	0.41875	0.36111	0.42000		
13446-002	0.60500	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	7.75784	10.05049	0.02063	Equal Variances
Distribution	Shapiro-Wilk W	0.95846	0.81445	0.68925	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0298774	0.0298774	1	1.85	0.20108	Non-Significant Effect
Error	0.1777088	0.0161554	11			
Total	0.20758623	0.0460327	12			

Group Comparisons

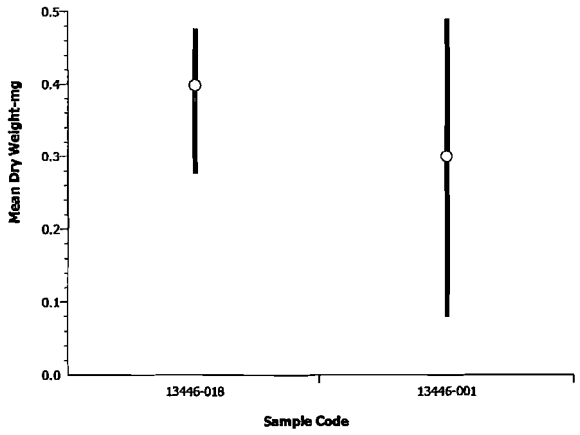
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-001	1.35992	1.79589	0.1005	0.13013	Non-Significant Effect

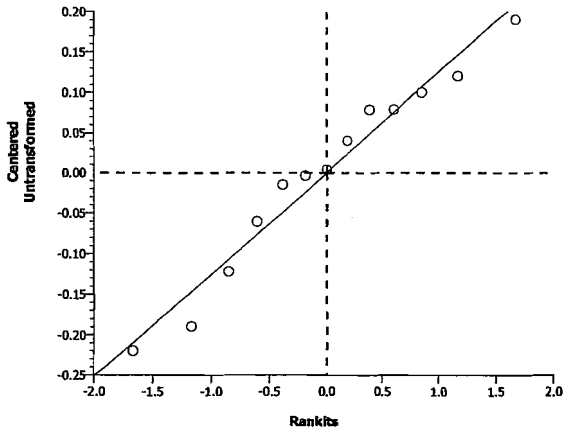
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39854	0.27667	0.47750	0.06836				
13446-001	5	0.30000	0.08000	0.49000	0.19039				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38333	0.43875	0.40222	0.33818	0.47750	0.27667	0.39500	0.47667		
13446-001	0.08000	0.49000	0.11000	0.40000	0.42000					

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:44 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.52258	8.88539	0.06456	Equal Variances
Distribution	Shapiro-Wilk W	0.98628	0.84420	0.98764	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0023989	0.0023989	1	0.56	0.46672	Non-Significant Effect
Error	0.0599936	0.0042853	14			
Total	0.06239255	0.0066842	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-009	-0.7482	1.76131	0.7666	0.05765	Non-Significant Effect

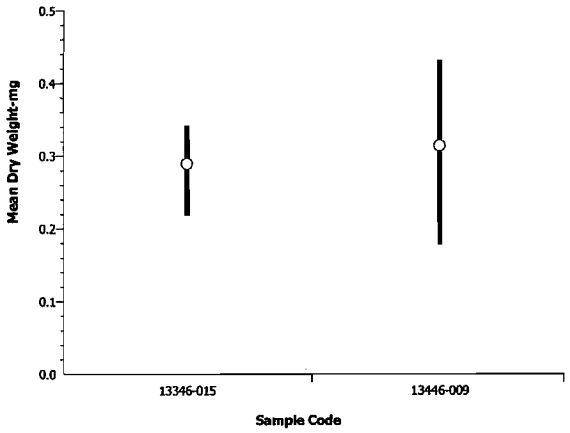
Data Summary

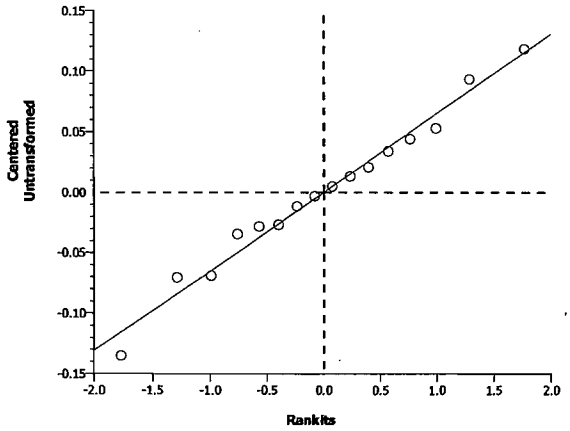
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28951	0.21875	0.34222	0.03939				
13446-009	8	0.31400	0.17875	0.43200	0.08378				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		
13446-009	0.35778	0.28556	0.31875	0.28700	0.24500	0.43200	0.40714	0.17875		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:42 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.06104	8.88539	0.16311	Equal Variances
Distribution	Shapiro-Wilk W	0.96412	0.84420	0.70316	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0065514	0.0065514	1	0.69	0.41994	Non-Significant Effect
Error	0.1328318	0.009488	14			
Total	0.13938323	0.0160394	15			

Group Comparisons

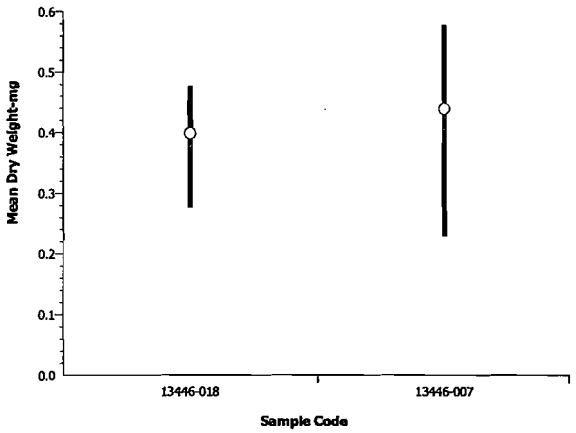
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-007	-0.831	1.76131	0.7900	0.08578	Non-Significant Effect

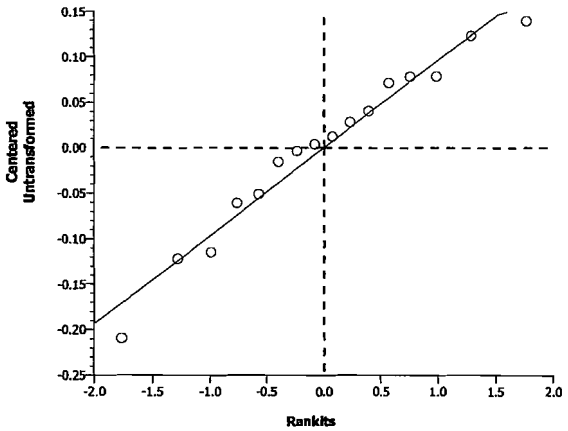
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39854	0.27667	0.47750	0.06836				
13446-007	8	0.43901	0.23000	0.57857	0.11960				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38333	0.43875	0.40222	0.33818	0.47750	0.27667	0.39500	0.47667		
13446-007	0.45125	0.23000	0.57857	0.46714	0.51000	0.56250	0.32429	0.38833		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:36 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	6.36158	8.88539	0.02607	Equal Variances
Distribution	Shapiro-Wilk W	0.95648	0.84420	0.57207	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0051232	0.0051232	1	0.62	0.44452	Non-Significant Effect
Error	0.1158617	0.0082758	14			
Total	0.12098487	0.0133990	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-007	0.7868	1.76131	0.2223	0.08011	Non-Significant Effect

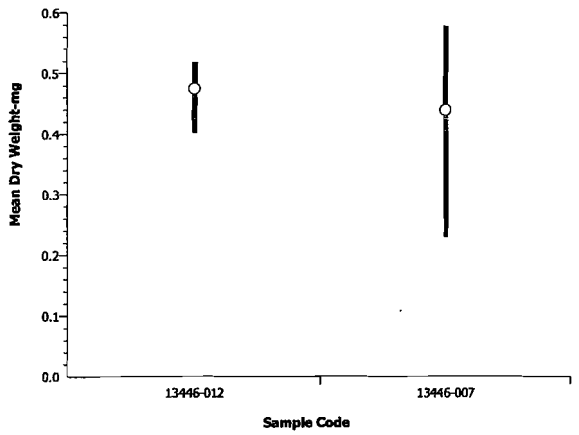
Data Summary

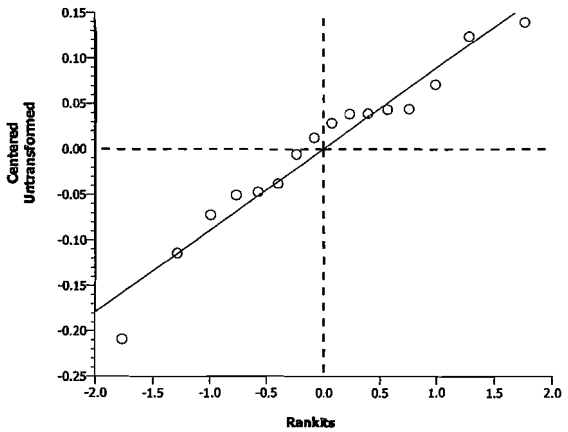
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47480	0.40222	0.51900	0.04742				
13446-007	8	0.43901	0.23000	0.57857	0.11960				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.46889	0.40222	0.43667	0.42750	0.51900	0.51333	0.51300	0.51778		
13446-007	0.45125	0.23000	0.57857	0.46714	0.51000	0.56250	0.32429	0.38833		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:44 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.84498	8.88539	0.19115	Equal Variances
Distribution	Shapiro-Wilk W	0.91953	0.84420	0.16509	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.166565	0.166565	1	55.83	0.00000	Significant Effect
Error	0.0417692	0.0029835	14			
Total	0.20833422	0.1695485	15			

Group Comparisons

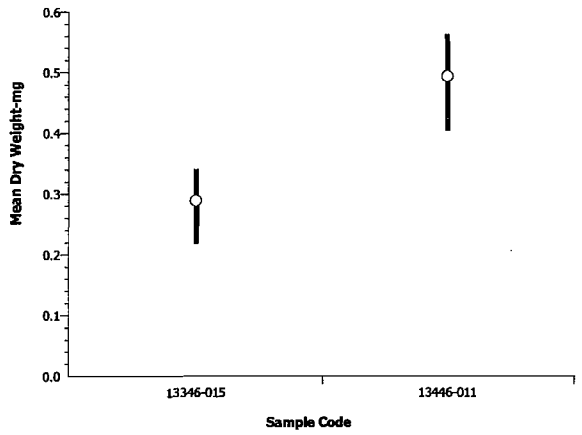
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-011	-7.4718	1.76131	1.0000	0.04810	Non-Significant Effect

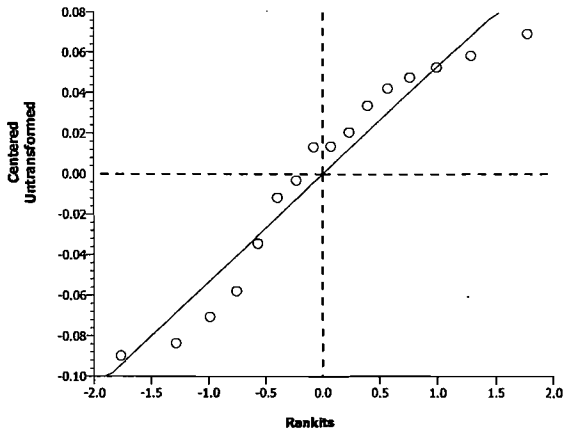
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28951	0.21875	0.34222	0.03939				
13446-011	8	0.49357	0.40375	0.56300	0.06645				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		
13446-011	0.53600	0.56300	0.40375	0.55200	0.43556	0.54125	0.41000	0.50700		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	20.06239	9.15534	0.00088	Unequal Variances
Distribution	Shapiro-Wilk W	0.89268	0.83526	0.07609	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2251199	0.2251199	1	8.98	0.01030	Significant Effect
Error	0.3257974	0.0250613	13			
Total	0.55091727	0.2501812	14			

Group Comparisons

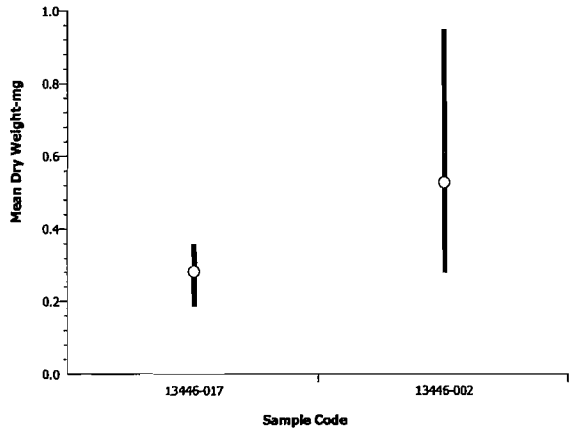
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-002	-2.8075	1.94318	0.9846	0.16996	Non-Significant Effect

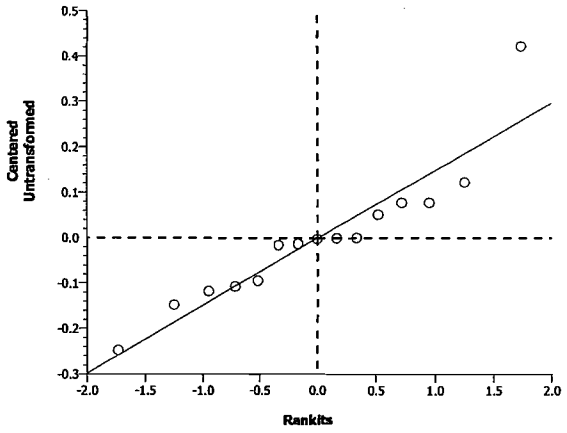
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28230	0.18750	0.35889	0.05057				
13446-002	7	0.52786	0.28000	0.95000	0.22653				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.26875	0.28222	0.26625	0.35889	0.28143	0.33333	0.18750	0.28000		
13446-002	0.60500	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:44 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.22185	16.23556	0.23147	Equal Variances
Distribution	Shapiro-Wilk W	0.95375	0.78055	0.68349	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0357640	0.0357640	1	18.04	0.00281	Significant Effect
Error	0.0158633	0.0019829	8			
Total	0.05162735	0.0377469	9			

Group Comparisons

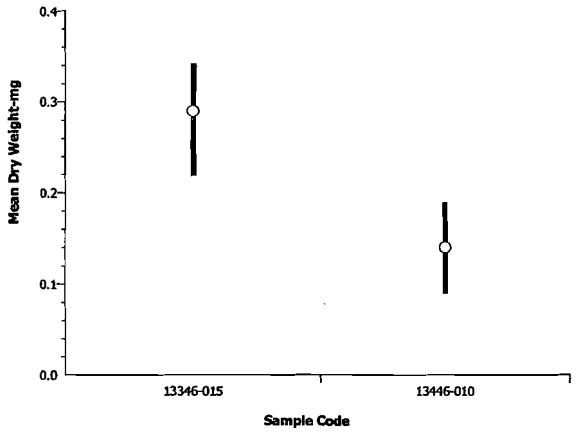
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-010	4.24689	1.85955	0.0014	0.06546	Significant Effect

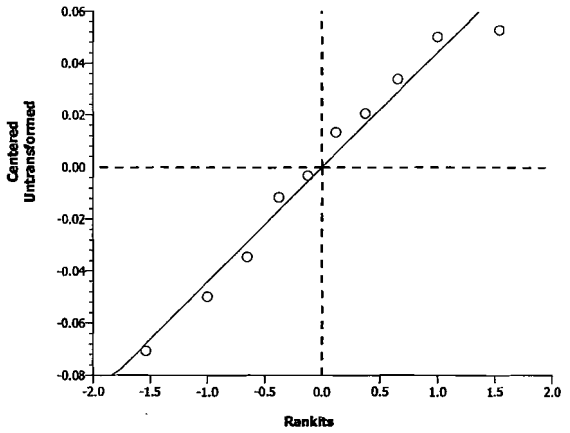
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28951	0.21875	0.34222	0.03939				
13446-010	2	0.14000	0.09000	0.19000	0.07071				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		
13446-010	0.09000	0.19000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.56203	8.88539	0.57064	Equal Variances
Distribution	Shapiro-Wilk W	0.88877	0.84420	0.05306	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2634398	0.2634398	1	72.76	0.00000	Significant Effect
Error	0.0506917	0.0036208	14			
Total	0.31413151	0.2670607	15			

Group Comparisons

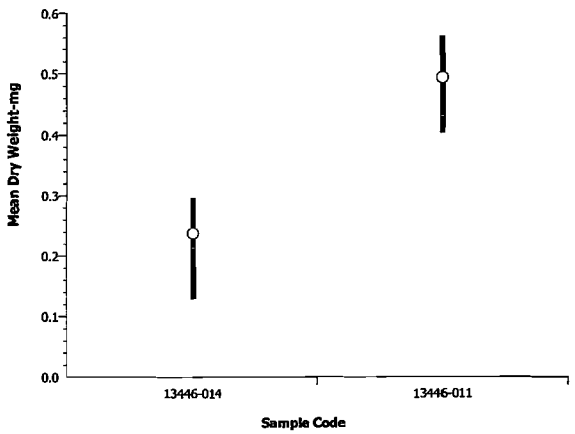
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-011	-8.5298	1.76131	1.0000	0.05299	Non-Significant Effect

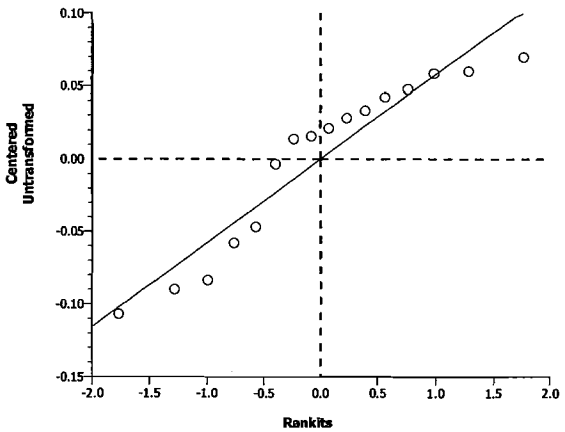
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23694	0.13000	0.29667	0.05317				
13446-011	8	0.49357	0.40375	0.56300	0.06645				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		
13446-011	0.53600	0.56300	0.40375	0.55200	0.43556	0.54125	0.41000	0.50700		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:35 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	22.82325	9.15534	0.00058	Unequal Variances
Distribution	Shapiro-Wilk W	0.89441	0.83526	0.08082	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0105101	0.0105101	1	0.42	0.52717	Non-Significant Effect
Error	0.3236316	0.0248947	13			
Total	0.33414166	0.0354048	14			

Group Comparisons

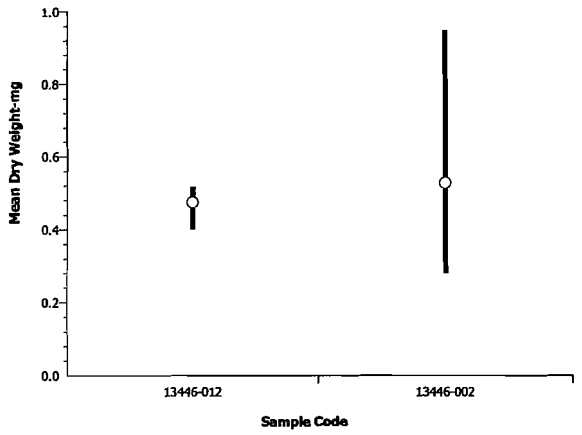
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-002	-0.6081	1.94318	0.7173	0.16953	Non-Significant Effect

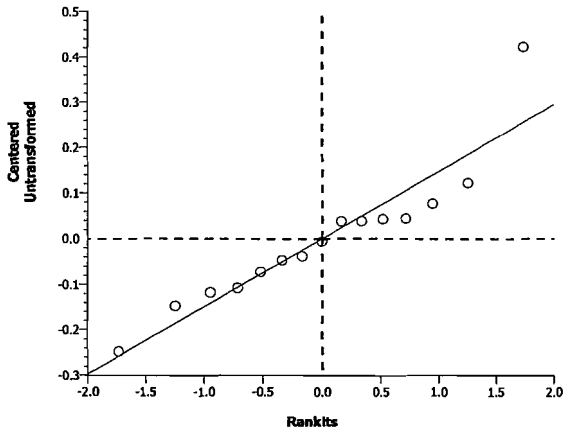
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47480	0.40222	0.51900	0.04742				
13446-002	7	0.52786	0.28000	0.95000	0.22653				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.46889	0.40222	0.43667	0.42750	0.51900	0.51333	0.51300	0.51778		
13446-002	0.60500	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunnett's Multiple Comparison	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Distribution	Shapiro-Wilk W	0.88056	0.76370	0.16104	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0363768	0.0363768	1	14.22	0.00697	Significant Effect
Error	0.0179046	0.0025578	7			
Total	0.05428139	0.0389346	8			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-004	3.7712	1.89	<= 0.0500	0.10138	Significant Effect

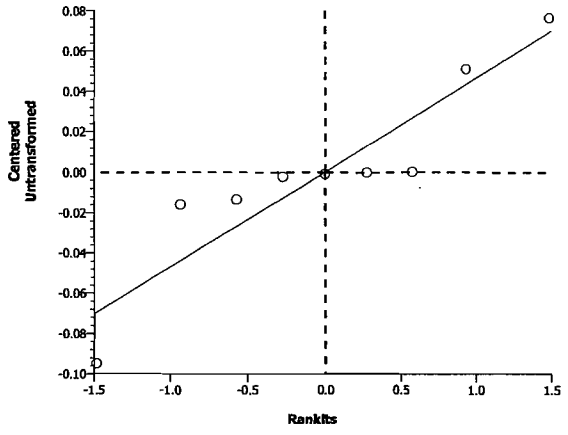
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28230	0.18750	0.35889	0.05057				
13446-004	1	0.08000	0.08000	0.08000					

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.26875	0.28222	0.26625	0.35889	0.28143	0.33333	0.18750	0.28000		
13446-004	0.08000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.59204	8.88539	0.03707	Equal Variances
Distribution	Shapiro-Wilk W	0.95756	0.84420	0.59000	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0982368	0.0982368	1	11.65	0.00420	Significant Effect
Error	0.1180276	0.0084305	14			
Total	0.21626439	0.1066674	15			

Group Comparisons

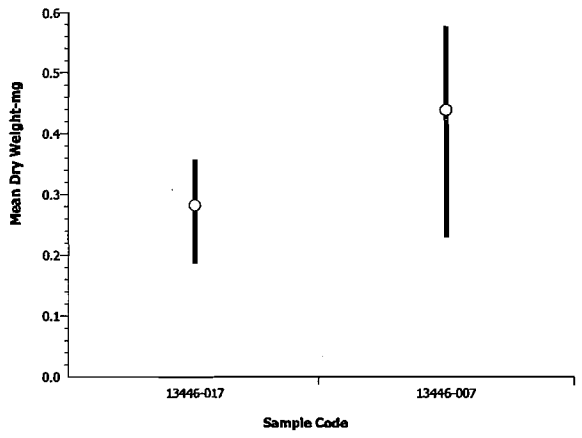
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-007	-3.4136	1.76131	0.9979	0.08086	Non-Significant Effect

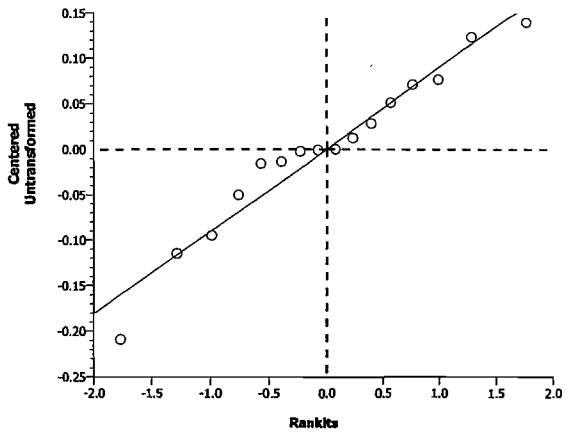
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28230	0.18750	0.35889	0.05057				
13446-007	8	0.43901	0.23000	0.57857	0.11960				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.26875	0.28222	0.26625	0.35889	0.28143	0.33333	0.18750	0.28000		
13446-007	0.45125	0.23000	0.57857	0.46714	0.51000	0.56250	0.32429	0.38833		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.09156	8.88539	0.15957	Equal Variances
Distribution	Shapiro-Wilk W	0.86961	0.84420	0.02592	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.108305	0.108305	1	18.73	0.00070	Significant Effect
Error	0.0809546	0.0057825	14			
Total	0.18925962	0.1140875	15			

Group Comparisons

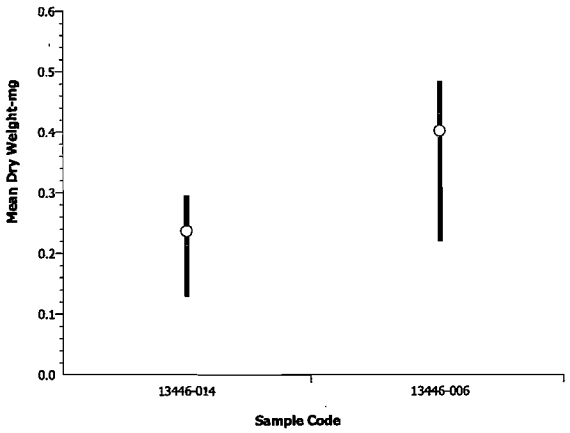
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-006	-4.3278	1.76131	0.9997	0.06697	Non-Significant Effect

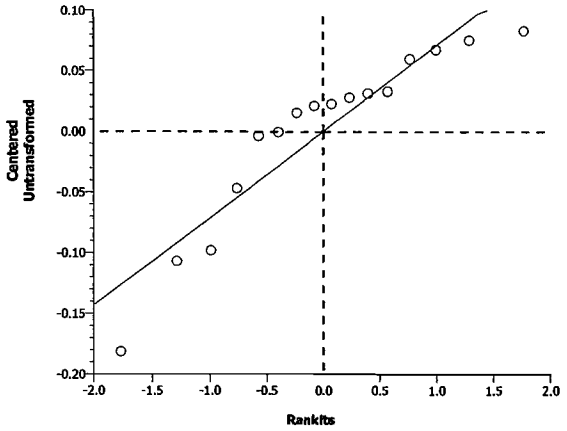
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23694	0.13000	0.29667	0.05317				
13446-006	8	0.40149	0.22000	0.48444	0.09348				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		
13446-006	0.47667	0.42444	0.30333	0.43300	0.46889	0.40111	0.48444	0.22000		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.76895	16.23556	0.45042	Equal Variances
Distribution	Shapiro-Wilk W	0.90516	0.78055	0.24020	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0150350	0.0150350	1	4.85	0.05873	Non-Significant Effect
Error	0.0247858	0.0030982	8			
Total	0.03982078	0.0181332	9			

Group Comparisons

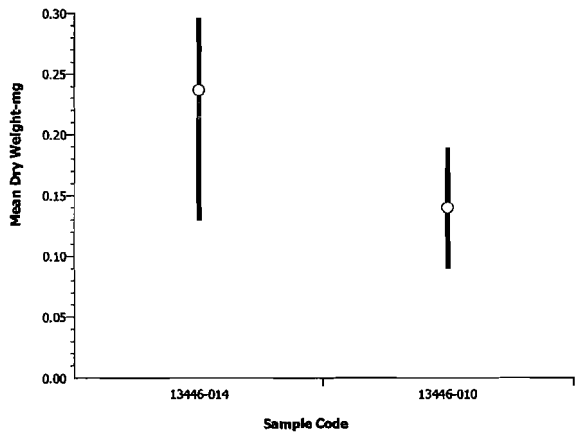
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-010	2.20290	1.85955	0.0294	0.08183	Significant Effect

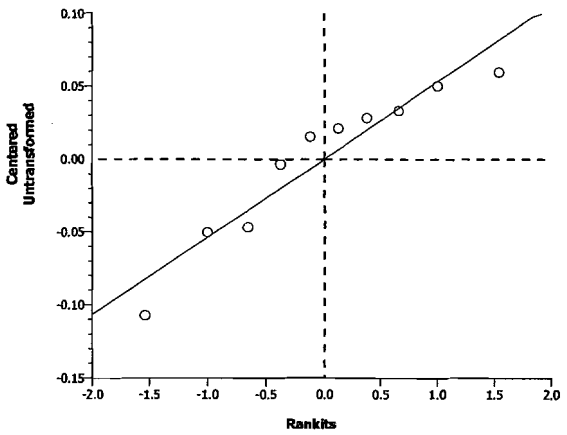
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23694	0.13000	0.29667	0.05317				
13446-010	2	0.14000	0.09000	0.19000	0.07071				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		
13446-010	0.09000	0.19000								

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:38 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.95792	8.88539	0.08991	Equal Variances
Distribution	Shapiro-Wilk W	0.96485	0.84420	0.71596	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0300637	0.0300637	1	3.36	0.08832	Non-Significant Effect
Error	0.1254199	0.0089586	14			
Total	0.15548357	0.0390223	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-007	-1.8319	1.76131	0.9558	0.08335	Non-Significant Effect

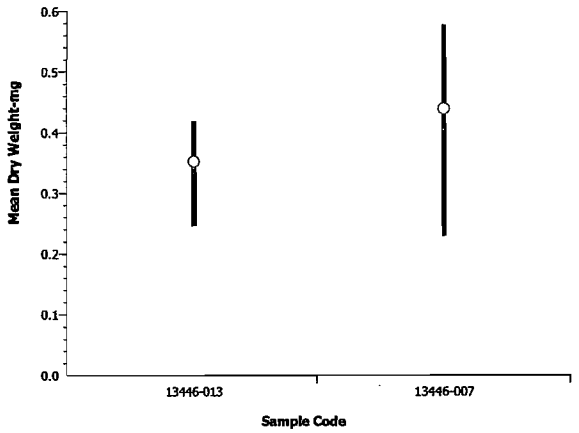
Data Summary

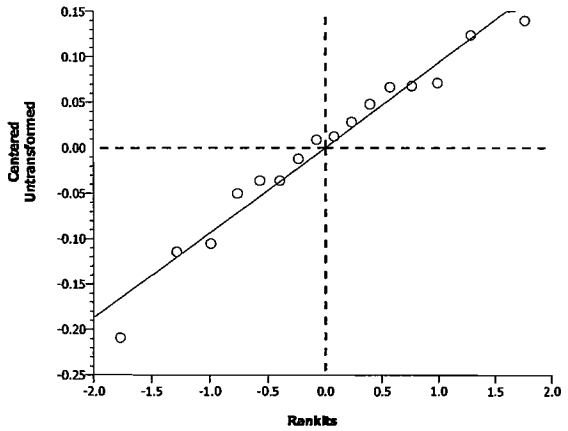
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35232	0.24667	0.42000	0.06012				
13446-007	8	0.43901	0.23000	0.57857	0.11960				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.24667	0.34000	0.40000	0.31600	0.31600	0.41875	0.36111	0.42000		
13446-007	0.45125	0.23000	0.57857	0.46714	0.51000	0.56250	0.32429	0.38833		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:44 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	9.10295	8.88539	0.00931	Unequal Variances
Distribution	Shapiro-Wilk W	0.89766	0.84420	0.07387	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0637336	0.0637336	1	8.13	0.01282	Significant Effect
Error	0.1097516	0.0078394	14			
Total	0.1734852	0.071573	15			

Group Comparisons

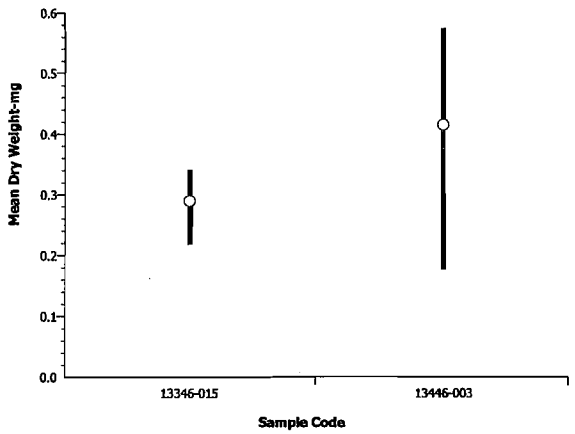
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-003	-2.8513	1.85955	0.9893	0.08232	Non-Significant Effect

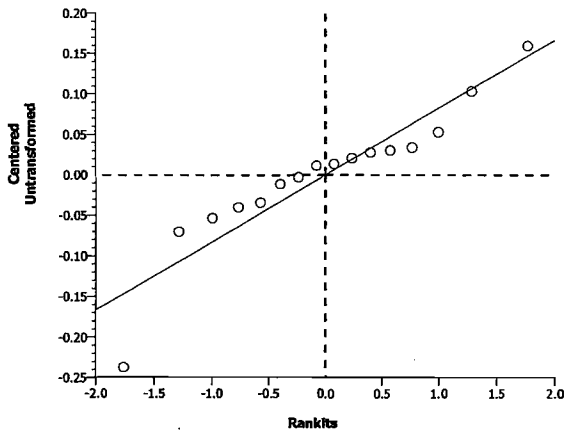
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.28951	0.21875	0.34222	0.03939				
13446-003	8	0.41574	0.17778	0.57500	0.11886				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		
13446-003	0.42700	0.57500	0.44571	0.51900	0.36250	0.17778	0.37556	0.44333		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	14.17237	10.05049	0.00362	Unequal Variances
Distribution	Shapiro-Wilk W	0.94718	0.81445	0.53100	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0009643	0.0009643	1	0.07	0.80329	Non-Significant Effect
Error	0.1629046	0.0148095	11			
Total	0.1638689	0.0157738	12			

Group Comparisons

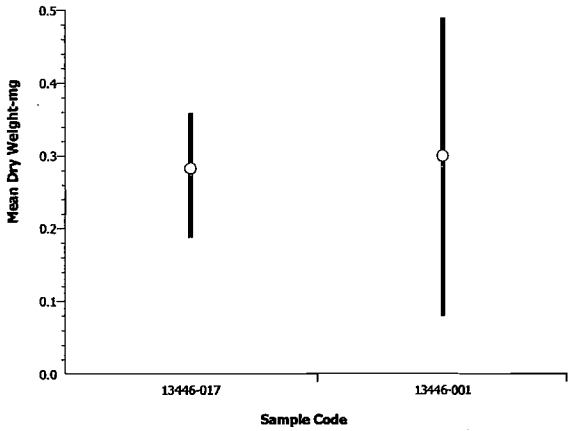
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-001	-0.2035	2.13185	0.5757	0.18548	Non-Significant Effect

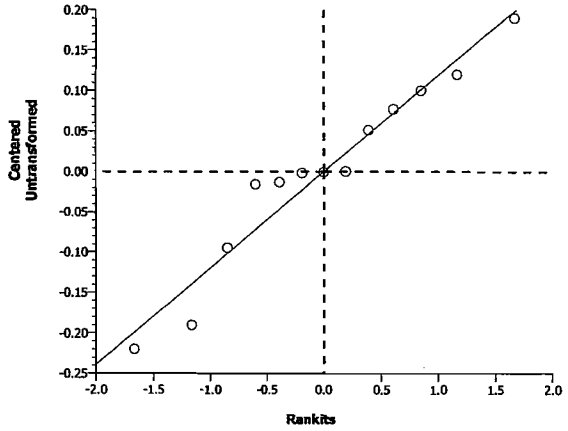
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28230	0.18750	0.35889	0.05057				
13446-001	5	0.30000	0.08000	0.49000	0.19039				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.26875	0.28222	0.26625	0.35889	0.28143	0.33333	0.18750	0.28000		
13446-001	0.08000	0.49000	0.11000	0.40000	0.42000					

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:40 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.21226	10.78592	0.35252	Equal Variances
Distribution	Shapiro-Wilk W	0.93742	0.83526	0.34557	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0578551	0.0578551	1	5.41	0.03678	Significant Effect
Error	0.1389159	0.0106858	13			
Total	0.196771	0.068541	14			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-007	-2.3268	1.77093	0.9816	0.09475	Non-Significant Effect

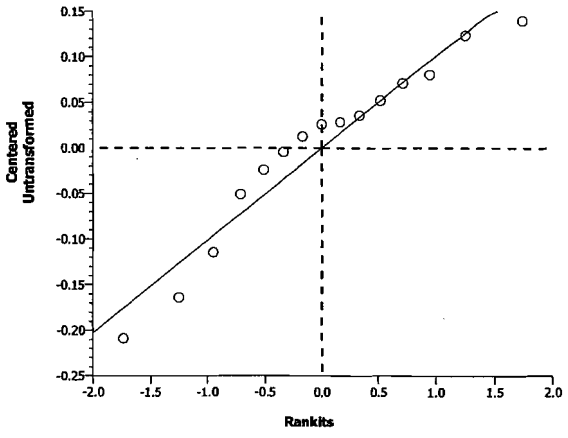
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31452	0.15000	0.39500	0.08041				
13446-007	8	0.43901	0.23000	0.57857	0.11960				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.39500	0.31000	0.36667	0.15000	0.34000			
13446-007	0.45125	0.23000	0.57857	0.46714	0.51000	0.56250	0.32429	0.38833		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:42 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunnett's Multiple Comparison	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Distribution	Shapiro-Wilk W	0.93425	0.76370	0.49642	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0901936	0.0901936	1	19.30	0.00318	Significant Effect
Error	0.0327089	0.0046727	7			
Total	0.12290244	0.0948663	8			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-004	4.39344	1.89	<= 0.0500	0.13703	Significant Effect

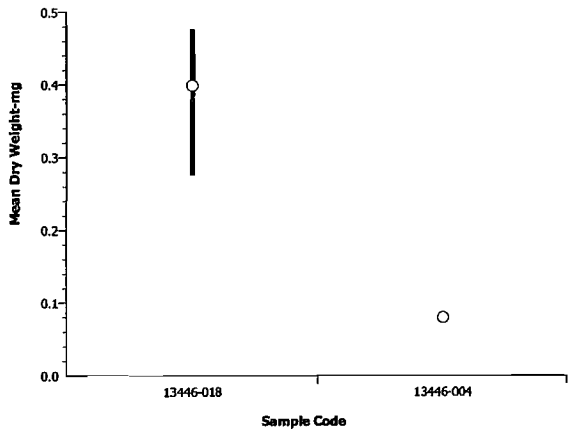
Data Summary

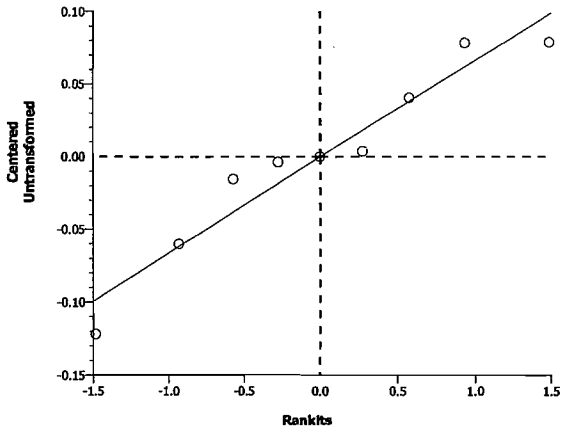
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39854	0.27667	0.47750	0.06836				
13446-004	1	0.08000	0.08000	0.08000					

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38333	0.43875	0.40222	0.33818	0.47750	0.27667	0.39500	0.47667		
13446-004	0.08000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.99795	8.88539	0.04992	Equal Variances
Distribution	Shapiro-Wilk W	0.90873	0.84420	0.11122	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1278744	0.1278744	1	15.09	0.00165	Significant Effect
Error	0.1186741	0.0084767	14			
Total	0.24654844	0.1363511	15			

Group Comparisons

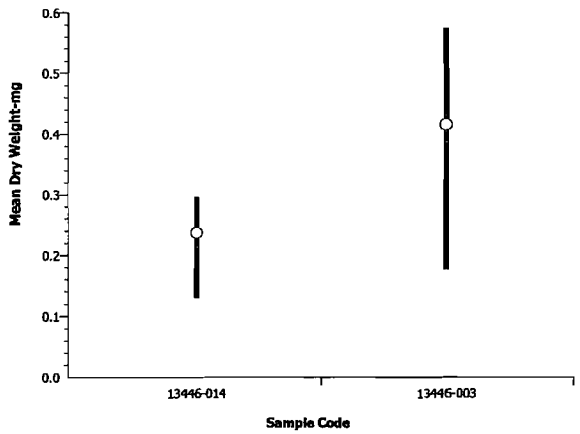
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-003	-3.884	1.76131	0.9992	0.08108	Non-Significant Effect

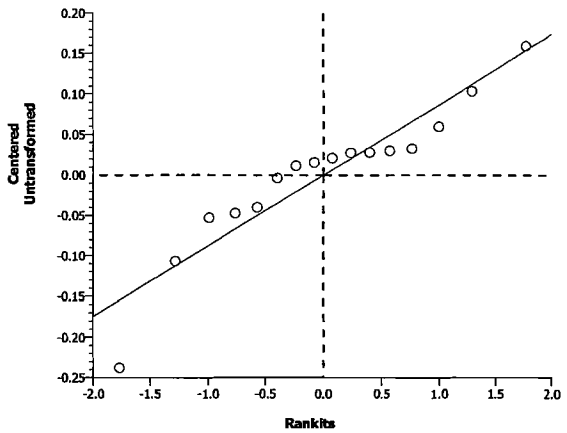
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23694	0.13000	0.29667	0.05317				
13446-003	8	0.41574	0.17778	0.57500	0.11886				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		
13446-003	0.42700	0.57500	0.44571	0.51900	0.36250	0.17778	0.37556	0.44333		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:43 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.48311	8.88539	0.25317	Equal Variances
Distribution	Shapiro-Wilk W	0.98106	0.84420	0.95318	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0237527	0.0237527	1	4.83	0.04538	Significant Effect
Error	0.0689161	0.0049226	14			
Total	0.09266875	0.0286753	15			

Group Comparisons

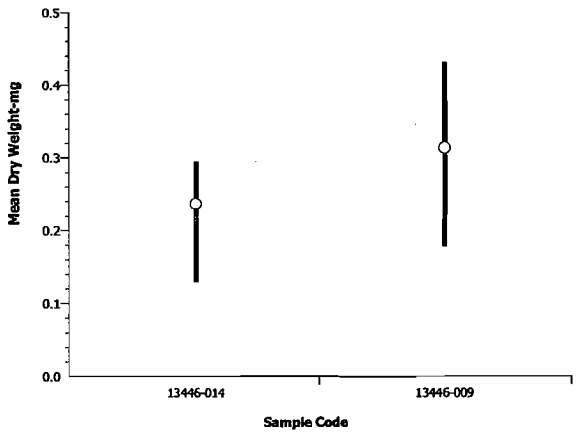
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-009	-2.1966	1.76131	0.9773	0.06179	Non-Significant Effect

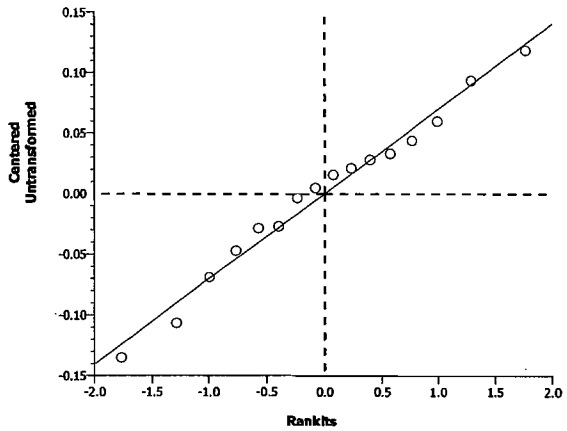
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.23694	0.13000	0.29667	0.05317				
13446-009	8	0.31400	0.17875	0.43200	0.08378				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		
13446-009	0.35778	0.28556	0.31875	0.28700	0.24500	0.43200	0.40714	0.17875		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:38 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	10.03088	10.05049	0.01006	Equal Variances
Distribution	Shapiro-Wilk W	0.96163	0.81445	0.73551	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0084214	0.0084214	1	0.54	0.47623	Non-Significant Effect
Error	0.1702969	0.0154815	11			
Total	0.1787183	0.023903	12			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-001	0.73754	1.79589	0.2381	0.12739	Non-Significant Effect

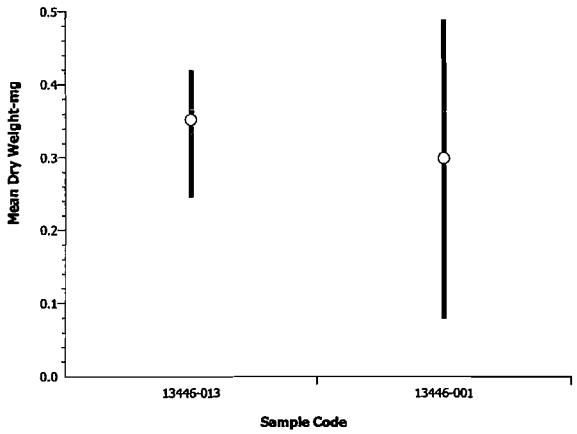
Data Summary

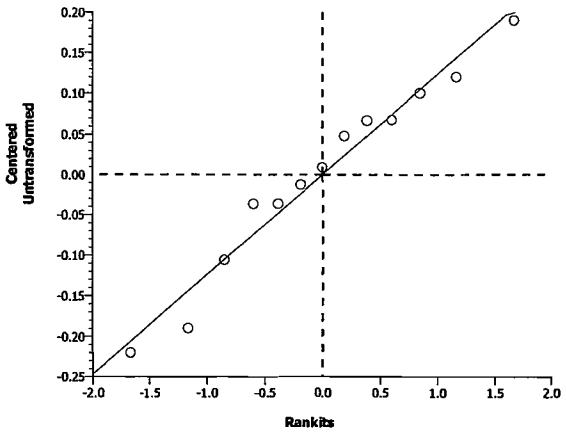
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35232	0.24667	0.42000	0.06012				
13446-001	5	0.30000	0.08000	0.49000	0.19039				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.24667	0.34000	0.40000	0.31600	0.31600	0.41875	0.36111	0.42000		
13446-001	0.08000	0.49000	0.11000	0.40000	0.42000					

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:39 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunnett's Multiple Comparison	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Distribution	Shapiro-Wilk W	0.84388	0.74935	0.08689	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0481262	0.0481262	1	7.44	0.03426	Significant Effect
Error	0.0387929	0.0064655	6			
Total	0.0869191	0.0545917	7			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-004	2.72829	1.94	<= 0.0500	0.16676	Significant Effect

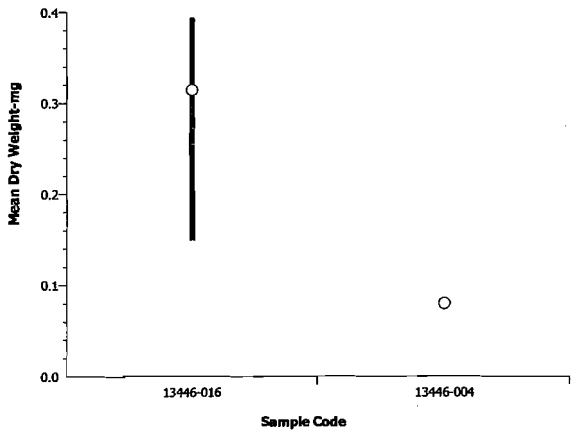
Data Summary

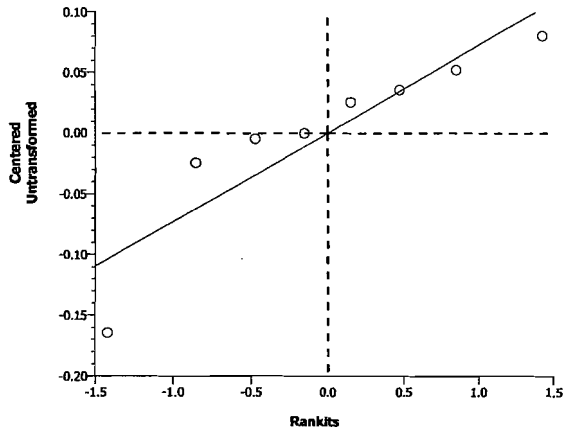
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31452	0.15000	0.39500	0.08041				
13446-004	1	0.08000	0.08000	0.08000					

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.39500	0.31000	0.36667	0.15000	0.34000			
13446-004	0.08000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:39 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	7.93684	11.07304	0.02353	Equal Variances
Distribution	Shapiro-Wilk W	0.91482	0.82506	0.19064	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1592889	0.1592889	1	5.51	0.03684	Significant Effect
Error	0.3466857	0.0288905	12			
Total	0.50597459	0.1881794	13			

Group Comparisons

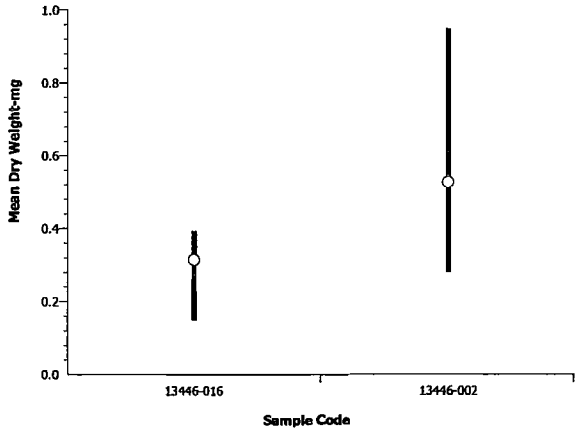
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-002	-2.3481	1.78229	0.9816	0.16193	Non-Significant Effect

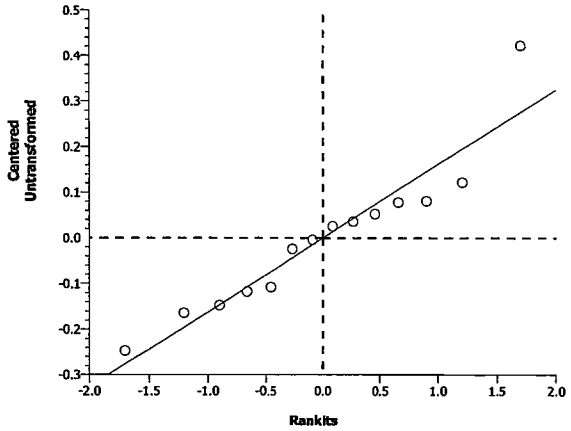
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31452	0.15000	0.39500	0.08041				
13446-002	7	0.52786	0.28000	0.95000	0.22653				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.39500	0.31000	0.36667	0.15000	0.34000			
13446-002	0.60500	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:41 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	10.98199	9.15534	0.00582	Unequal Variances
Distribution	Shapiro-Wilk W	0.90737	0.83526	0.12673	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0624322	0.0624322	1	2.38	0.14666	Non-Significant Effect
Error	0.3406017	0.0262001	13			
Total	0.40303387	0.0886323	14			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-002	-1.4536	1.94318	0.9019	0.17288	Non-Significant Effect

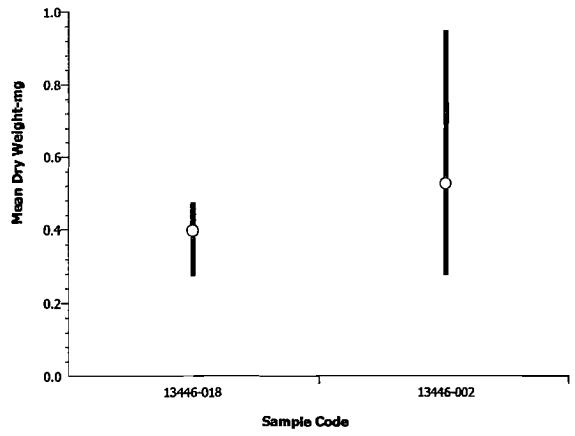
Data Summary

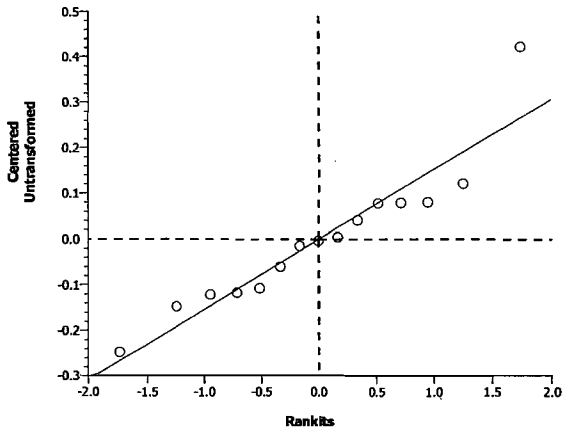
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39854	0.27667	0.47750	0.06836				
13446-002	7	0.52786	0.28000	0.95000	0.22653				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38333	0.43875	0.40222	0.33818	0.47750	0.27667	0.39500	0.47667		
13446-002	0.60500	0.65000	0.41000	0.42000	0.95000	0.28000	0.38000			

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:35 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	16.12268	10.05049	0.00244	Unequal Variances
Distribution	Shapiro-Wilk W	0.95281	0.81445	0.60790	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.094014	0.094014	1	6.43	0.02765	Significant Effect
Error	0.1607387	0.0146126	11			
Total	0.25475271	0.1086266	12			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-001	2.01424	2.13185	0.0571	0.18501	Non-Significant Effect

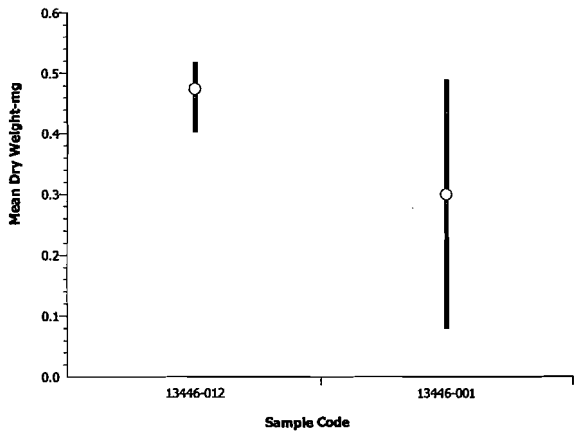
Data Summary

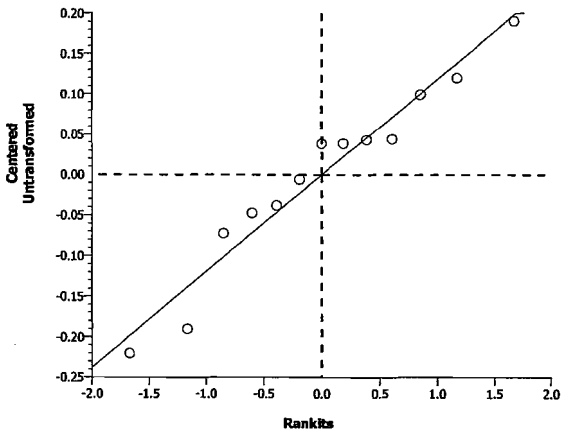
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47480	0.40222	0.51900	0.04742				
13446-001	5	0.30000	0.08000	0.49000	0.19039				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.46889	0.40222	0.43667	0.42750	0.51900	0.51333	0.51300	0.51778		
13446-001	0.08000	0.49000	0.11000	0.40000	0.42000					

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 9:39 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunnett's Multiple Comparison	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Distribution	Shapiro-Wilk W	0.87530	0.76370	0.14330	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1385475	0.1385475	1	61.62	0.00010	Significant Effect
Error	0.0157387	0.0022484	7			
Total	0.15428619	0.1407959	8			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-004	7.8499	1.89	<= 0.0500	0.09505	Significant Effect

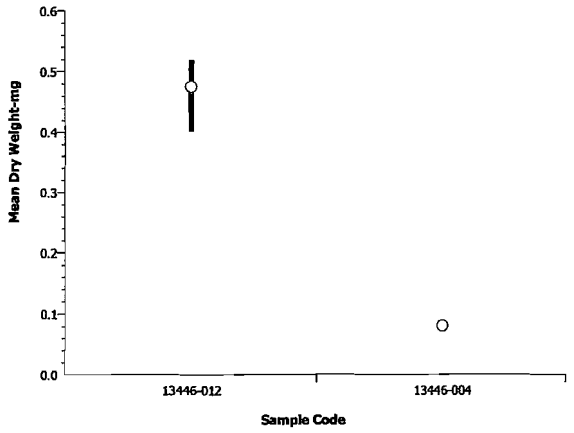
Data Summary

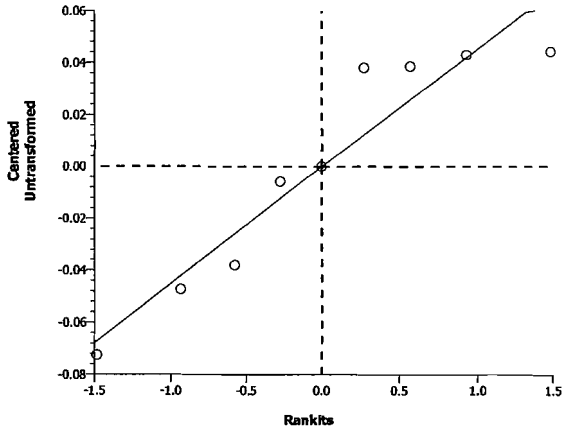
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47480	0.40222	0.51900	0.04742				
13446-004	1	0.08000	0.08000	0.08000					

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.46889	0.40222	0.43667	0.42750	0.51900	0.51333	0.51300	0.51778		
13446-004	0.08000									

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.01094	8.88539	0.16912	Equal Variances
Distribution	Shapiro-Wilk W	0.96431	0.84420	0.70652	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0475524	0.0475524	1	15.28	0.00157	Significant Effect
Error	0.0435722	0.0031123	14			
Total	0.09112453	0.0506647	15			

Group Comparisons

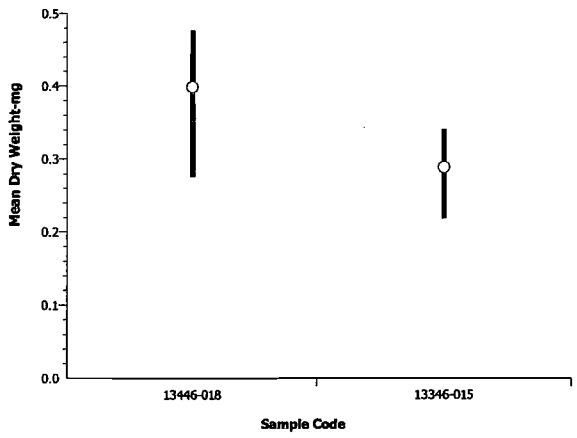
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13346-015	3.90882	1.76131	0.0008	0.04913	Significant Effect

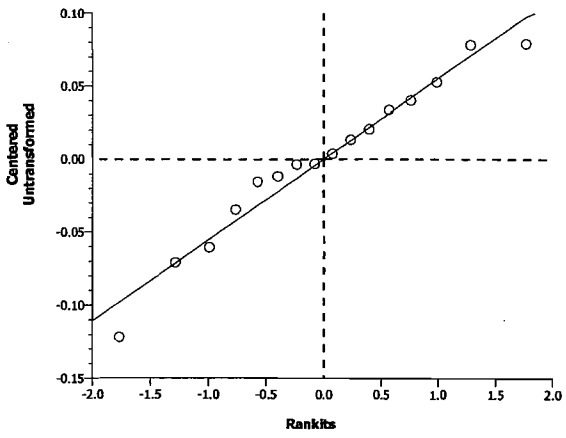
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39854	0.27667	0.47750	0.06836				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38333	0.43875	0.40222	0.33818	0.47750	0.27667	0.39500	0.47667		
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.65315	8.88539	0.52313	Equal Variances
Distribution	Shapiro-Wilk W	0.93426	0.84420	0.27880	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1044616	0.1044616	1	27.86	0.00012	Significant Effect
Error	0.0524946	0.0037496	14			
Total	0.15695621	0.1082112	15			

Group Comparisons

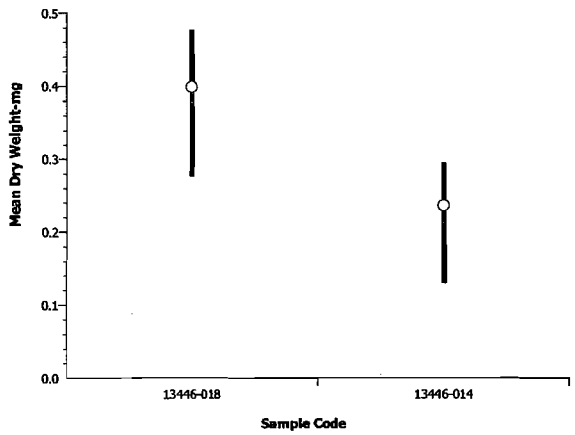
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-014	-5.2782	1.76131	0.9999	0.05393	Non-Significant Effect

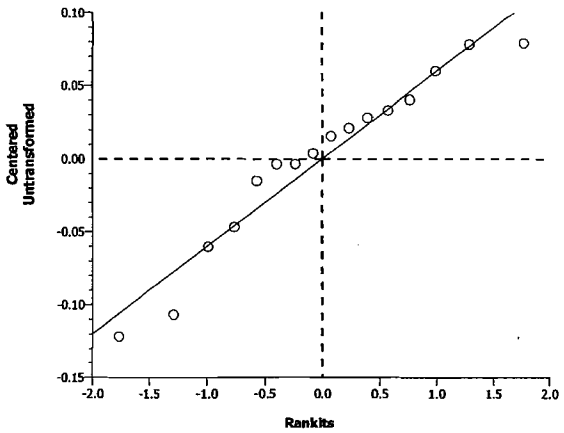
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39854	0.27667	0.47750	0.06836				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38333	0.43875	0.40222	0.33818	0.47750	0.27667	0.39500	0.47667		
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.27854	8.88539	0.75405	Equal Variances
Distribution	Shapiro-Wilk W	0.92107	0.84420	0.17451	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0532488	0.0532488	1	16.54	0.00116	Significant Effect
Error	0.0450827	0.0032202	14			
Total	0.09833143	0.056469	15			

Group Comparisons

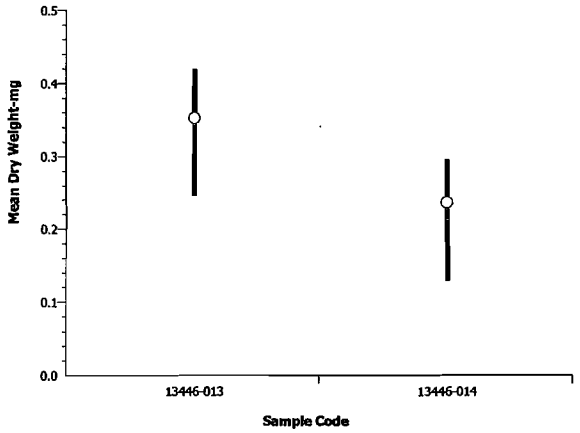
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-014	4.06644	1.76131	0.0006	0.04997	Significant Effect

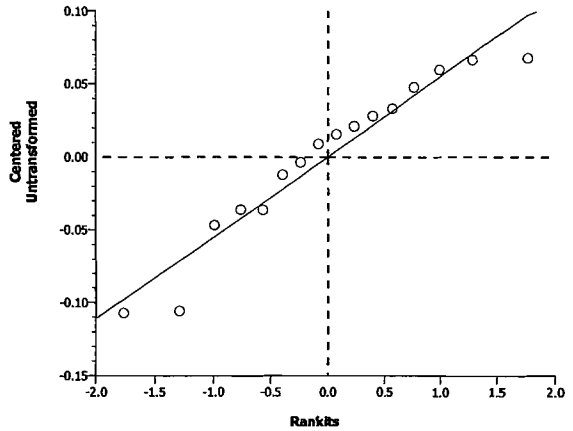
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35232	0.24667	0.42000	0.06012				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.24667	0.34000	0.40000	0.31600	0.31600	0.41875	0.36111	0.42000		
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.44879	8.88539	0.63694	Equal Variances
Distribution	Shapiro-Wilk W	0.91225	0.84420	0.12661	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1373311	0.1373311	1	72.27	0.00000	Significant Effect
Error	0.0266020	0.0019001	14			
Total	0.16393309	0.1392312	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13346-015	8.50141	1.76131	0.0000	0.03839	Significant Effect

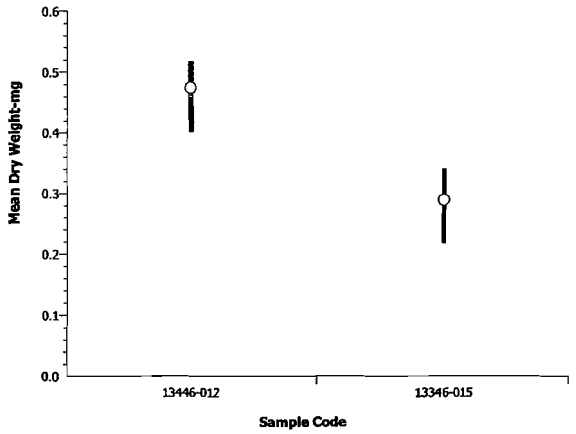
Data Summary

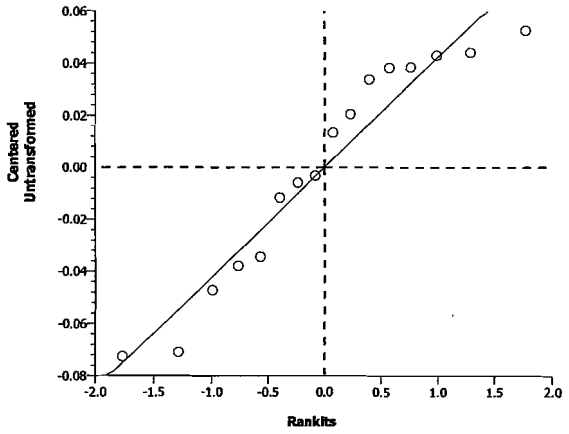
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47480	0.40222	0.51900	0.04742				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.46889	0.40222	0.43667	0.42750	0.51900	0.51333	0.51300	0.51778		
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.16616	9.15534	0.08365	Equal Variances
Distribution	Shapiro-Wilk W	0.88569	0.83526	0.05957	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0023364	0.0023364	1	0.61	0.44817	Non-Significant Effect
Error	0.0496562	0.0038197	13			
Total	0.05199255	0.0061561	14			

Group Comparisons

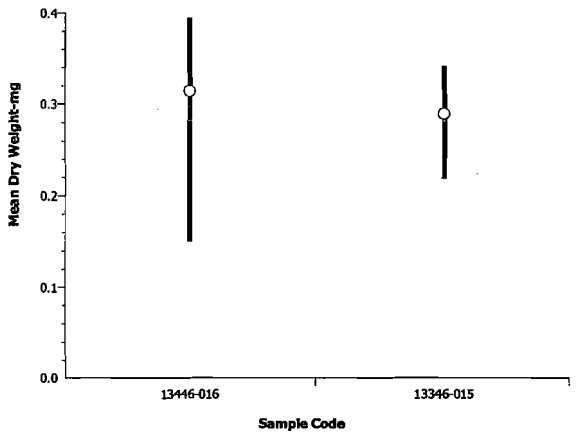
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13346-015	0.78209	1.77093	0.2241	0.05665	Non-Significant Effect

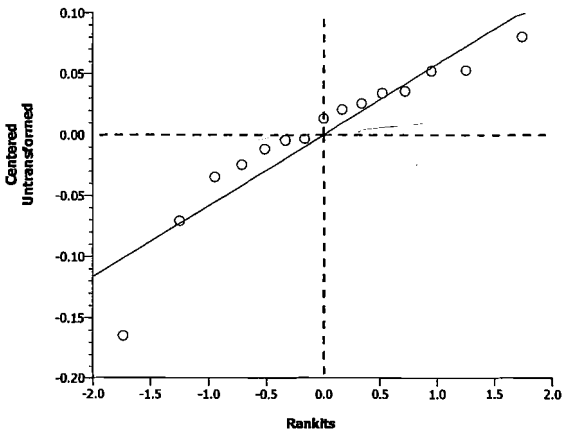
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31452	0.15000	0.39500	0.08041				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.39500	0.31000	0.36667	0.15000	0.34000			
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:18 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.01094	8.88539	0.16912	Equal Variances
Distribution	Shapiro-Wilk W	0.96431	0.84420	0.70652	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0475524	0.0475524	1	15.28	0.00157	Significant Effect
Error	0.0435722	0.0031123	14			
Total	0.09112453	0.0506647	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13346-015	-3.9088	1.76131	0.9992	0.04913	Non-Significant Effect

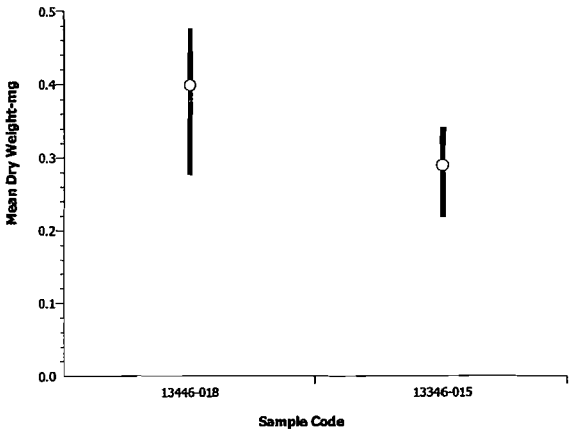
Data Summary

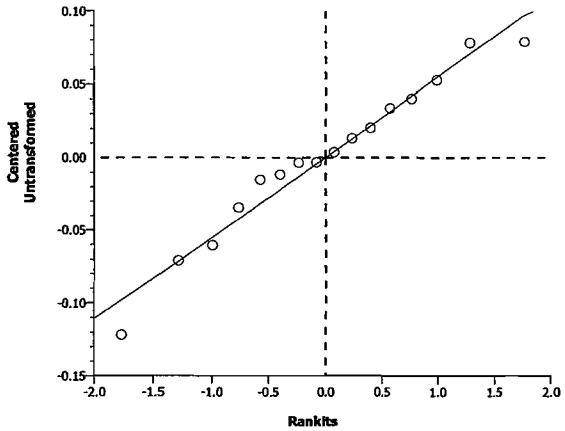
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39854	0.27667	0.47750	0.06836				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38333	0.43875	0.40222	0.33818	0.47750	0.27667	0.39500	0.47667		
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.10507	8.88539	0.89853	Equal Variances
Distribution	Shapiro-Wilk W	0.93205	0.84420	0.25805	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0082298	0.0082298	1	3.06	0.10228	Non-Significant Effect
Error	0.0376903	0.0026922	14			
Total	0.04592014	0.010922	15			

Group Comparisons

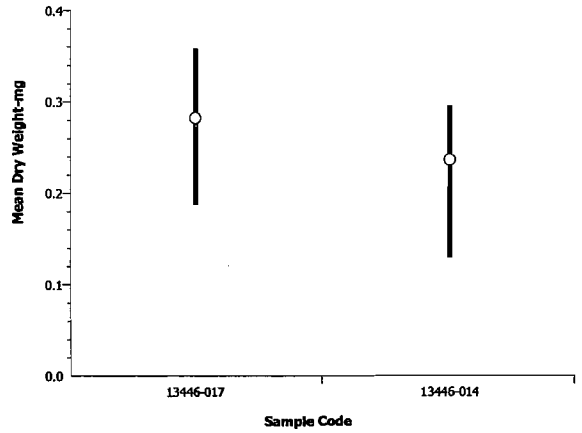
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-014	-1.7484	1.76131	0.9489	0.04569	Non-Significant Effect

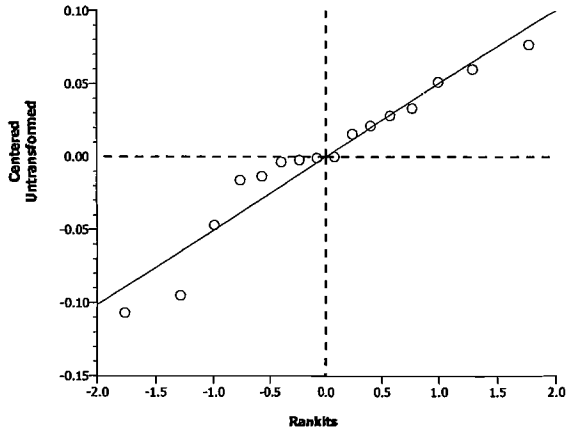
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28230	0.18750	0.35889	0.05057				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.26875	0.28222	0.26625	0.35889	0.28143	0.33333	0.18750	0.28000		
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.32865	8.88539	0.28722	Equal Variances
Distribution	Shapiro-Wilk W	0.96093	0.84420	0.64752	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0157796	0.0157796	1	6.11	0.02690	Significant Effect
Error	0.0361602	0.0025829	14			
Total	0.05193978	0.0183625	15			

Group Comparisons

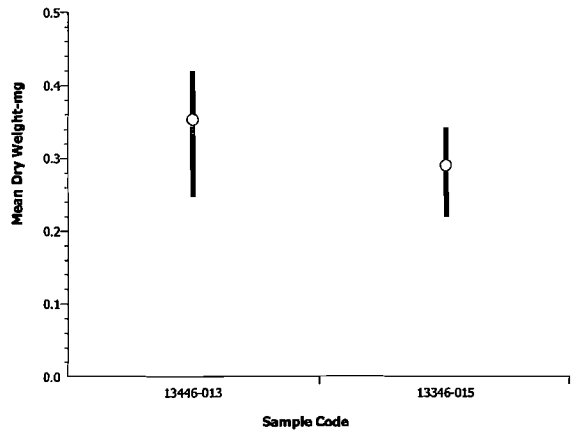
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13346-015	-2.4717	1.76131	0.9866	0.04476	Non-Significant Effect

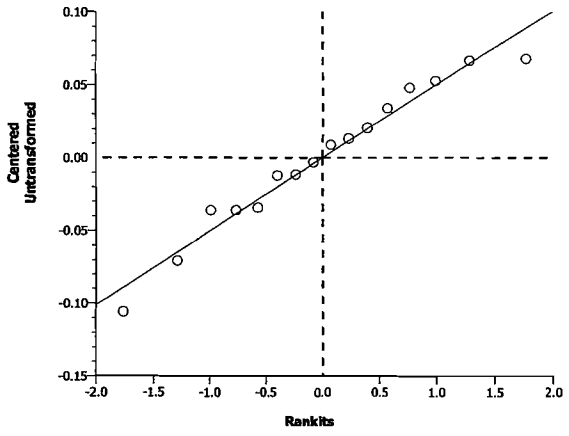
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35232	0.24667	0.42000	0.06012				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.24667	0.34000	0.40000	0.31600	0.31600	0.41875	0.36111	0.42000		
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.25714	8.88539	0.77041	Equal Variances
Distribution	Shapiro-Wilk W	0.90160	0.84420	0.08549	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2263116	0.2263116	1	89.19	0.00000	Significant Effect
Error	0.0355245	0.0025375	14			
Total	0.2618361	0.2288491	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-014	-9.4439	1.76131	1.0000	0.04436	Non-Significant Effect

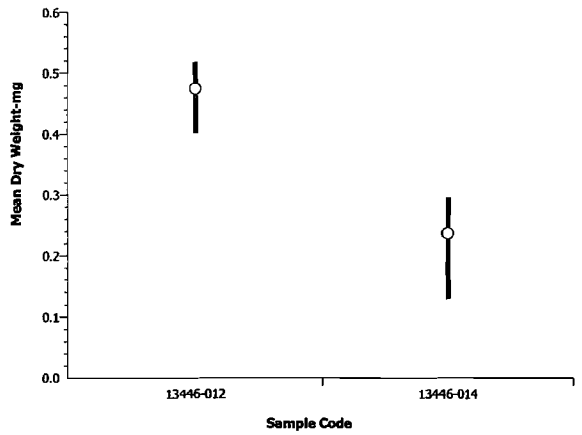
Data Summary

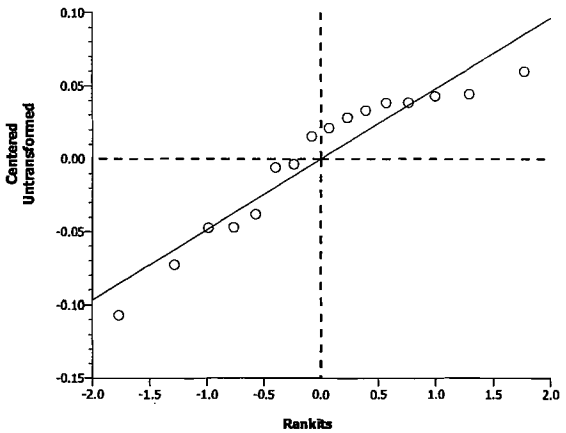
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47480	0.40222	0.51900	0.04742				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.46889	0.40222	0.43667	0.42750	0.51900	0.51333	0.51300	0.51778		
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.28742	9.15534	0.30329	Equal Variances
Distribution	Shapiro-Wilk W	0.86857	0.83526	0.03259	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0224733	0.0224733	1	4.99	0.04374	Significant Effect
Error	0.0585786	0.0045060	13			
Total	0.08105194	0.0269794	14			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-014	2.23324	1.77093	0.0219	0.06153	Significant Effect

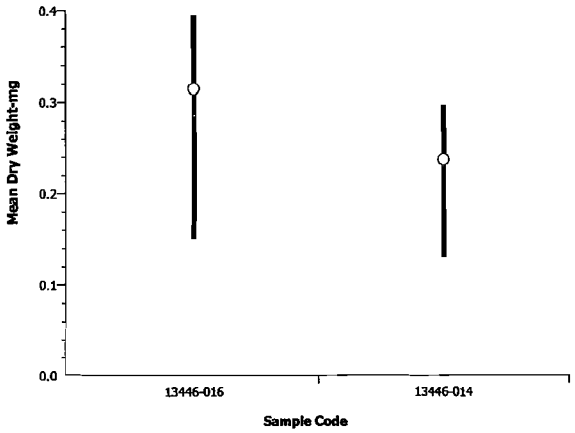
Data Summary

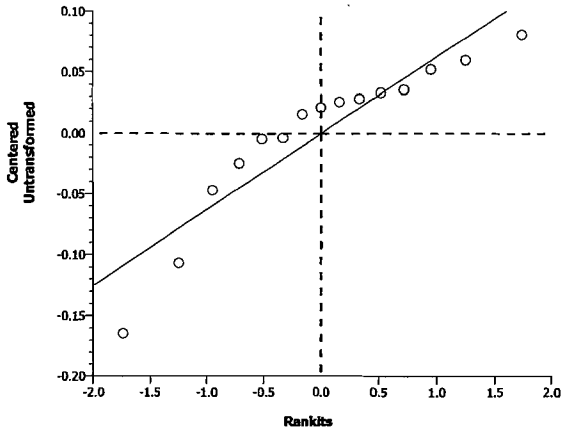
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31452	0.15000	0.39500	0.08041				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.39500	0.31000	0.36667	0.15000	0.34000			
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.25714	8.88539	0.77041	Equal Variances
Distribution	Shapiro-Wilk W	0.90160	0.84420	0.08549	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2263116	0.2263116	1	89.19	0.00000	Significant Effect
Error	0.0355245	0.0025375	14			
Total	0.2618361	0.2288491	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-014	9.44395	1.76131	0.0000	0.04436	Significant Effect

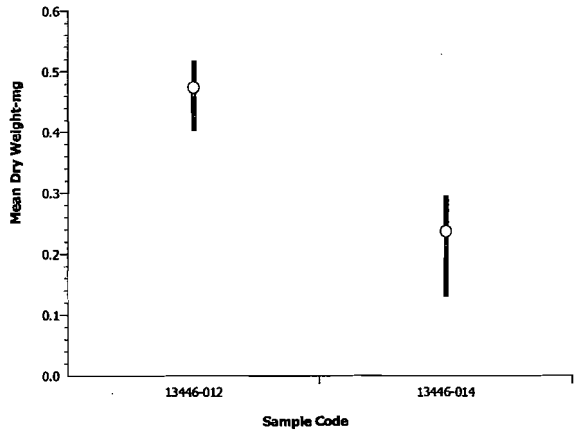
Data Summary

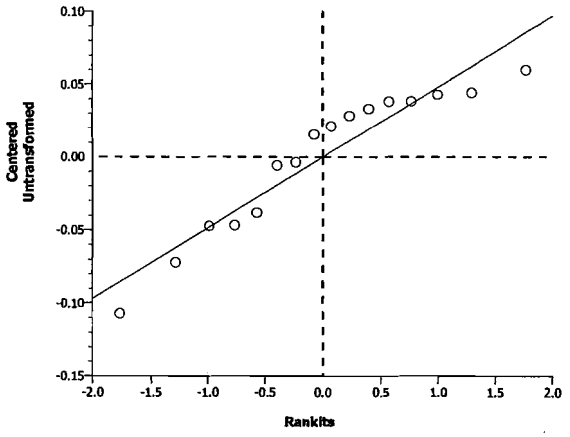
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47480	0.40222	0.51900	0.04742				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.46889	0.40222	0.43667	0.42750	0.51900	0.51333	0.51300	0.51778		
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.27854	8.88539	0.75405	Equal Variances
Distribution	Shapiro-Wilk W	0.92107	0.84420	0.17451	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0532488	0.0532488	1	16.54	0.00116	Significant Effect
Error	0.0450827	0.0032202	14			
Total	0.09833143	0.056469	15			

Group Comparisons

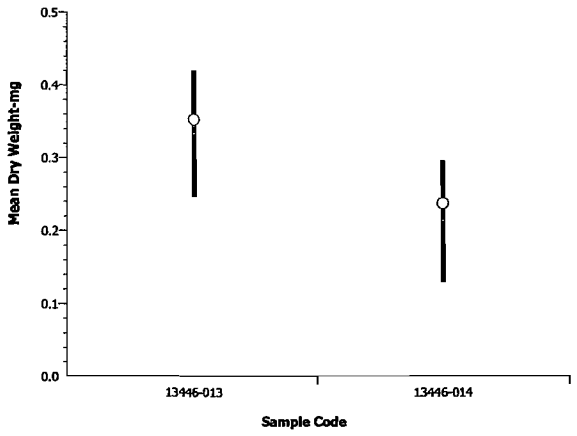
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-014	-4.0664	1.76131	0.9994	0.04997	Non-Significant Effect

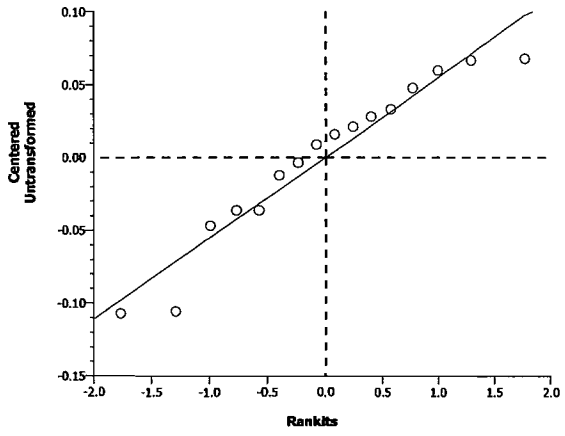
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35232	0.24667	0.42000	0.06012				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.24667	0.34000	0.40000	0.31600	0.31600	0.41875	0.36111	0.42000		
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.44879	8.88539	0.63694	Equal Variances
Distribution	Shapiro-Wilk W	0.91225	0.84420	0.12661	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1373311	0.1373311	1	72.27	0.00000	Significant Effect
Error	0.0266020	0.0019001	14			
Total	0.16393309	0.1392312	15			

Group Comparisons

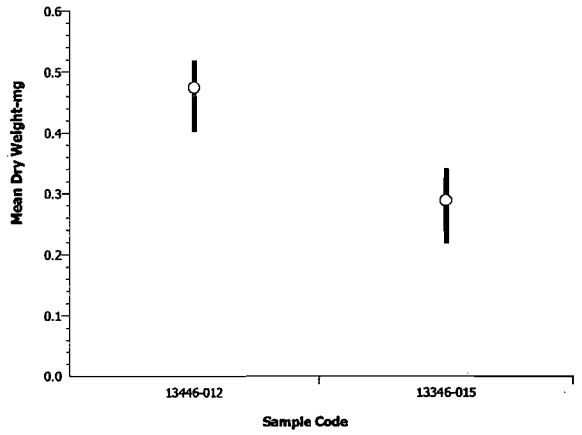
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13346-015	-8.5014	1.76131	1.0000	0.03839	Non-Significant Effect

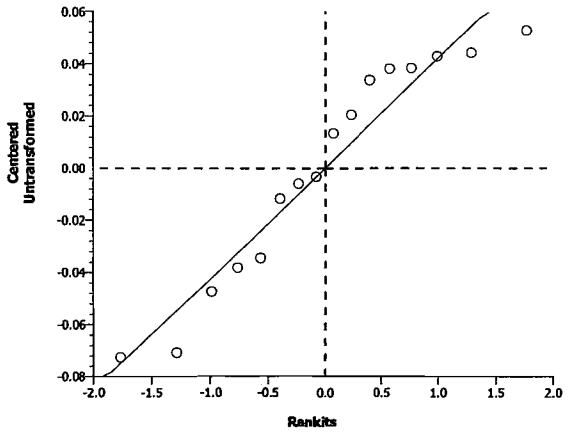
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.47480	0.40222	0.51900	0.04742				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.46889	0.40222	0.43667	0.42750	0.51900	0.51333	0.51300	0.51778		
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.10507	8.88539	0.89853	Equal Variances
Distribution	Shapiro-Wilk W	0.93205	0.84420	0.25805	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0082298	0.0082298	1	3.06	0.10228	Non-Significant Effect
Error	0.0376903	0.0026922	14			
Total	0.04592014	0.010922	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-014	1.74841	1.76131	0.0511	0.04569	Non-Significant Effect

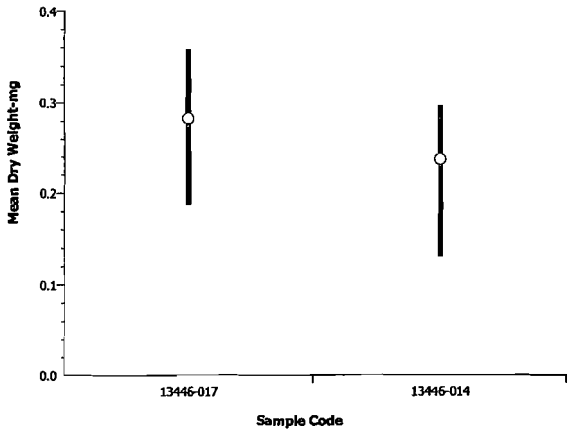
Data Summary

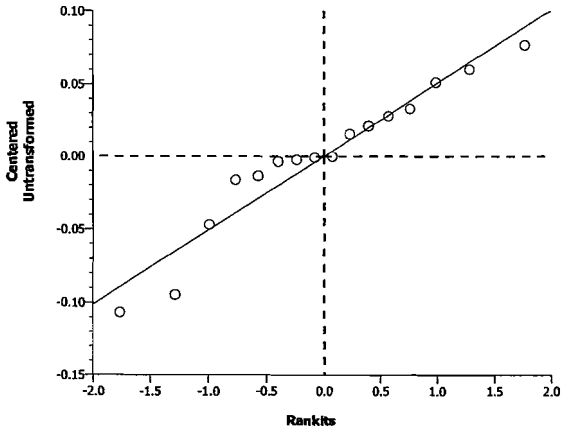
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28230	0.18750	0.35889	0.05057				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.26875	0.28222	0.26625	0.35889	0.28143	0.33333	0.18750	0.28000		
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.16616	9.15534	0.08365	Equal Variances
Distribution	Shapiro-Wilk W	0.88569	0.83526	0.05957	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0023364	0.0023364	1	0.61	0.44817	Non-Significant Effect
Error	0.0496562	0.0038197	13			
Total	0.05199255	0.0061561	14			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13346-015	-0.7821	1.77093	0.7759	0.05665	Non-Significant Effect

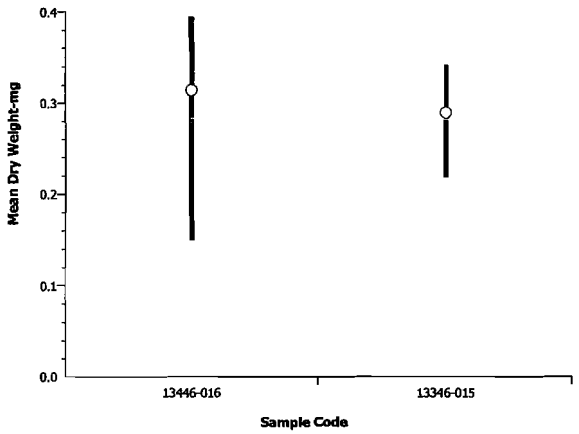
Data Summary

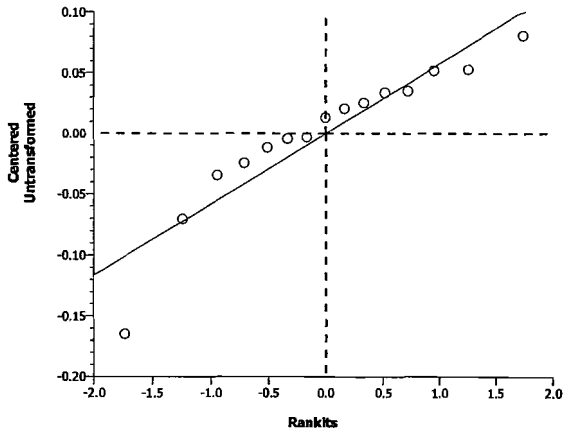
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31452	0.15000	0.39500	0.08041				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.39500	0.31000	0.36667	0.15000	0.34000			
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.64817	8.88539	0.52560	Equal Variances
Distribution	Shapiro-Wilk W	0.95975	0.84420	0.62716	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.000208	0.000208	1	0.10	0.75507	Non-Significant Effect
Error	0.0287679	0.0020548	14			
Total	0.02897587	0.0022628	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13346-015	0.31815	1.76131	0.3775	0.03992	Non-Significant Effect

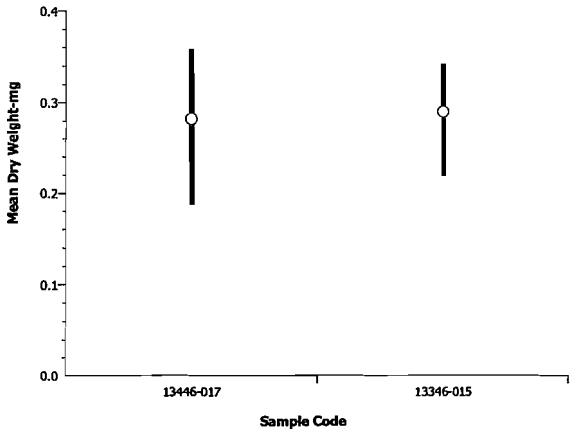
Data Summary

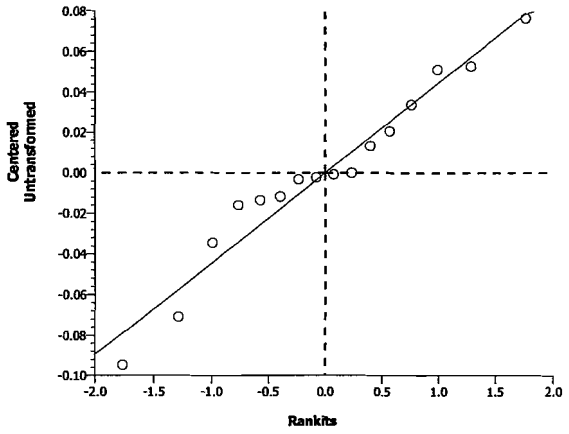
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28230	0.18750	0.35889	0.05057				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.26875	0.28222	0.26625	0.35889	0.28143	0.33333	0.18750	0.28000		
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:17 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C < T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.28742	9.15534	0.30329	Equal Variances
Distribution	Shapiro-Wilk W	0.86857	0.83526	0.03259	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0224733	0.0224733	1	4.99	0.04374	Significant Effect
Error	0.0585786	0.0045060	13			
Total	0.08105194	0.0269794	14			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-014	-2.2332	1.77093	0.9781	0.06153	Non-Significant Effect

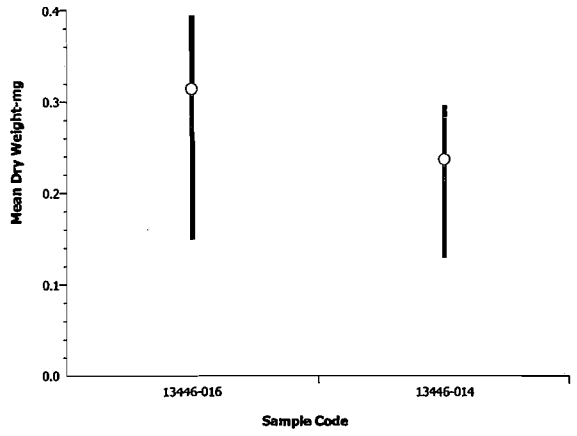
Data Summary

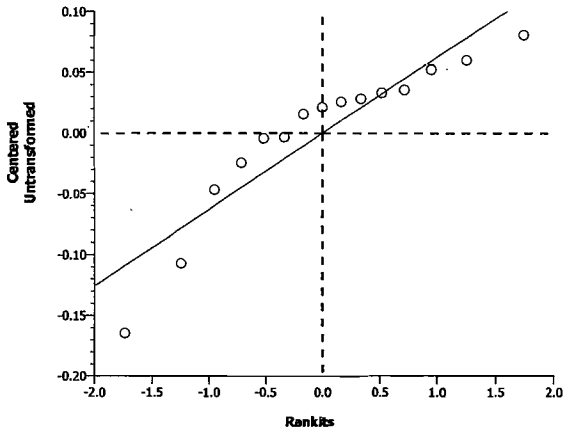
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	7	0.31452	0.15000	0.39500	0.08041				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	0.35000	0.29000	0.39500	0.31000	0.36667	0.15000	0.34000			
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.64817	8.88539	0.52560	Equal Variances
Distribution	Shapiro-Wilk W	0.95975	0.84420	0.62716	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.000208	0.000208	1	0.10	0.75507	Non-Significant Effect
Error	0.0287679	0.0020548	14			
Total	0.02897587	0.0022628	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13346-015	-0.3182	1.76131	0.6225	0.03992	Non-Significant Effect

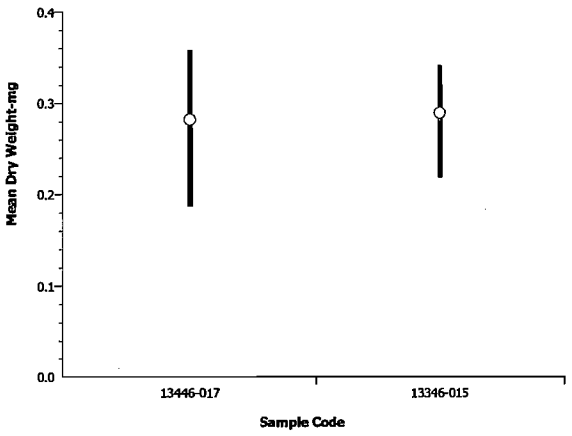
Data Summary

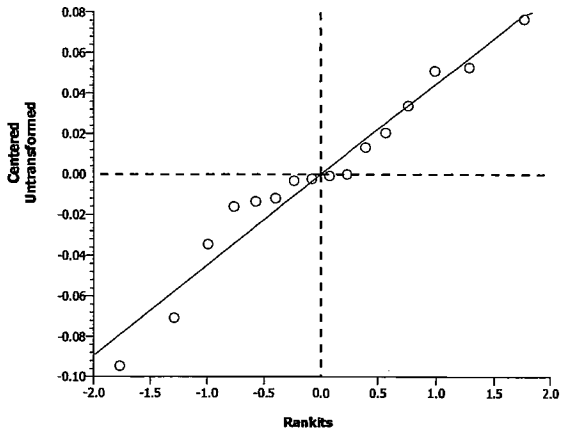
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.28230	0.18750	0.35889	0.05057				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	0.26875	0.28222	0.26625	0.35889	0.28143	0.33333	0.18750	0.28000		
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.65315	8.88539	0.52313	Equal Variances
Distribution	Shapiro-Wilk W	0.93426	0.84420	0.27880	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1044616	0.1044616	1	27.86	0.00012	Significant Effect
Error	0.0524946	0.0037496	14			
Total	0.15695621	0.1082112	15			

Group Comparisons

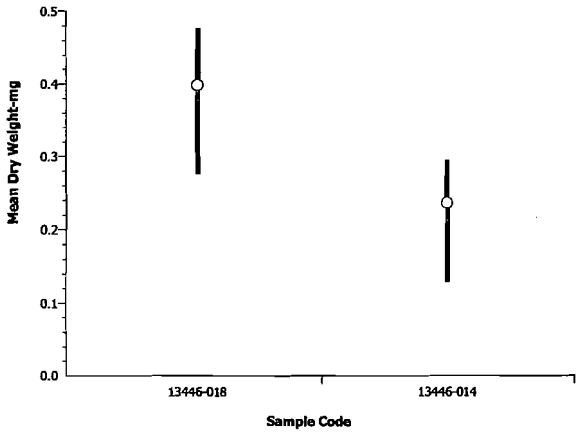
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-014	5.27819	1.76131	0.0001	0.05393	Significant Effect

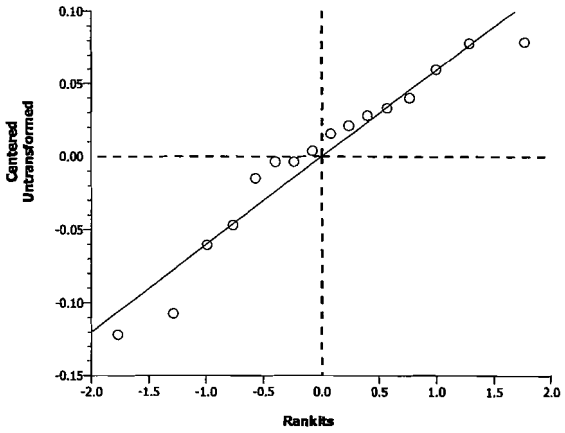
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.39854	0.27667	0.47750	0.06836				
13446-014	8	0.23694	0.13000	0.29667	0.05317				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	0.38333	0.43875	0.40222	0.33818	0.47750	0.27667	0.39500	0.47667		
13446-014	0.25800	0.19000	0.13000	0.26500	0.27000	0.23333	0.25250	0.29667		

Graphics





CETIS Analysis Detail

Hyalella 28-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	03-3742-8762	**Test Type:**	Survival-Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Hyalella azteca
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	50/50 Mix of Surface Water and MHR	**Source:**	Aquatic Indicators, CA
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Mean Dry Weight-mg	Comparison	07-6089-8675	07-6089-8675	24 Oct-05 10:16 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.32865	8.88539	0.28722	Equal Variances
Distribution	Shapiro-Wilk W	0.96093	0.84420	0.64752	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0157796	0.0157796	1	6.11	0.02690	Significant Effect
Error	0.0361602	0.0025829	14			
Total	0.05193978	0.0183625	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13346-015	2.47170	1.76131	0.0134	0.04476	Significant Effect

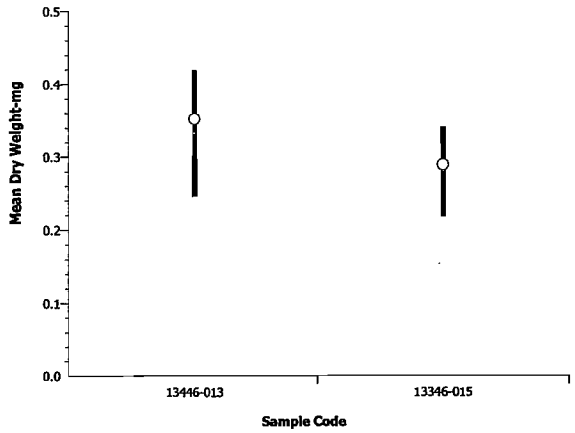
Data Summary

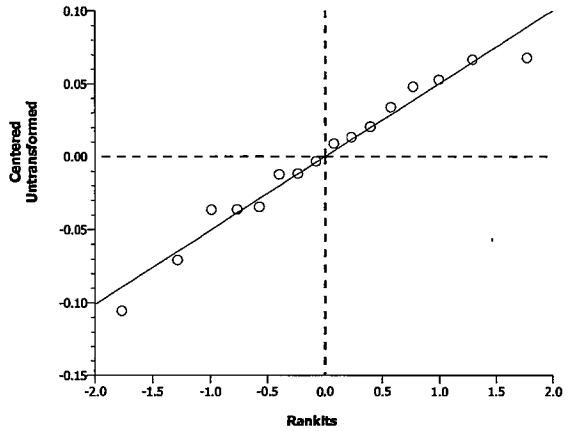
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.35232	0.24667	0.42000	0.06012				
13346-015	8	0.28951	0.21875	0.34222	0.03939				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.24667	0.34000	0.40000	0.31600	0.31600	0.41875	0.36111	0.42000		
13346-015	0.31000	0.28625	0.27778	0.34222	0.21875	0.25500	0.32333	0.30273		

Graphics





C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	Lab				-001				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	8.7	103	7.38	22	7.9	115	6.81	22	1	330i	✓	7/7/05	BB
1	8.5	165	7.19	24	7.8	152	6.24	24	1	330i	✓	7/8/05	DBS
2	8.3	231	7.18	22	7.8	176	6.35	22	1	330i	✓	7/9	CW
3	8.0	231	7.39	22	7.6	180	6.48	22	1	330i	✓	7/10	TP
4	6.7	252	6.87	23	6.7	192	6.26	23	2	330i	✓	7/11/05	✓
5	6.7	177	6.99	24	6.9	115	6.87	24	1	330i	✓	7/12/05	DBS
6	5.7	133	6.81	22	5.8	91	6.67	22	1	330i	✓	7/13/05	BB
7	5.2	123	6.92	22	5.8	85	6.80	22	1	330i	✓	7/14/05	BB
8	5.3	109	6.88	22	6.2	73	6.93	22	1	330i	✓	7/15/05	BB
9	4.4	82	6.96	22	6.2	64	6.34	22	2	330i	✓	7/16/05	PS
10	5.8	98	6.96	22	6.6	69	7.01	22	1	330i	✓	7/17/05	BB
11	4.9	100	6.88	22	5.1	69	6.78	22	1	330i	✓	7/18/05	BB
12	5.2	95	7.16	22	5.7	64	6.78	22	2	330i	✓	7/19/05	DBS
13	4.3	95	6.78	22	4.1	65	6.60	22	1	330i	✓	7/20/05	BB
14	5.5	91	7.20	22	5.6	61	6.99	22	2	330i	✓	7/21/05	DBS
15	6.0	101	7.14	22	5.6	61	6.62	22	2	330i	✓	7/22/05	✓ DBS
16	5.7	90	6.85	~~24~~ 23	5.1	60	6.47	23	1	330i	✓	7/23/05	✓
17	4.7	92	7.20	22	5.0	60	6.68	22	2	330i	✓	7/24	TP
18	5.9	118	7.04	23	5.5	81	6.64	22	1	330i	✓	7/25/05	DBS
19	4.8	108	6.92	22	4.7	74	6.17	22	2	330i	✓	7/26/05	BB
20	6.1	100	7.00	21	5.7	70	6.36	21	2	330i	✓	7/27/05	DBS

Pull Alkalinity, Hardness, Ammonia Day ~~0, 10, 20~~

23° C

FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	-002				-003				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.7	108	6.76	22	7.7	122	6.79	22	1	330i	✓	7/7/05	BB
1	7.8	136	6.35	24	7.4	145	6.71	24	1	330i	✓	7/8/05	DHB
2	7.5	154	6.52	22	8.9	169		22	1	330I	✓	7/9	BM
3	6.5	139	6.75	23	6.8	186	7.09	23	1	330i	✓	7/10	TP
4	6.3	172	6.39	23	5.7	191	6.47	23	2	330i	✓	7/11/05	✓
5	7.1	105	6.82	24	6.8	112	6.83	24	1	330i	✓	7/12/05	DHB
6	5.7	82	6.63	21	5.8	93	6.63	21	1	330i	✓	7/13/05	BB
7	5.9	79	6.72	22	6.1	83	6.72	22	1	330i	✓	7/14/05	BB
8	6.2	69	6.73	22	6.1	74	6.66	22	1	330i	✓	7/15/05	BB
9	5.4	66	6.11	22	5.1	68	6.04	22	2	330i	✓	7/16/05	PS
10	5.4	70	6.62	22	5.6	73	6.71	22	1	330i	✓	7/17/05	BB
11	4.7	69	6.71	22	4.4	67	6.61	22	1	330i	✓	7/18/05	BB
12	5.2	65	6.77	22	5.8	60	6.59	22	2	330i	✓	7/19/05	DHB
13	3.8	61	6.53	22	4.2	60	6.37	22	1	330i	✓	7/20/05	BB
14	5.2	55	6.77	22	5.7	58	6.51	22	2	330i	✓	7/21/05	DHB
15	5.7	58	6.63	22	5.6	62	6.38	22	2	330i	✓	7/22/05	DHB
16	4.6	53	6.28	23	4.7	59	6.18	23	1	330i	✓	7/23/05	✓
17	5.0	56	6.61	22	5.4	58	6.65	22	2	330i	✓	7/24	TP
18	5.8	83	6.57	22	6.1	82	6.34	22	1	330i	✓	7/25/05	DHB
19	4.8	72	6.28	22	5.3	70	6.16	22	2	330i	✓	7/26/05	BB
20	5.6	66	6.41	21	6.0	62	6.37	21	2	330i	✓	7/27/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 10, 20~~

23° C

FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	-004				-006				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.4	103	6.60	22	7.4	124	6.71	22	1	330i	✓	7/7/05	BB
1	7.3	129	6.46	24	7.3	149	6.77	24	1	330i	✓	7/8/05	DHB
2	7.5	149	6.46	22	7.6	173	6.81	22	1	330I	✓	7/9	CW
3	6.6	160	6.91	23	6.5	190	7.11	23	1	330i	✓	7/10	TP
4	6.4	170	6.46	23	5.4	211	6.66	23	2	330i	✓	7/11/05	✓
5	7.0	120	6.76	24	6.3	139	6.95	24	1	330i	✓	7/12/05	DHB
6	6.1	95	6.62	21	6.1	108	6.69	21	1	330i	✓	7/13/05	BB
7	6.1	86	6.75	22	6.2	99	6.72	22	1	330i	✓	7/14/05	BB
8	5.9	75	6.69	22	5.8	83	6.64	22	1	330i	✓	7/15/05	BB
9	5.3	65	6.03	21	3.7	90	6.08	21	2	330i	✓	7/16/05	PS
10	5.9	70	6.71	22	4.3	92	6.61	22	1	330i	✓	7/17/05	BB
11	4.6	68	6.59	22	3.5	81	6.59	22	1	330i	✓	7/18/05	BB
12	5.7	64	6.64	22	3.6	79	6.72	22	2	330i	✓	7/19/05	DHB
13	4.7	63	6.43	22	3.1	82	6.54	22	1	330i	✓	7/20/05	BB
14	6.0	59	6.65	22	4.8	71	6.79	22	2	330i	✓	7/21/05	DHB
15	6.0	59	6.39	22	5.0	66	6.61	22	2	330i	✓	7/22/05	✓/DHB
16	4.9	59	6.27	23	3.2	74	6.46	23	1	330i	✓	7/23/05	✓
17	5.1	59	6.51	22	3.2	89	6.57	22	2	330i	✓	7/24	TP
18	6.6	78	6.43	22	5.4	90	6.69	22	1	330i	✓	7/25/05	DHB
19	5.4	71	6.11	22	4.9	69	6.43	22	2	330i	✓	7/26/05	BB
20	5.8	67	6.24	21	5.9	61	6.43	21	2	330i	✓	7/27/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 10, 20~~

23° C

FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	-007				-009				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.7	93	6.70	22	7.7	92	6.73	22	1	330i	✓	7/7/05	BB
1	7.1	127	6.58	24	7.6	132	6.65	24	1	330i	✓	7/8/05	DHB
2	7.3	146	6.72	22	7.6	157	6.77	22	1	330i	✓	7/9	CW
3	6.7	155	6.82	23	6.8	175	7.05	23	1	330i	✓	7/10	TP
4	5.6	169	6.45	23	5.9	192	6.62	23	2	330i	/	7/11/05	✓
5	6.9	124	6.99	24	6.9	127	7.04	24	1	330i	✓	7/12/05	DHB
6	5.4	99	6.71	21	5.7	96	6.71	21	1	330i	✓	7/13/05	BB
7	5.7	89	6.80	22	5.8	94	6.81	22	1	330i	✓	7/14/05	BB
8	5.7	75	6.64	22	5.2	88	6.73	22	1	330i	✓	7/15/05	BB
9	4.1	78	6.01	22	4.5	75	6.12	22	2	330i	✓	7/16/05	PS
10	4.6	77	6.62	22	6.2	84	6.92	22	1	330i	✓	7/17/05	BB
11	3.7	74	6.54	22	5.1	82	6.65	22	1	330i	✓	7/18/05	BB
12	3.8	71	6.58	22	5.16	72	6.70	22	2	330i	✓	7/19/05	DHB
13	2.9	74	6.52	22	3.4	75	6.53	22	1	330i	✓	7/20/05	BB
14	5.1	65	6.75	22	5.4	65	6.71	22	2	330i	✓	7/21/05	DHB
15	5.0	65	6.53	22	5.6	67	6.59	22	2	330i	✓	7/22/05	DHB
16	4.1	69	6.45	23	4.4	68	6.57	23	1	330i	/	7/23/05	✓
17	3.6	63	6.71	22	4.5	63	6.64	22	2	330i	✓	7/24	TP
18	5.6	80	6.61	22	5.9	84	6.46	22	1	330i	✓	7/25/05	DHB
19	4.3	72	6.33	22	4.5	71	6.05	22	2	330i	✓	7/26/05	BB
20	5.5	67	6.33	21	5.7	67	6.35	21	2	330i	✓	7/27/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 10~~, ~~20~~

23° C

FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	-010				-011				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.8	76	6.76	22	7.7	87	6.48	22	1	330i	✓	7/7/05	BB
1	7.8	112	6.54	24	7.7	127	6.42	24	1	330i	✓	7/8/05	DHB
2	7.3	141	6.64	22	7.5	151	6.62	22	1	330I	✓	7/9	CW
3	6.9	167	6.68	23	6.9	166	6.88	23	1	330i	✓	7/10	TP
4	6.1	192	6.26	23	6.4	177	6.44	23	2	330i	/	7/11/05	✓
5	7.2	124	6.80	24	7.1	114	6.90	24	1	330i	✓	7/12/05	DHB
6	6.2	88	6.53	21	6.4	87	6.55	21	1	330i	✓	7/13/05	BB
7	6.1	83	6.80	22	6.3	88	6.79	22	1	330i	✓	7/14/05	CB
8	5.7	75	6.71	22	5.3	81	6.70	22	1	330i	✓	7/15/05	BB
9	6.1	68	6.11	22	4.1	65	6.05	22	2	330i	✓	7/18/05	PS
10	6.2	71	6.85	22	6.1	72	6.78	22	1	330i	✓	7/19/05	BB
11	5.3	74	6.66	22	5.3	70	6.57	22	1	330i	✓	7/20/05	BB
12	5.9	72	6.75	22	4.9	67	6.55	22	2	330i	✓	7/21/05	DHB
13	4.2	74	6.60	22	4.3	69	6.53	22	1	330i	✓	7/22/05	BB
14	6.3	65	6.81	22	5.5	61	6.78	22	2	330i	✓	7/21/05	DHB
15	6.5	62	6.65	22	6.0	60	6.54	22	2	330i	✓	7/22/05	✓/DHB
16	5.2	61	6.55	23	4.6	61	6.48	23	1	330i	/	7/23/05	✓
17	5.1	62	6.68	22	4.4	67	6.60	23	2	330i	✓	7/24	TP
18	6.0	85	6.47	22	5.0	97	6.64	22	1	330i	✓	7/25/05	DHB
19	5.3	71	6.27	22	5.3	75	6.49	22	2	330i	✓	7/26/05	CB
20	5.7	66	6.34	21	5.5	64	6.49	21	2	330i	✓	7/27/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 10, 20~~

23° C

FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	-012				-013				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.7	89	6.64	22	7.9	67	6.82	22	1	330i	✓	7/7/05	BB
1	7.3	134	6.67	24	8.2	90	6.76	24	1	330i	✓	7/8/05	DBB
2	7.5	179	7.00	22	7.9	115	6.85	22	1	330i	✓	7/9	CW
3	7.1	184	7.10	23	7.0	125	7.03	22	1	330i	✓	7/10	TP
4	5.9	200	6.59	23	6.6	140	6.31	23	2	330i	✓	7/11/05	✓
5	7.1	113	6.98	24	7.3	86	7.00	24	1	330i	✓	7/12/05	DBB
6	6.3	88	6.65	21	6.4	71	6.72	21	1	330i	✓	7/13/05	BB
7	6.3	86	6.88	22	6.4	69	6.92	22	1	330i	✓	7/14/05	BB
8	5.7	78	6.75	22	5.7	64	6.61	22	1	330i	✓	7/15/05	BB
9	6.1	63	6.13	21	5.8	59	6.01	22	2	330i	✓	7/18/05	PS
10	5.9	76	6.82	22	6.1	62	6.77	22	1	330i	✓	7/17/05	BB
11	4.7	78	6.65	22	4.8	64	6.66	22	1	330i	✓	7/18/05	BB
12	5.5	70	6.63	22	5.7	63	6.53	22	2	330i	✓	7/19/05	DBB
13	3.8	69	6.50	22	4.4	64	6.54	22	1	330i	✓	7/20/05	BB
14	5.6	62	6.73	22	5.6	55	6.73	22	2	330i	✓	7/21/05	DBB
15	6.0	65	6.59	22	6.6	56	4.55	22	2	330i	✓	7/22/05	✓
16	4.7	64	6.53	23	5.2	56	6.45	23	1	330i	✓	7/23/05	✓
17	4.4	68	6.76	22	5.1	57	6.75	22	2	330i	✓	7/24	TP
18	5.7	91	6.67	22	6.6	82	6.59	22	1	330i	✓	7/25/05	DBB
19	4.6	72	6.44	22	4.6	67	6.37	22	2	330i	✓	7/26/05	BB
20	5.7	67	6.49	21	6.1	59	6.44	21	2	330i	✓	7/27/05	DBB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 10, 20~~

23° C

FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	-014				-015				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.8	226	6.92	22	7.9	226	7.07	22	1	330i	✓	7/7/05	BB
1	7.8	483	6.88	24	7.8	452	7.19	24	1	330i	✓	7/8/05	DKB
2	7.7	597	6.93	22	7.6	577	7.15	22	1	330I	✓	7/9	CW
3	7.0	730	7.11	22	7.0	705	7.19	22	1	330i	✓	7/10	TP
4	6.6	832	6.88	23	6.4	781	7.17	23	2	330i	/	7/11/05	⌐
5	7.2	409	7.04	24	7.0	391	7.26	24	1	330i	✓	7/12/05	DKB
6	6.7	248	6.76	21	6.7	255	6.92	21	1	330i	✓	7/13/05	BSB
7	6.5	208	6.92	22	6.5	219	7.01	22	1	330i	✓	7/14/05	BB
8	5.6	183	6.79	22	5.3	189	6.93	22	1	330i	✓	7/15/05	BSB
9	5.3	190	6.42	21	4.7	158	6.47	21	2	330i	✓	7/18/05	PS
10	6.2	139	6.95	22	6.3	133	6.98	22	1	330i	✓	7/17/05	BB
11	4.8	145	6.83	22	4.1	120	6.84	22	1	330i	✓	7/18/05	BSB
12	4.9	131	6.80	22	4.9	113	6.80	22	2	330i	✓	7/19/05	DKB
13	4.2	137	6.81	22	4.1	124	6.87	22	1	330i	✓	7/20/05	BSB
14	5.7	92	6.95	22	5.6	89	7.07	22	2	330i	✓	7/21/05	DKB
15	5.8	101	6.93	22	5.4	96	7.02	22	2	330i	✓	7/22/05	BB
16	4.4	88	6.78	23	4.5	88	6.90	23	1	330i	✓	7/23/05	⌐
17	4.5	93	6.96	22	4.6	95	7.05	22	2	330i	✓	7/24	TP
18	6.7	120	7.00	22	6.6	119	7.03	22	1	330i	✓	7/25/05	DKB
19	5.1	99	6.73	22	5.1	101	6.87	22	2	330i	✓	7/26/05	BSB
20	4.0	82	6.69	21	5.7	85	6.83	21	2	330i	✓	7/27/05	DKB

Pull Alkalinity, Hardness, Ammonia Day ~~0~~, ~~10~~, ~~20~~

23° C

FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	-016				-017				Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.6	108	6.68	22	7.6	88	6.65	22	1	3301	✓	7/7/05	BB
1	7.6	178	6.45	24	7.5	138	6.62	24	1	3301	✓	7/8/05	DHB
2	7.5	235	6.57	22	7.8	169	6.68	22	1	3307	✓	7/9	CW
3	7.1	260	6.75	22	7.2	187	6.87	22	1	3301	✓	7/10	TP
4	6.3	~~193~~	6.40	23	6.0	200	6.56	23	2	3301	/	7/11/05	—
5	7.1	202	6.79	24	7.0	142	6.96	24	1	3301	✓	7/12/05	~~DHB~~
6	6.7	133	6.61	21	6.7	107	6.70	21	1	3301	✓	7/13/05	BB
7	6.2	113	6.82	22	6.2	95	6.81	22	1	3301	✓	7/14/05	BB
8	5.2	112	6.78	22	5.3	94	6.77	22	1	3301	✓	7/15/05	BB
9	5.0	79	6.22	21	4.7	82	6.00	21	2	3301	✓	7/18/05	PS
10	5.9	98	6.84	22	5.4	82	6.61	22	1	3301	✓	7/17/05	BB
11	4.2	86	6.70	22	4.2	76	6.62	22	1	3301	✓	7/18/05	BB
12	4.8	87	6.64	22	4.4	74	6.38	22	2	3301	✓	7/19/05	DHB
13	3.8	87	6.66	22	3.8	75	6.59	22	1	3301	✓	7/20/05	BB
14	5.7	72	6.89	22	5.4	66	6.73	22	2	3301	✓	7/21/05	~~DHB~~
15	5.6	68	6.67	22	5.4	65	6.52	22	2	3301	✓	7/22/05	DHB
16	4.5	69	6.56	23	4.4	69	6.45	23	1	3301	/	7/23/05	—
17	4.5	66	6.75	22	4.5	67	6.67	22	2	3301	✓	7/24	TP
18	6.0	E3 ~~#9~~ 69	6.50	22	5.6	E3 ~~89~~ 74	6.56	22	1	3301	✓	7/25/05	DHB
19	4.8	66	6.41	22	4.7	68	6.34	22	2	3301	✓	7/26/05	BB
20	5.6	65	6.19	21	5.7	65	6.39	21	2	3301	✓	7/27/05	DHB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 10, 20~~

23° C

FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

C. tentans SEDIMENT ASSAY
Daily Water Quality Measurements & Feeding Record

STUDY #: 13446	Client: BBL	Overlying Water: Pond	START DATE: 7/7/05

DAY	- 018								Water Quality Station #	S/C Meter #	ΔH_2O fed	DATE	INIT
	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	Temp. (°C)	D.O. (mg/L)	Cond. (µMHOS/cm)	pH (SU)	TEMP (°C)					
0	7.6	84	6.75	22					1	330i	✓	7/7/05	BB
1	7.7	129	6.68	23					1	330i	✓	7/8/05	DKB
2	7.8	163	6.77	22					1	330i	✓	7/9	CN
3	6.8	175	7.06	22					1	330i	✓	7/10	TP
4	5.7	209	6.52	23					2	330i	✓	7/11/05	⌐
5	7.1	127	6.96	24					1	330i	✓	7/12/05	DKB
6	6.2	100	6.77	21					1	330i	✓	7/13/05	KB
7	6.2	89	6.82	22					1	330i	✓	7/14/05	KB
8	5.4	90	6.78	22					1	330i	✓	7/15/05	KB
9	5.1	71	6.08	21					2	330i	✓	7/16/05	PS
10	5.1	84	6.63	22					1	330i	✓	7/17/05	KB
11	4.2	76	6.61	22					1	330i	✓	7/18/05	KB
12	5.1	75	6.44	22					2	330i	✓	7/19/05	DKB
13	4.7	75	6.56	22					1	330i	✓	7/20/05	BB
14	5.6	166	6.72	22					2	330i	✓	7/21/05	DKB
15	6.0	68	6.57	22					2	330i	✓	7/22/05	⌐/DKB
16	4.7	70	6.47	23					1	330i	✓	7/23/05	⌐
17	4.7	70	6.75	22					2	330i	✓	7/24	TP
18	5.5	82	6.59	22					1	330i	✓	7/25/05	DKB
19	3.9	71	6.46	22					2	330i	✓	7/26/05	KB
20	5.4	67	6.45	21					2	330i	✓	7/27/05	DKB

Pull Alkalinity, Hardness, Ammonia Day ~~0, 10, 20~~
23° C
FEED 1 mL of 6g/L Tetramin Flake Daily Two Volume Additions Daily

STUDY: 13446
CLIENT: BBL Sciences
PROJECT: Blackstone River
TASK: C. dilutus 20 Day Exposure Assay
DATA: Alkalinity
START DATE: 07/07/05
DATE ENDED: 07/27/05

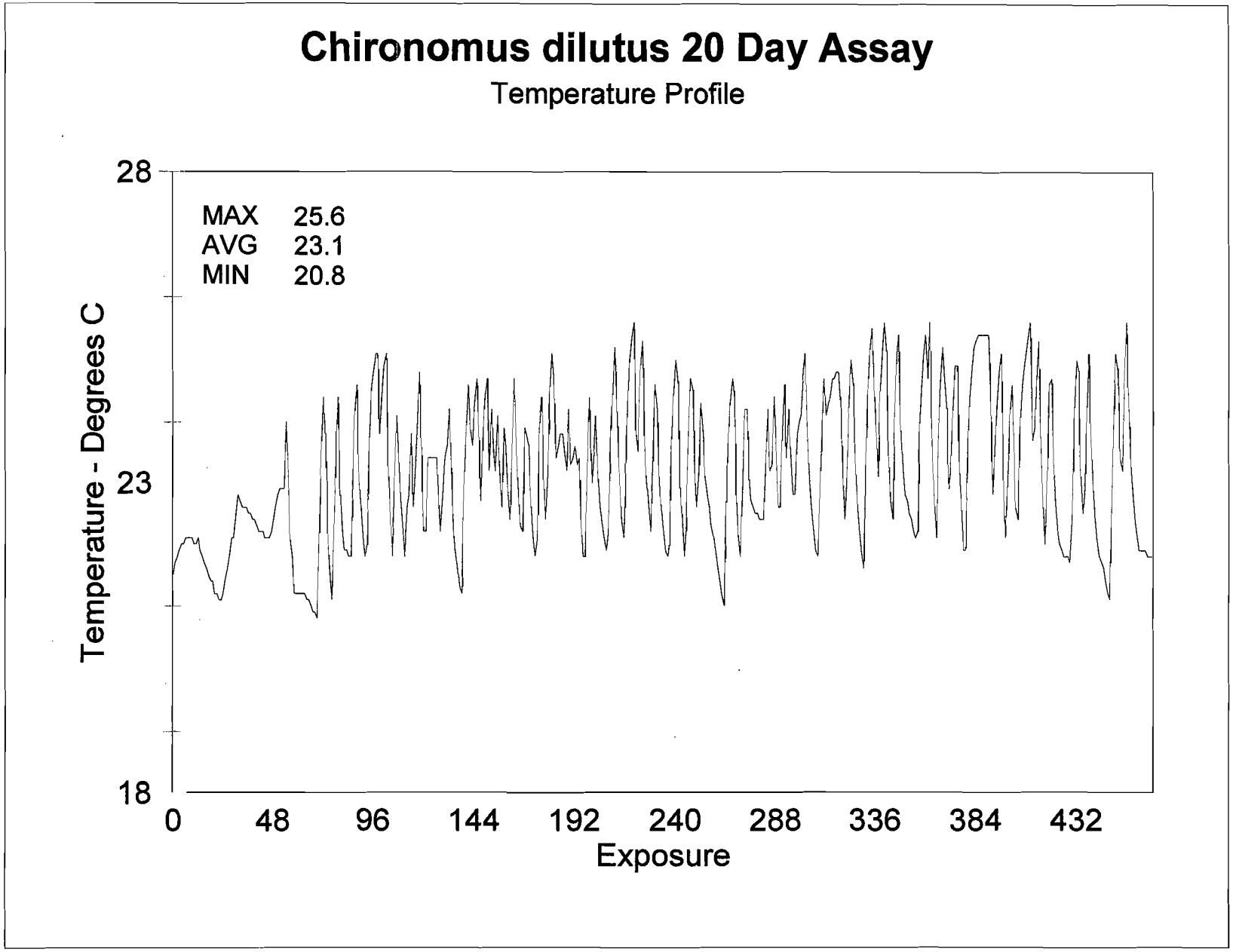
Lab ID	Sample #	Date Sampled	Exposure Day	Conc.	Units
-001 Ct	13446-073	07/07/05	0	<10	mg/L as CaCO3
-001 Ct	13446-235	07/17/05	10	<10	mg/L as CaCO3
-001 Ct	13446-343	07/27/05	20	<10	mg/L as CaCO3
-002 Ct	13446-076	07/07/05	0	<10	mg/L as CaCO3
-002 Ct	13446-238	07/17/05	10	<10	mg/L as CaCO3
-002 Ct	13446-346	07/27/05	20	<10	mg/L as CaCO3
-003 Ct	13446-079	07/07/05	0	<10	mg/L as CaCO3
-003 Ct	13446-241	07/17/05	10	<10	mg/L as CaCO3
-003 Ct	13446-349	07/27/05	20	<10	mg/L as CaCO3
-004 Ct	13446-082	07/07/05	0	<10	mg/L as CaCO3
-004 Ct	13446-244	07/17/05	10	<10	mg/L as CaCO3
-004 Ct	13446-352	07/27/05	20	<10	mg/L as CaCO3
-006 Ct	13446-085	07/07/05	0	<10	mg/L as CaCO3
-006 Ct	13446-247	07/17/05	10	12	mg/L as CaCO3
-006 Ct	13446-355	07/27/05	20	<10	mg/L as CaCO3
-007 Ct	13446-088	07/07/05	0	10	mg/L as CaCO3
-007 Ct	13446-250	07/17/05	10	<10	mg/L as CaCO3
-007 Ct	13446-358	07/27/05	20	<10	mg/L as CaCO3
-009 Ct	13446-091	07/07/05	0	<10	mg/L as CaCO3
-009 Ct	13446-253	07/17/05	10	<10	mg/L as CaCO3
-009 Ct	13446-361	07/27/05	20	<10	mg/L as CaCO3
-010 Ct	13446-094	07/07/05	0	<10	mg/L as CaCO3
-010 Ct	13446-256	07/17/05	10	12	mg/L as CaCO3
-010 Ct	13446-364	07/27/05	20	<10	mg/L as CaCO3
-011 Ct	13446-097	07/07/05	0	<10	mg/L as CaCO3
-011 Ct	13446-259	07/17/05	10	<10	mg/L as CaCO3
-011 Ct	13446-367	07/27/05	20	<10	mg/L as CaCO3
-012 Ct	13446-100	07/07/05	0	<10	mg/L as CaCO3
-012 Ct	13446-262	07/17/05	10	<10	mg/L as CaCO3
-012 Ct	13446-370	07/27/05	20	<10	mg/L as CaCO3
-013 Ct	13446-103	07/07/05	0	<10	mg/L as CaCO3
-013 Ct	13446-265	07/17/05	10	<10	mg/L as CaCO3
-013 Ct	13446-373	07/27/05	20	<10	mg/L as CaCO3
-014 Ct	13446-106	07/07/05	0	29	mg/L as CaCO3
-014 Ct	13446-268	07/17/05	10	<10	mg/L as CaCO3
-014 Ct	13446-376	07/27/05	20	<10	mg/L as CaCO3
-015 Ct	13446-109	07/07/05	0	<10	mg/L as CaCO3
-015 Ct	13446-271	07/17/05	10	<10	mg/L as CaCO3
-015 Ct	13446-379	07/27/05	20	<10	mg/L as CaCO3
-016 Ct	13446-112	07/07/05	0	<10	mg/L as CaCO3
-016 Ct	13446-274	07/17/05	10	12	mg/L as CaCO3
-016 Ct	13446-382	07/27/05	20	<10	mg/L as CaCO3
-017 Ct	13446-115	07/07/05	0	<10	mg/L as CaCO3
-017 Ct	13446-277	07/17/05	10	<10	mg/L as CaCO3
-017 Ct	13446-385	07/27/05	20	<10	mg/L as CaCO3
-018 Ct	13446-118	07/07/05	0	<10	mg/L as CaCO3
-018 Ct	13446-280	07/17/05	10	<10	mg/L as CaCO3
-018 Ct	13446-388	07/27/05	20	<10	mg/L as CaCO3
Lab Ct	13446-070	07/07/05	0	15	mg/L as CaCO3
Lab Ct	13446-232	07/17/05	10	12	mg/L as CaCO3
Lab Ct	13446-286	07/22/05	15	24	mg/L as CaCO3
Lab Ct	13446-340	07/27/05	20	29	mg/L as CaCO3
Pond	13446-121	07/07/05	0	<10	mg/L as CaCO3
Pond	13446-283	07/17/05	10	<10	mg/L as CaCO3
Pond	13446-391	07/27/05	20	<10	mg/L as CaCO3

STUDY: 13446
CLIENT: BBL Sciences
PROJECT: Blackstone River
TASK: C. dilutus 20 Day Exposure Assay
DATA: Ammonia
START DATE: 07/07/05
DATE ENDED: 07/27/05

Lab ID	Sample #	Date Sampled	Exposure Day	Conc.	Units
-001 Ct	13446-075	07/07/05	0	0.96	mg/L as N
-001 Ct	13446-237	07/17/05	10	0.72	mg/L as N
-001 Ct	13446-345	07/27/05	20	0.23	mg/L as N
-002 Ct	13446-078	07/07/05	0	0.86	mg/L as N
-002 Ct	13446-240	07/17/05	10	1.2	mg/L as N
-002 Ct	13446-348	07/27/05	20	0.27	mg/L as N
-003 Ct	13446-081	07/07/05	0	1.8	mg/L as N
-003 Ct	13446-243	07/17/05	10	0.54	mg/L as N
-003 Ct	13446-351	07/27/05	20	0.35	mg/L as N
-004 Ct	13446-084	07/07/05	0	1.7	mg/L as N
-004 Ct	13446-246	07/17/05	10	0.63	mg/L as N
-004 Ct	13446-354	07/27/05	20	0.11	mg/L as N
-006 Ct	13446-087	07/07/05	0	1.6	mg/L as N
-006 Ct	13446-249	07/17/05	10	0.73	mg/L as N
-006 Ct	13446-357	07/27/05	20	0.6	mg/L as N
-007 Ct	13446-090	07/07/05	0	0.87	mg/L as N
-007 Ct	13446-252	07/17/05	10	0.55	mg/L as N
-007 Ct	13446-360	07/27/05	20	0.5	mg/L as N
-009 Ct	13446-093	07/07/05	0	1.7	mg/L as N
-009 Ct	13446-255	07/17/05	10	1.2	mg/L as N
-009 Ct	13446-363	07/27/05	20	0.91	mg/L as N
-010 Ct	13446-096	07/07/05	0	<0.1	mg/L as N
-010 Ct	13446-258	07/17/05	10	0.64	mg/L as N
-010 Ct	13446-366	07/27/05	20	0.39	mg/L as N
-011 Ct	13446-099	07/07/05	0	0.67	mg/L as N
-011 Ct	13446-261	07/17/05	10	0.35	mg/L as N
-011 Ct	13446-369	07/27/05	20	0.65	mg/L as N
-012 Ct	13446-102	07/07/05	0	0.3	mg/L as N
-012 Ct	13446-264	07/17/05	10	0.3	mg/L as N
-012 Ct	13446-372	07/27/05	20	0.45	mg/L as N
-013 Ct	13446-105	07/07/05	0	<0.1	mg/L as N
-013 Ct	13446-267	07/17/05	10	0.2	mg/L as N
-013 Ct	13446-375	07/27/05	20	0.25	mg/L as N
-014 Ct	13446-108	07/07/05	0	0.45	mg/L as N
-014 Ct	13446-270	07/17/05	10	0.86	mg/L as N
-014 Ct	13446-378	07/27/05	20	0.72	mg/L as N
-015 Ct	13446-111	07/07/05	0	0.25	mg/L as N
-015 Ct	13446-273	07/17/05	10	0.22	mg/L as N
-015 Ct	13446-381	07/27/05	20	0.34	mg/L as N
-016 Ct	13446-114	07/07/05	0	0.32	mg/L as N
-016 Ct	13446-276	07/17/05	10	0.57	mg/L as N
-016 Ct	13446-384	07/27/05	20	<0.1	mg/L as N
-017 Ct	13446-117	07/07/05	0	3.1	mg/L as N
-017 Ct	13446-279	07/17/05	10	1.3	mg/L as N
-017 Ct	13446-387	07/27/05	20	0.93	mg/L as N
-018 Ct	13446-120	07/07/05	0	0.53	mg/L as N
-018 Ct	13446-282	07/17/05	10	<0.1	mg/L as N
-018 Ct	13446-390	07/27/05	20	0.35	mg/L as N
Lab Ct	13446-072	07/07/05	0	<0.1	mg/L as N
Lab Ct	13446-234	07/17/05	10	0.97	mg/L as N
Lab Ct	13446-342	07/27/05	20	0.31	mg/L as N
Pond	13446-123	07/07/05	0	<0.1	mg/L as N
Pond	13446-285	07/17/05	10	<0.1	mg/L as N
Pond	13446-393	07/27/05	20	<0.1	mg/L as N

STUDY: 13446
CLIENT: BBL Sciences
PROJECT: Blackstone River
TASK: C. dilutus 20 Day Exposure Assay
DATA: Hardness
START DATE: 07/07/05
DATE ENDED: 07/27/05

Lab ID	Sample #	Date Sampled	Exposure Day	Conc.	Units
-001 Ct	13446-074	07/07/05	0	19	mg/L
-001 Ct	13446-236	07/17/05	10	13	mg/L
-001 Ct	13446-344	07/27/05	20	14	mg/L
-002 Ct	13446-077	07/07/05	0	16	mg/L
-002 Ct	13446-239	07/17/05	10	11	mg/L
-002 Ct	13446-347	07/27/05	20	15	mg/L
-003 Ct	13446-080	07/07/05	0	18	mg/L
-003 Ct	13446-242	07/17/05	10	14	mg/L
-003 Ct	13446-350	07/27/05	20	12	mg/L
-004 Ct	13446-083	07/07/05	0	22	mg/L
-004 Ct	13446-245	07/17/05	10	18	mg/L
-004 Ct	13446-353	07/27/05	20	15	mg/L
-006 Ct	13446-086	07/07/05	0	14	mg/L
-006 Ct	13446-248	07/17/05	10	16	mg/L
-006 Ct	13446-356	07/27/05	20	12	mg/L
-007 Ct	13446-089	07/07/05	0	15	mg/L
-007 Ct	13446-251	07/17/05	10	14	mg/L
-007 Ct	13446-359	07/27/05	20	13	mg/L
-009 Ct	13446-092	07/07/05	0	15	mg/L
-009 Ct	13446-254	07/17/05	10	16	mg/L
-009 Ct	13446-362	07/27/05	20	13	mg/L
-010 Ct	13446-095	07/07/05	0	12	mg/L
-010 Ct	13446-257	07/17/05	10	13	mg/L
-010 Ct	13446-365	07/27/05	20	13	mg/L
-011 Ct	13446-098	07/07/05	0	17	mg/L
-011 Ct	13446-260	07/17/05	10	17	mg/L
-011 Ct	13446-368	07/27/05	20	15	mg/L
-012 Ct	13446-101	07/07/05	0	18	mg/L
-012 Ct	13446-263	07/17/05	10	18	mg/L
-012 Ct	13446-371	07/27/05	20	17	mg/L
-013 Ct	13446-104	07/07/05	0	9.4	mg/L
-013 Ct	13446-266	07/17/05	10	12	mg/L
-013 Ct	13446-374	07/27/05	20	13	mg/L
-014 Ct	13446-107	07/07/05	0	8.8	mg/L
-014 Ct	13446-269	07/17/05	10	8.1	mg/L
-014 Ct	13446-377	07/27/05	20	7.4	mg/L
-015 Ct	13446-110	07/07/05	0	7.1	mg/L
-015 Ct	13446-272	07/17/05	10	7.9	mg/L
-015 Ct	13446-380	07/27/05	20	6.3	mg/L
-016 Ct	13446-113	07/07/05	0	18	mg/L
-016 Ct	13446-275	07/17/05	10	17	mg/L
-016 Ct	13446-383	07/27/05	20	14	mg/L
-017 Ct	13446-116	07/07/05	0	13	mg/L
-017 Ct	13446-278	07/17/05	10	15	mg/L
-017 Ct	13446-386	07/27/05	20	12	mg/L
-018 Ct	13446-119	07/07/05	0	18	mg/L
-018 Ct	13446-281	07/17/05	10	14	mg/L
-018 Ct	13446-389	07/27/05	20	13	mg/L
Lab Ct	13446-071	07/07/05	0	32	mg/L
Lab Ct	13446-233	07/17/05	10	25	mg/L
Lab Ct	13446-341	07/27/05	20	21	mg/L
Pond	13446-122	07/07/05	0	9.1	mg/L
Pond	13446-284	07/17/05	10	9.2	mg/L
Pond	13446-392	07/27/05	20	8.6	mg/L


Chironomus dilutus 20 Day Assay
Temperature Profile
MAX 25.6
AVG 23.1
MIN 20.8
Temperature - Degrees C
28
23
18
0
48
96
144
192
240
288
336
384
432
Exposure

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
Lab A	1000	8	
Lab B	1002	8	
Lab C	1003	10	
Lab D	1004	10	
Lab E	1005	8	
Lab F	1007	7	
Lab G	1009	8	2 emerging (not placed on foil)
Lab H	1010	8	
14 A	1430	8	
14 B	1425	8	
14 C	1433	8	
14 D	1435	9	
14 E	1436	TMS 3 8/9	
14 F	1439	10	
14 G	1442	9	
14 H	1445	8	

ANALYST: BB
DATE: 7/27/05 7/27/05

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
001A	1412	10	
001B	1414	7	
001C	1415	5	
001D	1416	7	
~~100~~ 001E	1421	7	
001F	1423	8	
001G	1426	8	
001H	1429	9	
002A	1431	7	
002B	1434	7	
002C	1435	8	
002D	1437	8	
002E	1440	7	
002F	1444	7	
002G	1445	8	
002H	1449	10	

ANALYST: _____

DATE: 7/27

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
003A	1505	6	2 emerging - not included in wghts.
003B	1511	9	3 emerging
003C	1513	10	
003D	1515	8	
003E	1517	9	1 emerging
003F	1521	9	
003G	1523	8	
003H	1528	9	1 emerging
004A	1531	8	
004B	1535	8	
004C	1537	5	
004D	1538	10	
004E	1540	9	
004F	1541	5	
004G	1543	8	
004H	1545	4	

ANALYST: XH
DATE: 7/27

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
006A	1546	9	
006B	1552	21	
006C	1559	20	
006D	1601	8	
006E	1605	5	
006F	1606	8	
006G	1607	9	
~~006H 007H~~	1617	9	1 emerging
007A	1622	11	
007B	1623	~~7~~ 8 AH 7/27	
007C	1626	7	
007D	1630	14	
007E	1634	9	1 emerging
007F	1636	7	
007G	1641	11	
007H	1644	8	

ANALYST: AH
DATE: 7/27/05

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
-010A	1648	5	
10-B	1652	4	1 partial emerged
10-C	1655	9	
10-D	1657	6	
10-E	1659	6	
10-F	1702	4	
10-G	1703	7	
10-	1704	4	
11-A	1707	10	
11-B	1708	10	1 emerged
11-C	1710	11	
11-D	1714	9	
11-E	1704	10	
11-F	1709	7	
11-G	1711	6	
11-H	1715	6	

#

ANALYST: _____

DATE: _____

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
13-A	1530	9	
13-B	1532	8	
13-C	1534	9	
13-D	1536	10	
13-E	1538	9	
13-F	1600	6	1 starting to emerge not fin wt.
13-G	1602	9	
13-H	1603	5	1 starting to emerge not fin wt.
12-A	1605	7	
12-B	1610	9	
12-C	1614	10	
12-D	1616	9	
12-E	1619	9	1 starting to emerge
12-F	1622	9	2 starting to emerge
12-G	1625	8	1 starting to emerge
12-H	1627	10	

ANALYST: 7/27/05 TMB
DATE: _____

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
15A	1447	9	
15B	1450	10	
15C	1452	9	
15D	1454	10	
15E	1455	9	
15F	1457	10	
15G	1458	9	
15H	1500	9	
16A	1502	10	
16B	1503	7	
16C	1505	7	
16D	1506	10	
16E	1509	10	
16F	1510	10	
16G	1512	10	* Number = 10+ small midge larvae - native
16H	1515	10	* 6 small midge larvae not included in est.

ANALYST: TKS
DATE: 2/22/05

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
17-A	1517	10	
17-B	1518	10	* 6 - small larvae not included in ct
17-C	1520	~~10~~ 5	
17-D	1523	9	
17-E	1525	7	
17-F	1527	6	* 12 small larvae not include in ct
17-G	1530	8	
17-H	1532	8	
18-A	1533	~~9~~ 10	
18-B	1535	10	* 12 small larvae not included in ct.
18-C	1537	10	* 4 small larvae. . .
18-D	1540	9	
18-E	1542	10	* 8 small larvae.
18-F	1544	10	
18-G	1545	10	
18-H	1547	10	* 12 small larvae

ANALYST: CBS 7/27/05
DATE: _____

ESI STUDY# 13446 BBL
***C. tentans* SEDIMENT ASSAY**

DAY 20:

SAMPLE ID	TIME	#LIVE	COMMENTS
009A	1645	7	
009B	1653	7	
009C	1650	10	
009D	1653	10	
009E	1655	8	
009F	1658	9	
009G	1701	12	
009H		19	

ANALYST: _____
DATE: 7/12

C. tentans Assay
GROWTH DATA

STUDY NUMBER: 13446 **CLIENT:** BBL

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*C.tentans* Dry + FOIL (g)	*C.tentans* Ashed + FOIL (g)
Lab	I	0.01057	0.02800	0.01323
	J	0.01013	0.02783	0.01172
	K	0.01119	0.02841	0.01287
	L	0.01168	0.03156	0.01401
	M	0.01066	0.02793	0.01245
	N	0.01108	0.02307	0.01223
	O	0.01088	0.02300	0.01225
	P	0.01149	0.02836	0.01325
-001	I	0.01109	0.02776	0.01372
	J	0.01118	0.02528	0.01333
	K	0.01132	0.02001	0.01228
	L	0.01108	0.02628	0.01332
	M	0.01112	0.02434	0.01282
	N	0.01035	0.02756	0.01291
	O	0.01060	0.02741	0.01324
	P	0.01144	0.03031	0.01484
-002	A	0.01129	0.02469	0.01370
	B	0.01192	0.02819	0.01509
	C	0.01032	0.02643	0.01275
	D	0.01066	0.02553	0.01318
	E	0.01107	0.02949	0.01476
	F	0.01034	0.02971	0.01359
	G	0.01088	0.02799	0.01326
	H	0.01102	0.02946	0.01394
-003	A	0.01075	0.02111	0.01234
	B	0.01092	0.02599	0.01275
	C	0.01029	0.03226	0.01300
	D	0.01009	0.02760	0.01191
	E	0.01095	0.02962	0.01396
	F	0.01116	0.03436	0.01348
	G	0.01154	0.03563	0.01446
	H	0.01072	0.02716	0.01263
RECORDED BY:				
DATE:		7/27/05		7/29/05

NOTES:

C. tentans Assay
GROWTH DATA

STUDY NUMBER: 13446 **CLIENT:** BBL

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*C.tentans* Dry + FOIL (g)	*C.tentans* Ashed + FOIL (g)
-004	I	0.01046	0.02509	0.01299
	J	0.01229	0.02327	0.01394
	K	0.01086	0.02022	0.01189
	L	0.01064	0.02322	0.01249
	M	0.01157 0.02752	~~0.02066~~	0.01379
	N	0.01149	0.02066	0.01285
	O	0.01105	0.02295	0.01281
	P	0.01066	0.01993	0.01206
-006	I	0.01136	0.02651	0.01330
	J	0.01284	0.03547	0.01594
	K	0.01140	0.03194	0.01389
	L	0.01088	0.02456	0.01219
	M	0.01065	0.01910	0.01164
	N	0.01203	0.02598	0.01338
	O	0.01013	0.02710	0.01242
	P	0.01083	0.02943	0.01315
-007	A	0.01171	0.02945	0.01416
	B	0.01147	0.02585	0.01322
	C	0.01209	0.02831	0.01425
	D	0.01101	0.03416	0.01424
	E	0.01184	0.02910	0.01428
	F	0.01108	0.02724	0.01284
	G	0.01185	0.03221	0.01443
	H	0.01059	0.02819	0.01283
-009	A	0.01242	0.02400	0.01442
	B	0.01119	0.02486	0.01330
	C	0.01123	0.02719	0.01364
	D	0.01161	0.02639	0.01434
	E	0.01139	0.02149	0.01277
	F	0.01216	0.02306	0.01407
	G	0.01075	0.02152	0.01375
	H	0.00926	0.02619	0.01192
RECORDED BY:		[illegible]		[illegible]
DATE:		7/27/05		7/29/05

NOTES:

C. tentans Assay
GROWTH DATA

STUDY NUMBER: 13446 **CLIENT:** BBL

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*C.tentans* Dry + FOIL (g)	*C.tentans* Ashed + FOIL (g)
-010	I	0.01053	0.02316	0.01339
	J	0.01059	0.01749	0.01139
	K	0.01163	0.02610	0.01390
	L	0.01202	0.02472	0.01371
	M	0.01154	0.02493	0.01342
	N	0.01266	0.02510	0.01422
	O	0.01253	0.02569	0.01548
	P	0.01062	0.01863	0.01238
-011	I	0.01132	0.02941	0.01350
	J	0.01149	0.03171	0.01426
	K	0.01129	0.03472	0.01564
	L	0.01239	0.03862	0.01651
	M	0.01124	0.03196	0.01425
	N	0.01146	0.02974	0.01395
	O	0.01225	0.02738	0.01520
	P	0.01121	0.02869	0.01405
-012	A	0.01247	0.03384	0.01612
	B	0.01090	0.03349	0.01479
	C	0.01127	0.03284	0.01530
	D	0.01137	0.03136	0.01501
	E	0.01082	0.03204	0.01442
	F	0.01039	0.02683	0.01282
	G	0.01132	0.02898	0.01453
	H	0.01219	0.03212	0.01485
-013	A	0.01156	0.02610	0.01370
	B	0.01098	0.02407	0.01277
	C	0.01154	0.02559	0.01407
	D	0.01143	0.02671	0.01405
	E	0.01107	0.03112	0.01677
	F	0.01160	0.02081	0.01288
	G	0.01061	0.02339	0.01264
	H	0.01042	0.01783	0.01113
RECORDED BY:		M		M
DATE:		7/27/05		7/29/05

NOTES:

C. tentans Assay
GROWTH DATA

STUDY NUMBER: 13446 **CLIENT:** BBL

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*C.tentans* Dry + FOIL (g)	*C.tentans* Ashed + FOIL (g)
-014	I	0.01006	0.02363	0.01235
	J	0.00996	0.02251	0.01189
	K	0.01185	0.02587	0.01433
	L	0.01274	0.02556	0.01513
	M	0.01215	0.02627	0.01494
	N	0.00989	0.02275	0.01195
	O	0.01357	0.03021	0.01624
	P	0.01228	0.02995	0.01487
-015	I	0.01124	0.02691	0.01378
	J	0.01107	0.02709	0.01369
	K	0.01065	0.02822	0.01345
	L	0.01236	0.03192	0.01559
	M	0.01108	0.02745	0.01402
	N	0.01211	0.03059	0.01513
	O	0.01122	0.02835	0.01360
	P	0.01194	0.02638	0.01428
-016	A	0.01231	0.02467	0.01451
	B	0.01204	0.02234	0.01352
	C	0.00969	0.02351	0.01208
	D	0.01200	0.02567	0.01406
	E	0.01255	0.02787	0.01524
	F	0.01194	0.02958	0.01467
	G	0.01219	0.02336	0.01443
	H	0.01132	0.02455	0.01376
-017	A	0.01062	0.02583	0.01333
	B	0.01214	0.02845	0.01493
	C	0.01028	0.02268	0.01203
	D	0.01206	0.02755	0.01424
	E	0.01280	0.02600	0.01483
	F	0.01159	~~0.020~~ 0.01982	0.01283
	G	0.01126	0.02147	0.01253
	H	0.01238	0.02784	0.01436
RECORDED BY:		M		M
DATE:		7/27/05		7/29/05

NOTES:

C. tentans Assay
GROWTH DATA

STUDY NUMBER: 13446 **CLIENT:** BBL

ESI SAMPLE ID	REP	FOIL TARE WEIGHT (g)	*C.tentans* Dry + FOIL (g)	*C.tentans* Ashed + FOIL (g)
-018	I	0.01032	0.03386	0.01398
	J	~~0.01244~~ 0.01062	0.02061	0.01255
	K	0.01241	0.03158	0.01516
	L	0.01220	0.03328	0.01527
	M	0.01244	0.02648	0.01465
	N	0.01048	0.03049	0.01365
	O	0.01022	0.02838	0.01291
	P	0.01220	0.03209	0.01538
	I			
	J			
	K			
	L			
	M			
	N			
	O			
	P			
	A			
	B			
	C			
	D			
	E			
	F			
	G			
	H			
	A			
	B			
	C			
	D			
	F			
	F			
	G			
	H			
RECORDED BY:				
DATE:		7/29/05		7/29/05

NOTES:

CETIS Test Summary

Report Date: 07 Sep-05 7:38 PM
Link: 11-9871-1008

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	15-2759-3311	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:00 PM	**Code:**	13346-015	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 20h (4 °C)	**Station:**	T05BL-004 - 13446-015 - Pond Refere		
Sample No:	06-2942-1705	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	06 Jul-05 12:00 PM	**Code:**	13446-000	**Project:**	Ecologcal Risk Assessment
Receive Date:	06 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	24h	**Station:**	Lab Control		
Sample No:	03-5574-1378	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 11:00 AM	**Code:**	13446-001	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	16d 1h (4 °C)	**Station:**	T05PA-001 - 13446-001 - Pond		
Sample No:	06-2098-4840	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 12:30 PM	**Code:**	13446-002	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 23h (4 °C)	**Station:**	T05PD-002 - 13446-002 - Pond		
Sample No:	02-7805-4131	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:00 PM	**Code:**	13446-003	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 21h (4 °C)	**Station:**	T05BR-001 - 13446-003 - Riverine		
Sample No:	07-4822-9464	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:30 PM	**Code:**	13446-004	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 20h (4 °C)	**Station:**	T05PA-003 - 13446-004 - Pond		
Sample No:	09-5133-3778	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-006	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 17h (4 °C)	**Station:**	T05BR-003 - 13446-006 - Riverine		
Sample No:	14-6644-4706	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-007	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 17h (4 °C)	**Station:**	T05PF-004 - 13446-007 - Pond		
Sample No:	11-7563-0513	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 11:00 AM	**Code:**	13446-009	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 1h (4 °C)	**Station:**	T05BR-005 - 13446-009 - Riverine		
Sample No:	10-0504-8146	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 10:45 AM	**Code:**	13446-010	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 1h (4 °C)	**Station:**	T05BR-006 - 13446-010 - Riverine		
Sample No:	09-8620-6643	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 01:20 PM	**Code:**	13446-011	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 22h (4 °C)	**Station:**	T05BR-011 - 13446-011 - Riverine		

CETIS Test Summary

Report Date: 07 Sep-05 7:38 PM
Link: 11-9871-1008

Sample No:	09-4449-7974	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:00 AM	**Code:**	13446-012	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	14d 1h (4 °C)	**Station:**	T05BL-001 - 13446-012 - Riverine Ref		
Sample No:	08-9678-2866	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:30 AM	**Code:**	13446-013	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	14d 0h (4 °C)	**Station:**	T05BL-002 - 13446-013 - Riverine Ref		
Sample No:	15-3550-8902	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 02:30 PM	**Code:**	13446-014	**Project:**	Ecologcal Risk Assessment
Receive Date:	23 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 21h (4 °C)	**Station:**	T05BL-003 - 13446-014 - Pond Refere		
Sample No:	08-7654-4935	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:50 PM	**Code:**	13446-016	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 19h (4 °C)	**Station:**	T05BL-005 - 13446-016 - Riverine Ref		
Sample No:	12-3605-9504	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:00 PM	**Code:**	13446-017	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 19h (4 °C)	**Station:**	T05BL-006 - 13446-017 - Riverine Ref		
Sample No:	04-4912-0227	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:30 PM	**Code:**	13446-018	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 18h (4 °C)	**Station:**	TO5BL-007 - 13446-018 - Riverine Ref		

Proportion Survived Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000	8	0.83750	0.70000	1.00000	0.03750	0.10607	12.66%
13446-012	8	0.88750	0.70000	1.00000	0.03504	0.09910	11.17%
13446-013	8	0.81250	0.50000	1.00000	0.06105	0.17269	21.25%
13446-016	8	0.92500	0.70000	1.00000	0.04910	0.13887	15.01%
13446-017	8	0.78750	0.50000	1.00000	0.06391	0.18077	22.96%
13446-018	8	0.98750	0.90000	1.00000	0.01250	0.03536	3.58%
13446-014	8	0.86250	0.80000	1.00000	0.02631	0.07440	8.63%
13346-015	8	0.93750	0.90000	1.00000	0.01830	0.05175	5.52%
13446-001	8	0.76250	0.50000	1.00000	0.05324	0.15059	19.75%
13446-002	8	0.77500	0.70000	1.00000	0.03660	0.10351	13.36%
13446-004	8	0.71250	0.40000	1.00000	0.07662	0.21671	30.42%
13446-007	8	0.86250	0.70000	1.00000	0.04605	0.13025	15.10%
13446-003	8	0.85000	0.60000	1.00000	0.04226	0.11952	14.06%
13446-006	8	0.85000	0.50000	1.00000	0.05669	0.16036	18.87%
13446-009	8	0.88750	0.70000	1.00000	0.04795	0.13562	15.28%
13446-010	8	0.56250	0.40000	0.90000	0.06250	0.17678	31.43%
13446-011	8	0.85000	0.60000	1.00000	0.06547	0.18516	21.78%

CETIS Test Summary

Report Date: 07 Sep-05 7:38 PM
Link: 11-9871-1008

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000

CETIS Test Summary

Report Date: 07 Sep-05 7:44 PM
Link: 11-9871-1008

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	15-2759-3311	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:00 PM	**Code:**	13346-015	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 20h (4 °C)	**Station:**	T05BL-004 - 13446-015 - Pond Refere		
Sample No:	06-2942-1705	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	06 Jul-05 12:00 PM	**Code:**	13446-000	**Project:**	Ecologcal Risk Assessment
Receive Date:	06 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	24h	**Station:**	Lab Control		
Sample No:	03-5574-1378	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 11:00 AM	**Code:**	13446-001	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	16d 1h (4 °C)	**Station:**	T05PA-001 - 13446-001 - Pond		
Sample No:	06-2098-4840	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 12:30 PM	**Code:**	13446-002	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 23h (4 °C)	**Station:**	T05PD-002 - 13446-002 - Pond		
Sample No:	02-7805-4131	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:00 PM	**Code:**	13446-003	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 21h (4 °C)	**Station:**	T05BR-001 - 13446-003 - Riverine		
Sample No:	07-4822-9464	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:30 PM	**Code:**	13446-004	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 20h (4 °C)	**Station:**	T05PA-003 - 13446-004 - Pond		
Sample No:	09-5133-3778	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-006	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 17h (4 °C)	**Station:**	T05BR-003 - 13446-006 - Riverine		
Sample No:	14-6644-4706	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-007	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 17h (4 °C)	**Station:**	T05PF-004 - 13446-007 - Pond		
Sample No:	11-7563-0513	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 11:00 AM	**Code:**	13446-009	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 1h (4 °C)	**Station:**	T05BR-005 - 13446-009 - Riverine		
Sample No:	10-0504-8146	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 10:45 AM	**Code:**	13446-010	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 1h (4 °C)	**Station:**	T05BR-006 - 13446-010 - Riverine		
Sample No:	09-8620-6643	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 01:20 PM	**Code:**	13446-011	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 22h (4 °C)	**Station:**	T05BR-011 - 13446-011 - Riverine		

CETIS Test Summary

Report Date: 07 Sep-05 7:44 PM
Link: 11-9871-1008

Sample No:	09-4449-7974	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:00 AM	**Code:**	13446-012	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	14d 1h (4 °C)	**Station:**	T05BL-001 - 13446-012 - Riverine Ref		
Sample No:	08-9678-2866	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 11:30 AM	**Code:**	13446-013	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	14d 0h (4 °C)	**Station:**	T05BL-002 - 13446-013 - Riverine Ref		
Sample No:	15-3550-8902	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 02:30 PM	**Code:**	13446-014	**Project:**	Ecologcal Risk Assessment
Receive Date:	23 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 21h (4 °C)	**Station:**	T05BL-003 - 13446-014 - Pond Refere		
Sample No:	08-7654-4935	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:50 PM	**Code:**	13446-016	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 19h (4 °C)	**Station:**	T05BL-005 - 13446-016 - Riverine Ref		
Sample No:	12-3605-9504	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:00 PM	**Code:**	13446-017	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 19h (4 °C)	**Station:**	T05BL-006 - 13446-017 - Riverine Ref		
Sample No:	04-4912-0227	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 05:30 PM	**Code:**	13446-018	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 18h (4 °C)	**Station:**	TO5BL-007 - 13446-018 - Riverine Ref		

Ash Free Dry Weight - mg Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000	8	1.79125	1.55000	2.01000	0.05995	0.16957	9.47%
13446-012	8	2.20000	1.73000	3.43000	0.19927	0.56361	25.62%
13446-013	8	1.42375	1.19000	1.68000	0.06296	0.17808	12.51%
13446-016	8	1.22375	0.89000	1.63000	0.08621	0.24383	19.93%
13446-017	8	1.47625	1.12000	2.13000	0.11738	0.33200	22.49%
13446-018	8	1.56500	0.81000	2.00000	0.14131	0.39968	25.54%
13446-014	8	1.39000	1.08000	1.89000	0.08944	0.25298	18.20%
13346-015	8	1.56125	1.34000	2.03000	0.07855	0.22216	14.23%
13446-001	8	1.68625	1.41000	1.85000	0.05217	0.14755	8.75%
13446-002	8	1.81000	1.54000	2.30000	0.09791	0.27692	15.30%
13446-004	8	1.47000	1.07000	1.97000	0.10309	0.29160	19.84%
13446-007	8	1.62750	0.62000	2.15000	0.16938	0.47907	29.44%
13446-003	8	2.02875	1.34000	3.09000	0.19738	0.55827	27.52%
13446-006	8	1.39875	0.76000	1.81000	0.13014	0.36810	26.32%
13446-009	8	1.20375	0.75000	1.65000	0.10879	0.30771	25.56%
13446-010	8	1.84500	1.36000	2.72000	0.15093	0.42688	23.14%
13446-011	8	2.02750	1.59000	2.46000	0.11689	0.33062	16.31%

CETIS Test Summary

Report Date: 07 Sep-05 7:44 PM
Link: 11-9871-1008

Ash Free Dry Weight - mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000

CETIS Test Summary

Report Date: 07 Sep-05 8:23 PM
Link: 10-6000-9244

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	09-9352-5608	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-000 Cd	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Lab Control		

Sample No:	01-8029-8185	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-100	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite River Reference Site -100		

Sample No:	04-6955-5147	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-101	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite River Sites -101		

Sample No:	05-8340-0434	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-200	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite Pond Reference Site -200		

Sample No:	11-0340-2019	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-201	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite Pond Sites -201		

Proportion Survived Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000 Cd	8	0.83750	0.70000	1.00000	0.03750	0.10607	12.66%
13446-100	40	0.88000	0.50000	1.00000	0.02353	0.14884	16.91%
13446-101	40	0.80000	0.40000	1.00000	0.03038	0.19215	24.02%
13446-200	16	0.90000	0.80000	1.00000	0.01826	0.07303	8.11%
13446-201	32	0.77813	0.40000	1.00000	0.02795	0.15808	20.32%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-100	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	0.80000
	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000	1.00000	0.70000	0.70000	1.00000
	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000
	0.80000	0.80000	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000
13446-101	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000	0.90000	1.00000
	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000	0.70000	0.70000	1.00000	1.00000
	0.80000	0.90000	1.00000	1.00000	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000
	0.70000	0.40000	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000
13446-200	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000	0.90000	1.00000
	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000				
13446-201	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000	0.70000	0.70000
	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000	0.80000	0.80000	0.50000	1.00000
	0.90000	0.50000	0.80000	0.40000	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000
	1.00000	0.80000								

CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.94203	4.84726	0.26572	Equal Variances
Distribution	Shapiro-Wilk W	0.88776	0.88421	0.01196	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0389402	0.0389402	1	2.41	0.13469	Non-Significant Effect
Error	0.355202	0.0161456	22			
Total	0.39414223	0.0550857	23			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000 Cd		13446-200	-1.5530	1.71714	0.9327	0.09448	Non-Significant Effect

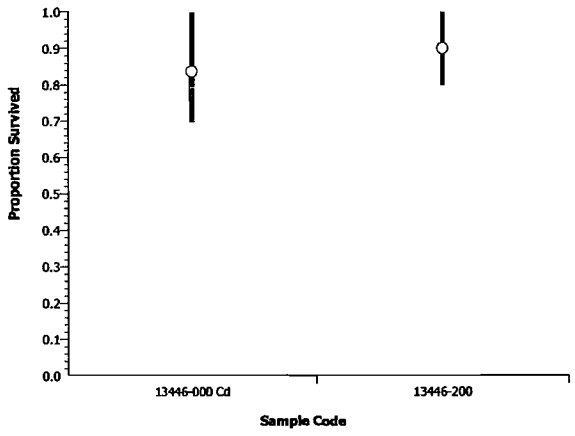
Data Summary

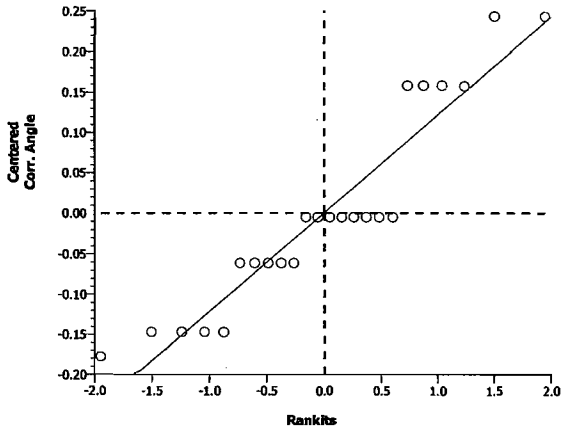
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000 Cd	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-200	16	0.90000	0.80000	1.00000	0.07303	1.25431	1.10715	1.41202	0.11145

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-200	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000	0.90000	1.00000
	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000				

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:20 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Dunn-Sidak Adj t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.46652	2.32129	0.23627	Equal Variances
Distribution	Kolmogorov-Smirnov D	0.18030	0.11566	0.00000	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2065096	0.2065096	1	4.31	0.04120	Significant Effect
Error	3.738065	0.0479239	78			
Total	3.94457488	0.2544335	79			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-100		13446-101	2.07584	1.66463	0.0206	0.08148	Significant Effect

Data Summary

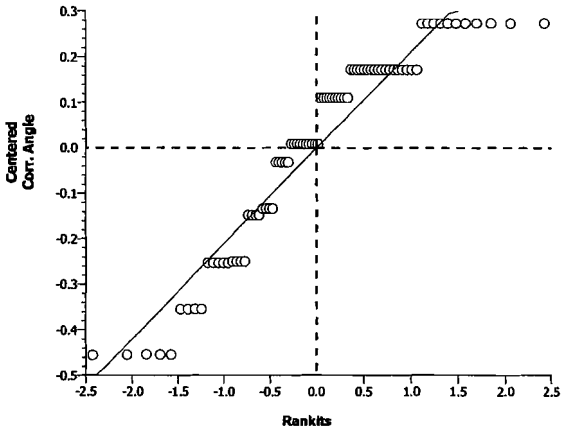
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-100	40	0.88000	0.50000	1.00000	0.14884	1.24107	0.78540	1.41202	0.19713
13446-101	40	0.80000	0.40000	1.00000	0.19215	1.13946	0.68472	1.41202	0.23872

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-100	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	0.80000
	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000	1.00000	0.70000	0.70000	1.00000
	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000
	0.80000	0.80000	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000
13446-101	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000	0.90000	1.00000
	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000	0.70000	0.70000	1.00000	1.00000
	0.80000	0.90000	1.00000	1.00000	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000
	0.70000	0.40000	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.36228	7.43112	0.23645	Equal Variances
Distribution	Shapiro-Wilk W	0.89864	0.92871	0.00074	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0057655	0.0057655	1	0.11	0.74063	Non-Significant Effect
Error	2.391412	0.0519872	46			
Total	2.39717801	0.0577527	47			

Group Comparisons

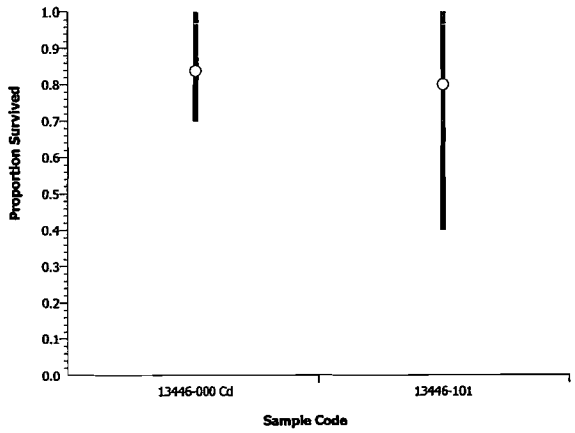
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000 Cd		13446-101	0.09883	1.64485	0.4606	7	Non-Significant Effect

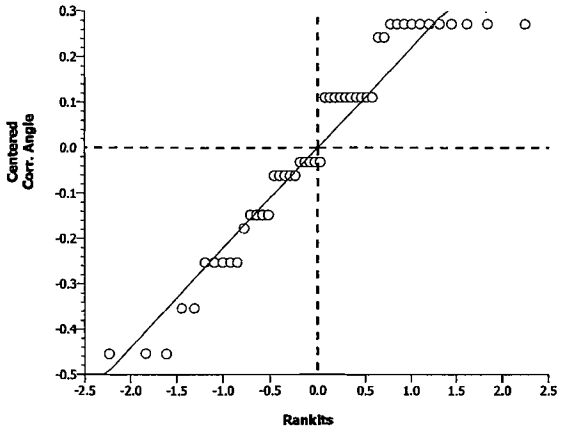
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000 Cd	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-101	40	0.80000	0.40000	1.00000	0.19215	1.13946	0.68472	1.41202	0.23872

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-101	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000	0.90000	1.00000
	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000	0.70000	0.70000	1.00000	1.00000
	0.80000	0.90000	1.00000	1.00000	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000
	0.70000	0.40000	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:15 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.18681	3.67377	0.02052	Equal Variances
Distribution	Shapiro-Wilk W	0.92147	0.92871	0.00527	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2486777	0.2486777	1	8.09	0.00661	Significant Effect
Error	1.41353	0.0307289	46			
Total	1.66220786	0.2794067	47			

Group Comparisons

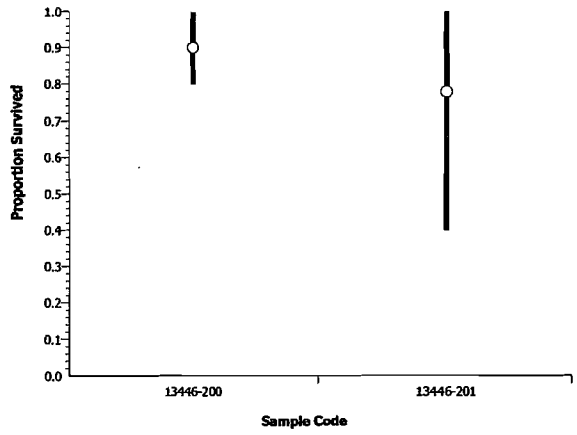
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-200		13446-201	2.87566	1.64485	0.0020	5	Significant Effect

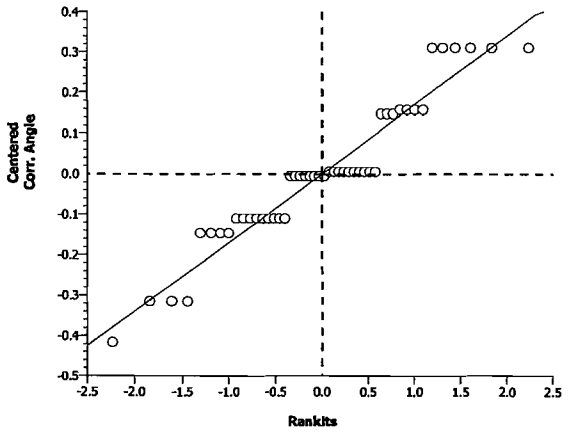
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-200	16	0.90000	0.80000	1.00000	0.07303	1.25431	1.10715	1.41202	0.11145
13446-201	32	0.77812	0.40000	1.00000	0.15808	1.10163	0.68472	1.41202	0.19896

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-200	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000	0.90000	1.00000
	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000				
13446-201	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000	0.70000	0.70000
	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000	0.80000	0.80000	0.50000	1.00000
	0.90000	0.50000	0.80000	0.40000	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000
	1.00000	0.80000								

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.64096	7.52012	0.51269	Equal Variances
Distribution	Shapiro-Wilk W	0.91309	0.91882	0.00650	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0289359	0.0289359	1	0.79	0.38040	Non-Significant Effect
Error	1.396067	0.0367386	38			
Total	1.42500332	0.0656746	39			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000 Cd		13446-201	1.00286	1.64485	0.1580	5	Non-Significant Effect

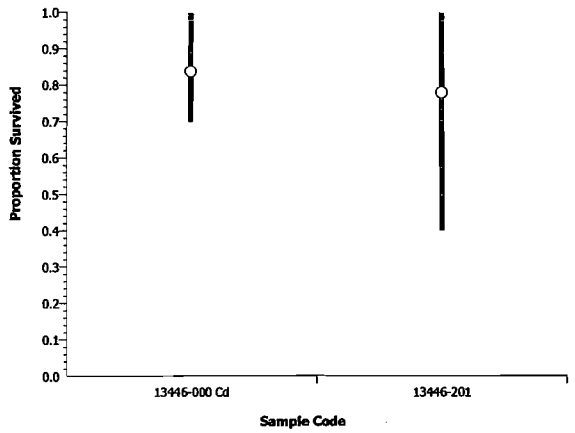
Data Summary

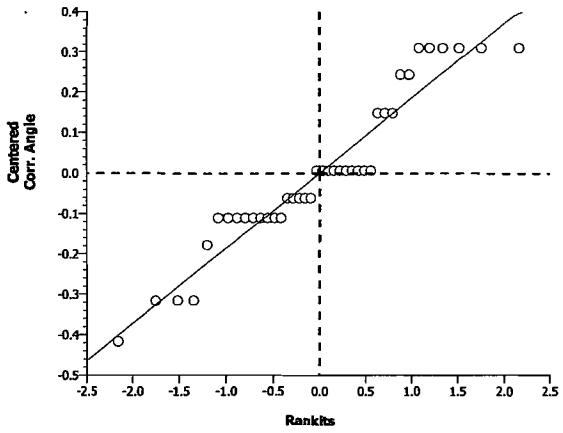
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000 Cd	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-201	32	0.77812	0.40000	1.00000	0.15808	1.10163	0.68472	1.41202	0.19896

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-201	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000	0.70000	0.70000
	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000	0.80000	0.80000	0.50000	1.00000
	0.90000	0.50000	0.80000	0.40000	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000
	1.00000	0.80000								

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:14 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.61081	7.43112	0.52909	Equal Variances
Distribution	Shapiro-Wilk W	0.86931	0.92871	0.00007	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0347585	0.0347585	1	0.95	0.33501	Non-Significant Effect
Error	1.684392	0.0366172	46			
Total	1.71915068	0.0713757	47			

Group Comparisons

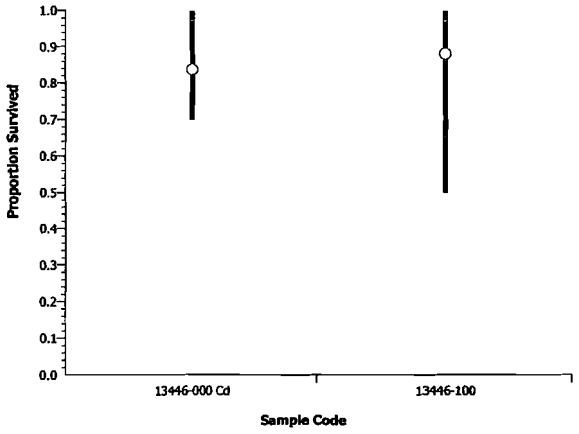
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000 Cd		13446-100	-1.2172	1.64485	0.8882	6	Non-Significant Effect

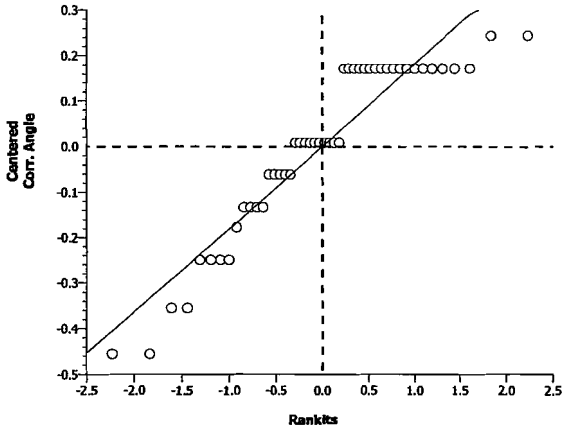
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000 Cd	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-100	40	0.88000	0.50000	1.00000	0.14884	1.24107	0.78540	1.41202	0.19713

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-100	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000	0.90000	0.80000
	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000	1.00000	0.70000	0.70000	1.00000
	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000
	0.80000	0.80000	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000

Graphics





CETIS Test Summary

Report Date: 07 Sep-05 8:22 PM
Link: 10-6000-9244

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	09-9352-5608	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-000 Cd	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Lab Control		
Sample No:	01-8029-8185	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-100	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite River Reference Site -100		
Sample No:	04-6955-5147	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-101	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite River Sites -101		
Sample No:	05-8340-0434	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-200	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite Pond Reference Site -200		
Sample No:	11-0340-2019	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	27 Jul-05 12:00 PM	**Code:**	13446-201	**Project:**	Ecologcal Risk Assessment
Receive Date:	27 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	N/A	**Station:**	Composite Pond Sites -201		

Ash Free Dry Weight - mg Summary

Sample Code	Reps	Mean	Minimum	Maximum	SE	SD	CV
13446-000 Cd	8	1.79125	1.55000	2.01000	0.05995	0.16957	9.47%
13446-100	40	1.57775	0.81000	3.43000	0.07648	0.48371	30.66%
13446-101	40	1.70075	0.75000	3.09000	0.08173	0.51691	30.39%
13446-200	16	1.47563	1.08000	2.03000	0.06160	0.24641	16.70%
13446-201	32	1.64844	0.62000	2.30000	0.05828	0.32968	20.00%

Ash Free Dry Weight - mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-100	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000	1.38000	1.41000
	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000	1.02000	1.26000	1.63000	1.16000
	1.26000	1.49000	0.89000	1.08000	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000
	1.12000	1.69000	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000
13446-101	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000	1.47000	0.76000
	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000	1.37000	1.65000	1.36000	0.93000
	1.09000	1.00000	1.48000	0.75000	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000
	1.46000	1.56000	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000
13446-200	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000	1.46000	1.34000
	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000				
13446-201	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000	1.57000	1.87000
	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000	1.51000	1.17000	1.67000	1.07000
	1.53000	1.57000	1.27000	1.97000	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000
	1.62000	1.92000								

CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.11159	7.96777	0.32204	Equal Variances
Distribution	Shapiro-Wilk W	0.97000	0.88421	0.65985	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.531302	0.531302	1	10.51	0.00374	Significant Effect
Error	1.112081	0.0505492	22			
Total	1.64338320	0.5818512	23			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000 Cd		13446-200	3.24201	1.71714	0.0019	0.16717	Significant Effect

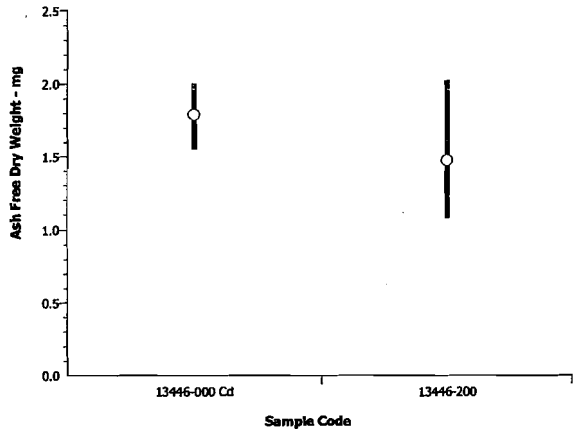
Data Summary

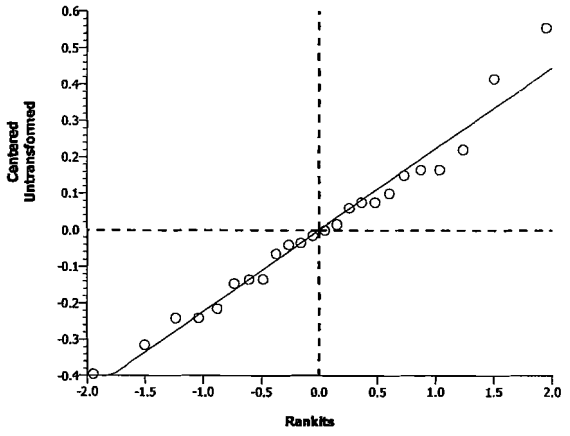
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000 Cd	8	1.79125	1.55000	2.01000	0.16957				
13446-200	16	1.47563	1.08000	2.03000	0.24641				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-200	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000	1.46000	1.34000
	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000				

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.14198	2.32129	0.68052	Equal Variances
Distribution	Kolmogorov-Smirnov D	0.10477	0.11566	0.02995	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.30258	0.30258	1	1.21	0.27521	Non-Significant Effect
Error	19.54577	0.2505869	78			
Total	19.8483545	0.5531669	79			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-100		13446-101	-1.0989	1.66463	0.8624	0.18633	Non-Significant Effect

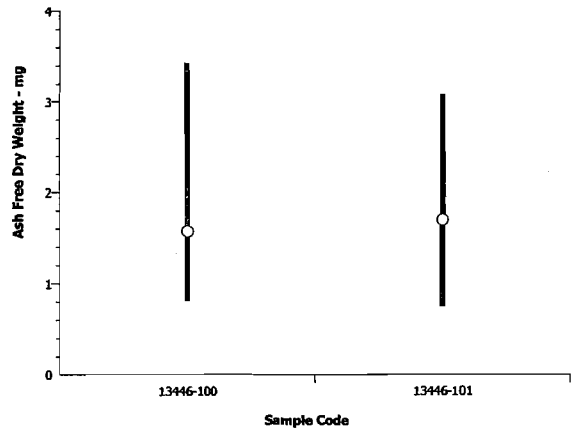
Data Summary

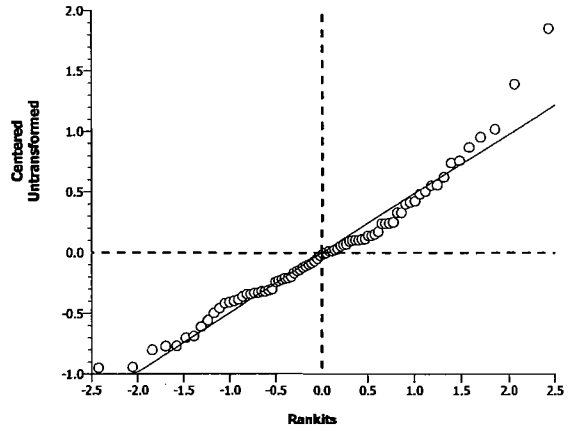
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-100	40	1.57775	0.81000	3.43000	0.48371				
13446-101	40	1.70075	0.75000	3.09000	0.51691				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-100	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000	1.38000	1.41000
	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000	1.02000	1.26000	1.63000	1.16000
	1.26000	1.49000	0.89000	1.08000	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000
	1.12000	1.69000	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000
13446-101	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000	1.47000	0.76000
	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000	1.37000	1.65000	1.36000	0.93000
	1.09000	1.00000	1.48000	0.75000	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000
	1.46000	1.56000	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.77985	7.52012	0.07381	Equal Variances
Distribution	Shapiro-Wilk W	0.95471	0.91882	0.15395	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1305306	0.1305306	1	1.39	0.24588	Non-Significant Effect
Error	3.570709	0.0939660	38			
Total	3.70124008	0.2244966	39			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000 Cd		13446-201	1.17861	1.68595	0.1229	0.20429	Non-Significant Effect

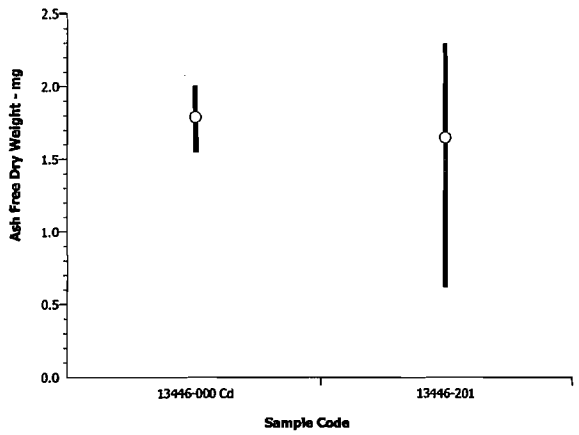
Data Summary

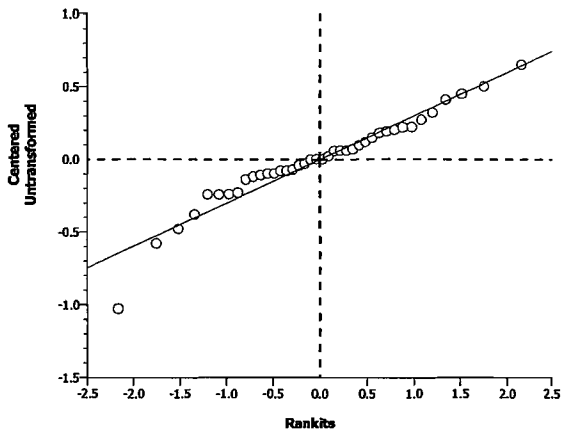
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000 Cd	8	1.79125	1.55000	2.01000	0.16957				
13446-201	32	1.64844	0.62000	2.30000	0.32968				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-201	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000	1.57000	1.87000
	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000	1.51000	1.17000	1.67000	1.07000
	1.53000	1.57000	1.27000	1.97000	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000
	1.62000	1.92000								

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	8.13681	7.43112	0.00755	Unequal Variances
Distribution	Shapiro-Wilk W	0.90184	0.92871	0.00097	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3038816	0.3038816	1	1.50	0.22709	Non-Significant Effect
Error	9.326385	0.2027475	46			
Total	9.63026714	0.5066292	47			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000 Cd		13446-100	1.95075	1.64485	0.0255	5	Significant Effect

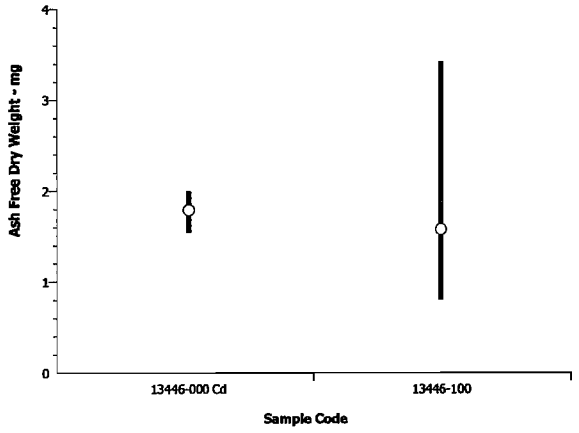
Data Summary

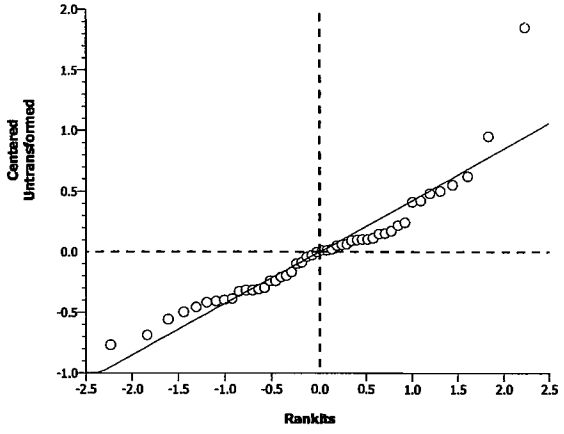
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000 Cd	8	1.79125	1.55000	2.01000	0.16957				
13446-100	40	1.57775	0.81000	3.43000	0.48371				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-100	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000	1.38000	1.41000
	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000	1.02000	1.26000	1.63000	1.16000
	1.26000	1.49000	0.89000	1.08000	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000
	1.12000	1.69000	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	9.29207	7.43112	0.00497	Unequal Variances
Distribution	Shapiro-Wilk W	0.96118	0.92871	0.18121	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0546017	0.0546017	1	0.24	0.62908	Non-Significant Effect
Error	10.62196	0.2309123	46			
Total	10.6765661	0.2855139	47			

Group Comparisons

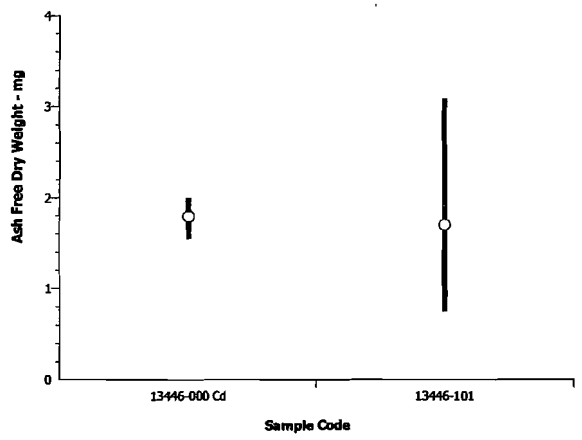
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000 Cd		13446-101	0.89284	1.68957	0.1890	0.17126	Non-Significant Effect

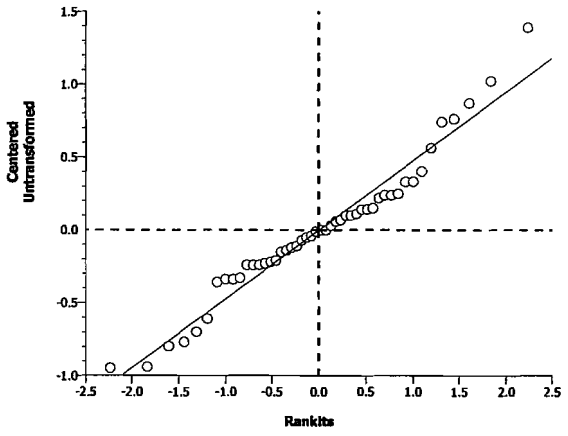
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000 Cd	8	1.79125	1.55000	2.01000	0.16957				
13446-101	40	1.70075	0.75000	3.09000	0.51691				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000 Cd	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-101	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000	1.47000	0.76000
	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000	1.37000	1.65000	1.36000	0.93000
	1.09000	1.00000	1.48000	0.75000	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000
	1.46000	1.56000	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	10-6000-9244	10-6000-9244	07 Sep-05 8:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.79005	3.67377	0.23280	Equal Variances
Distribution	Shapiro-Wilk W	0.96476	0.92871	0.24525	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.318551	0.318551	1	3.42	0.07070	Non-Significant Effect
Error	4.280215	0.0930482	46			
Total	4.5987663	0.4115992	47			

Group Comparisons

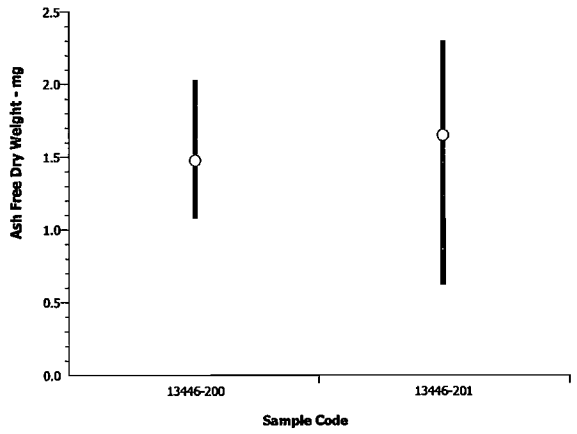
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-200		13446-201	-1.8503	1.67866	0.9646	0.15678	Non-Significant Effect

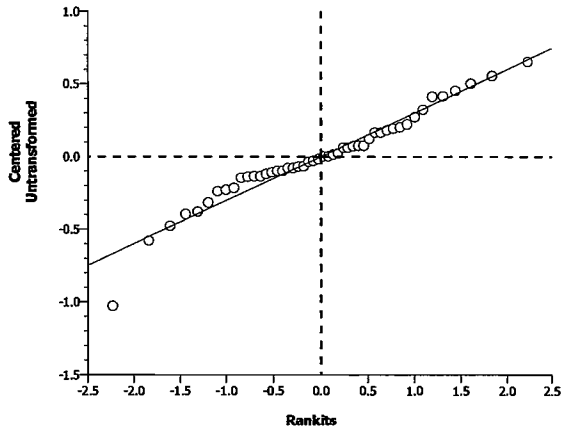
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-200	16	1.47563	1.08000	2.03000	0.24641				
13446-201	32	1.64844	0.62000	2.30000	0.32968				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-200	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000	1.46000	1.34000
	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000				
13446-201	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000	1.57000	1.87000
	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000	1.51000	1.17000	1.67000	1.07000
	1.53000	1.57000	1.27000	1.97000	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000
	1.62000	1.92000								

Graphics





CETIS Data Worksheet

Report Date: 07 Sep-05 8:14 PM
Link: 10-6000-9244

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Start Date: 07 Jul-05 12:00 PM **Species:** Chironomus tentans **Sample Code:** 13446-000 Cd
Ending Date: 27 Jul-05 12:00 PM **Protocol:** EPA/600/R-99/064 (2000) **Sample Source:** Blackstone River
Sample Date: 27 Jul-05 12:00 PM **Material:** Freshwater Sediment **Sample Station:** Lab Control

Sample Code	Rep	Pos	# Exposed	# Survived	Total Weight-mg	Ashed Weight-mg	Pan Count	Mean Length-mm	Notes
13446-000 Cd	1	83	10	8		1.85	1		
13446-000 Cd	2	105	10	8		2.01	1		
13446-000 Cd	3	38	10	10		1.55	1		
13446-000 Cd	4	82	10	10		1.75	1		
13446-000 Cd	5	53	10	8		1.94	1		
13446-000 Cd	6	97	10	7		1.55	1		
13446-000 Cd	7	49	10	8		1.79	1		
13446-000 Cd	8	115	10	8		1.89	1		
13446-100	1	59	10	7		2.53	1		
13446-100	2	62	10	9		2.08	1		
13446-100	3	23	10	10		1.75	1		
13446-100	4	7	10	9		1.82	1		
13446-100	5	103	10	9		2.2	1		
13446-100	6	21	10	9		3.43	1		
13446-100	7	40	10	8		2.06	1		
13446-100	8	136	10	10		1.73	1		
13446-100	9	79	10	9		1.38	1		
13446-100	10	108	10	8		1.41	1		
13446-100	11	25	10	9		1.28	1		
13446-100	12	3	10	10		1.27	1		
13446-100	13	123	10	9		1.59	1		
13446-100	14	133	10	6		1.59	1		
13446-100	15	64	10	9		1.19	1		
13446-100	16	13	10	5		1.68	1		
13446-100	17	78	10	10		1.02	1		
13446-100	18	94	10	7		1.26	1		
13446-100	19	41	10	7		1.63	1		
13446-100	20	66	10	10		1.16	1		
13446-100	21	74	10	10		1.26	1		
13446-100	22	91	10	10		1.49	1		
13446-100	23	15	10	10		0.89	1		
13446-100	24	80	10	10		1.08	1		
13446-100	25	45	10	10		1.25	1		
13446-100	26	95	10	10		1.37	1		
13446-100	27	70	10	5		2.13	1		
13446-100	28	12	10	9		1.48	1		
13446-100	29	14	10	7		1.6	1		
13446-100	30	71	10	6		1.17	1		
13446-100	31	119	10	8		1.12	1		
13446-100	32	9	10	8		1.69	1		
13446-100	33	131	10	10		1.99	1		
13446-100	34	67	10	10		0.81	1		
13446-100	35	24	10	10		1.64	1		
13446-100	36	109	10	9		2	1		
13446-100	37	20	10	10		1.18	1		
13446-100	38	16	10	10		1.68	1		
13446-100	39	37	10	10		1.55	1		
13446-100	40	73	10	10		1.67	1		
13446-101	1	101	10	6		3.09	1		
13446-101	2	33	10	9		2.57	1		
13446-101	3	127	10	10		1.34	1		
13446-101	4	46	10	8		1.7	1		
13446-101	5	1	10	9		1.94	1		

CETIS Data Worksheet

Report Date: 07 Sep-05 8:14 PM
Link: 10-6000-9244

Sample Code	Rep	Pos	# Exposed	# Survived	Total Weight-mg	Ashed Weight-mg	Pan Count	Mean Length-mm	Notes
13446-101	6	6	10	9		1.8	1		
13446-101	7	29	10	8		1.69	1		
13446-101	8	135	10	9		2.1	1		
13446-101	9	8	10	9		1.47	1		
13446-101	10	77	10	10		0.76	1		
13446-101	11	4	10	10		0.9	1		
13446-101	12	111	10	8		1.55	1		
13446-101	13	28	10	5		1.49	1		
13446-101	14	35	10	8		1.58	1		
13446-101	15	34	10	9		1.63	1		
13446-101	16	17	10	9		1.81	1		
13446-101	17	90	10	7		1.37	1		
13446-101	18	54	10	7		1.65	1		
13446-101	19	84	10	10		1.36	1		
13446-101	20	118	10	10		0.93	1		
13446-101	21	2	10	8		1.09	1		
13446-101	22	89	10	9		1	1		
13446-101	23	48	10	10		1.48	1		
13446-101	24	44	10	10		0.75	1		
13446-101	25	51	10	5		1.95	1		
13446-101	26	18	10	4		2.03	1		
13446-101	27	81	10	9		1.36	1		
13446-101	28	76	10	6		1.84	1		
13446-101	29	106	10	6		1.84	1		
13446-101	30	56	10	4		2.72	1		
13446-101	31	52	10	7		1.46	1		
13446-101	32	126	10	4		1.56	1		
13446-101	33	55	10	10		1.59	1		
13446-101	34	58	10	10		1.94	1		
13446-101	35	110	10	10		1.73	1		
13446-101	36	87	10	9		2.46	1		
13446-101	37	88	10	10		1.77	1		
13446-101	38	93	10	7		2.26	1		
13446-101	39	61	10	6		2.03	1		
13446-101	40	120	10	6		2.44	1		
13446-200	1	125	10	8		1.41	1		
13446-200	2	63	10	8		1.33	1		
13446-200	3	104	10	8		1.44	1		
13446-200	4	31	10	9		1.16	1		
13446-200	5	130	10	9		1.26	1		
13446-200	6	128	10	10		1.08	1		
13446-200	7	65	10	9		1.55	1		
13446-200	8	112	10	8		1.89	1		
13446-200	9	72	10	9		1.46	1		
13446-200	10	107	10	10		1.34	1		
13446-200	11	5	10	9		1.64	1		
13446-200	12	22	10	10		2.03	1		
13446-200	13	102	10	9		1.49	1		
13446-200	14	86	10	10		1.55	1		
13446-200	15	99	10	9		1.64	1		
13446-200	16	68	10	9		1.34	1		
13446-201	1	98	10	10		1.41	1		
13446-201	2	30	10	7		1.71	1		
13446-201	3	96	10	5		1.55	1		
13446-201	4	60	10	7		1.85	1		
13446-201	5	32	10	7		1.65	1		
13446-201	6	75	10	8		1.83	1		
13446-201	7	47	10	8		1.77	1		

CETIS Data Worksheet

Report Date: 07 Sep-05 8:14 PM
Link: 10-6000-9244

Sample Code	Rep	Pos	# Exposed	# Survived	Total Weight-mg	Ashed Weight-mg	Pan Count	Mean Length-mm	Notes
13446-201	8	124	10	9		1.72	1		
13446-201	9	85	10	7		1.57	1		
13446-201	10	27	10	7		1.87	1		
13446-201	11	11	10	8		1.71	1		
13446-201	12	132	10	8		1.54	1		
13446-201	13	50	10	7		2.1	1		
13446-201	14	42	10	7		2.3	1		
13446-201	15	117	10	8		1.84	1		
13446-201	16	43	10	10		1.55	1		
13446-201	17	26	10	8		1.51	1		
13446-201	18	39	10	8		1.17	1		
13446-201	19	114	10	5		1.67	1		
13446-201	20	122	10	10		1.07	1		
13446-201	21	36	10	9		1.53	1		
13446-201	22	19	10	5		1.57	1		
13446-201	23	57	10	8		1.27	1		
13446-201	24	69	10	4		1.97	1		
13446-201	25	121	10	10		0.62	1		
13446-201	26	100	10	8		1.58	1		
13446-201	27	129	10	7		2.15	1		
13446-201	28	10	10	10		1.42	1		
13446-201	29	116	10	9		1.65	1		
13446-201	30	113	10	7		2.06	1		
13446-201	31	92	10	10		1.62	1		
13446-201	32	134	10	8		1.92	1		

CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	10.78989	8.88539	0.00558	Unequal Variances
Distribution	Shapiro-Wilk W	0.86568	0.84420	0.02237	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3902911	0.3902911	1	19.94	0.00053	Significant Effect
Error	0.2739902	0.0195707	14			
Total	0.66428131	0.4098618	15			

Group Comparisons

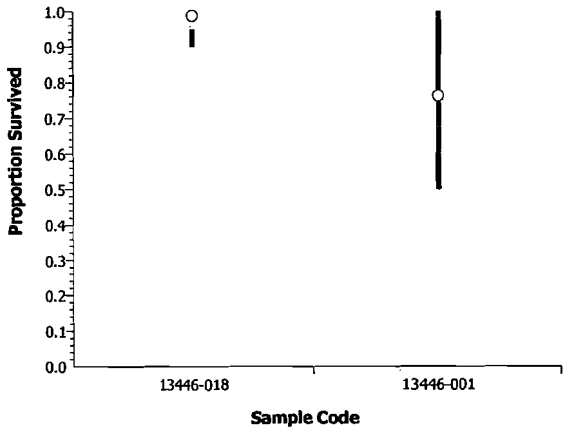
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-001	4.46571	1.85955	0.0010	0.13007	Significant Effect

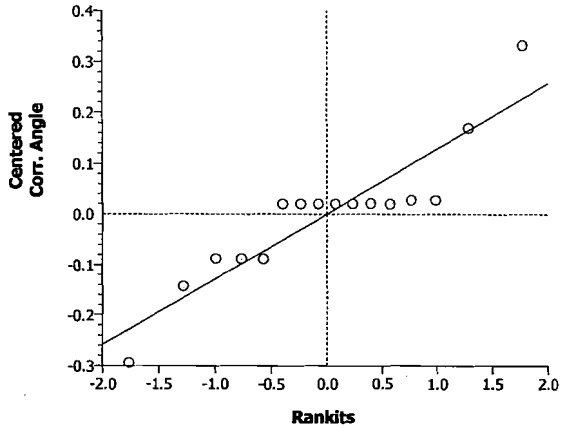
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-001	8	0.76250	0.50000	1.00000	0.15059	1.07928	0.78540	1.41202	0.18927

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.95441	8.88539	0.39647	Equal Variances
Distribution	Shapiro-Wilk W	0.89257	0.84420	0.06112	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0003918	0.0003918	1	0.02	0.88570	Non-Significant Effect
Error	0.2559522	0.0182823	14			
Total	0.256344	0.0186741	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-003	0.14639	1.76131	0.4429	0.11908	Non-Significant Effect

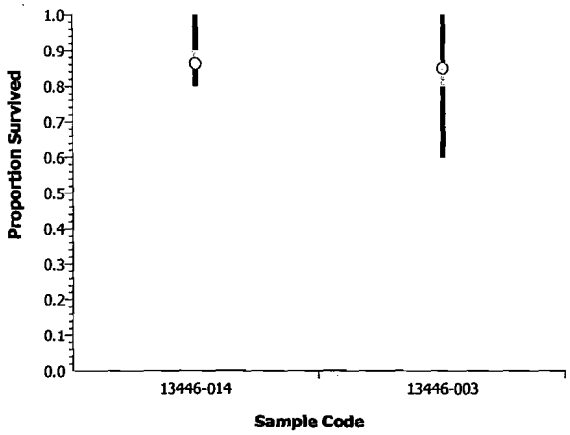
Data Summary

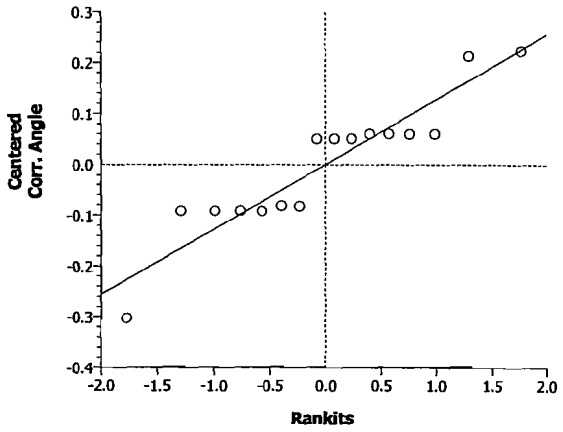
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-003	8	0.85000	0.60000	1.00000	0.11952	1.18857	0.88608	1.41202	0.15553

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:18 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.03249	8.88539	0.96745	Equal Variances
Distribution	Shapiro-Wilk W	0.91578	0.84420	0.14403	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0930909	0.0930909	1	4.61	0.04978	Significant Effect
Error	0.2826753	0.0201911	14			
Total	0.37576619	0.113282	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-002	2.14721	1.76131	0.0249	0.12514	Significant Effect

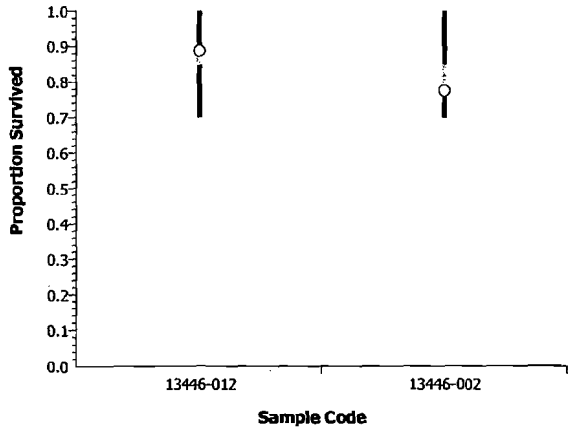
Data Summary

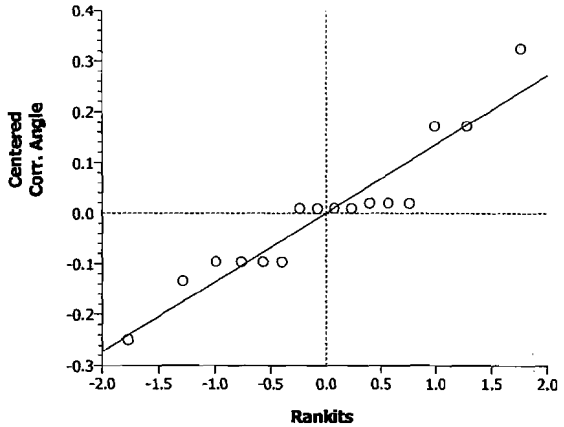
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-002	8	0.77500	0.70000	1.00000	0.10351	1.08726	0.99116	1.41202	0.14323

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.62238	8.88539	0.03653	Equal Variances
Distribution	Shapiro-Wilk W	0.90971	0.84420	0.11532	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0119328	0.0119328	1	0.51	0.48832	Non-Significant Effect
Error	0.3297864	0.0235562	14			
Total	0.34171917	0.035489	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-009	0.71174	1.76131	0.2442	0.13516	Non-Significant Effect

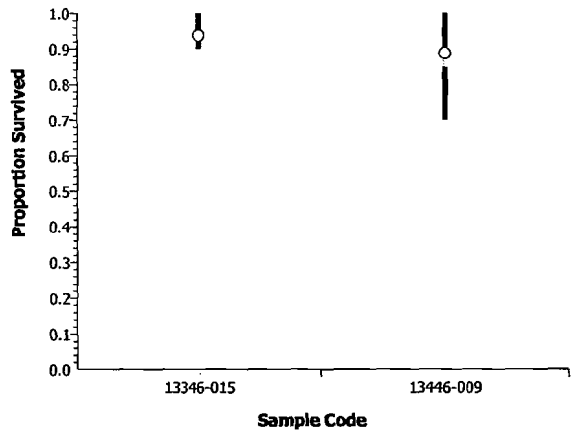
Data Summary

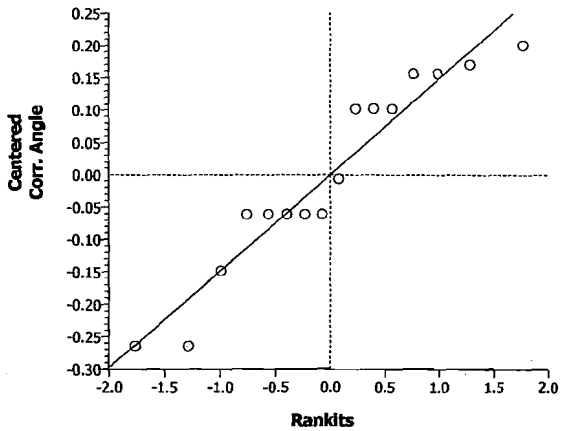
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-009	8	0.88750	0.70000	1.00000	0.13562	1.25554	0.99116	1.45584	0.20000

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.21316	8.88539	0.80530	Equal Variances
Distribution	Shapiro-Wilk W	0.93009	0.84420	0.24091	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0178573	0.0178573	1	0.44	0.51845	Non-Significant Effect
Error	0.5697219	0.0406944	14			
Total	0.58757921	0.0585518	15			

Group Comparisons

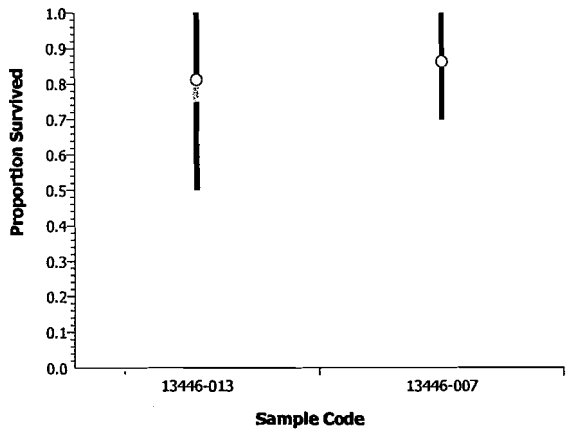
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-007	-0.6624	1.76131	0.7408	0.17765	Non-Significant Effect

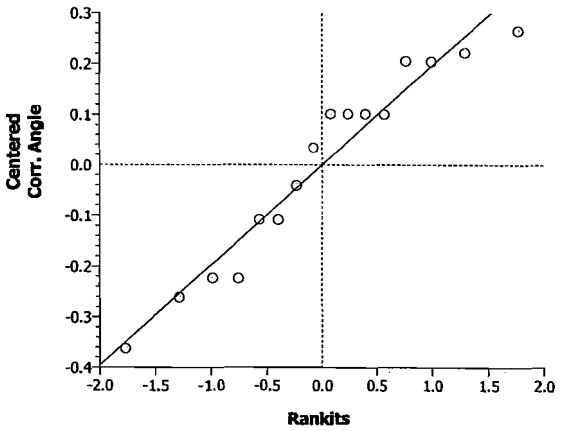
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-007	8	0.86250	0.70000	1.00000	0.13025	1.21517	0.99116	1.43676	0.19177

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.82199	8.88539	0.09782	Equal Variances
Distribution	Shapiro-Wilk W	0.88196	0.84420	0.04115	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0003932	0.0003932	1	0.01	0.91024	Non-Significant Effect
Error	0.4177482	0.0298392	14			
Total	0.41814131	0.0302323	15			

Group Comparisons

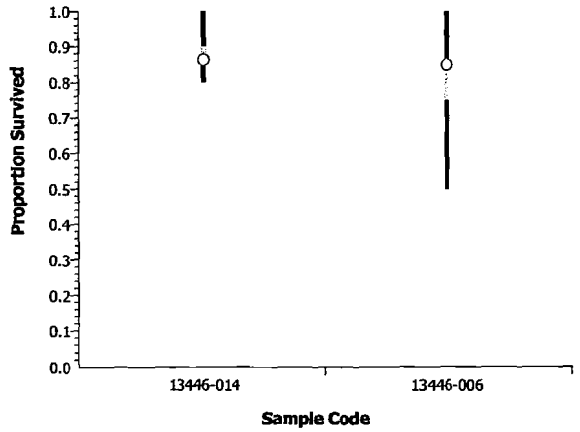
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-006	-0.1148	1.76131	0.5449	0.15212	Non-Significant Effect

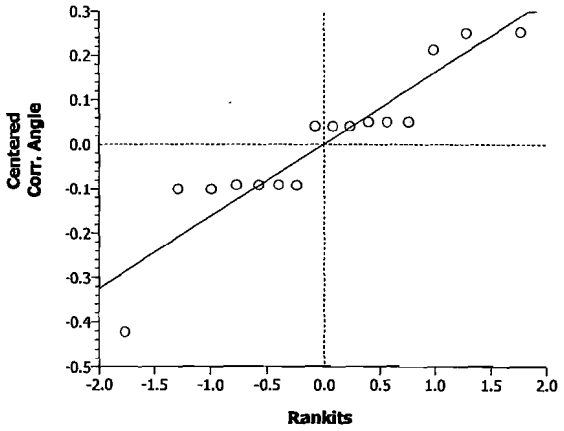
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-006	8	0.85000	0.50000	1.00000	0.16036	1.20838	0.78540	1.46147	0.21749

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:18 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.80294	8.88539	0.45487	Equal Variances
Distribution	Shapiro-Wilk W	0.95635	0.84420	0.56988	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1030881	0.1030881	1	3.70	0.07491	Non-Significant Effect
Error	0.3898294	0.027845	14			
Total	0.49291752	0.1309331	15			

Group Comparisons

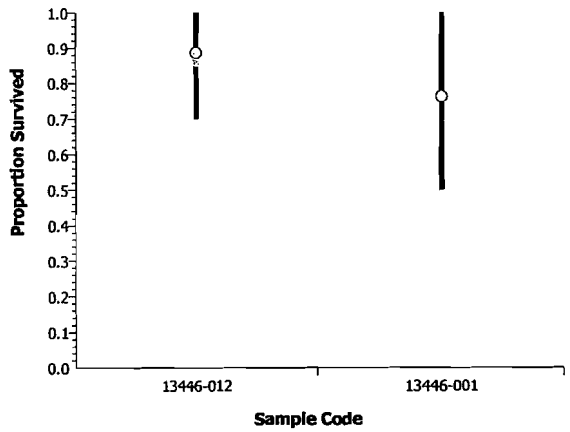
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-001	1.92412	1.76131	0.0375	0.14695	Significant Effect

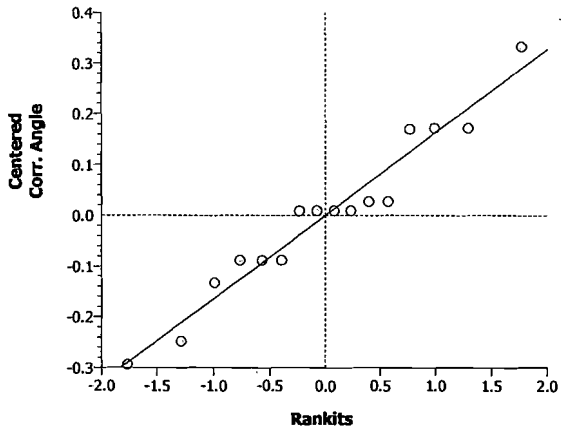
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-001	8	0.76250	0.50000	1.00000	0.15059	1.07928	0.78540	1.41202	0.18927

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:24 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.44041	8.88539	0.64219	Equal Variances
Distribution	Shapiro-Wilk W	0.93309	0.84420	0.26764	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0371855	0.0371855	1	0.83	0.37806	Non-Significant Effect
Error	0.6282212	0.0448729	14			
Total	0.66540667	0.0820584	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-007	-0.9103	1.76131	0.8110	0.18655	Non-Significant Effect

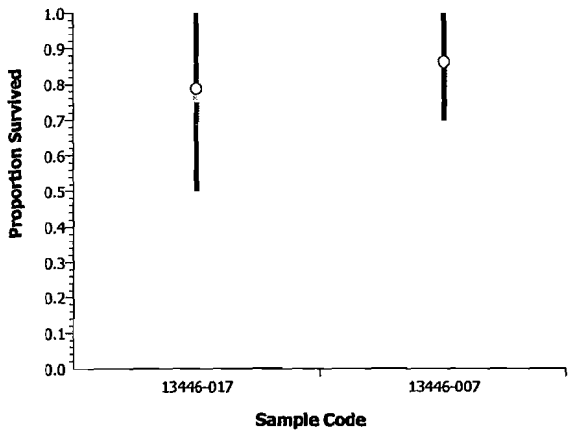
Data Summary

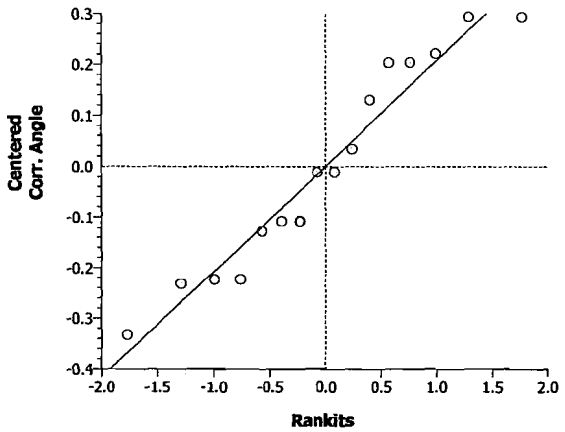
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-007	8	0.86250	0.70000	1.00000	0.13025	1.21517	0.99116	1.43676	0.19177

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:24 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.58221	8.88539	0.23395	Equal Variances
Distribution	Shapiro-Wilk W	0.92848	0.84420	0.22760	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0039664	0.0039664	1	0.11	0.74735	Non-Significant Effect
Error	0.5143931	0.0367424	14			
Total	0.51835953	0.0407088	15			

Group Comparisons

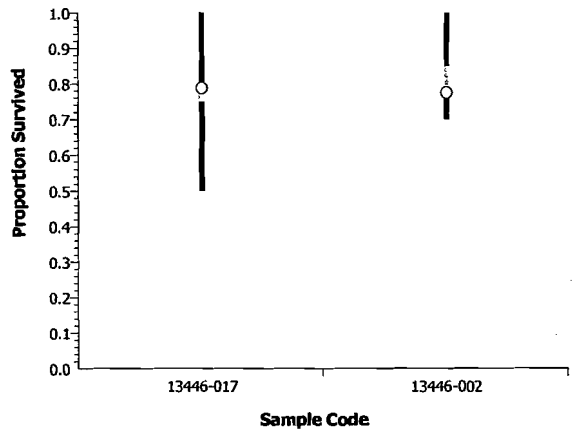
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-002	0.32856	1.76131	0.3737	0.16881	Non-Significant Effect

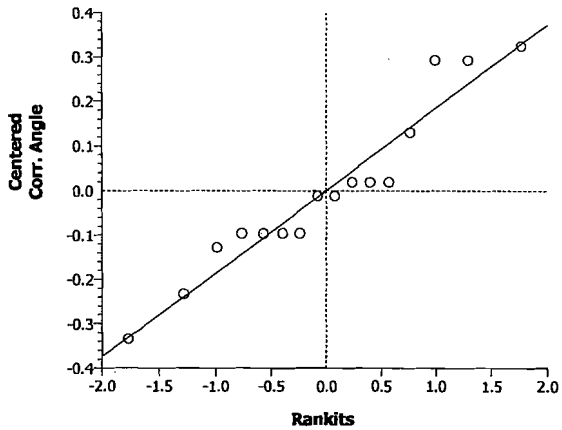
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-002	8	0.77500	0.70000	1.00000	0.10351	1.08726	0.99116	1.41202	0.14323

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:23 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.85021	8.88539	0.43559	Equal Variances
Distribution	Shapiro-Wilk W	0.89864	0.84420	0.07659	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1927915	0.1927915	1	6.59	0.02232	Significant Effect
Error	0.4092808	0.0292343	14			
Total	0.6020723	0.2220259	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-002	2.56801	1.76131	0.0112	0.15057	Significant Effect

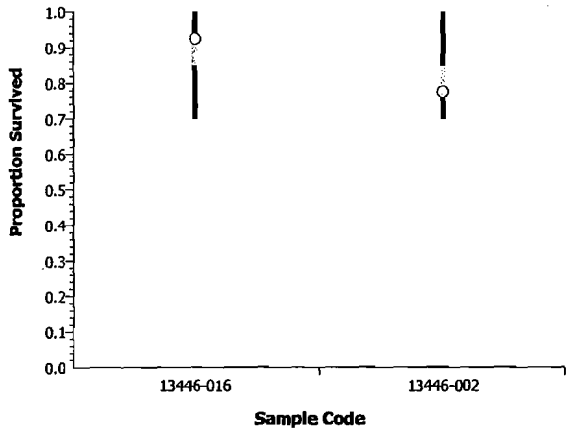
Data Summary

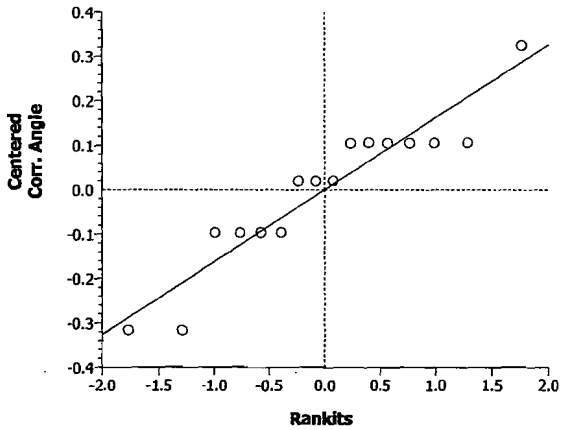
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-002	8	0.77500	0.70000	1.00000	0.10351	1.08726	0.99116	1.41202	0.14323

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:18 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.24026	8.88539	0.14368	Equal Variances
Distribution	Shapiro-Wilk W	0.95065	0.84420	0.48009	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1765044	0.1765044	1	4.19	0.05991	Non-Significant Effect
Error	0.5897302	0.0421236	14			
Total	0.76623461	0.218628	15			

Group Comparisons

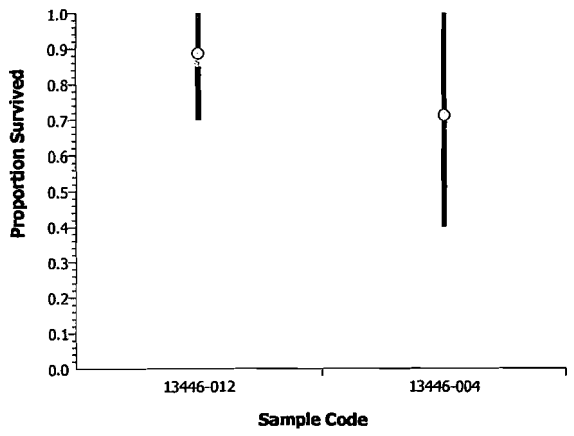
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-004	2.04699	1.76131	0.0300	0.18075	Significant Effect

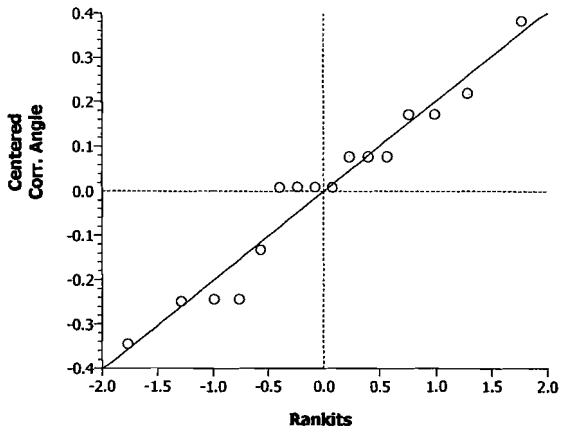
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-004	8	0.71250	0.40000	1.00000	0.21671	1.02975	0.68472	1.41202	0.25373

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:24 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.47874	8.88539	0.61857	Equal Variances
Distribution	Shapiro-Wilk W	0.95474	0.84420	0.54362	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0062323	0.0062323	1	0.14	0.71352	Non-Significant Effect
Error	0.6215472	0.0443962	14			
Total	0.62777954	0.0506285	15			

Group Comparisons

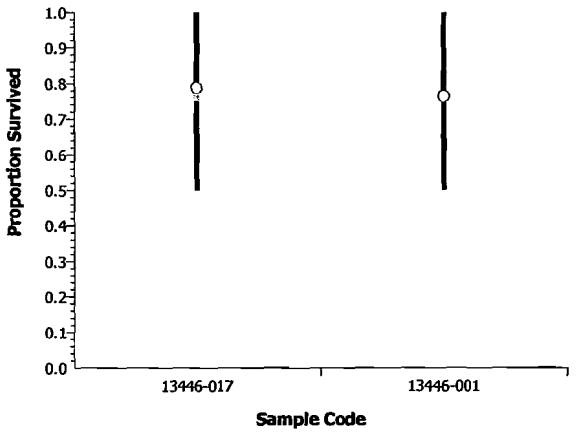
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-001	0.37467	1.76131	0.3568	0.18556	Non-Significant Effect

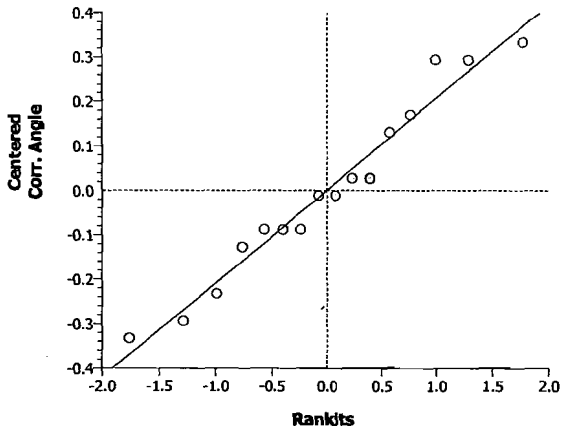
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-001	8	0.76250	0.50000	1.00000	0.15059	1.07928	0.78540	1.41202	0.18927

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.23185	8.88539	0.14453	Equal Variances
Distribution	Shapiro-Wilk W	0.92578	0.84420	0.20670	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0130291	0.0130291	1	0.50	0.49216	Non-Significant Effect
Error	0.3666216	0.0261873	14			
Total	0.37965071	0.0392163	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-009	-0.7054	1.76131	0.7539	0.14251	Non-Significant Effect

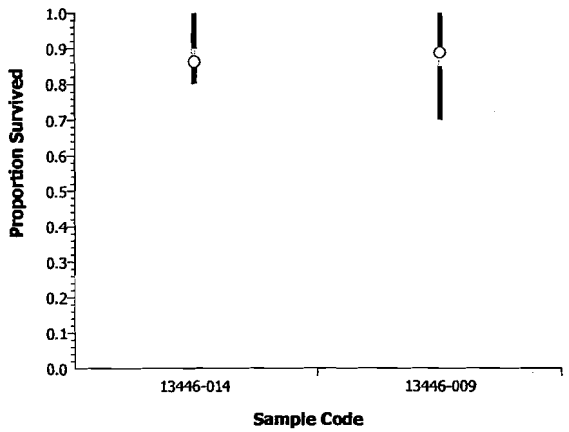
Data Summary

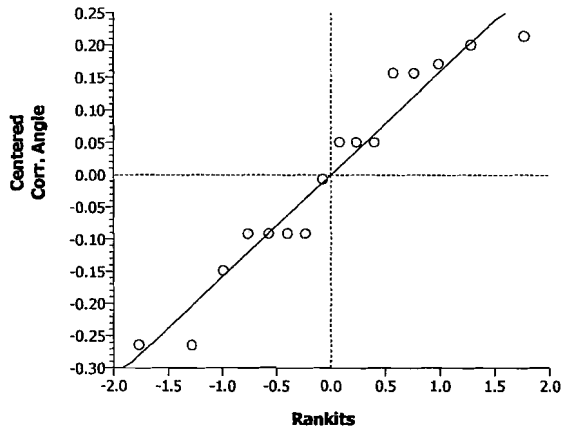
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-009	8	0.88750	0.70000	1.00000	0.13562	1.25554	0.99116	1.45584	0.20000

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.44302	8.88539	0.64055	Equal Variances
Distribution	Shapiro-Wilk W	0.90495	0.84420	0.09677	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0562638	0.0562638	1	1.03	0.32683	Non-Significant Effect
Error	0.7629486	0.0544963	14			
Total	0.81921243	0.1107601	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-004	1.01609	1.76131	0.1634	0.20558	Non-Significant Effect

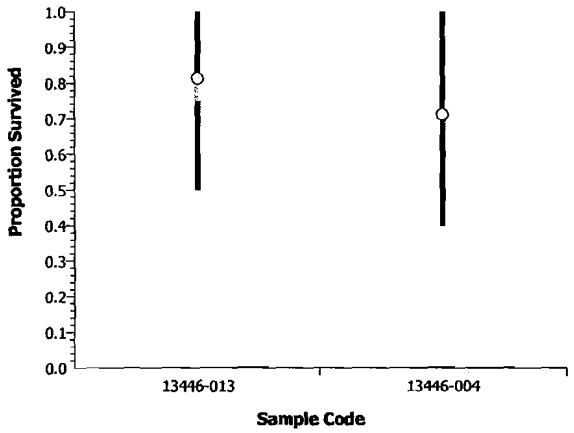
Data Summary

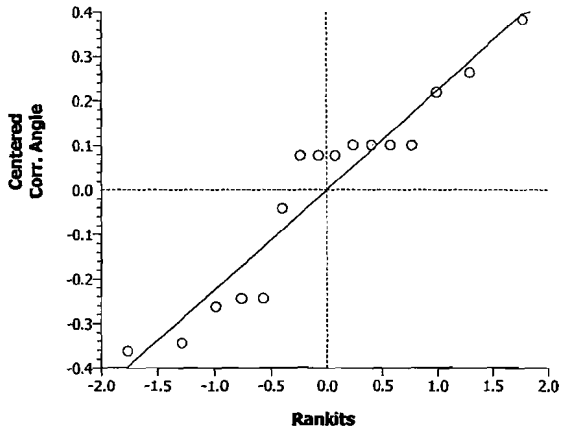
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-004	8	0.71250	0.40000	1.00000	0.21671	1.02975	0.68472	1.41202	0.25373

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	19.39169	8.88539	0.00088	Unequal Variances
Distribution	Shapiro-Wilk W	0.89783	0.84420	0.07433	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5238629	0.5238629	1	15.48	0.00150	Significant Effect
Error	0.473891	0.0338494	14			
Total	0.99775392	0.5577123	15			

Group Comparisons

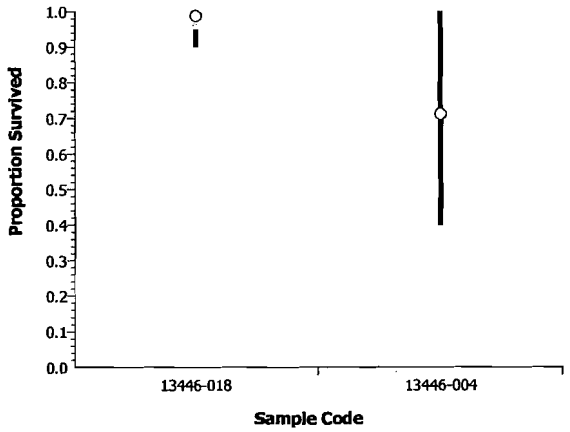
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-004	3.93399	1.89458	0.0028	0.17428	Significant Effect

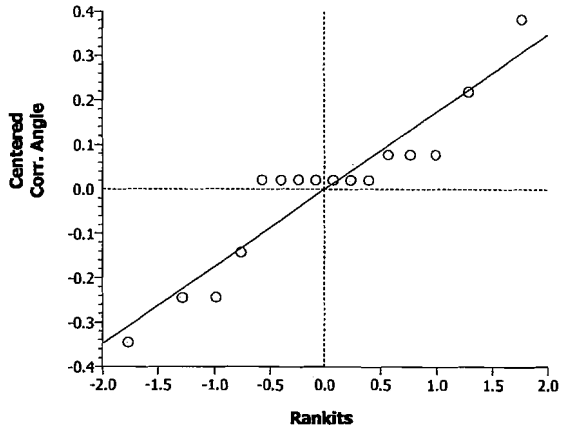
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-004	8	0.71250	0.40000	1.00000	0.21671	1.02975	0.68472	1.41202	0.25373

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	6.17901	8.88539	0.02825	Equal Variances
Distribution	Shapiro-Wilk W	0.70725	0.84420	0.00005	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3705978	0.3705978	1	31.10	0.00007	Significant Effect
Error	0.1668361	0.0119169	14			
Total	0.53743394	0.3825147	15			

Group Comparisons

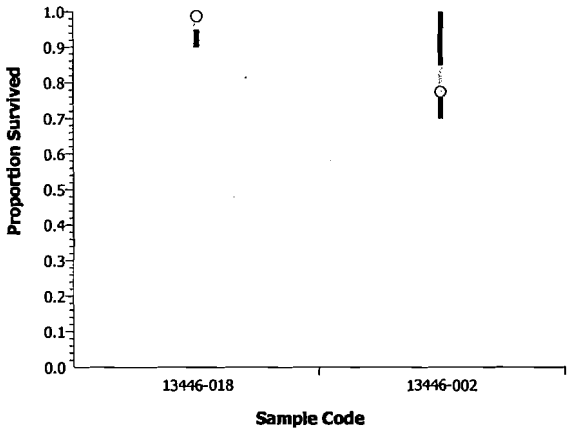
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-018		13446-002	59.5		0.0009	3	Significant Effect

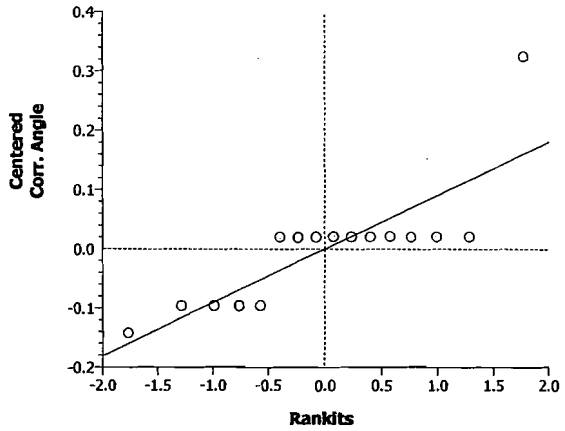
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-002	8	0.77500	0.70000	1.00000	0.10351	1.08726	0.99116	1.41202	0.14323

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:23 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.03208	8.88539	0.96784	Equal Variances
Distribution	Shapiro-Wilk W	0.86075	0.84420	0.01860	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0335862	0.0335862	1	0.90	0.35916	Non-Significant Effect
Error	0.523109	0.0373649	14			
Total	0.55669514	0.0709511	15			

Group Comparisons

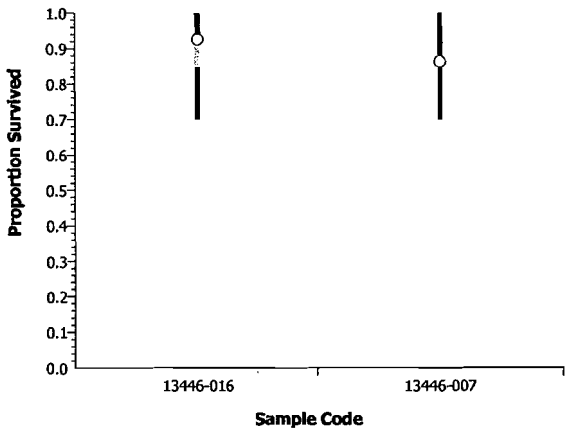
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-007	0.94809	1.76131	0.1796	0.17023	Non-Significant Effect

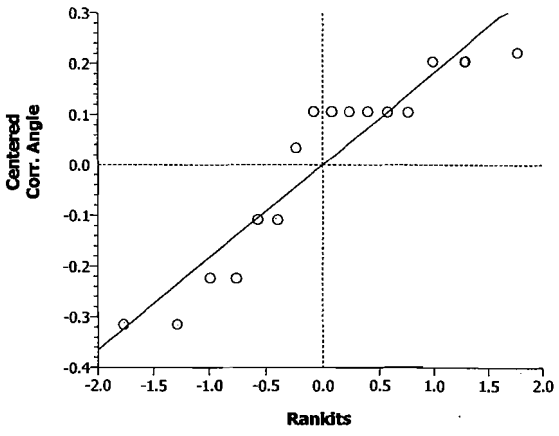
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-007	8	0.86250	0.70000	1.00000	0.13025	1.21517	0.99116	1.43676	0.19177

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.91213	8.88539	0.05222	Equal Variances
Distribution	Shapiro-Wilk W	0.89027	0.84420	0.05611	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0004012	0.0004012	1	0.01	0.91808	Non-Significant Effect
Error	0.5121912	0.0365851	14			
Total	0.51259244	0.0369863	15			

Group Comparisons

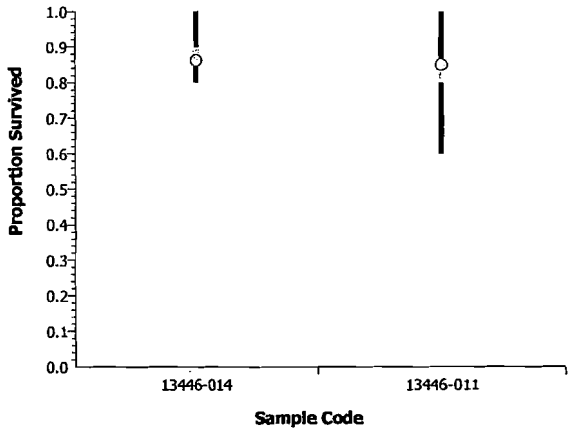
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-011	-0.1047	1.76131	0.5410	0.16844	Non-Significant Effect

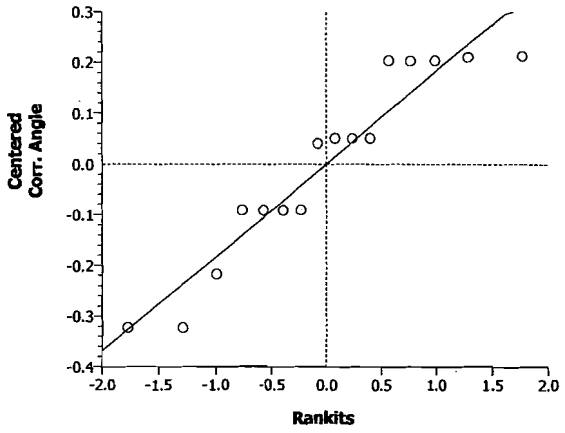
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-011	8	0.85000	0.60000	1.00000	0.18516	1.20848	0.88608	1.41946	0.24656

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.08834	8.88539	0.15994	Equal Variances
Distribution	Shapiro-Wilk W	0.88792	0.84420	0.05140	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.4677999	0.4677999	1	18.49	0.00073	Significant Effect
Error	0.3541896	0.0252993	14			
Total	0.82198945	0.4930991	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-010	4.30008	1.76131	0.0004	0.14007	Significant Effect

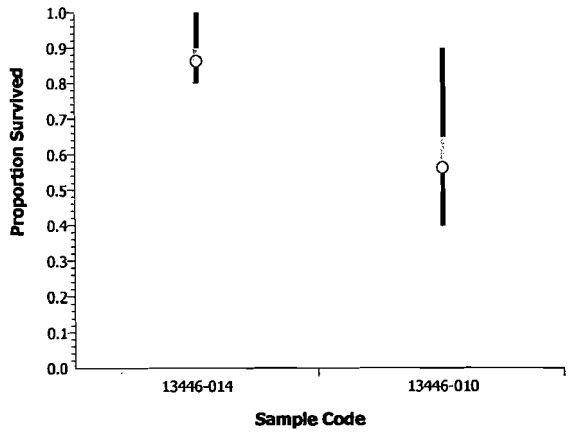
Data Summary

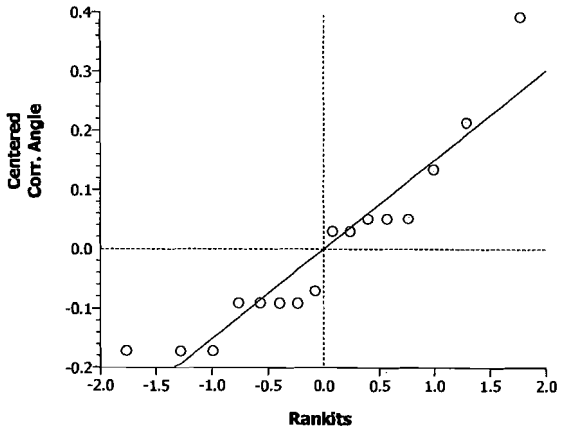
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-010	8	0.56250	0.40000	0.90000	0.17678	0.85649	0.68472	1.24905	0.19551

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:23 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.05955	8.88539	0.94113	Equal Variances
Distribution	Shapiro-Wilk W	0.89308	0.84420	0.06230	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2070666	0.2070666	1	5.61	0.03274	Significant Effect
Error	0.5164349	0.0368882	14			
Total	0.72350146	0.2439548	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-001	2.36925	1.76131	0.0164	0.16914	Significant Effect

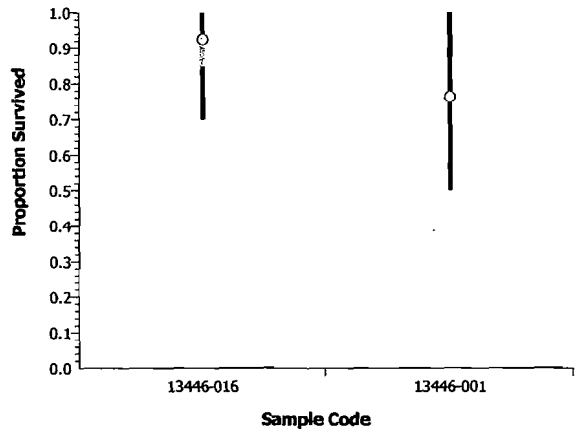
Data Summary

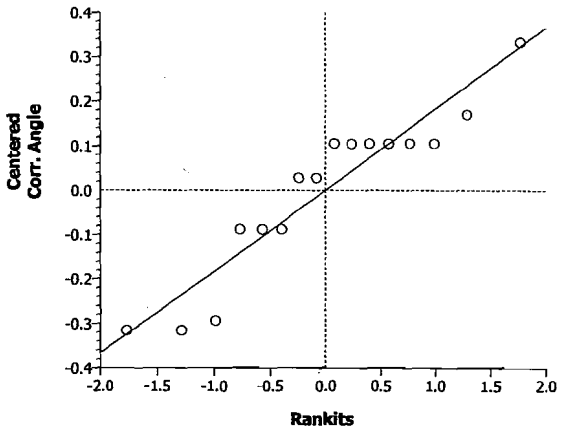
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-001	8	0.76250	0.50000	1.00000	0.15059	1.07928	0.78540	1.41202	0.18927

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	8.54554	8.88539	0.01122	Equal Variances
Distribution	Shapiro-Wilk W	0.89359	0.84420	0.06348	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0413521	0.0413521	1	1.22	0.28838	Non-Significant Effect
Error	0.475356	0.033954	14			
Total	0.51670808	0.0753061	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-011	1.10358	1.76131	0.1442	0.16227	Non-Significant Effect

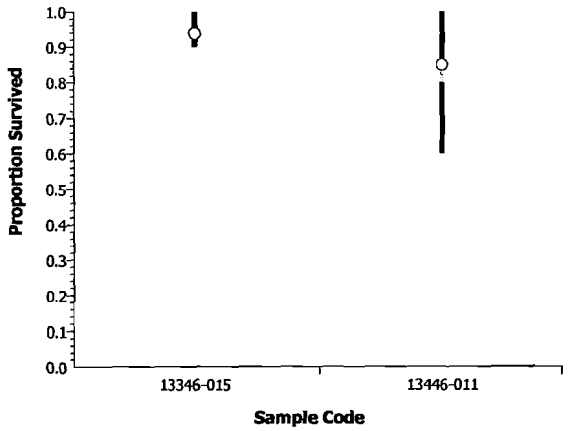
Data Summary

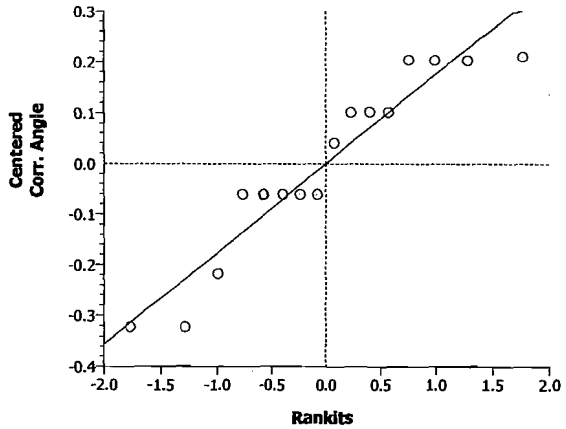
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-011	8	0.85000	0.60000	1.00000	0.18516	1.20848	0.88608	1.41946	0.24656

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:18 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.85093	8.88539	0.43530	Equal Variances
Distribution	Shapiro-Wilk W	0.90967	0.84420	0.11515	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0024298	0.0024298	1	0.09	0.77389	Non-Significant Effect
Error	0.3965035	0.0283217	14			
Total	0.39893328	0.0307515	15			

Group Comparisons

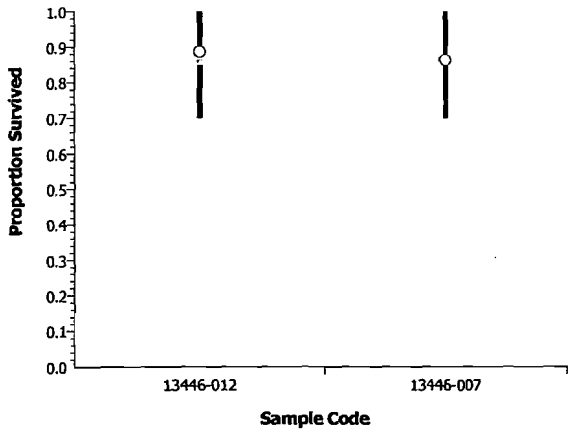
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-007	0.29290	1.76131	0.3869	0.14821	Non-Significant Effect

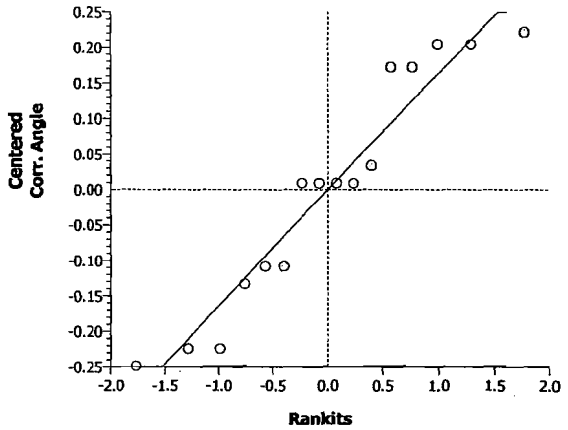
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-007	8	0.86250	0.70000	1.00000	0.13025	1.21517	0.99116	1.43676	0.19177

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:23 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.69619	8.88539	0.50233	Equal Variances
Distribution	Shapiro-Wilk W	0.83451	0.84420	0.00695	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.307023	0.307023	1	6.00	0.02807	Significant Effect
Error	0.7163357	0.0511668	14			
Total	1.02335873	0.3581899	15			

Group Comparisons

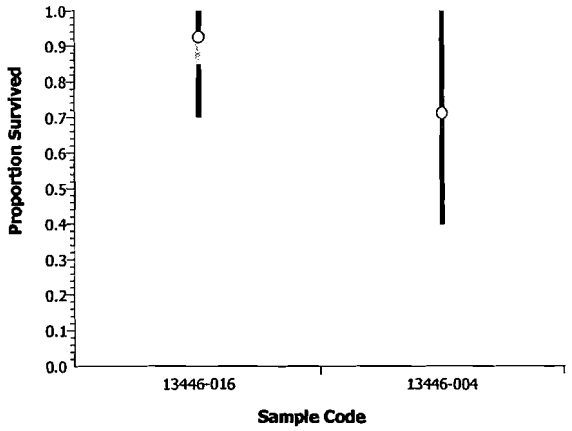
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-016		13446-004	51		0.0249	4	Significant Effect

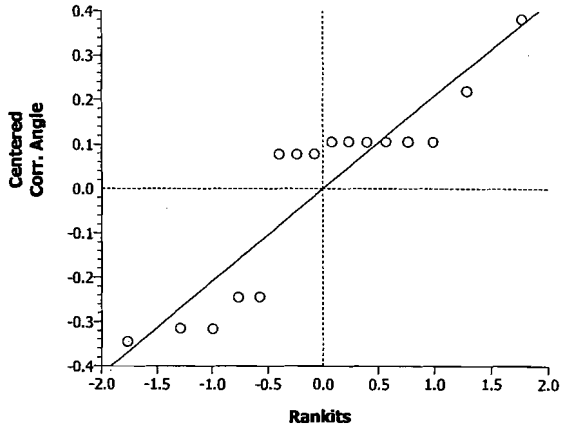
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-004	8	0.71250	0.40000	1.00000	0.21671	1.02975	0.68472	1.41202	0.25373

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.24545	8.88539	0.77952	Equal Variances
Distribution	Shapiro-Wilk W	0.96055	0.84420	0.64098	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0190851	0.0190851	1	0.47	0.50216	Non-Significant Effect
Error	0.5630478	0.0402177	14			
Total	0.58213297	0.0593028	15			

Group Comparisons

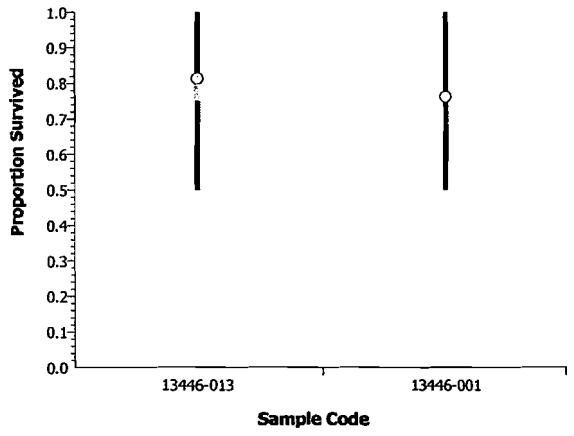
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-001	0.68887	1.76131	0.2511	0.17661	Non-Significant Effect

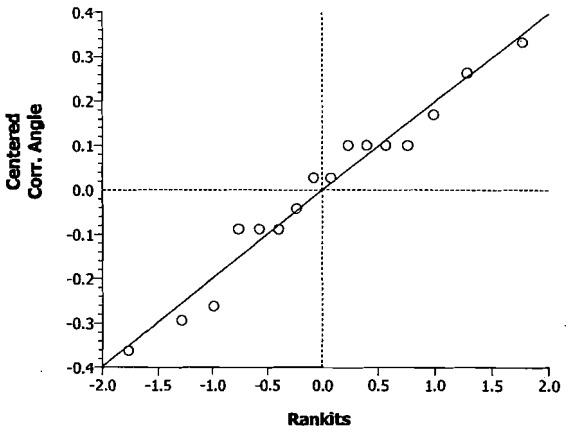
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-001	8	0.76250	0.50000	1.00000	0.15059	1.07928	0.78540	1.41202	0.18927

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:24 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.21536	8.88539	0.80351	Equal Variances
Distribution	Shapiro-Wilk W	0.94157	0.84420	0.35777	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0316826	0.0316826	1	0.54	0.47458	Non-Significant Effect
Error	0.821448	0.0586749	14			
Total	0.85313052	0.0903574	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-004	0.73483	1.76131	0.2373	0.21332	Non-Significant Effect

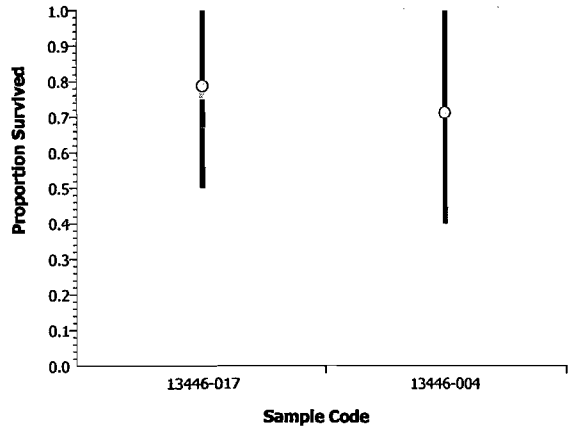
Data Summary

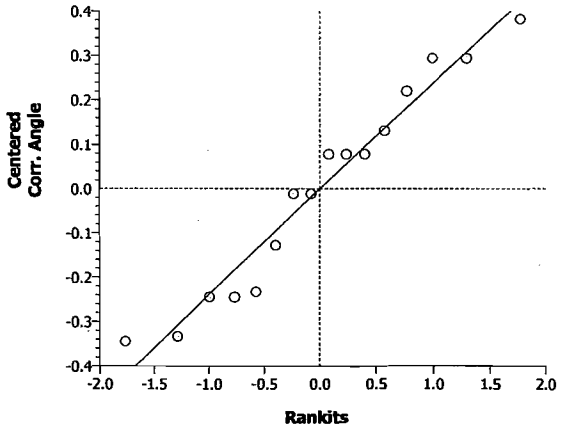
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-004	8	0.71250	0.40000	1.00000	0.21671	1.02975	0.68472	1.41202	0.25373

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.37274	8.88539	0.04126	Equal Variances
Distribution	Shapiro-Wilk W	0.87425	0.84420	0.03084	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8232681	0.8232681	1	36.32	0.00003	Significant Effect
Error	0.3173543	0.0226682	14			
Total	1.14062238	0.8459362	15			

Group Comparisons

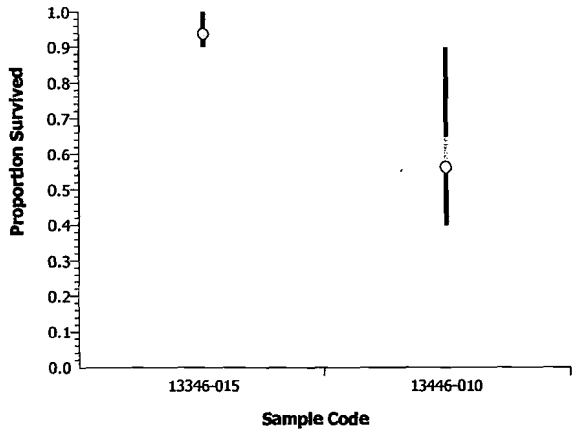
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-010	6.02646	1.76131	0.0000	0.13259	Significant Effect

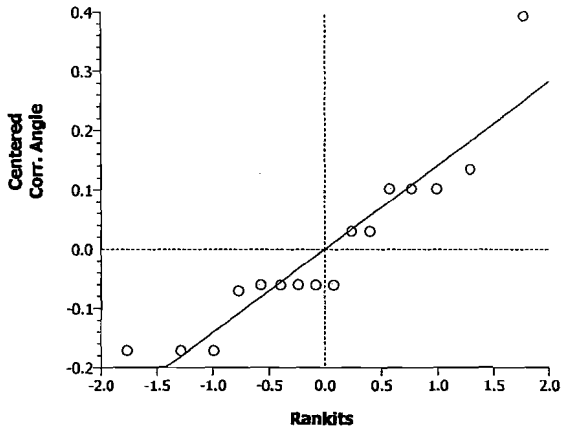
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-010	8	0.56250	0.40000	0.90000	0.17678	0.85649	0.68472	1.24905	0.19551

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:25 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	11.07708	8.88539	0.00515	Unequal Variances
Distribution	Shapiro-Wilk W	0.88988	0.84420	0.05529	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1245755	0.1245755	1	6.21	0.02582	Significant Effect
Error	0.2806643	0.0200475	14			
Total	0.40523974	0.1446229	15			

Group Comparisons

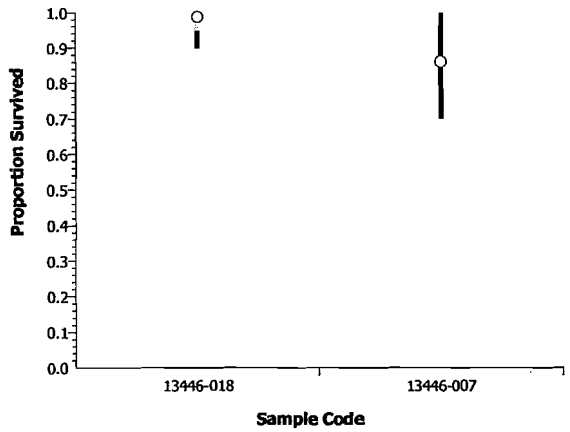
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-007	2.4928	1.85955	0.0187	0.13165	Significant Effect

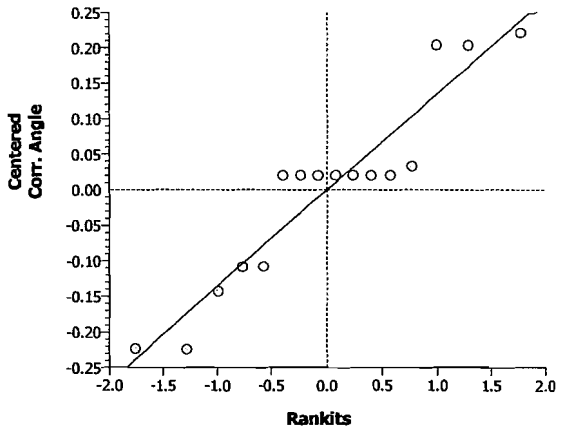
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-007	8	0.86250	0.70000	1.00000	0.13025	1.21517	0.99116	1.43676	0.19177

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.40005	8.88539	0.12877	Equal Variances
Distribution	Shapiro-Wilk W	0.89736	0.84420	0.07303	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0591345	0.0591345	1	3.78	0.07230	Non-Significant Effect
Error	0.219117	0.0156512	14			
Total	0.27825148	0.0747857	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-003	1.94378	1.76131	0.0362	0.11017	Significant Effect

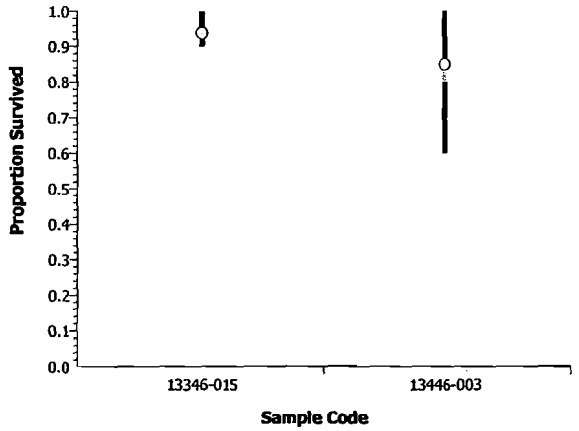
Data Summary

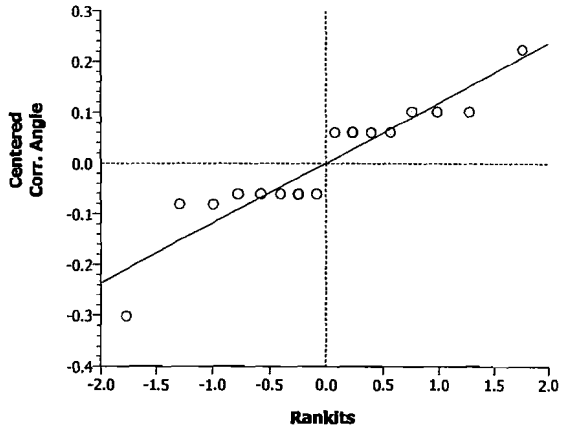
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-003	8	0.85000	0.60000	1.00000	0.11952	1.18857	0.88608	1.41202	0.15553

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	6.64905	8.88539	0.02305	Equal Variances
Distribution	Shapiro-Wilk W	0.88967	0.84420	0.05487	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0414342	0.0414342	1	1.52	0.23750	Non-Significant Effect
Error	0.3809129	0.0272081	14			
Total	0.42234715	0.0686423	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-006	1.23404	1.76131	0.1188	0.14526	Non-Significant Effect

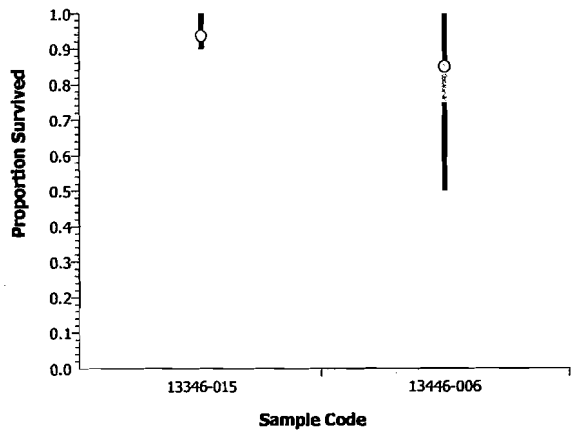
Data Summary

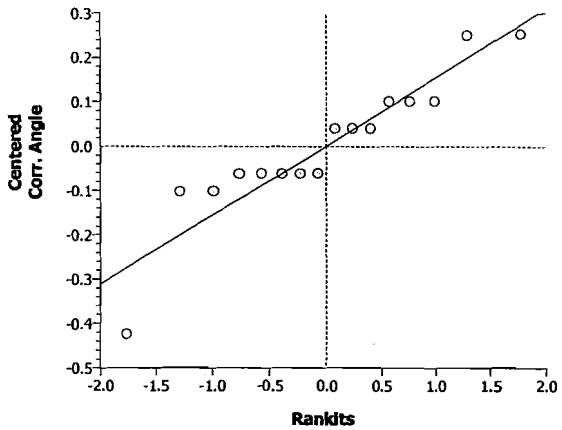
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-006	8	0.85000	0.50000	1.00000	0.16036	1.20838	0.78540	1.46147	0.21749

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	19 Oct-05 3:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.17482	8.88539	0.32696	Equal Variances
Distribution	Shapiro-Wilk W	0.95661	0.84420	0.57425	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0149288	0.0149288	1	0.46	0.50938	Non-Significant Effect
Error	0.4558937	0.0325638	14			
Total	0.47082254	0.0474927	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-002	0.67709	1.76131	0.2547	0.15892	Non-Significant Effect

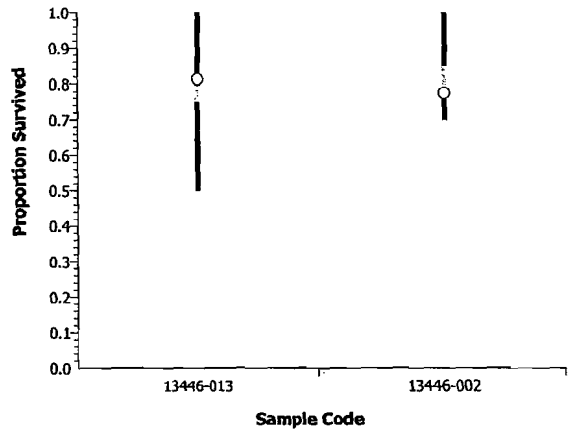
Data Summary

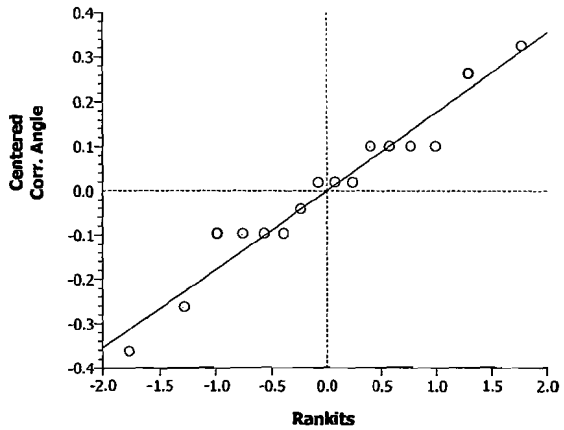
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-002	8	0.77500	0.70000	1.00000	0.10351	1.08726	0.99116	1.41202	0.14323

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00704	8.88539	0.99285	Equal Variances
Distribution	Shapiro-Wilk W	0.90198	0.84420	0.08669	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8111243	0.8111243	1	21.30	0.00040	Significant Effect
Error	0.5332397	0.0380886	14			
Total	1.34436399	0.8492128	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-010	4.61473	1.76131	0.0002	0.17187	Significant Effect

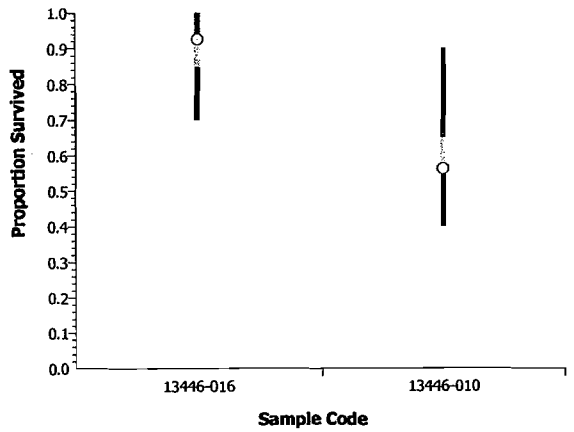
Data Summary

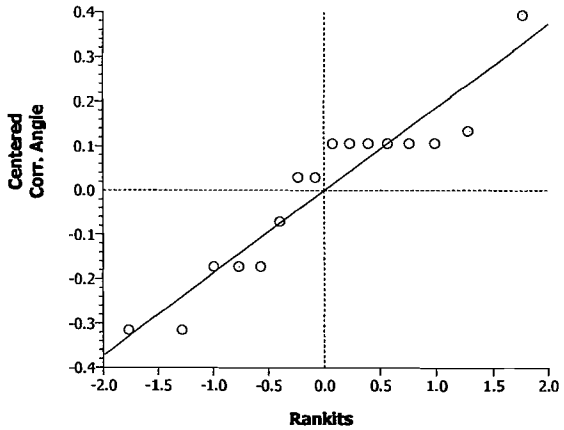
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-010	8	0.56250	0.40000	0.90000	0.17678	0.85649	0.68472	1.24905	0.19551

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.96077	8.88539	0.39423	Equal Variances
Distribution	Shapiro-Wilk W	0.89096	0.84420	0.05757	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0062461	0.0062461	1	0.17	0.68214	Non-Significant Effect
Error	0.4999839	0.0357131	14			
Total	0.50623000	0.0419592	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-006	-0.4182	1.76131	0.6589	0.16643	Non-Significant Effect

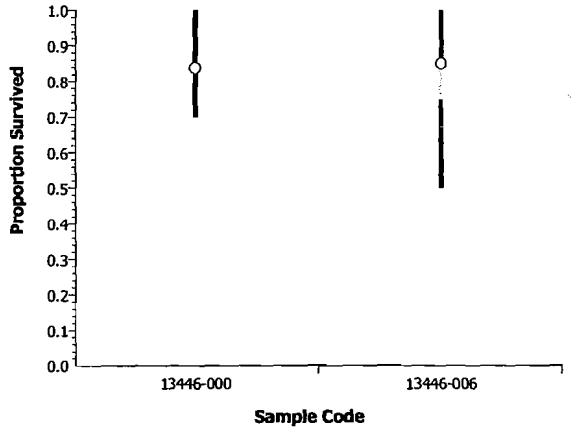
Data Summary

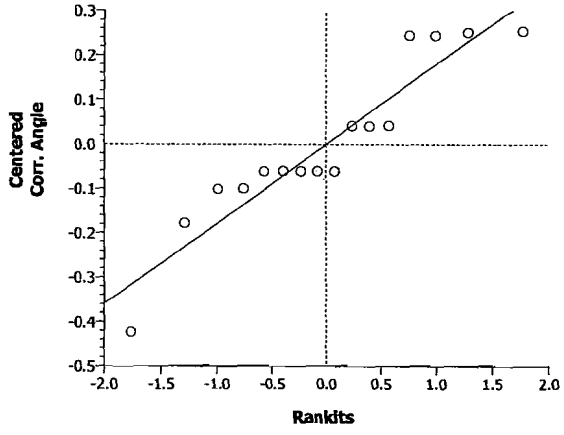
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-006	8	0.85000	0.50000	1.00000	0.16036	1.20838	0.78540	1.46147	0.21749

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.39104	8.88539	0.12956	Equal Variances
Distribution	Shapiro-Wilk W	0.76789	0.84420	0.00056	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.079855	0.079855	1	5.11	0.04020	Significant Effect
Error	0.2186684	0.0156192	14			
Total	0.29852340	0.0954741	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13346-015	13		0.9751	3	Non-Significant Effect

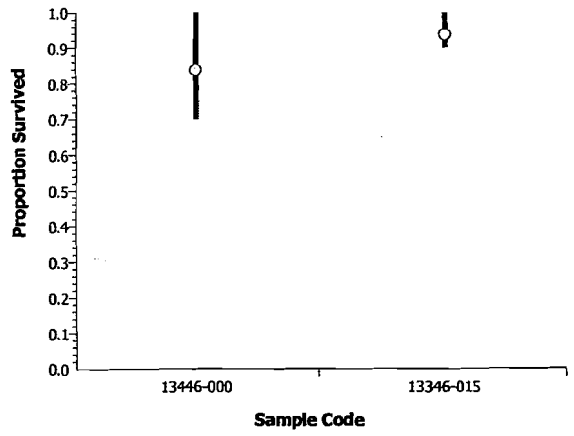
Data Summary

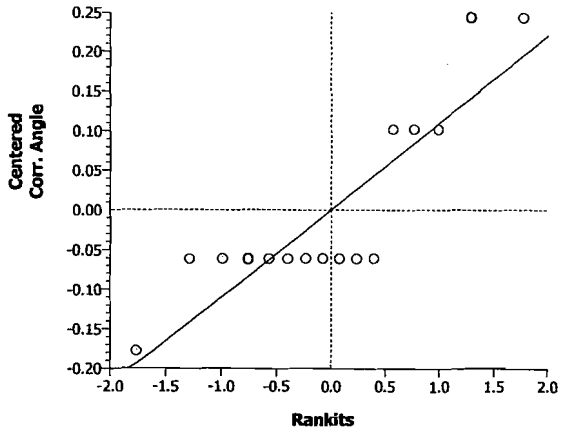
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.17600	8.88539	0.83612	Equal Variances
Distribution	Shapiro-Wilk W	0.79581	0.84420	0.00161	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0266378	0.0266378	1	1.19	0.29307	Non-Significant Effect
Error	0.3124664	0.0223190	14			
Total	0.3391042	0.0489568	15			

Group Comparisons

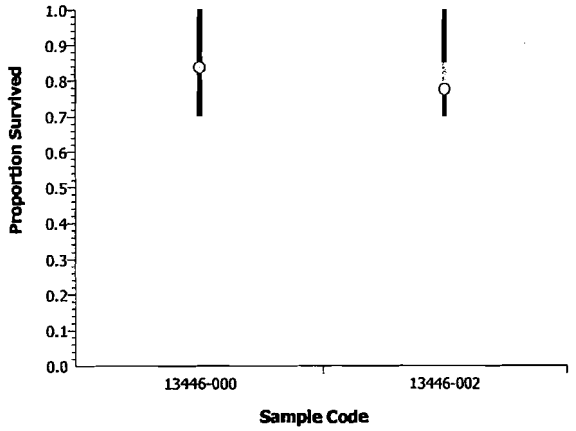
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-002	44.5		0.0974	3	Non-Significant Effect

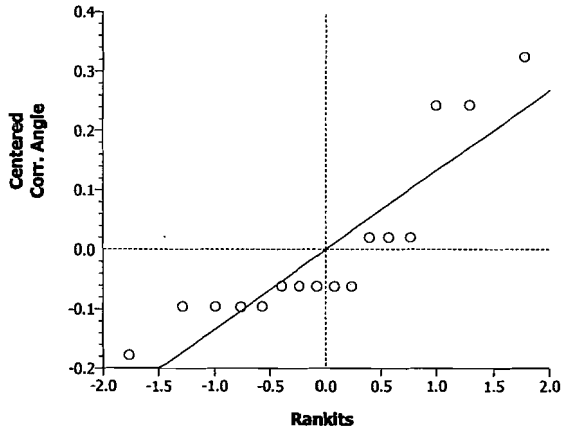
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-002	8	0.77500	0.70000	1.00000	0.10351	1.08726	0.99116	1.41202	0.14323

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:23 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.52003	8.88539	0.24578	Equal Variances
Distribution	Shapiro-Wilk W	0.88430	0.84420	0.04490	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0062780	0.0062780	1	0.15	0.70637	Non-Significant Effect
Error	0.5944269	0.0424591	14			
Total	0.60070497	0.0487371	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-011	-0.3845	1.76131	0.6468	0.18146	Non-Significant Effect

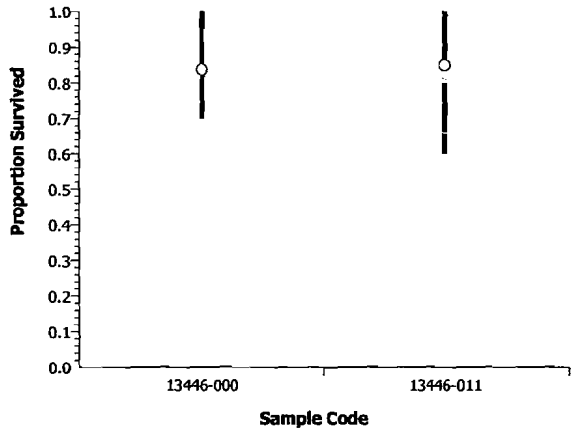
Data Summary

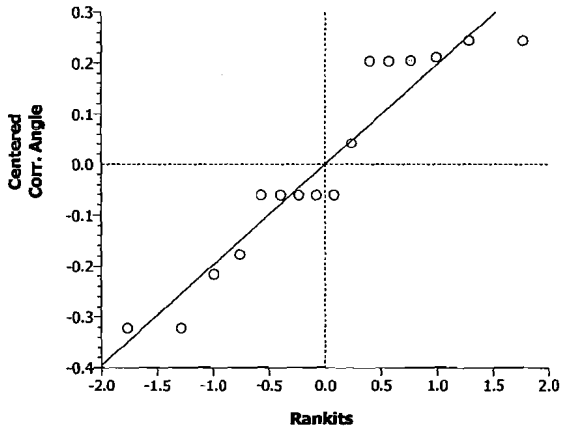
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-011	8	0.85000	0.60000	1.00000	0.18516	1.20848	0.88608	1.41946	0.24656

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.95107	8.88539	0.39766	Equal Variances
Distribution	Shapiro-Wilk W	0.96765	0.84420	0.76447	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8602563	0.8602563	1	3.65	0.07678	Non-Significant Effect
Error	3.299887	0.2357062	14			
Total	4.16014349	1.0959625	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-003	-1.9104	1.76131	0.9616	0.42755	Non-Significant Effect

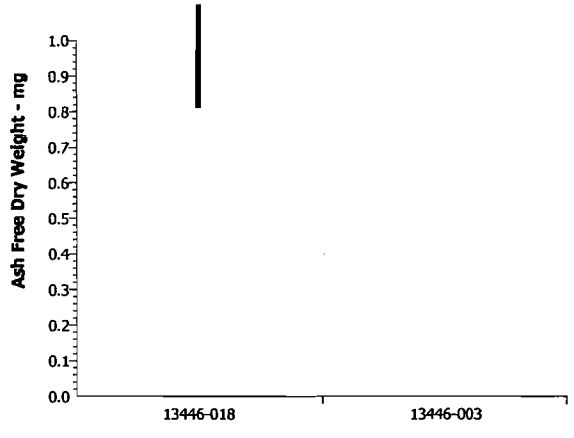
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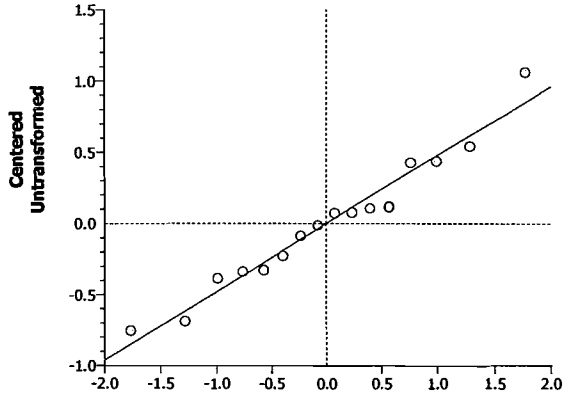
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-003	8	2.02875	1.34000	3.09000	0.55827				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.26716	8.88539	0.30234	Equal Variances
Distribution	Shapiro-Wilk W	0.93962	0.84420	0.33510	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0625	0.0625	1	1.76	0.20617	Non-Significant Effect
Error	0.497875	0.0355625	14			
Total	0.56037498	0.0980625	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-001	-1.3257	1.76131	0.8969	0.16607	Non-Significant Effect

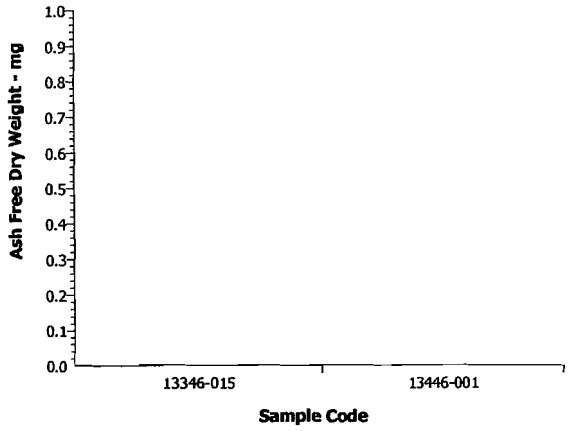
Data Summary

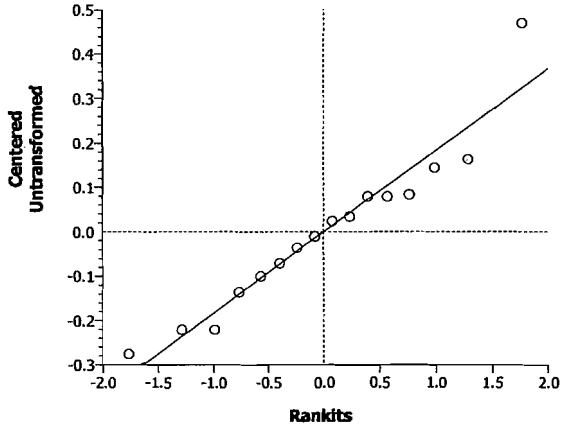
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-001	8	1.68625	1.41000	1.85000	0.14755				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.01316	8.88539	0.37631	Equal Variances
Distribution	Shapiro-Wilk W	0.87259	0.84420	0.02899	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0009892	0.0009892	1	0.03	0.85835	Non-Significant Effect
Error	0.4190663	0.0299333	14			
Total	0.42005550	0.0309225	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-009	-0.1818	1.76131	0.5708	0.15236	Non-Significant Effect

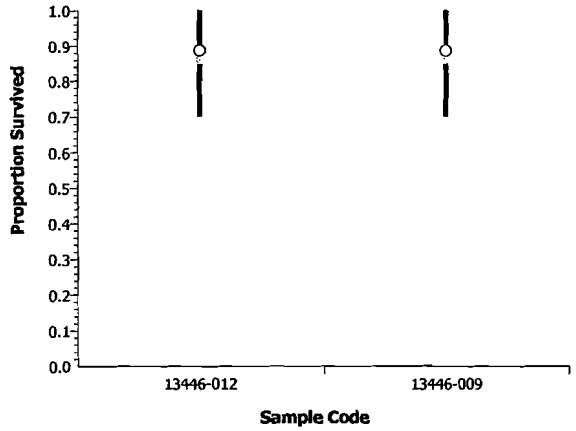
Data Summary

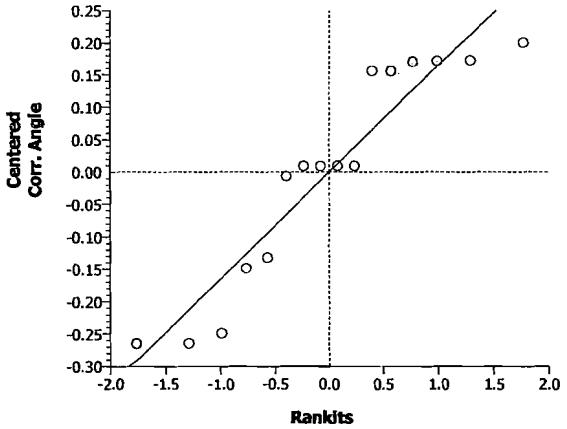
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-009	8	0.88750	0.70000	1.00000	0.13562	1.25554	0.99116	1.45584	0.20000

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.90610	8.88539	0.18264	Equal Variances
Distribution	Shapiro-Wilk W	0.87114	0.84420	0.02746	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.119025	0.119025	1	0.56	0.46761	Non-Significant Effect
Error	2.98875	0.2134822	14			
Total	3.1077752	0.3325071	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-011	0.74669	1.76131	0.2338	0.4069	Non-Significant Effect

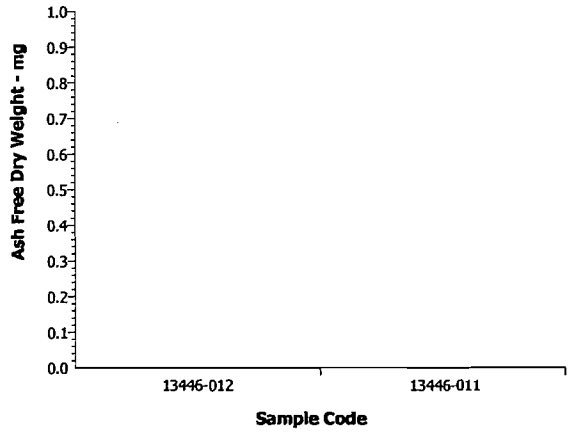
Data Summary

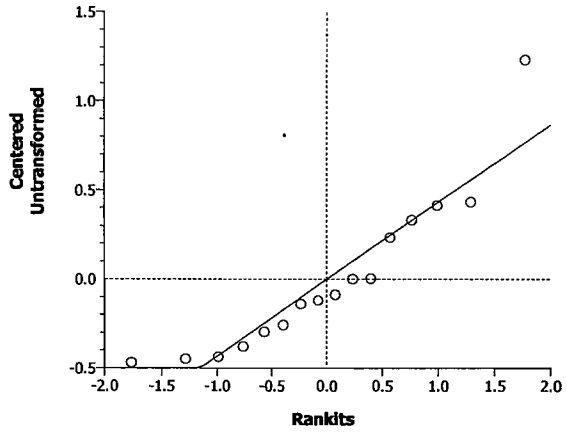
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-011	8	2.02750	1.59000	2.46000	0.33062				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.11540	8.88539	0.88915	Equal Variances
Distribution	Shapiro-Wilk W	0.88803	0.84420	0.05162	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0459572	0.0459572	1	1.09	0.31496	Non-Significant Effect
Error	0.5922847	0.0423061	14			
Total	0.63824185	0.0882632	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-009	-1.0423	1.76131	0.8425	0.18114	Non-Significant Effect

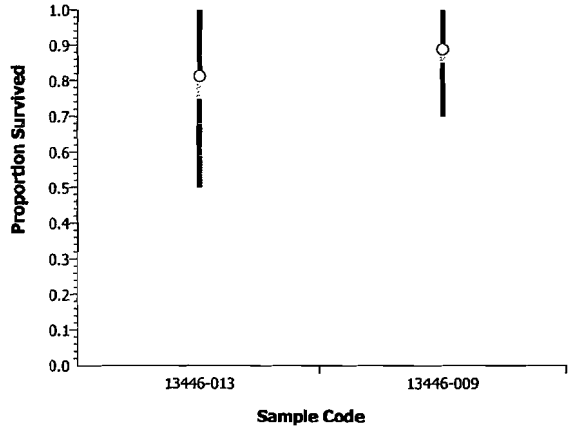
Data Summary

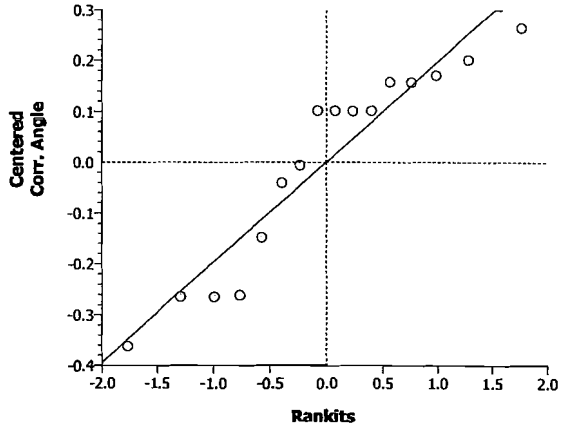
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-009	8	0.88750	0.70000	1.00000	0.13562	1.25554	0.99116	1.45584	0.20000

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.98570	8.88539	0.17226	Equal Variances
Distribution	Shapiro-Wilk W	0.96772	0.84420	0.76576	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1936	0.1936	1	3.06	0.10195	Non-Significant Effect
Error	0.884775	0.0631982	14			
Total	1.07837497	0.2567982	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-009	1.75025	1.76131	0.0510	0.22139	Non-Significant Effect

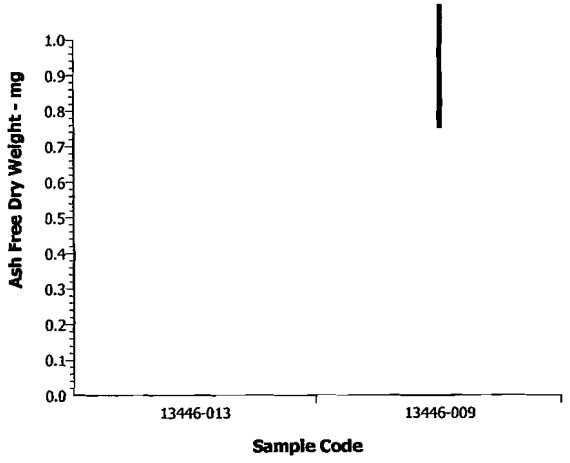
Data Summary

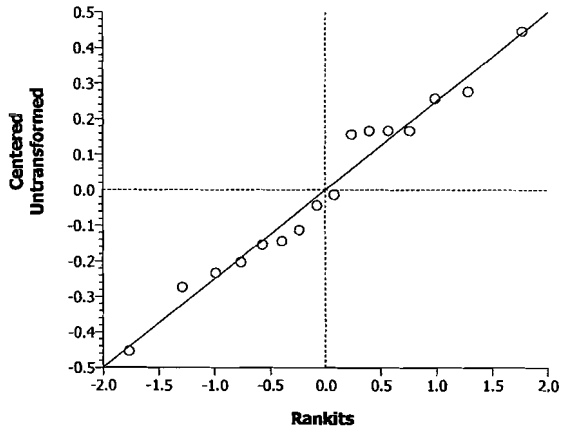
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-009	8	1.20375	0.75000	1.65000	0.30771				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.24208	8.88539	0.04404	Equal Variances
Distribution	Shapiro-Wilk W	0.93070	0.84420	0.24611	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.5921	2.5921	1	13.97	0.00221	Significant Effect
Error	2.597875	0.1855625	14			
Total	5.18997455	2.7776624	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-003	-3.7375	1.76131	0.9989	0.37936	Non-Significant Effect

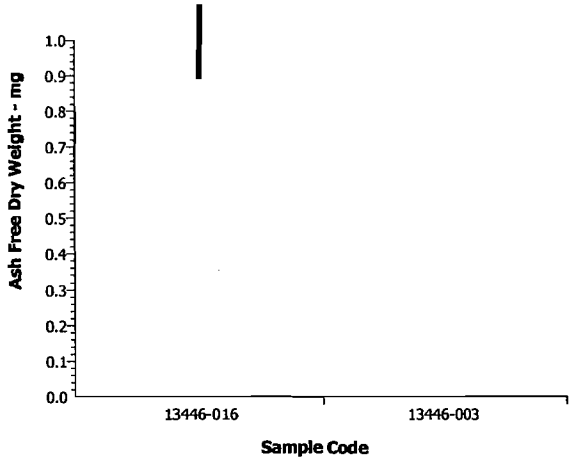
Data Summary

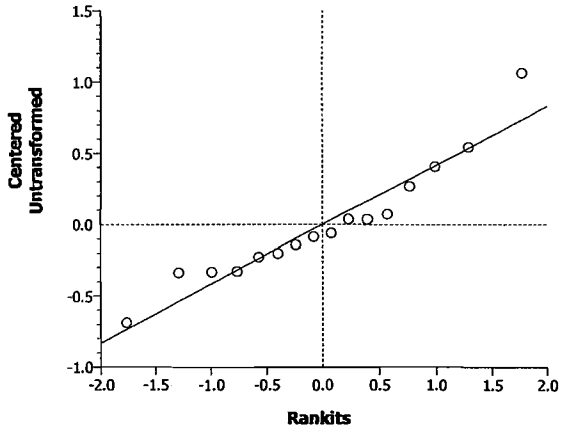
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-003	8	2.02875	1.34000	3.09000	0.55827				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	7.28582	8.88539	0.01780	Equal Variances
Distribution	Shapiro-Wilk W	0.83848	0.84420	0.00807	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1649547	0.1649547	1	11.99	0.00380	Significant Effect
Error	0.1925576	0.0137541	14			
Total	0.35751238	0.1787089	15			

Group Comparisons

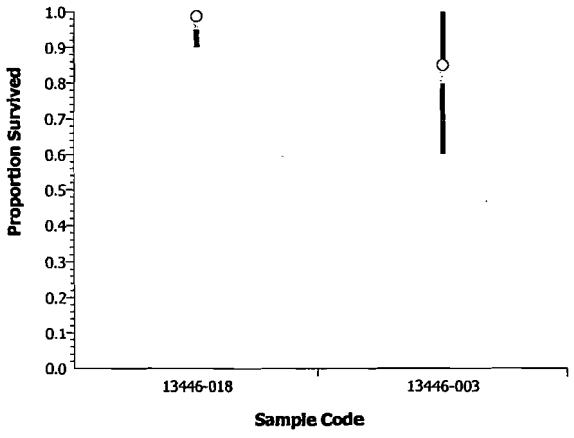
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-018		13446-003	57.5		0.0023	3	Significant Effect

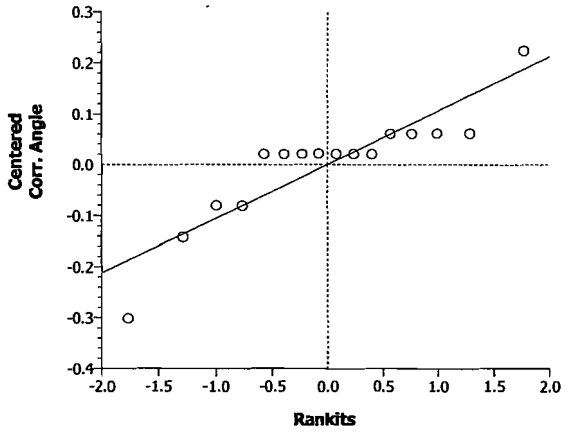
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-003	8	0.85000	0.60000	1.00000	0.11952	1.18857	0.88608	1.41202	0.15553

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.74627	8.88539	0.03445	Equal Variances
Distribution	Shapiro-Wilk W	0.91158	0.84420	0.12353	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.7098063	0.7098063	1	6.64	0.02198	Significant Effect
Error	1.497588	0.1069705	14			
Total	2.20739388	0.8167769	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-010	-2.576	1.76131	0.9890	0.28803	Non-Significant Effect

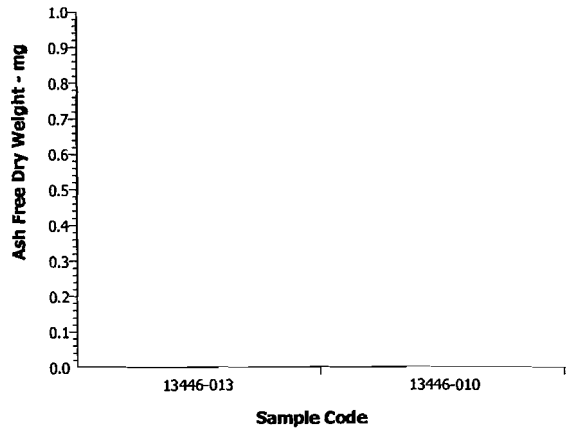
Data Summary

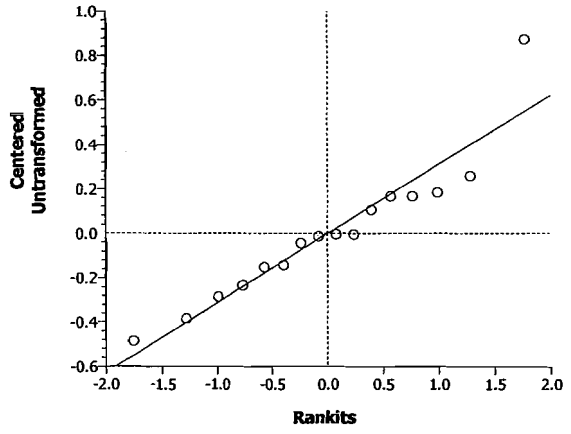
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-010	8	1.84500	1.36000	2.72000	0.42688				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.19821	8.88539	0.81755	Equal Variances
Distribution	Shapiro-Wilk W	0.90704	0.84420	0.10452	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.7056	0.7056	1	10.03	0.00685	Significant Effect
Error	0.9847999	0.0703429	14			
Total	1.69039983	0.7759428	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-002	-3.1672	1.76131	0.9966	0.23357	Non-Significant Effect

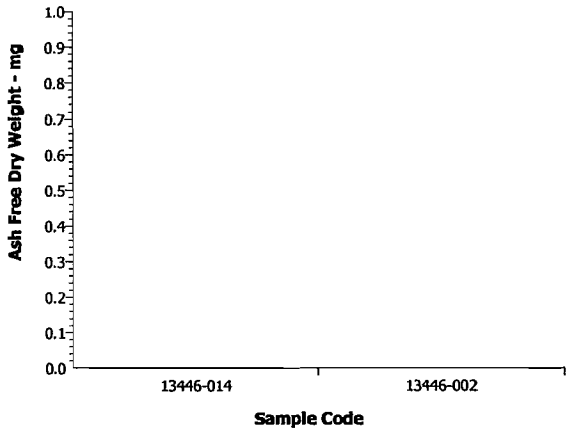
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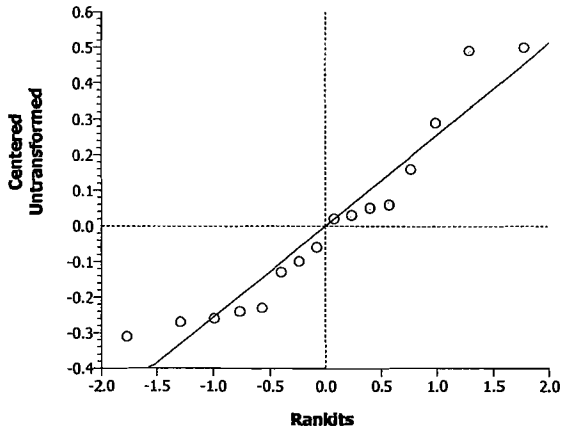
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-002	8	1.81000	1.54000	2.30000	0.27692				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.95696	8.88539	0.17592	Equal Variances
Distribution	Shapiro-Wilk W	0.95916	0.84420	0.61716	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.4128062	0.4128062	1	7.26	0.01747	Significant Effect
Error	0.7964876	0.056892	14			
Total	1.20929381	0.4696982	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-004	2.69369	1.76131	0.0087	0.21005	Significant Effect

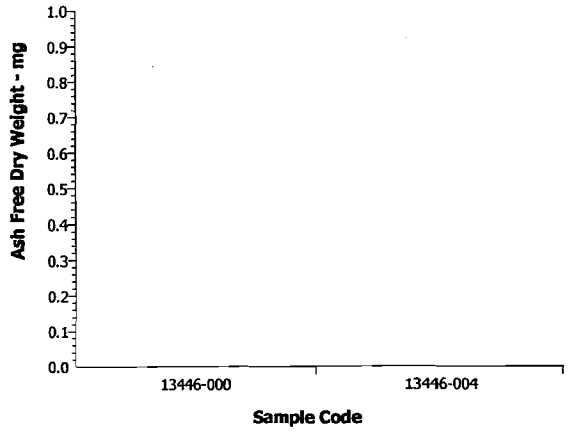
Data Summary

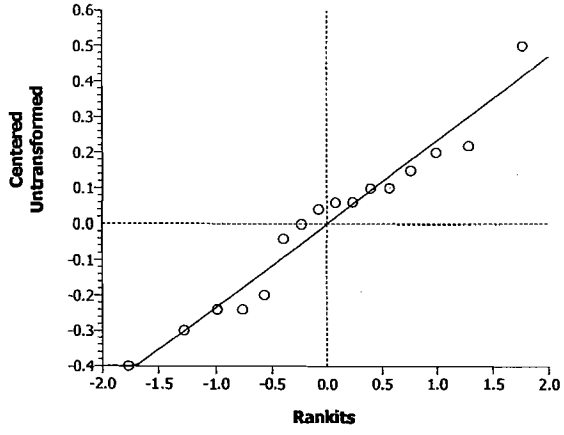
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-004	8	1.47000	1.07000	1.97000	0.29160				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.52440	8.88539	0.59174	Equal Variances
Distribution	Shapiro-Wilk W	0.86122	0.84420	0.01893	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0085755	0.0085755	1	0.28	0.60395	Non-Significant Effect
Error	0.4262945	0.0304496	14			
Total	0.43487004	0.0390251	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-007	-0.5307	1.76131	0.6980	0.15367	Non-Significant Effect

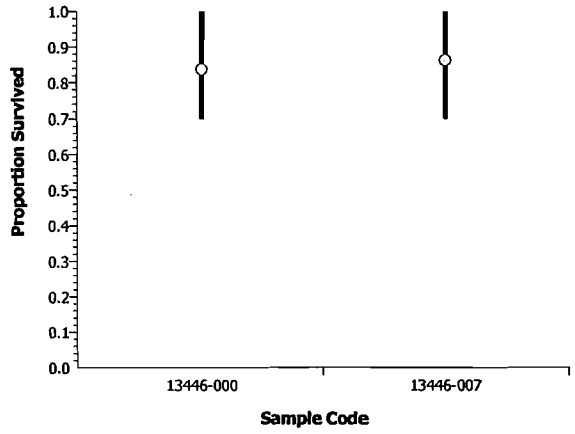
Data Summary

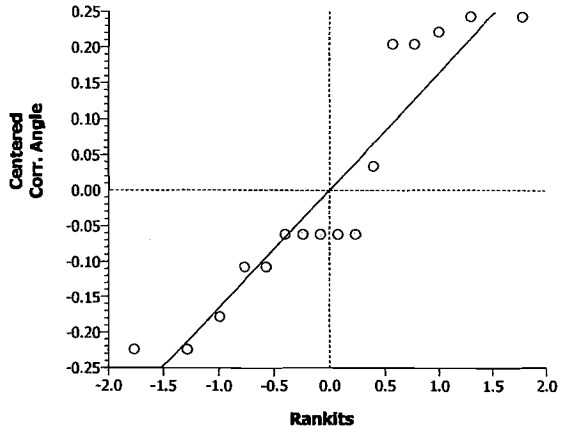
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-007	8	0.86250	0.70000	1.00000	0.13025	1.21517	0.99116	1.43676	0.19177

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.84444	8.88539	0.43789	Equal Variances
Distribution	Shapiro-Wilk W	0.89702	0.84420	0.07213	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0064702	0.0064702	1	0.19	0.67113	Non-Significant Effect
Error	0.4816152	0.0344011	14			
Total	0.48808546	0.0408713	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-003	-0.4337	1.76131	0.6644	0.16334	Non-Significant Effect

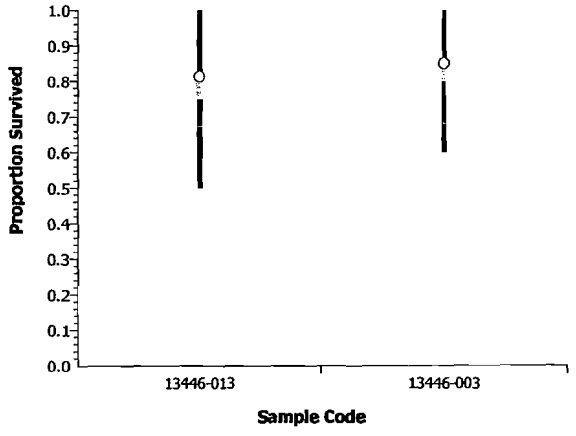
Data Summary

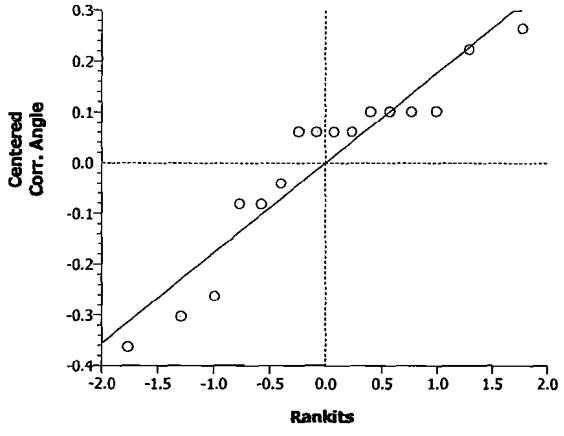
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-003	8	0.85000	0.60000	1.00000	0.11952	1.18857	0.88608	1.41202	0.15553

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.84934	8.88539	0.43594	Equal Variances
Distribution	Shapiro-Wilk W	0.93447	0.84420	0.28083	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0016832	0.0016832	1	0.05	0.82805	Non-Significant Effect
Error	0.4811667	0.0343691	14			
Total	0.48284996	0.0360523	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-013	0.22130	1.76131	0.4140	0.16326	Non-Significant Effect

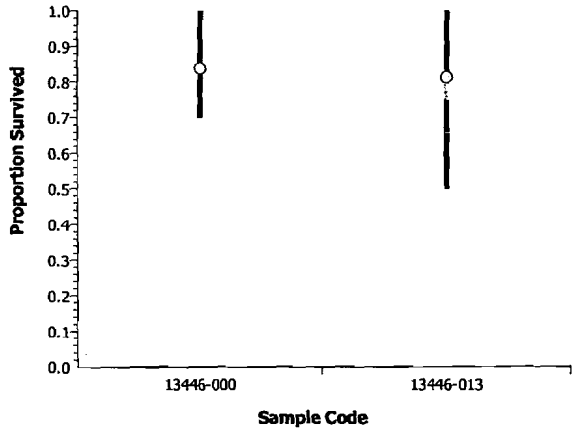
Data Summary

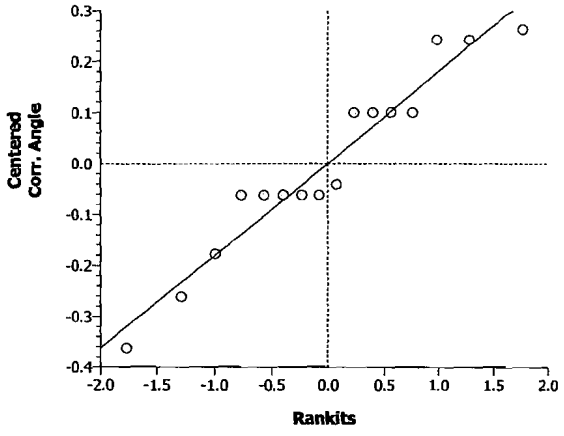
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.03528	8.88539	0.04896	Equal Variances
Distribution	Shapiro-Wilk W	0.91426	0.84420	0.13626	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2132246	0.2132246	1	9.93	0.00707	Significant Effect
Error	0.3005496	0.0214678	14			
Total	0.51377416	0.2346924	15			

Group Comparisons

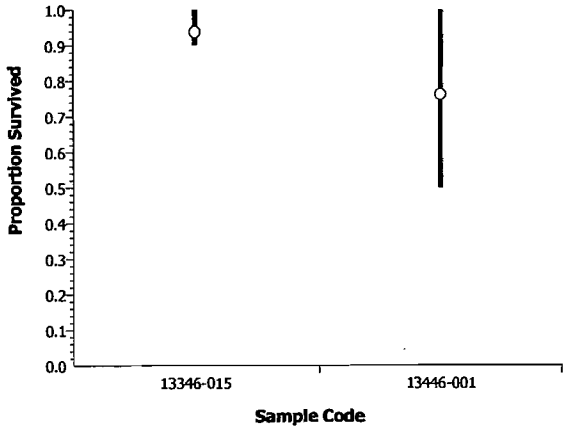
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-001	3.15155	1.76131	0.0035	0.12903	Significant Effect

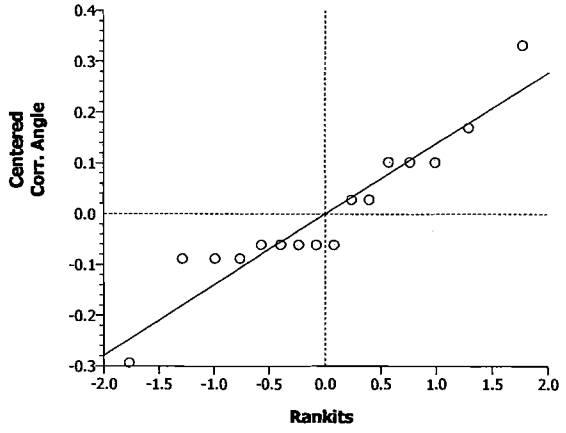
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-001	8	0.76250	0.50000	1.00000	0.15059	1.07928	0.78540	1.41202	0.18927

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.05384	8.88539	0.94663	Equal Variances
Distribution	Shapiro-Wilk W	0.78959	0.84420	0.00127	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0105104	0.0105104	1	0.27	0.61167	Non-Significant Effect
Error	0.5456718	0.0389766	14			
Total	0.55618220	0.049487	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-016		13446-009	32		0.4796	2	Non-Significant Effect

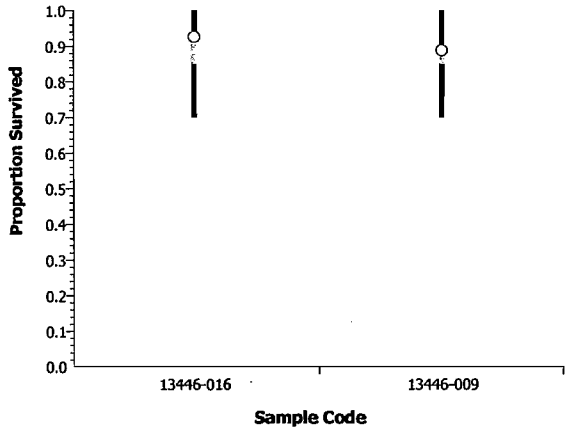
Data Summary

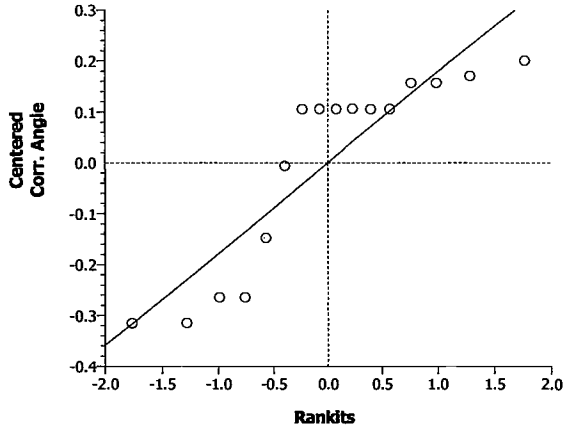
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-009	8	0.88750	0.70000	1.00000	0.13562	1.25554	0.99116	1.45584	0.20000

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.22927	8.88539	0.79233	Equal Variances
Distribution	Shapiro-Wilk W	0.97372	0.84420	0.86302	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0240250	0.0240250	1	0.20	0.66510	Non-Significant Effect
Error	1.720075	0.1228625	14			
Total	1.74410027	0.1468875	15			

Group Comparisons

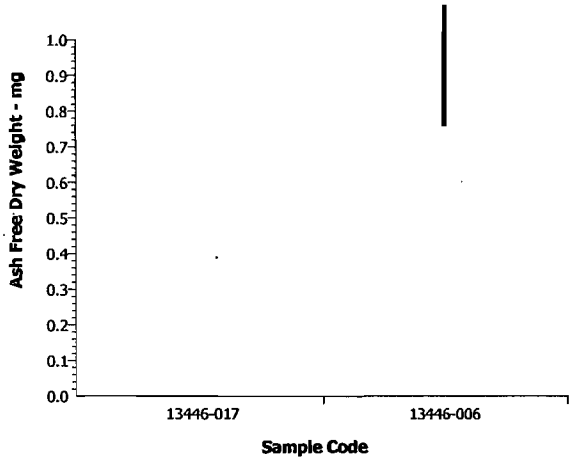
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-006	0.44220	1.76131	0.3325	0.30869	Non-Significant Effect

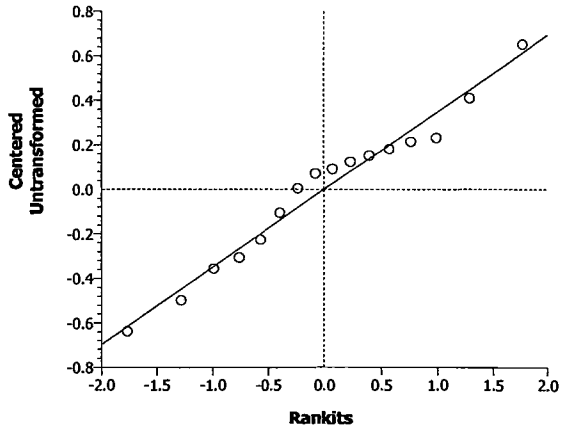
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-006	8	1.39875	0.76000	1.81000	0.36810				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.14768	8.88539	0.86046	Equal Variances
Distribution	Shapiro-Wilk W	0.89034	0.84420	0.05624	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0322078	0.0322078	1	0.57	0.46423	Non-Significant Effect
Error	0.7963536	0.0568824	14			
Total	0.82856144	0.0890902	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-011	-0.7525	1.76131	0.7679	0.21004	Non-Significant Effect

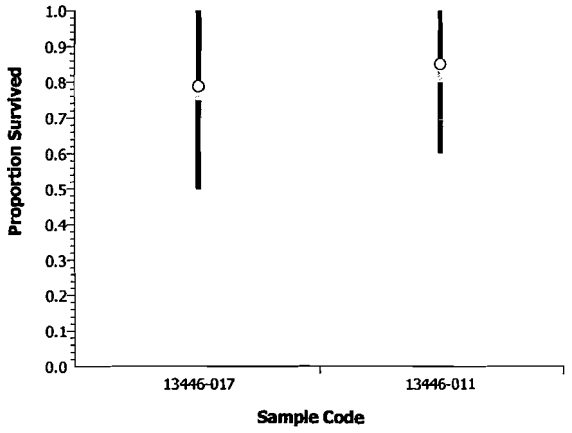
Data Summary

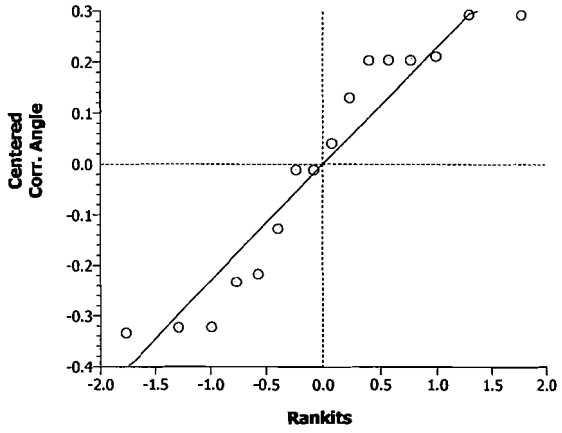
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-011	8	0.85000	0.60000	1.00000	0.18516	1.20848	0.88608	1.41946	0.24656

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:23 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.58439	8.88539	0.55853	Equal Variances
Distribution	Shapiro-Wilk W	0.85989	0.84420	0.01801	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3903188	0.3903188	1	12.52	0.00327	Significant Effect
Error	0.4364253	0.0311732	14			
Total	0.82674411	0.4214920	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-010	3.5385	1.76131	0.0016	0.15549	Significant Effect

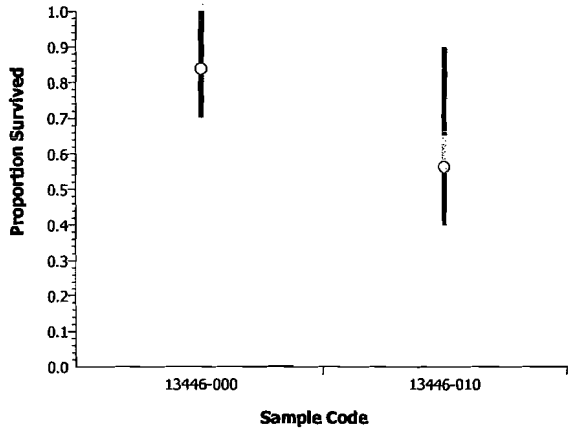
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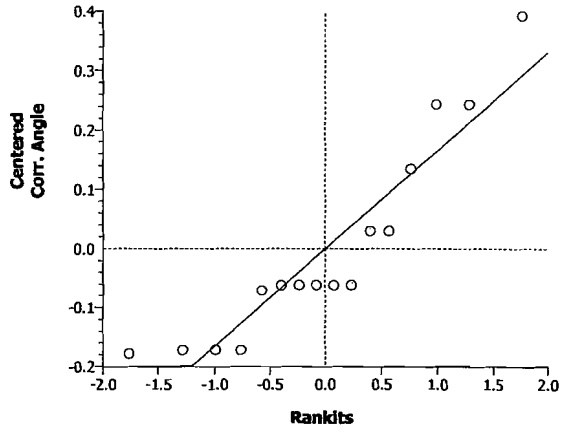
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-010	8	0.56250	0.40000	0.90000	0.17678	0.85649	0.68472	1.24905	0.19551

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.20179	8.88539	0.04495	Equal Variances
Distribution	Shapiro-Wilk W	0.96002	0.84420	0.63188	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1138598	0.1138598	1	2.97	0.10700	Non-Significant Effect
Error	0.5372856	0.0383775	14			
Total	0.65114537	0.1522373	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-004	1.72245	1.76131	0.0535	0.17252	Non-Significant Effect

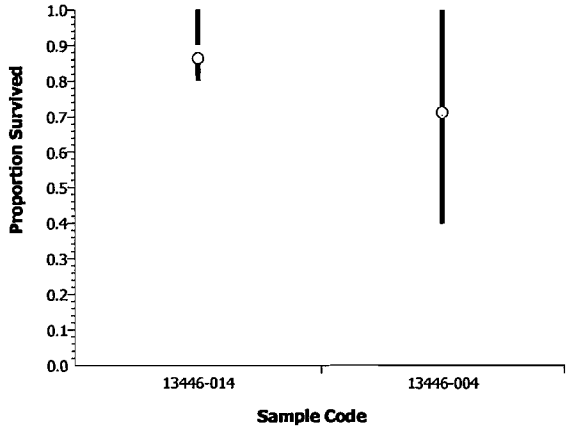
Data Summary

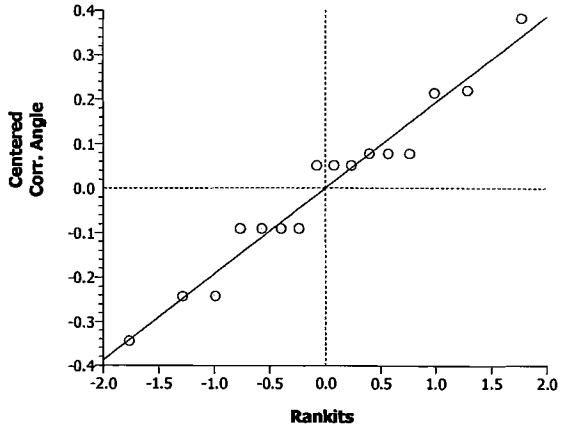
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-004	8	0.71250	0.40000	1.00000	0.21671	1.02975	0.68472	1.41202	0.25373

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.59252	8.88539	0.55420	Equal Variances
Distribution	Shapiro-Wilk W	0.96961	0.84420	0.79772	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0016	0.0016	1	0.02	0.88749	Non-Significant Effect
Error	1.078975	0.0770696	14			
Total	1.08057496	0.0786696	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-009	0.14408	1.76131	0.4437	0.24448	Non-Significant Effect

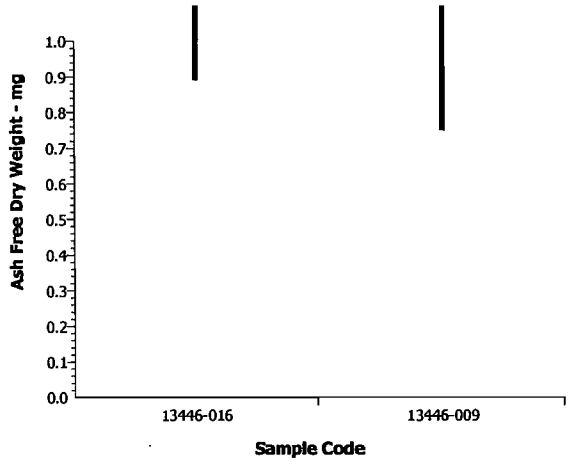
Data Summary

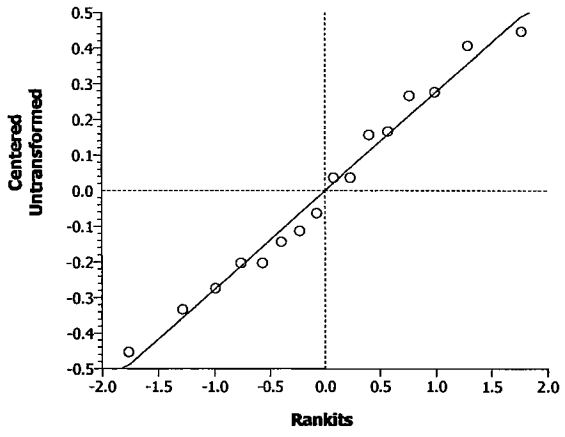
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-009	8	1.20375	0.75000	1.65000	0.30771				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00841	8.88539	0.99147	Equal Variances
Distribution	Shapiro-Wilk W	0.94778	0.84420	0.43854	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.215506	1.215506	1	11.07	0.00498	Significant Effect
Error	1.536738	0.109767	14			
Total	2.75224388	1.3252732	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-011	-3.3277	1.76131	0.9975	0.29177	Non-Significant Effect

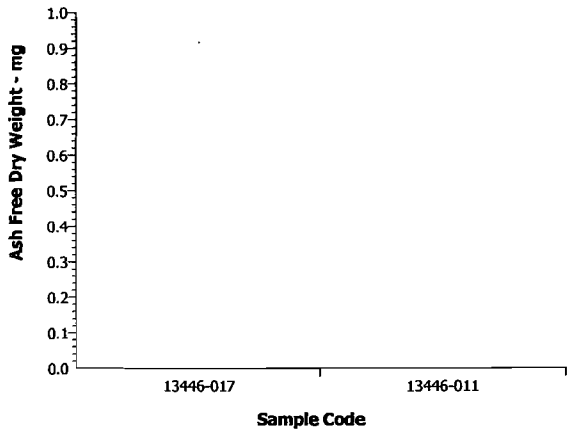
Data Summary

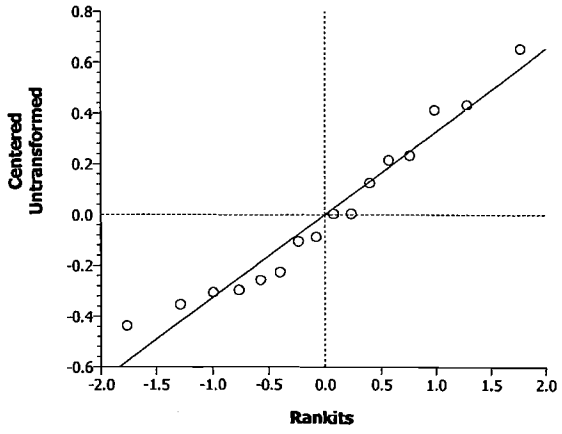
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-011	8	2.02750	1.59000	2.46000	0.33062				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.94923	8.88539	0.39831	Equal Variances
Distribution	Shapiro-Wilk W	0.82463	0.84420	0.00479	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0035051	0.0035051	1	0.19	0.66790	Non-Significant Effect
Error	0.2555037	0.0182503	14			
Total	0.2590088	0.0217554	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-014	25		0.7473	3	Non-Significant Effect

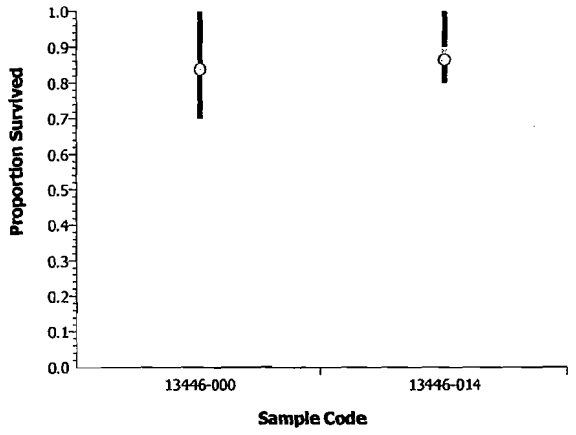
Data Summary

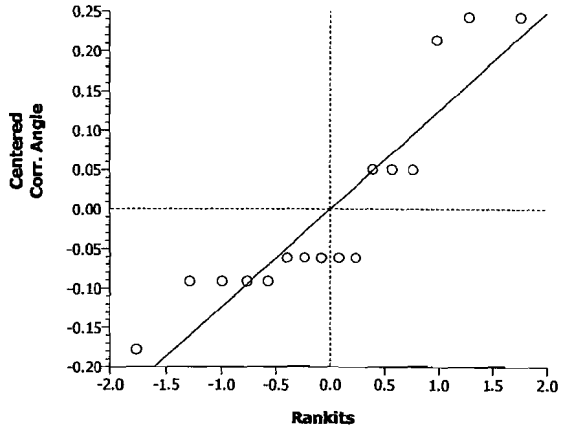
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.21420	8.88539	0.80445	Equal Variances
Distribution	Shapiro-Wilk W	0.92020	0.84420	0.16913	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0201348	0.0201348	1	0.92	0.35492	Non-Significant Effect
Error	0.3079483	0.0219963	14			
Total	0.3280831	0.0421311	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-012	-0.9568	1.76131	0.8225	0.13061	Non-Significant Effect

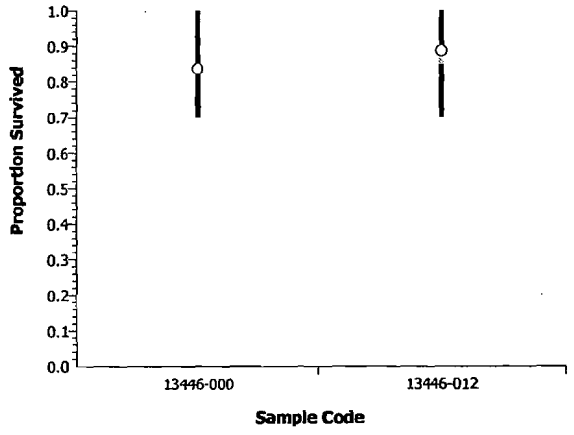
Data Summary

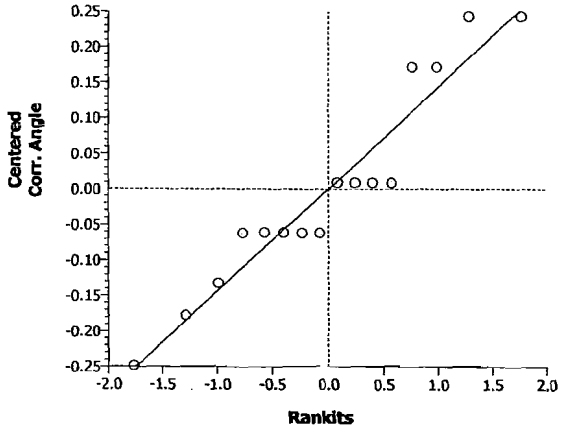
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.38077	8.88539	0.27513	Equal Variances
Distribution	Shapiro-Wilk W	0.93046	0.84420	0.24409	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.003952	0.003952	1	0.12	0.73667	Non-Significant Effect
Error	0.4701928	0.0335852	14			
Total	0.47414481	0.0375372	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-006	0.34303	1.76131	0.3683	0.16139	Non-Significant Effect

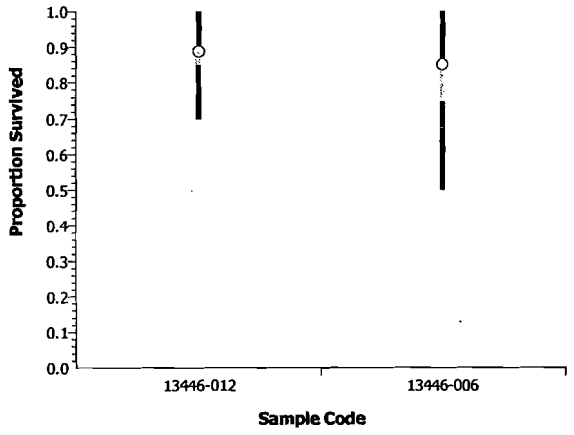
Data Summary

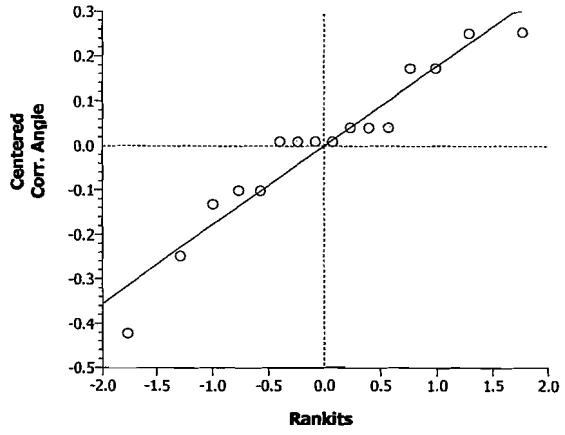
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-006	8	0.85000	0.50000	1.00000	0.16036	1.20838	0.78540	1.46147	0.21749

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:23 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.65801	8.88539	0.52073	Equal Variances
Distribution	Shapiro-Wilk W	0.90535	0.84420	0.09821	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0300499	0.0300499	1	0.94	0.34941	Non-Significant Effect
Error	0.4488574	0.0320612	14			
Total	0.47890722	0.0621111	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-009	-0.9681	1.76131	0.8253	0.15769	Non-Significant Effect

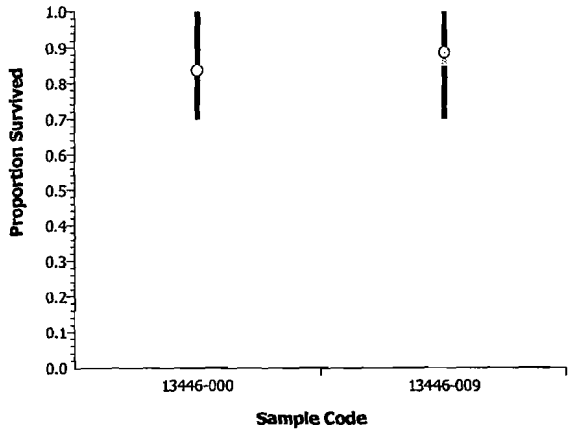
Data Summary

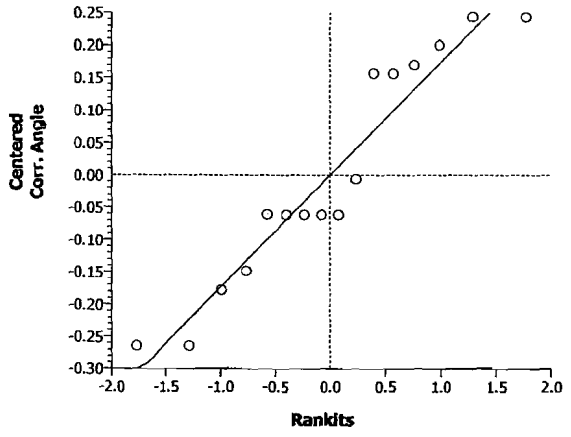
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-009	8	0.88750	0.70000	1.00000	0.13562	1.25554	0.99116	1.45584	0.20000

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.83326	8.88539	0.09713	Equal Variances
Distribution	Shapiro-Wilk W	0.92958	0.84420	0.23663	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3968999	0.3968999	1	5.71	0.03147	Significant Effect
Error	0.9728752	0.0694911	14			
Total	1.36977515	0.466391	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-017	2.38988	1.76131	0.0157	0.23215	Significant Effect

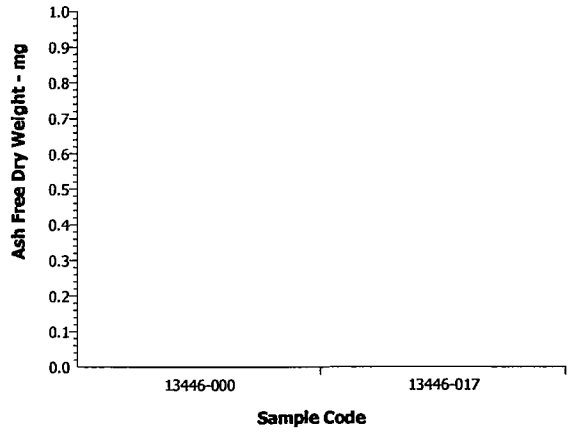
Data Summary

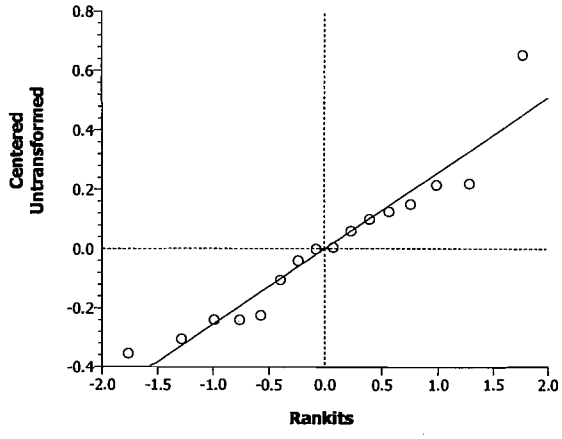
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-017	8	1.47625	1.12000	2.13000	0.33200				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	7.26652	8.88539	0.01793	Equal Variances
Distribution	Shapiro-Wilk W	0.83831	0.84420	0.00802	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1985206	0.1985206	1	14.47	0.00194	Significant Effect
Error	0.1921091	0.0137221	14			
Total	0.39062975	0.2122427	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-018	9		0.9926	2	Non-Significant Effect

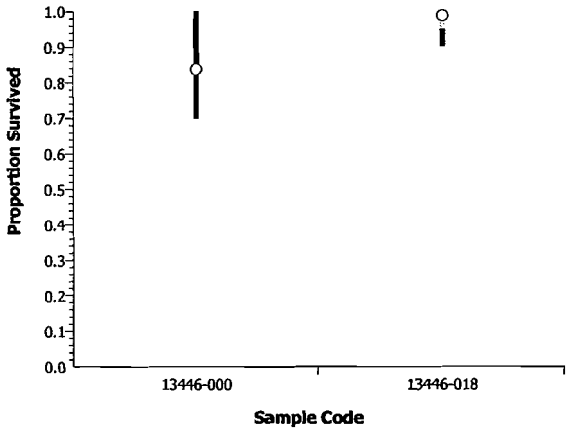
Data Summary

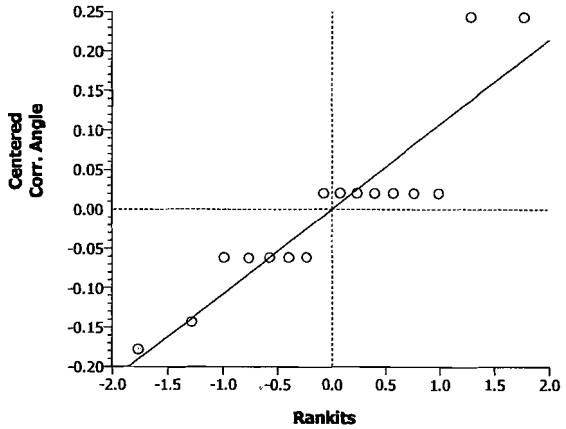
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.32433	8.88539	0.72031	Equal Variances
Distribution	Shapiro-Wilk W	0.92714	0.84420	0.21697	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0748461	0.0748461	1	1.61	0.22517	Non-Significant Effect
Error	0.650784	0.0464846	14			
Total	0.72563014	0.1213307	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-009	-1.2689	1.76131	0.8874	0.18987	Non-Significant Effect

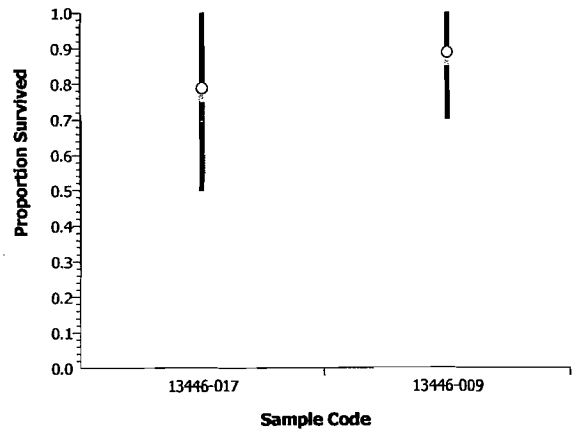
Data Summary

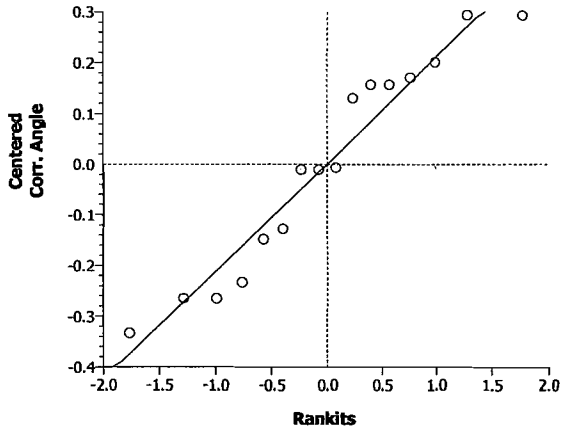
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-009	8	0.88750	0.70000	1.00000	0.13562	1.25554	0.99116	1.45584	0.20000

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.24627	8.88539	0.77888	Equal Variances
Distribution	Shapiro-Wilk W	0.85811	0.84420	0.01685	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0387449	0.0387449	1	0.91	0.35658	Non-Significant Effect
Error	0.5967983	0.0426285	14			
Total	0.63554316	0.0813733	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-006	0.95336	1.76131	0.1783	0.18183	Non-Significant Effect

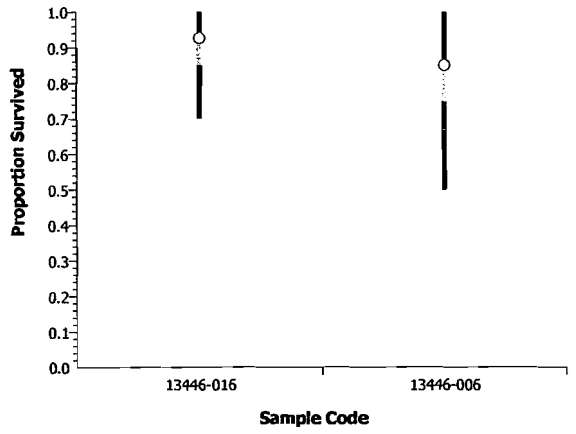
Data Summary

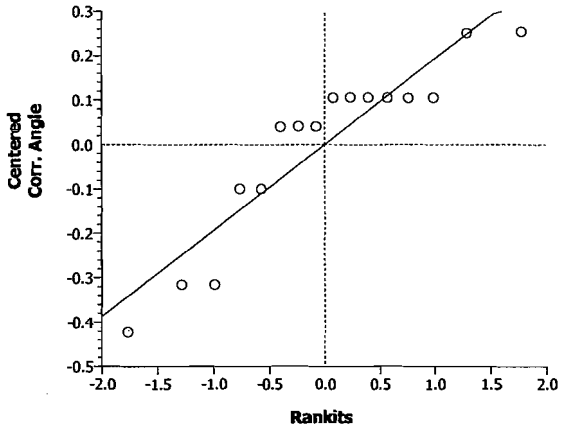
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-006	8	0.85000	0.50000	1.00000	0.16036	1.20838	0.78540	1.46147	0.21749

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.32857	8.88539	0.71727	Equal Variances
Distribution	Shapiro-Wilk W	0.94449	0.84420	0.39425	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0256	0.0256	1	0.34	0.56711	Non-Significant Effect
Error	1.0432	0.0745143	14			
Total	1.06880002	0.1001143	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-004	-0.5861	1.76131	0.7164	0.2404	Non-Significant Effect

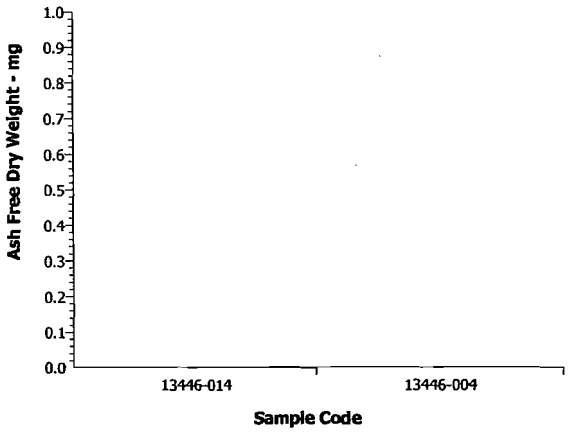
Data Summary

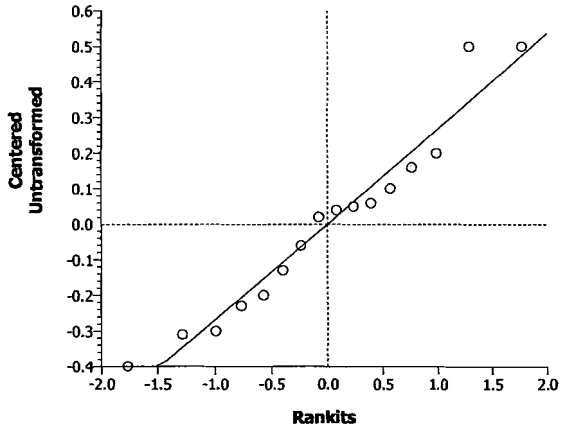
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-004	8	1.47000	1.07000	1.97000	0.29160				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.38587	8.88539	0.67762	Equal Variances
Distribution	Shapiro-Wilk W	0.95842	0.84420	0.60457	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2751251	0.2751251	1	6.03	0.02770	Significant Effect
Error	0.638352	0.0455966	14			
Total	0.91347712	0.3207217	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-010	2.4564	1.76131	0.0139	0.18805	Significant Effect

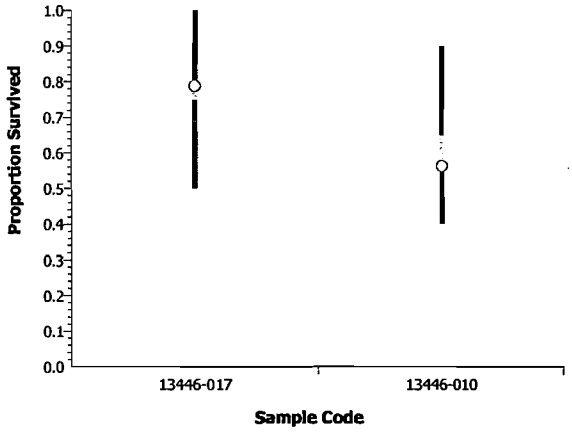
Data Summary

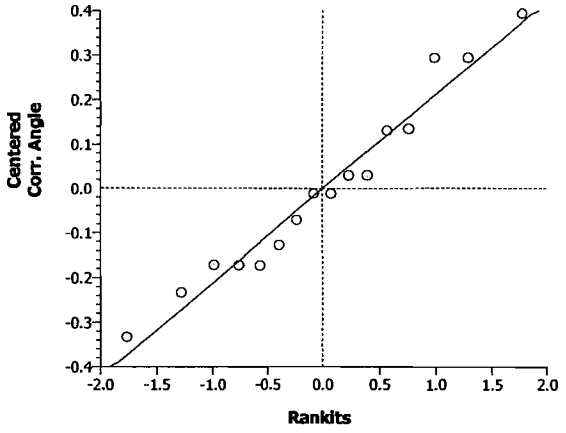
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-010	8	0.56250	0.40000	0.90000	0.17678	0.85649	0.68472	1.24905	0.19551

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	9.04946	8.88539	0.00947	Unequal Variances
Distribution	Shapiro-Wilk W	0.94466	0.84420	0.39638	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3145117	0.3145117	1	8.80	0.01021	Significant Effect
Error	0.5004503	0.0357465	14			
Total	0.814962	0.3502581	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-004	2.96621	1.85955	0.0090	0.17579	Significant Effect

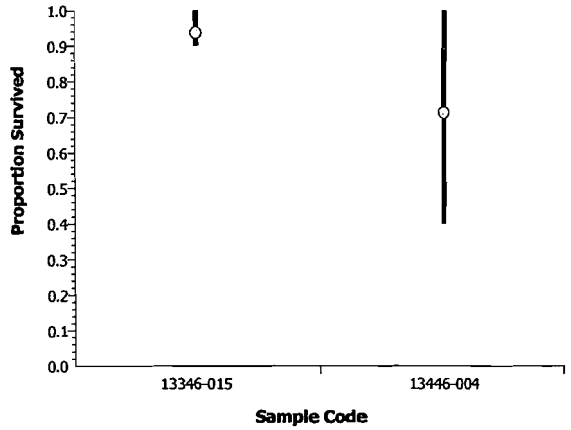
Data Summary

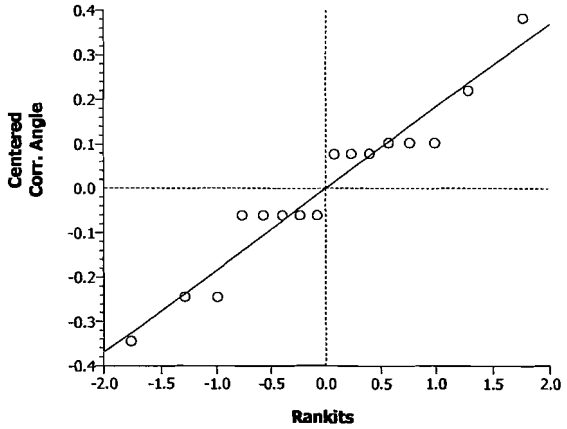
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-004	8	0.71250	0.40000	1.00000	0.21671	1.02975	0.68472	1.41202	0.25373

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.66683	8.88539	0.21896	Equal Variances
Distribution	Shapiro-Wilk W	0.92984	0.84420	0.23876	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0014063	0.0014063	1	0.03	0.87260	Non-Significant Effect
Error	0.7380875	0.0527205	14			
Total	0.73949372	0.0541268	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-002	-0.1633	1.76131	0.5637	0.20221	Non-Significant Effect

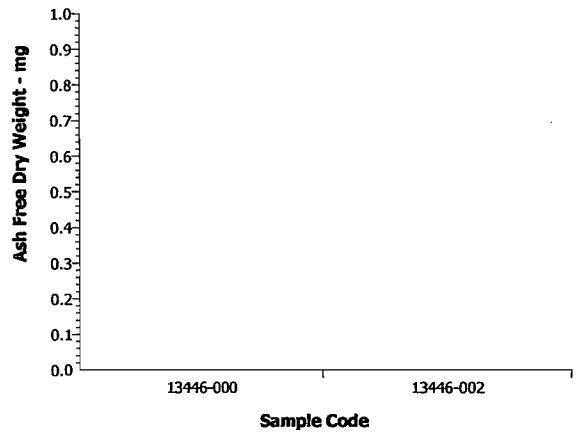
Data Summary

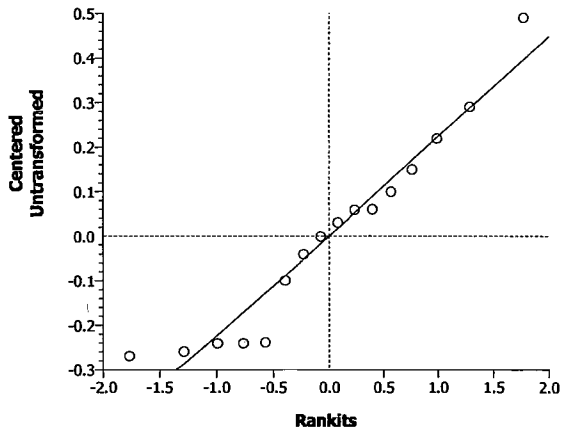
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-002	8	1.81000	1.54000	2.30000	0.27692				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.88354	8.88539	0.18572	Equal Variances
Distribution	Shapiro-Wilk W	0.78999	0.84420	0.00129	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1987351	0.1987351	1	14.39	0.00198	Significant Effect
Error	0.1933954	0.013814	14			
Total	0.39213052	0.2125491	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13346-015		13446-002	57.5		0.0023	4	Significant Effect

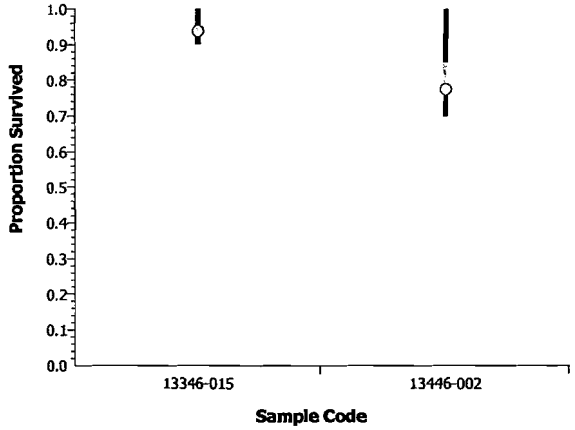
Data Summary

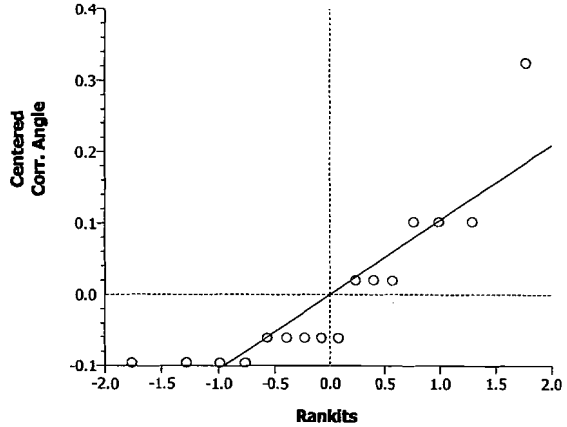
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-002	8	0.77500	0.70000	1.00000	0.10351	1.08726	0.99116	1.41202	0.14323

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:21 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.57331	8.88539	0.56449	Equal Variances
Distribution	Shapiro-Wilk W	0.89651	0.84420	0.07078	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0761039	0.0761039	1	2.45	0.13971	Non-Significant Effect
Error	0.4345538	0.0310396	14			
Total	0.51065771	0.1071435	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-016	-1.5658	1.76131	0.9301	0.15515	Non-Significant Effect

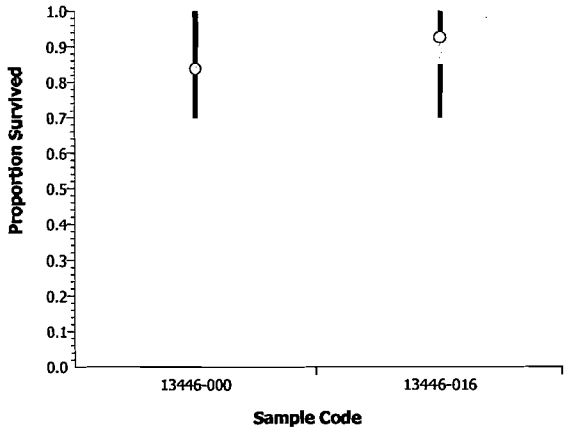
Data Summary

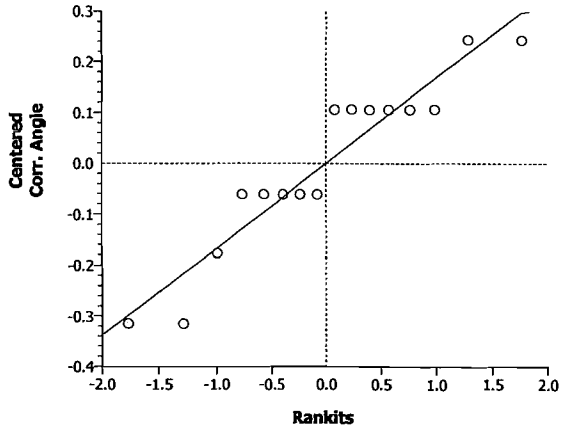
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.35492	8.88539	0.13277	Equal Variances
Distribution	Shapiro-Wilk W	0.87342	0.84420	0.02990	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	3.970056	3.970056	1	19.26	0.00062	Significant Effect
Error	2.886388	0.2061705	14			
Total	6.85644388	4.1762268	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-009	4.38819	1.76131	0.0003	0.39987	Significant Effect

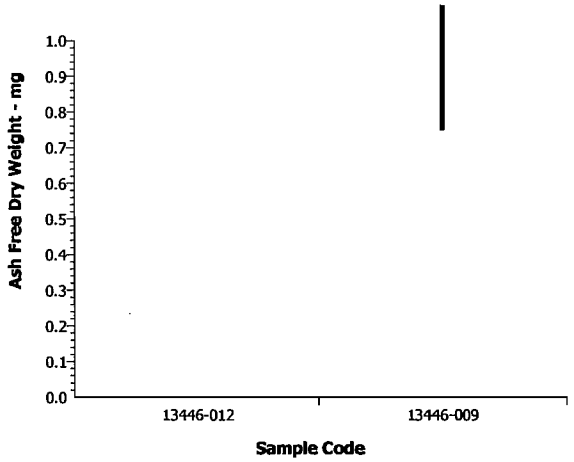
Data Summary

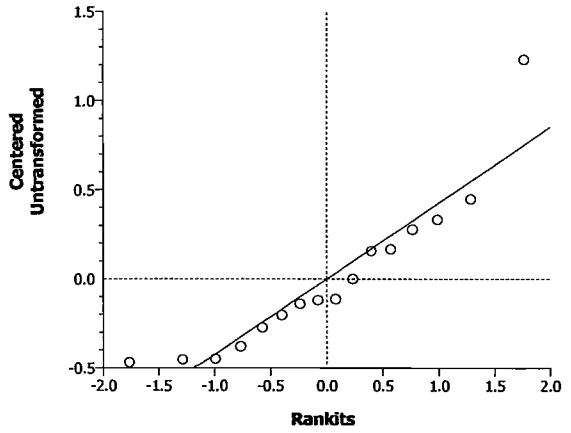
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-009	8	1.20375	0.75000	1.65000	0.30771				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.58605	8.88539	0.11379	Equal Variances
Distribution	Shapiro-Wilk W	0.90254	0.84420	0.08851	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.225625	0.225625	1	1.54	0.23538	Non-Significant Effect
Error	2.05455	0.1467536	14			
Total	2.28017493	0.3723786	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-007	-1.2399	1.76131	0.8823	0.33737	Non-Significant Effect

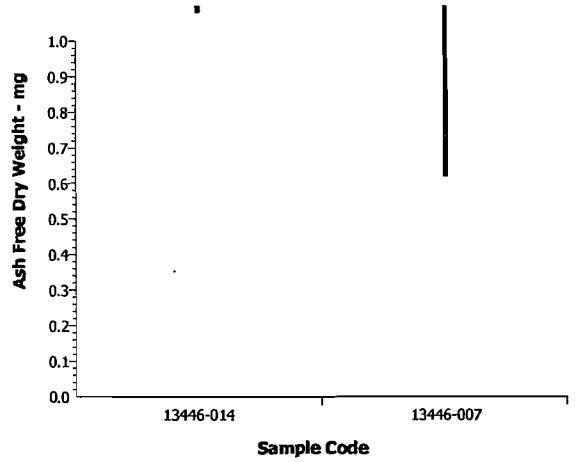
Data Summary

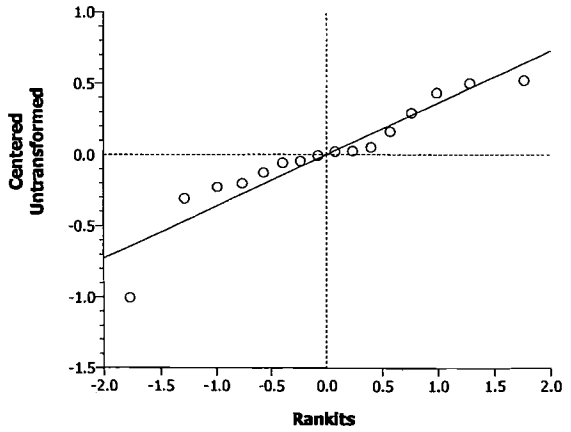
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-007	8	1.62750	0.62000	2.15000	0.47907				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.00266	8.88539	0.99730	Equal Variances
Distribution	Shapiro-Wilk W	0.91383	0.84420	0.13412	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0015532	0.0015532	1	0.06	0.80351	Non-Significant Effect
Error	0.3381879	0.0241563	14			
Total	0.33974111	0.0257095	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-003	-0.2536	1.76131	0.5982	0.13687	Non-Significant Effect

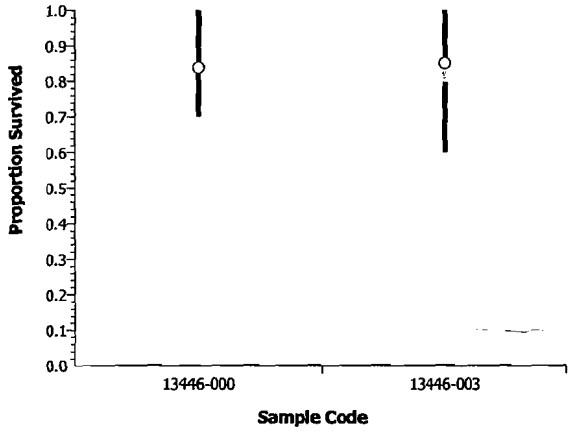
Data Summary

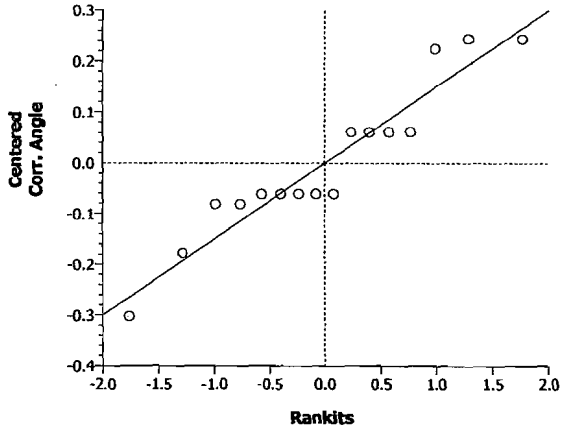
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-003	8	0.85000	0.60000	1.00000	0.11952	1.18857	0.88608	1.41202	0.15553

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.48488	8.88539	0.61488	Equal Variances
Distribution	Shapiro-Wilk W	0.90014	0.84420	0.08098	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0321041	0.0321041	1	1.07	0.31824	Non-Significant Effect
Error	0.4196205	0.0299729	14			
Total	0.45172466	0.0620770	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-001	1.03494	1.76131	0.1591	0.15247	Non-Significant Effect

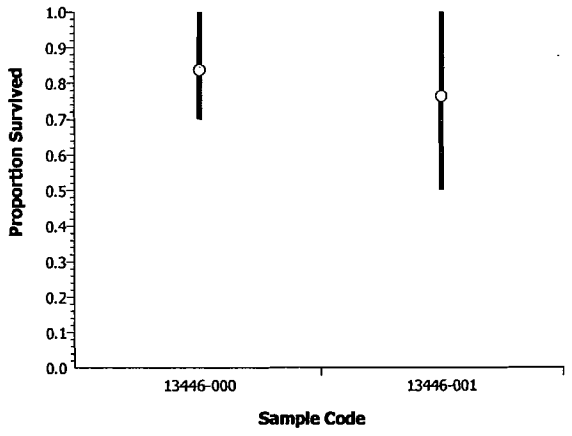
Data Summary

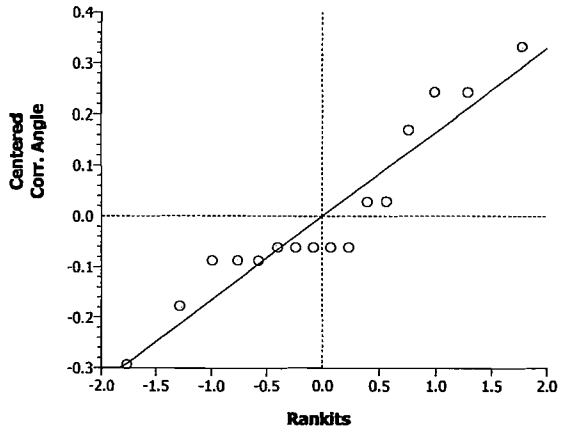
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-001	8	0.76250	0.50000	1.00000	0.15059	1.07928	0.78540	1.41202	0.18927

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	11.04688	8.88539	0.00520	Unequal Variances
Distribution	Shapiro-Wilk W	0.83128	0.84420	0.00616	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.6683063	0.6683063	1	3.86	0.06967	Non-Significant Effect
Error	2.424888	0.1732063	14			
Total	3.09319395	0.8415126	15			

Group Comparisons

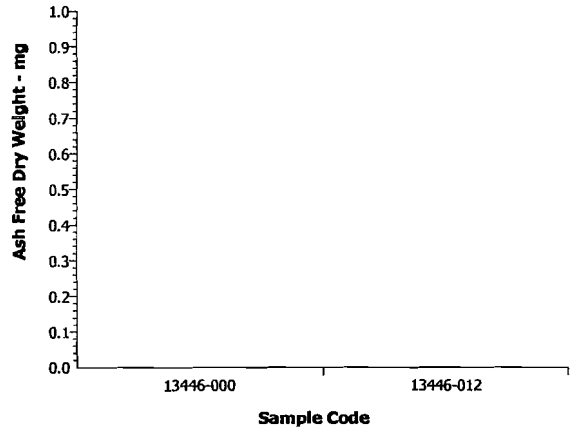
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-000		13446-012	15.5		0.9476	2	Non-Significant Effect

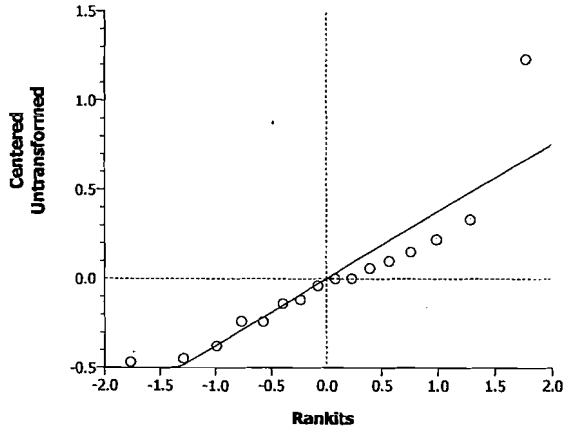
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-012	8	2.20000	1.73000	3.43000	0.56361				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.19575	8.88539	0.32117	Equal Variances
Distribution	Shapiro-Wilk W	0.91741	0.84420	0.15285	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0100463	0.0100463	1	0.26	0.61765	Non-Significant Effect
Error	0.5396661	0.0385476	14			
Total	0.54971242	0.0485939	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-017	0.51051	1.76131	0.3088	0.17290	Non-Significant Effect

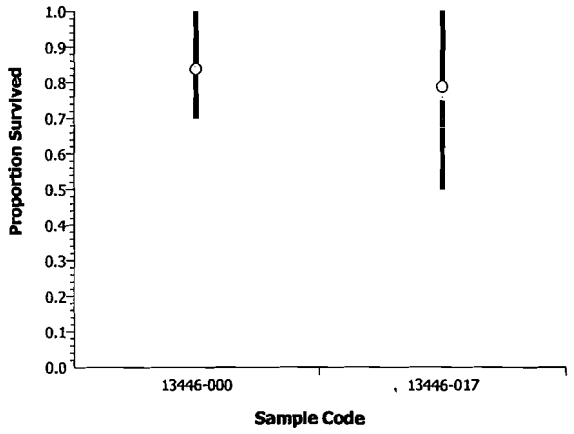
Data Summary

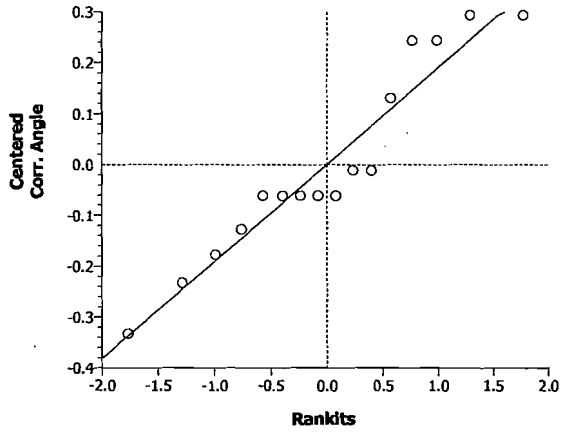
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	14.24796	8.88539	0.00236	Unequal Variances
Distribution	Shapiro-Wilk W	0.81480	0.84420	0.00331	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1343401	0.1343401	1	5.31	0.03708	Significant Effect
Error	0.3543536	0.025311	14			
Total	0.48869367	0.1596510	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-018		13446-006	46.5		0.0652	3	Non-Significant Effect

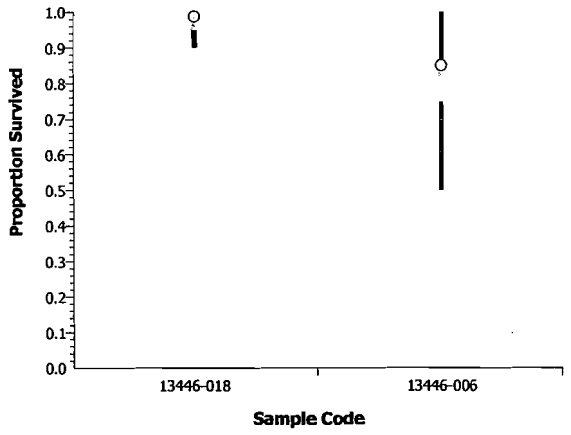
Data Summary

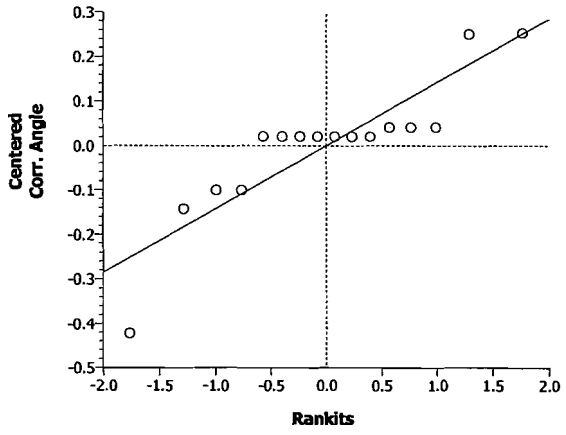
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-006	8	0.85000	0.50000	1.00000	0.16036	1.20838	0.78540	1.46147	0.21749

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.06496	8.88539	0.16265	Equal Variances
Distribution	Shapiro-Wilk W	0.93697	0.84420	0.30609	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.543806	1.543806	1	12.78	0.00305	Significant Effect
Error	1.691788	0.120842	14			
Total	3.23559391	1.6646483	15			

Group Comparisons

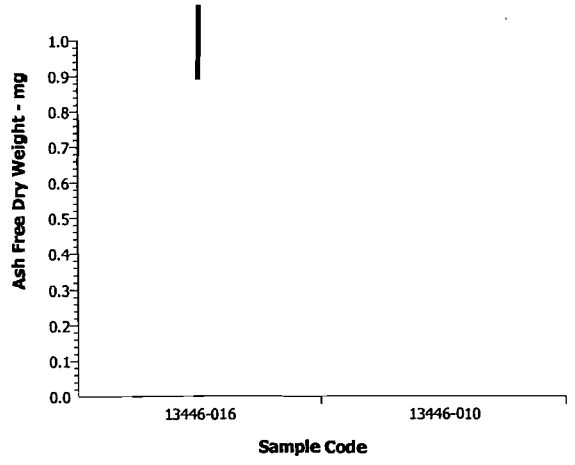
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-010	-3.5743	1.76131	0.9985	0.30614	Non-Significant Effect

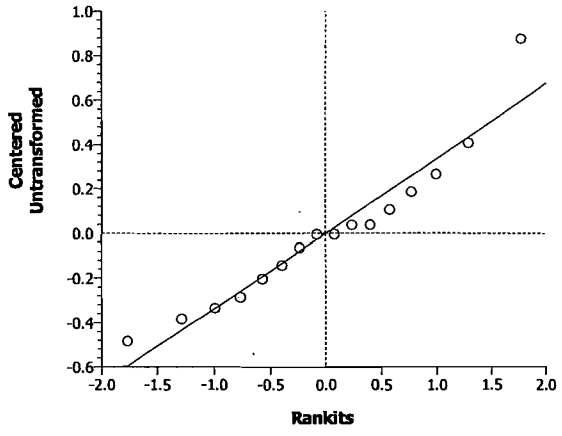
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-010	8	1.84500	1.36000	2.72000	0.42688				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.21743	8.88539	0.80184	Equal Variances
Distribution	Shapiro-Wilk W	0.93669	0.84420	0.30325	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0105035	0.0105035	1	0.48	0.50116	Non-Significant Effect
Error	0.3083968	0.0220284	14			
Total	0.31890037	0.0325319	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-003	0.69052	1.76131	0.2506	0.13071	Non-Significant Effect

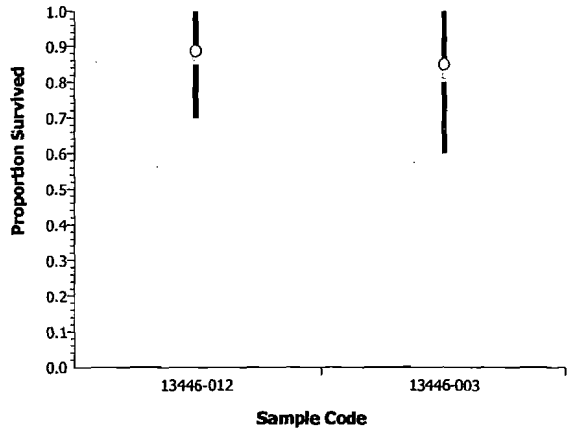
Data Summary

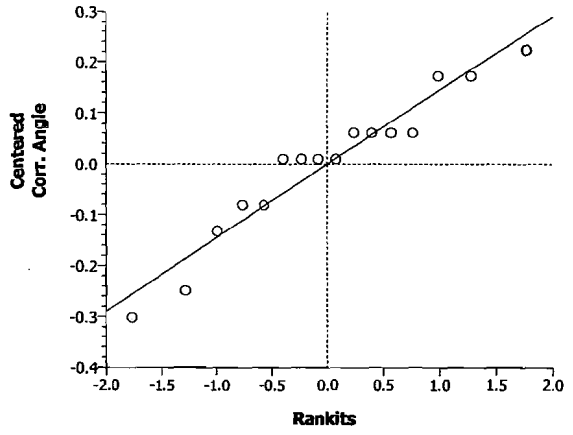
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-003	8	0.85000	0.60000	1.00000	0.11952	1.18857	0.88608	1.41202	0.15553

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.34436	8.88539	0.28350	Equal Variances
Distribution	Shapiro-Wilk W	0.91366	0.84420	0.13329	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.568006	2.568006	1	11.33	0.00461	Significant Effect
Error	3.172088	0.2265777	14			
Total	5.74009395	2.794584	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-006	3.36658	1.76131	0.0023	0.41919	Significant Effect

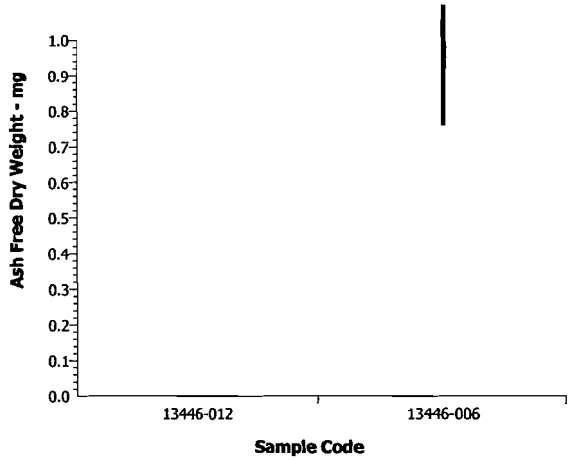
Data Summary

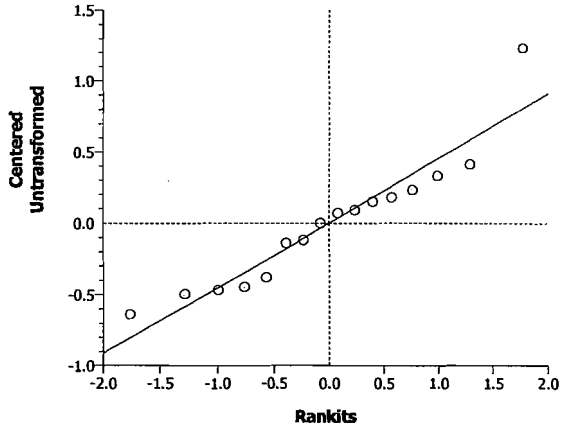
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-006	8	1.39875	0.76000	1.81000	0.36810				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	10.83866	8.88539	0.00551	Unequal Variances
Distribution	Shapiro-Wilk W	0.91527	0.84420	0.14138	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.225625	0.225625	1	1.33	0.26888	Non-Significant Effect
Error	2.382975	0.1702125	14			
Total	2.60859962	0.3958375	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-003	-1.1513	1.85955	0.8586	0.3836	Non-Significant Effect

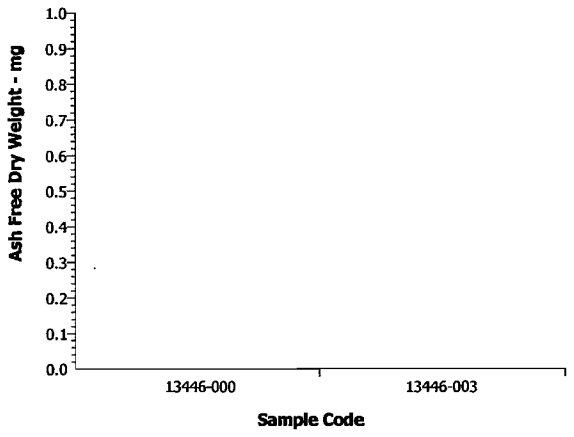
Data Summary

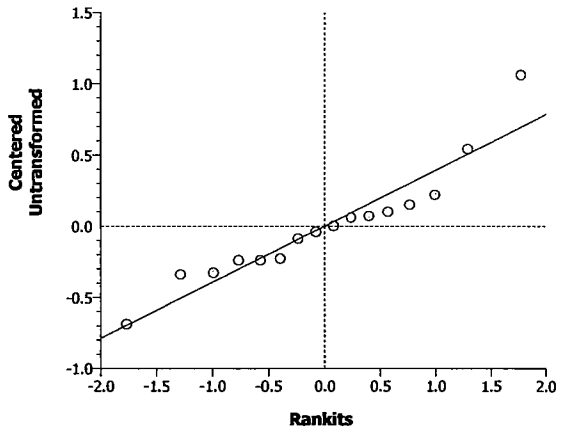
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-003	8	2.02875	1.34000	3.09000	0.55827				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.92377	8.88539	0.40752	Equal Variances
Distribution	Shapiro-Wilk W	0.93648	0.84420	0.30104	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5877554	0.5877554	1	20.24	0.00050	Significant Effect
Error	0.4066342	0.0290453	14			
Total	0.99438959	0.6168007	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-010	4.49842	1.76131	0.0003	0.15009	Significant Effect

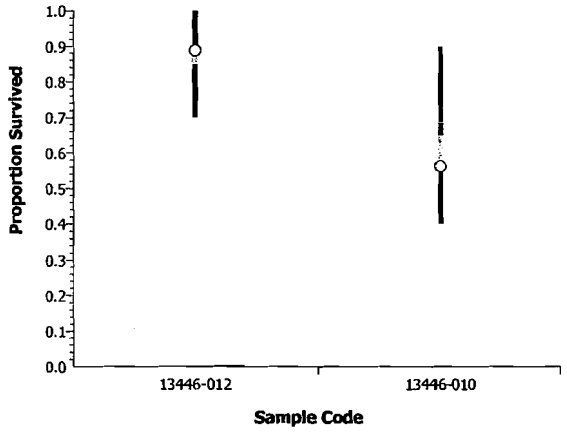
Data Summary

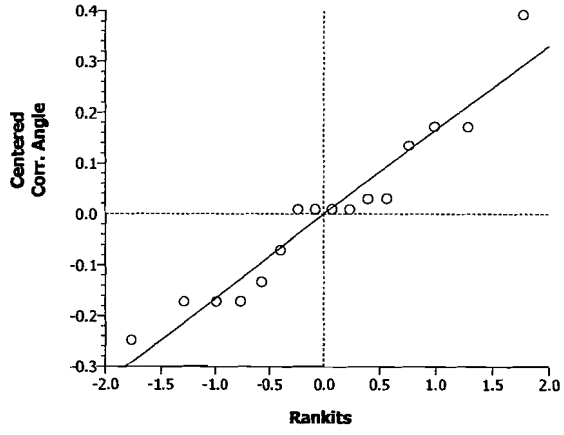
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-010	8	0.56250	0.40000	0.90000	0.17678	0.85649	0.68472	1.24905	0.19551

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.72278	8.88539	0.48997	Equal Variances
Distribution	Shapiro-Wilk W	0.94664	0.84420	0.42277	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0333063	0.0333063	1	0.50	0.49295	Non-Significant Effect
Error	0.9406874	0.067192	14			
Total	0.97399367	0.1004982	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-004	0.70405	1.76131	0.2465	0.22828	Non-Significant Effect

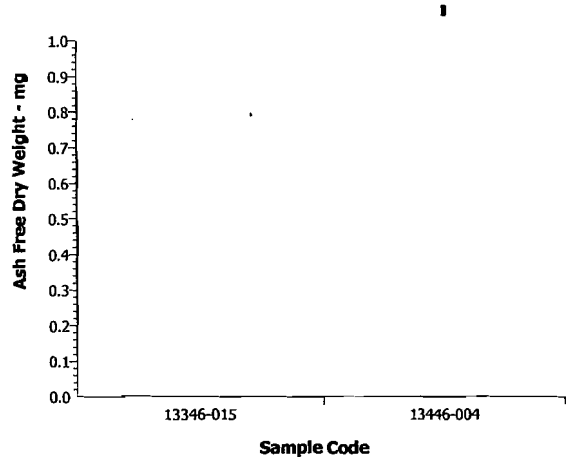
Data Summary

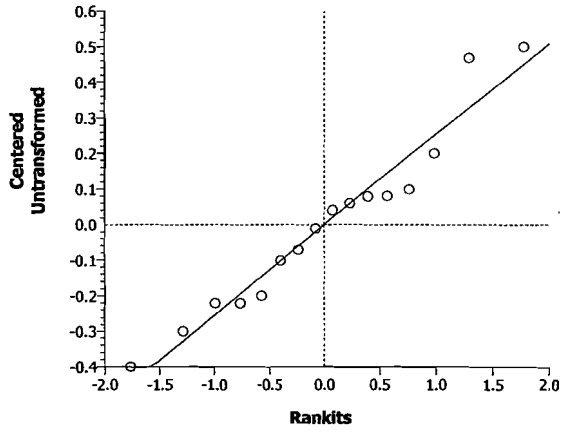
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-004	8	1.47000	1.07000	1.97000	0.29160				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-004	1.51000	1.17000	1.67000	1.07000	1.53000	1.57000	1.27000	1.97000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	12.04797	8.88539	0.00398	Unequal Variances
Distribution	Shapiro-Wilk W	0.88054	0.84420	0.03902	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.074097	0.074097	1	3.42	0.08559	Non-Significant Effect
Error	0.3032271	0.0216591	14			
Total	0.37732405	0.0957561	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-009	1.84961	1.85955	0.0508	0.13684	Non-Significant Effect

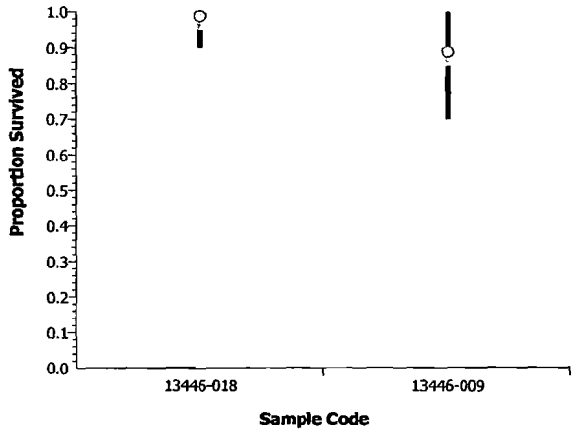
Data Summary

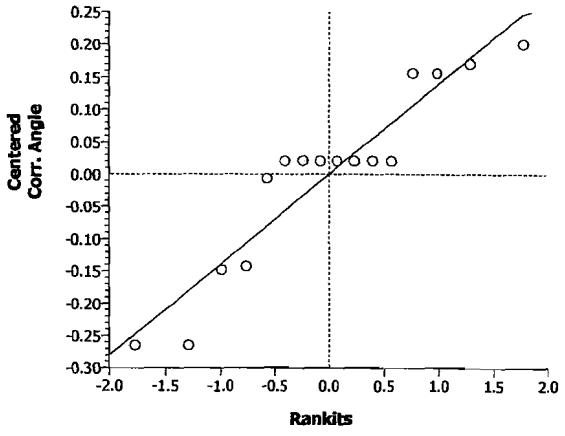
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-009	8	0.88750	0.70000	1.00000	0.13562	1.25554	0.99116	1.45584	0.20000

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-009	0.70000	0.70000	1.00000	1.00000	0.80000	0.90000	1.00000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.01921	8.88539	0.98062	Equal Variances
Distribution	Shapiro-Wilk W	0.87429	0.84420	0.03089	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1173063	0.1173063	1	0.37	0.55127	Non-Significant Effect
Error	4.405287	0.3146634	14			
Total	4.52259354	0.4319697	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-003	0.61057	1.76131	0.2756	0.49400	Non-Significant Effect

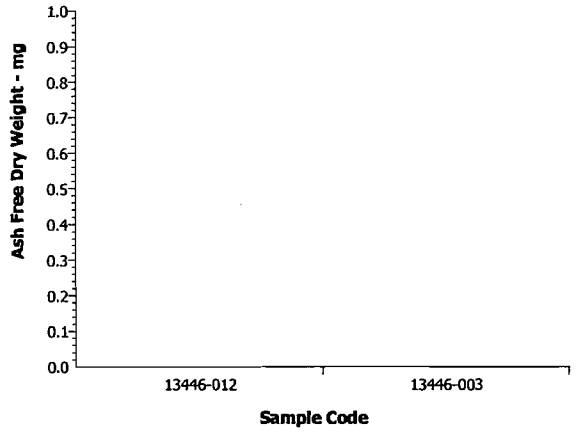
Data Summary

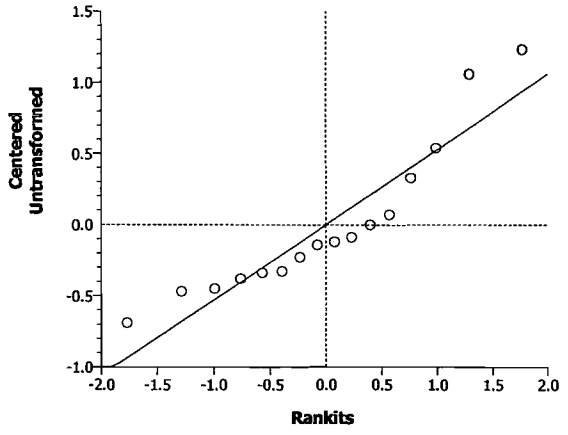
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-003	8	2.02875	1.34000	3.09000	0.55827				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.65321	8.88539	0.52310	Equal Variances
Distribution	Shapiro-Wilk W	0.91317	0.84420	0.13095	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5439062	0.5439062	1	3.72	0.07431	Non-Significant Effect
Error	2.047188	0.1462277	14			
Total	2.59109402	0.6901339	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-010	-1.9286	1.76131	0.9628	0.33676	Non-Significant Effect

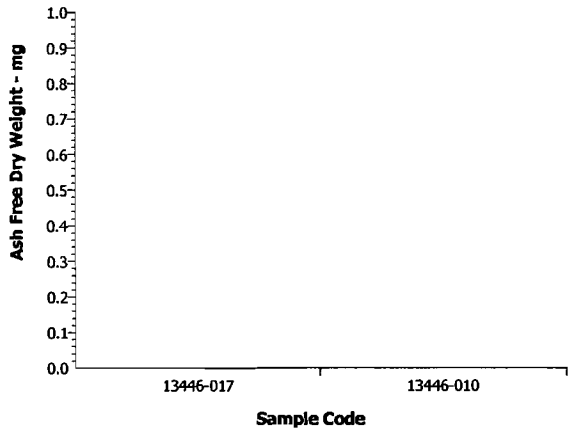
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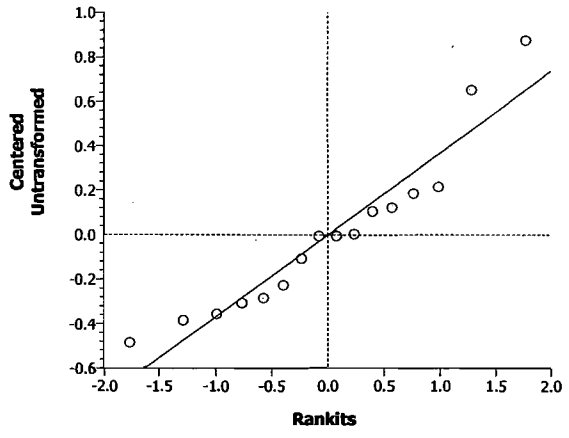
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-010	8	1.84500	1.36000	2.72000	0.42688				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.17893	8.88539	0.83365	Equal Variances
Distribution	Shapiro-Wilk W	0.86834	0.84420	0.02472	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1105562	0.1105562	1	0.75	0.40140	Non-Significant Effect
Error	2.066688	0.1476205	14			
Total	2.17724381	0.2581768	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-006	0.86540	1.76131	0.2007	0.33836	Non-Significant Effect

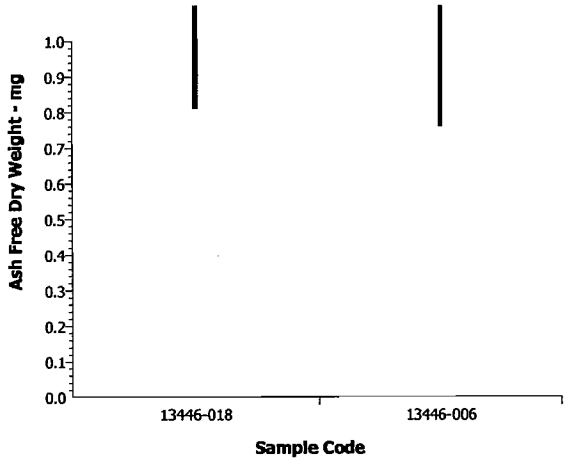
Data Summary

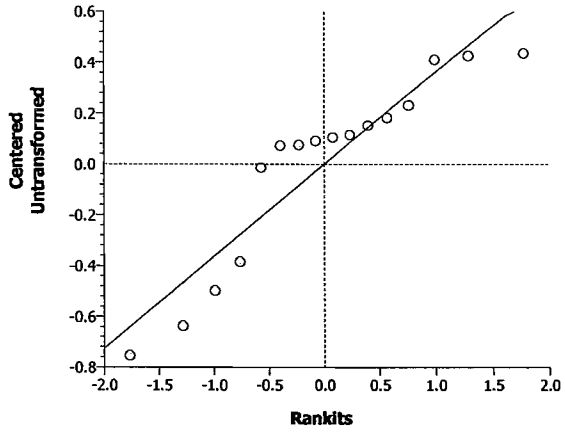
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-006	8	1.39875	0.76000	1.81000	0.36810				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.71639	8.88539	0.49291	Equal Variances
Distribution	Shapiro-Wilk W	0.92947	0.84420	0.23566	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2116	0.2116	1	5.42	0.03544	Significant Effect
Error	0.546775	0.0390554	14			
Total	0.75837496	0.2506553	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13346-015	2.32765	1.76131	0.0177	0.17404	Significant Effect

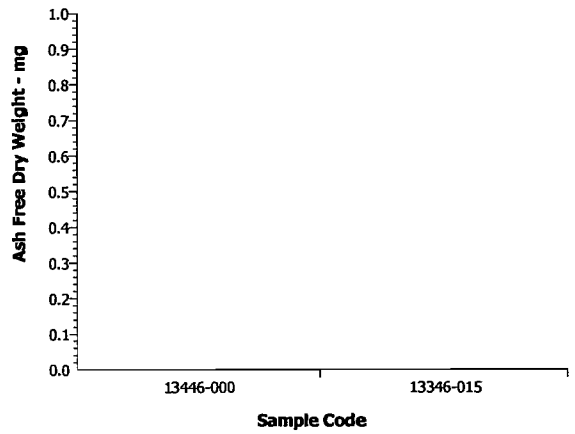
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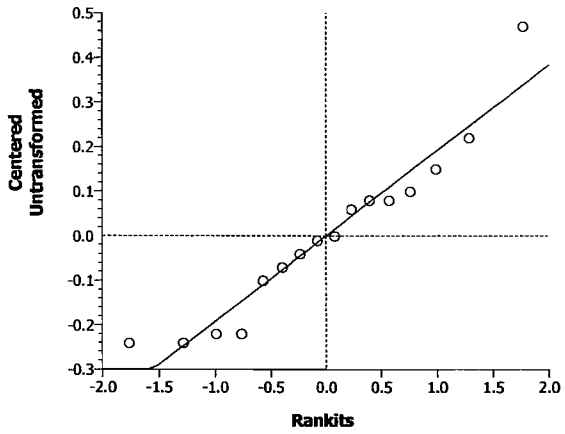
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13346-015	8	1.56125	1.34000	2.03000	0.22216				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.29274	8.88539	0.13855	Equal Variances
Distribution	Shapiro-Wilk W	0.97725	0.84420	0.91172	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.380625	1.380625	1	22.37	0.00032	Significant Effect
Error	0.8640751	0.0617196	14			
Total	2.24469995	1.4423445	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-009	4.72962	1.76131	0.0002	0.21879	Significant Effect

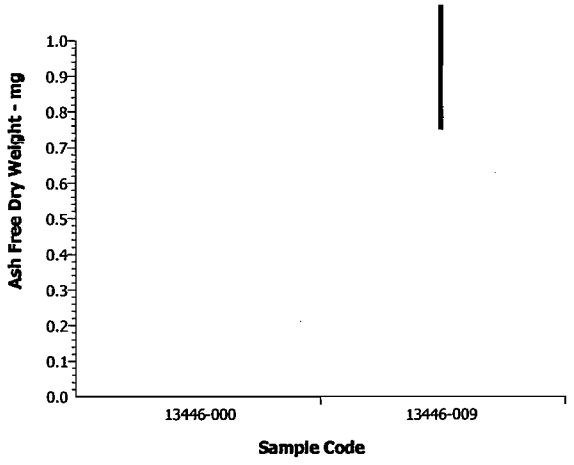
Data Summary

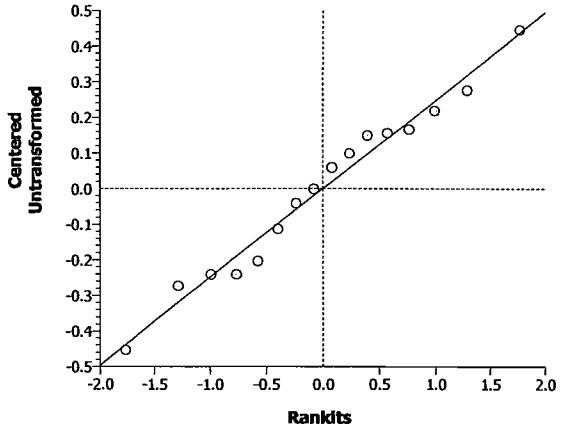
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-009	8	1.20375	0.75000	1.65000	0.30771				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.60174	8.88539	0.54933	Equal Variances
Distribution	Shapiro-Wilk W	0.76553	0.84420	0.00051	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0386654	0.0386654	1	0.78	0.39114	Non-Significant Effect
Error	0.6912413	0.0493744	14			
Total	0.72990677	0.0880398	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-016		13446-011	38		0.2869	3	Non-Significant Effect

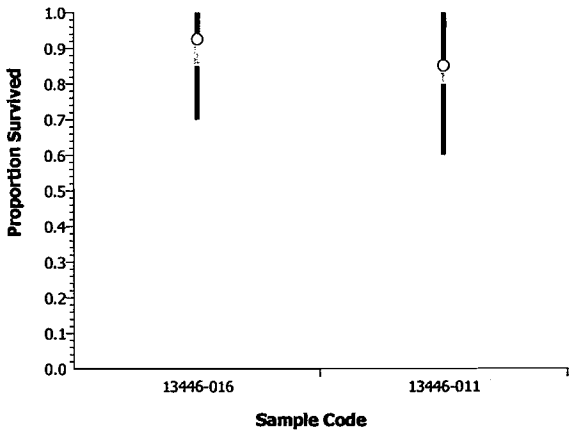
Data Summary

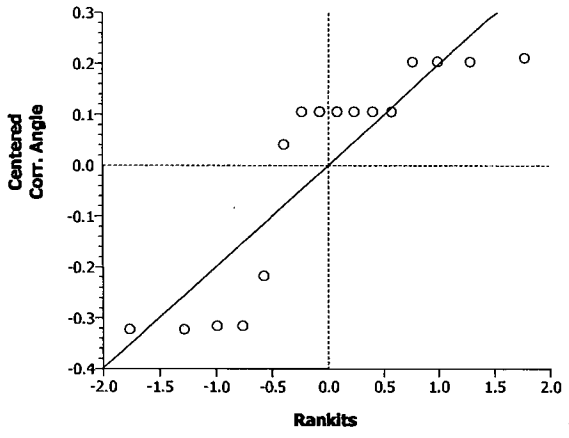
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-011	8	0.85000	0.60000	1.00000	0.18516	1.20848	0.88608	1.41946	0.24656

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.16722	8.88539	0.84359	Equal Variances
Distribution	Shapiro-Wilk W	0.97061	0.84420	0.81428	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.340738	0.340738	1	8.23	0.01240	Significant Effect
Error	0.5798526	0.0414180	14			
Total	0.92059061	0.3821561	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-010	2.86824	1.76131	0.0062	0.17923	Significant Effect

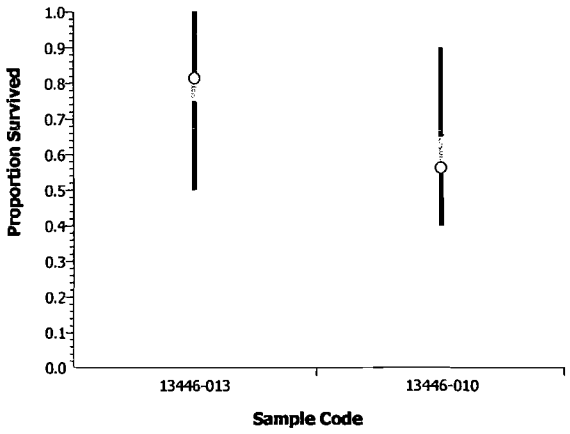
Data Summary

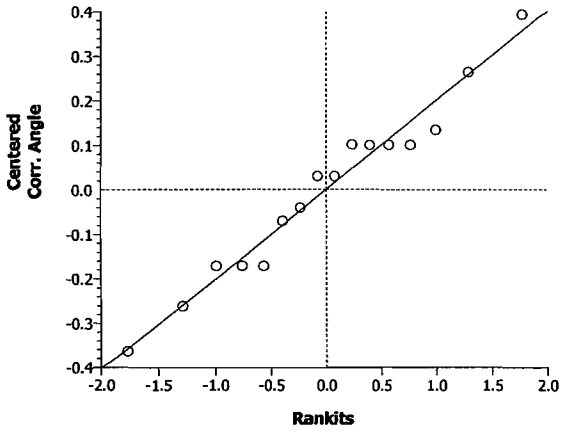
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-010	8	0.56250	0.40000	0.90000	0.17678	0.85649	0.68472	1.24905	0.19551

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.18994	8.88539	0.32277	Equal Variances
Distribution	Shapiro-Wilk W	0.95526	0.84420	0.55200	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0194998	0.0194998	1	0.51	0.48879	Non-Significant Effect
Error	0.5401146	0.0385796	14			
Total	0.55961442	0.0580794	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-003	-0.7109	1.76131	0.7556	0.17298	Non-Significant Effect

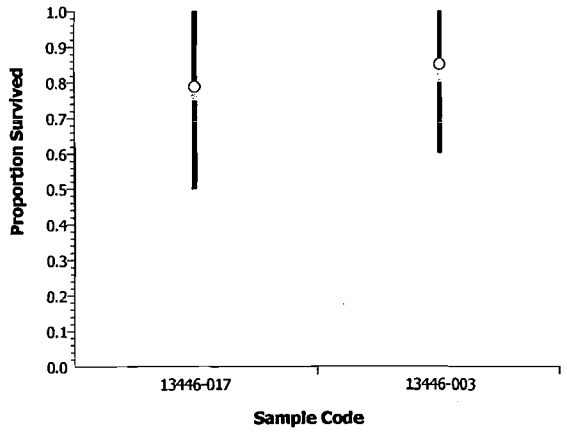
Data Summary

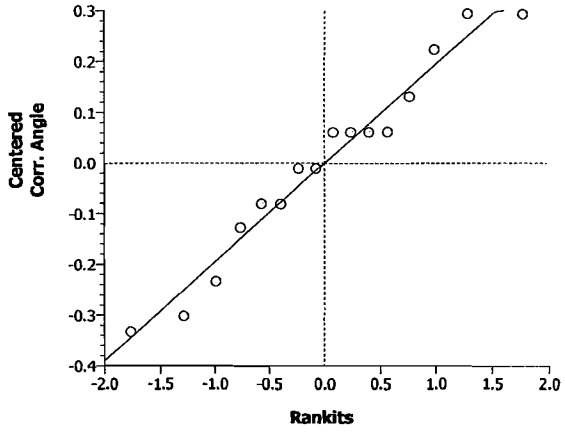
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-003	8	0.85000	0.60000	1.00000	0.11952	1.18857	0.88608	1.41202	0.15553

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.10284	8.88539	0.90057	Equal Variances
Distribution	Shapiro-Wilk W	0.93348	0.84420	0.27132	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.540225	0.540225	1	17.87	0.00084	Significant Effect
Error	0.4232751	0.0302339	14			
Total	0.96350002	0.5704589	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-013	4.22708	1.76131	0.0004	0.15313	Significant Effect

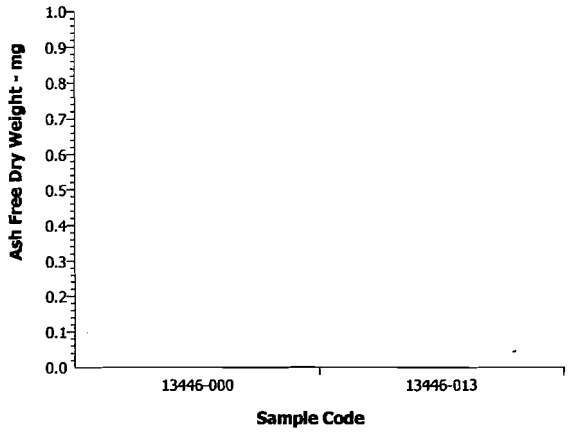
Data Summary

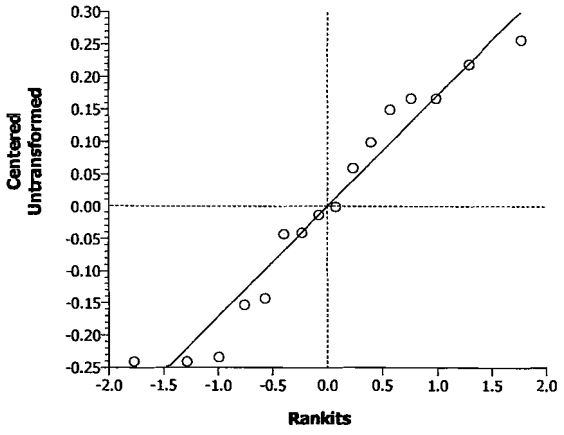
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-013	8	1.42375	1.19000	1.68000	0.17808				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.55375	8.88539	0.57521	Equal Variances
Distribution	Shapiro-Wilk W	0.88631	0.84420	0.04841	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2475062	0.2475062	1	3.93	0.06749	Non-Significant Effect
Error	0.8822873	0.0630205	14			
Total	1.12979354	0.3105267	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-002	-1.9818	1.76131	0.9663	0.22108	Non-Significant Effect

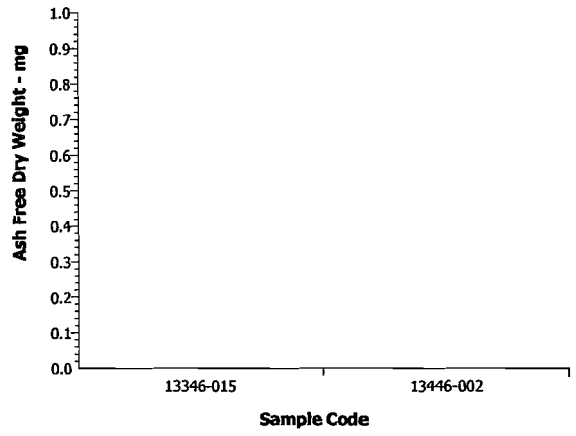
Data Summary

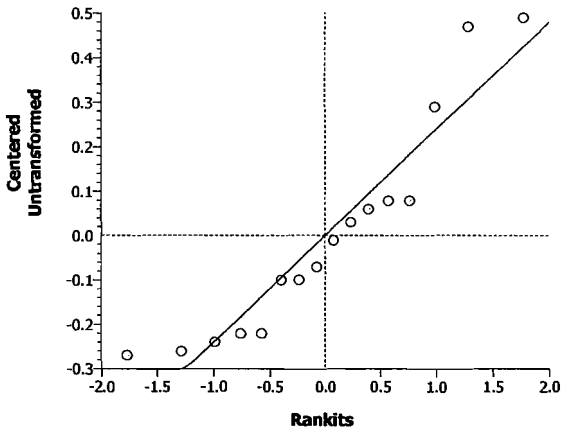
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-002	8	1.81000	1.54000	2.30000	0.27692				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-002	1.57000	1.87000	1.71000	1.54000	2.10000	2.30000	1.84000	1.55000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.16416	8.88539	0.84621	Equal Variances
Distribution	Shapiro-Wilk W	0.96181	0.84420	0.66288	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.297025	0.297025	1	2.90	0.11072	Non-Significant Effect
Error	1.434375	0.1024554	14			
Total	1.73140019	0.3994804	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-009	1.70267	1.76131	0.0554	0.28189	Non-Significant Effect

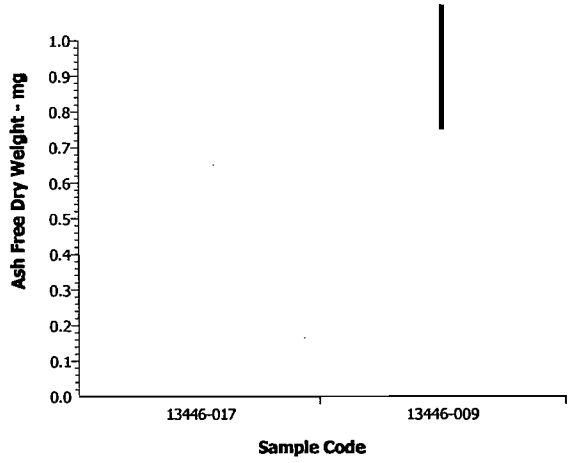
Data Summary

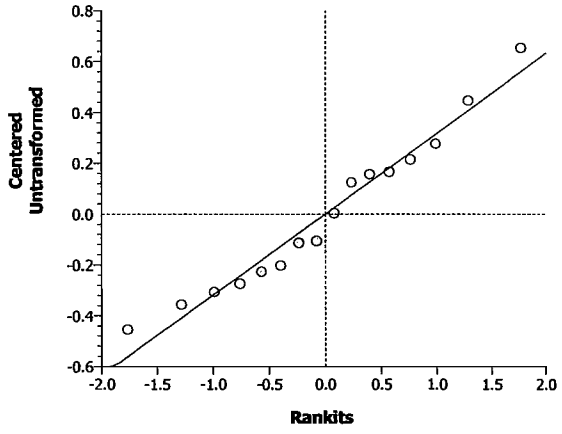
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-009	8	1.20375	0.75000	1.65000	0.30771				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:28 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.06025	8.88539	0.94046	Equal Variances
Distribution	Shapiro-Wilk W	0.91023	0.84420	0.11754	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0144143	0.0144143	1	0.31	0.58431	Non-Significant Effect
Error	0.6434112	0.0459579	14			
Total	0.65782551	0.0603722	15			

Group Comparisons

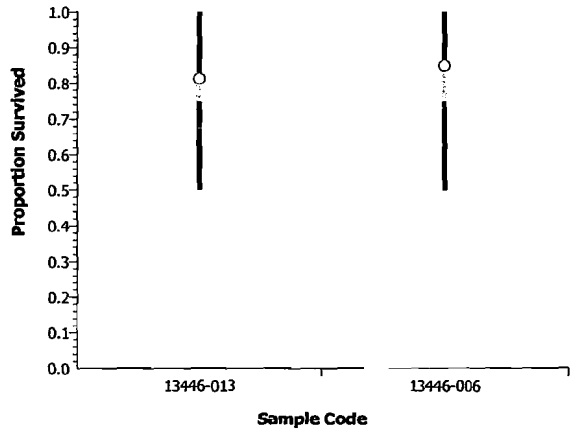
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-006	-0.5600	1.76131	0.7078	0.18879	Non-Significant Effect

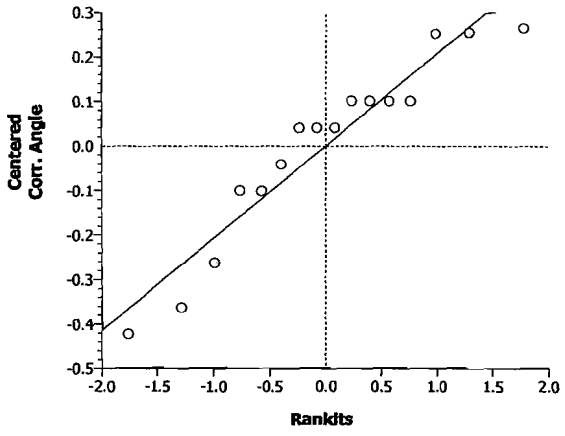
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-006	8	0.85000	0.50000	1.00000	0.16036	1.20838	0.78540	1.46147	0.21749

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	6.33720	8.88539	0.02635	Equal Variances
Distribution	Shapiro-Wilk W	0.89295	0.84420	0.06199	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0115563	0.0115563	1	0.11	0.74556	Non-Significant Effect
Error	1.476888	0.105492	14			
Total	1.48844384	0.1170482	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-010	-0.331	1.76131	0.6272	0.28603	Non-Significant Effect

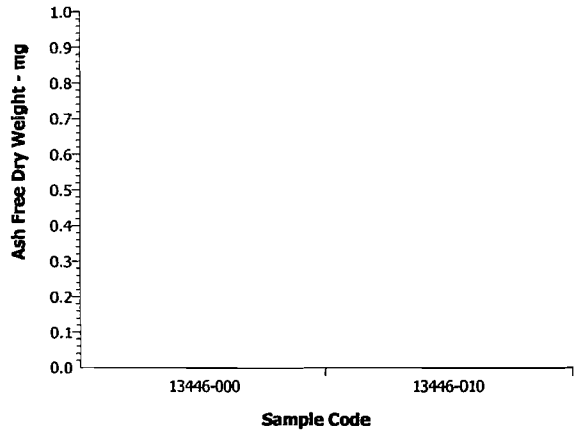
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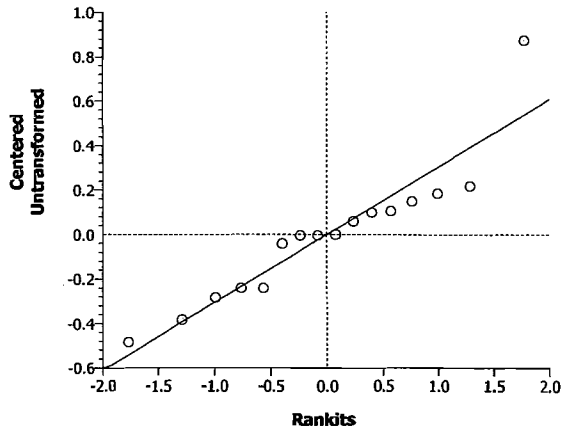
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-010	8	1.84500	1.36000	2.72000	0.42688				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.71210	8.88539	0.05814	Equal Variances
Distribution	Shapiro-Wilk W	0.89537	0.84420	0.06785	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.616225	0.616225	1	7.50	0.01598	Significant Effect
Error	1.149775	0.0821268	14			
Total	1.76600003	0.6983518	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-006	2.73922	1.76131	0.0080	0.25238	Significant Effect

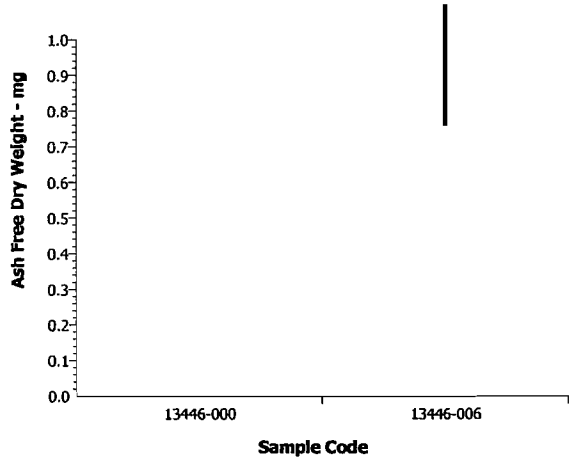
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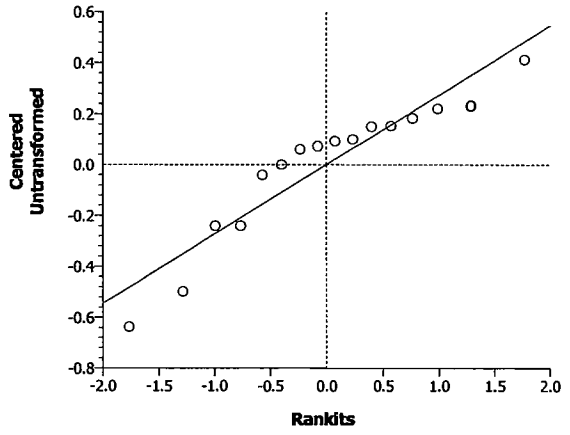
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-006	8	1.39875	0.76000	1.81000	0.36810				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.97141	8.88539	0.17406	Equal Variances
Distribution	Shapiro-Wilk W	0.89272	0.84420	0.06148	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0011156	0.0011156	1	0.05	0.83435	Non-Significant Effect
Error	0.3440588	0.0245756	14			
Total	0.34517438	0.0256912	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-007	-0.2131	1.76131	0.5828	0.13806	Non-Significant Effect

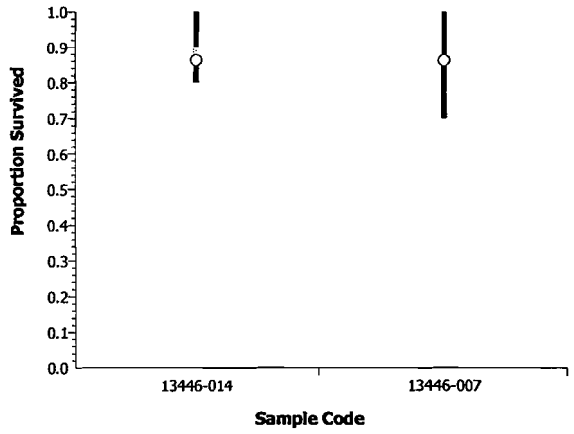
Data Summary

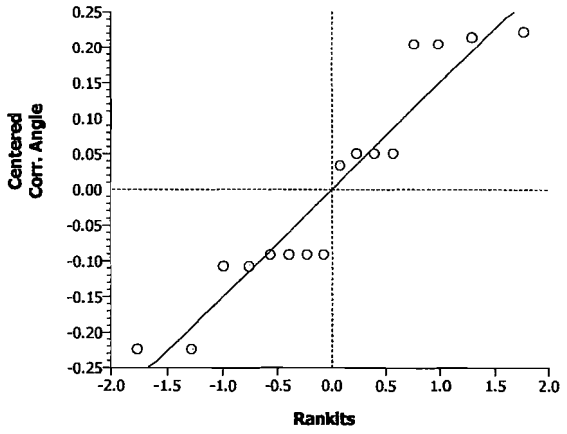
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-007	8	0.86250	0.70000	1.00000	0.13025	1.21517	0.99116	1.43676	0.19177

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.44682	8.88539	0.12478	Equal Variances
Distribution	Shapiro-Wilk W	0.96651	0.84420	0.74481	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.458056	1.458056	1	20.68	0.00046	Significant Effect
Error	0.9871375	0.0705098	14			
Total	2.44519383	1.5285662	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-011	-4.5474	1.76131	0.9998	0.23385	Non-Significant Effect

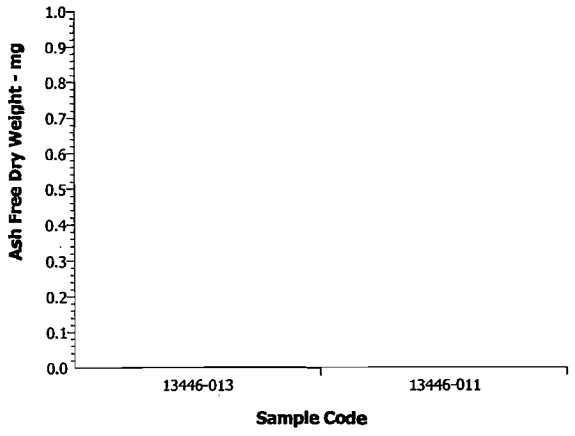
Data Summary

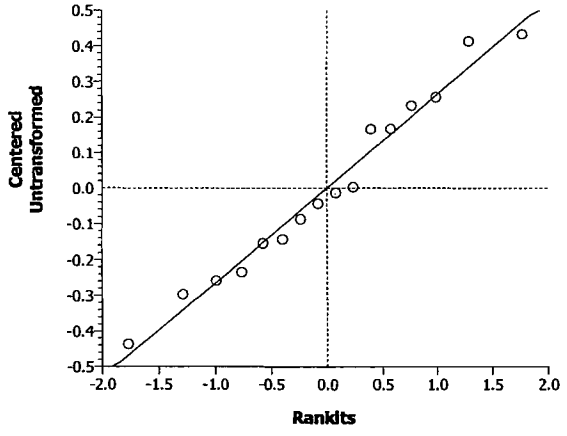
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-011	8	2.02750	1.59000	2.46000	0.33062				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:22 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.66863	8.88539	0.21866	Equal Variances
Distribution	Shapiro-Wilk W	0.95790	0.84420	0.59571	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0774104	0.0774104	1	1.75	0.20716	Non-Significant Effect
Error	0.6195213	0.0442515	14			
Total	0.6969317	0.1216619	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-004	1.32262	1.76131	0.1036	0.18526	Non-Significant Effect

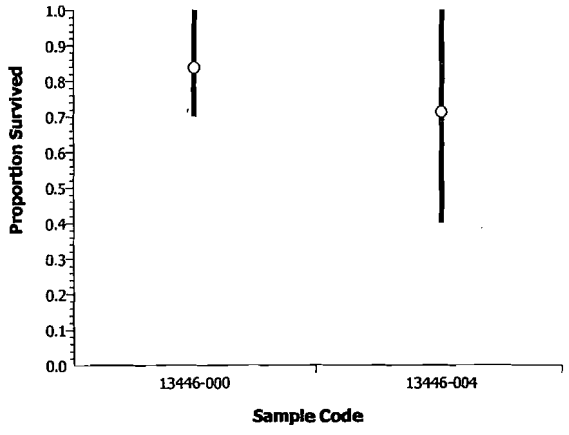
Data Summary

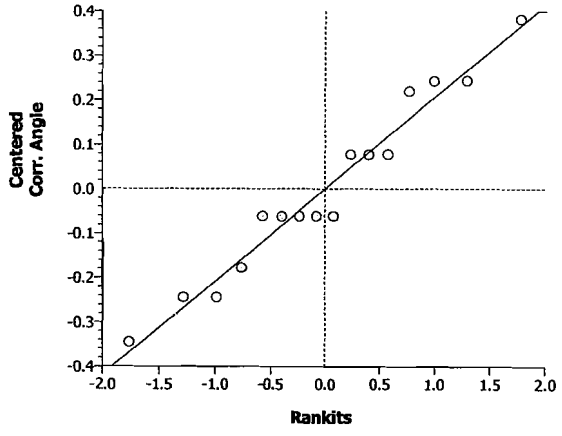
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	0.83750	0.70000	1.00000	0.10607	1.16887	0.99116	1.41202	0.15532
13446-004	8	0.71250	0.40000	1.00000	0.21671	1.02975	0.68472	1.41202	0.25373

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	0.80000	0.80000	1.00000	1.00000	0.80000	0.70000	0.80000	0.80000		
13446-004	0.80000	0.80000	0.50000	1.00000	0.90000	0.50000	0.80000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.55524	8.88539	0.03773	Equal Variances
Distribution	Shapiro-Wilk W	0.91812	0.84420	0.15684	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2047563	0.2047563	1	2.17	0.16263	Non-Significant Effect
Error	1.319488	0.0942491	14			
Total	1.52424385	0.2990054	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-018	1.47394	1.76131	0.0813	0.27036	Non-Significant Effect

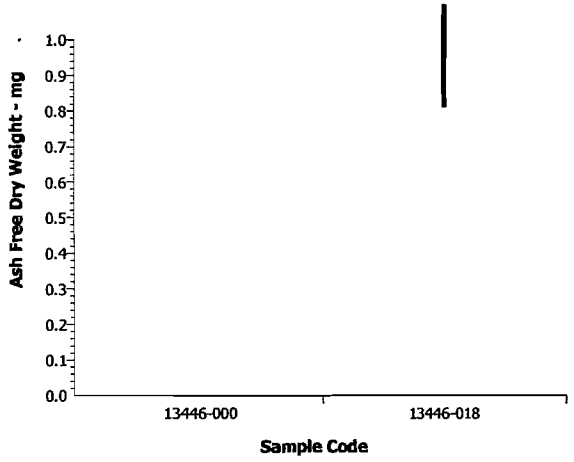
Data Summary

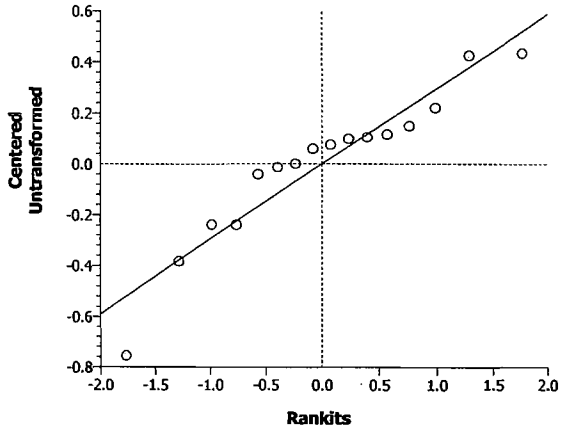
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-018	8	1.56500	0.81000	2.00000	0.39968				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.83847	8.88539	0.44028	Equal Variances
Distribution	Shapiro-Wilk W	0.94076	0.84420	0.34828	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	2.584056	2.584056	1	30.62	0.00007	Significant Effect
Error	1.181338	0.0843813	14			
Total	3.76539397	2.6684376	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-011	-5.5339	1.76131	1.0000	0.25582	Non-Significant Effect

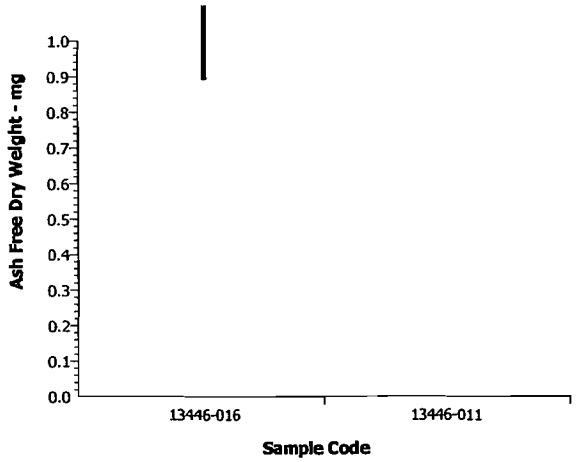
Data Summary

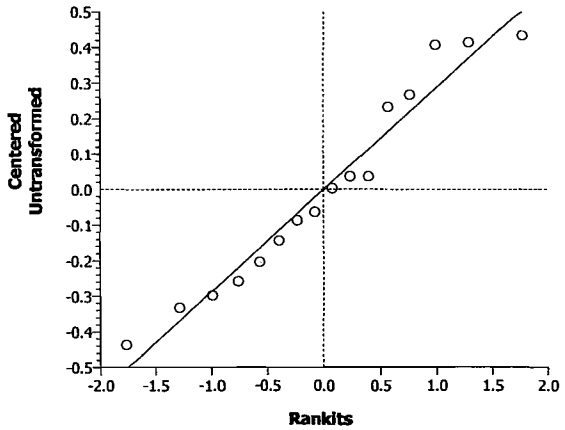
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-011	8	2.02750	1.59000	2.46000	0.33062				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.36267	8.88539	0.69337	Equal Variances
Distribution	Shapiro-Wilk W	0.85428	0.84420	0.01460	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0144628	0.0144628	1	0.27	0.60858	Non-Significant Effect
Error	0.7378542	0.0527039	14			
Total	0.75231704	0.0671667	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-011	-0.5238	1.76131	0.6957	0.20217	Non-Significant Effect

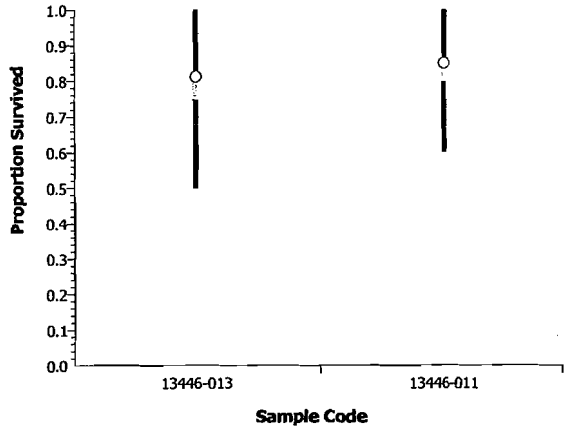
Data Summary

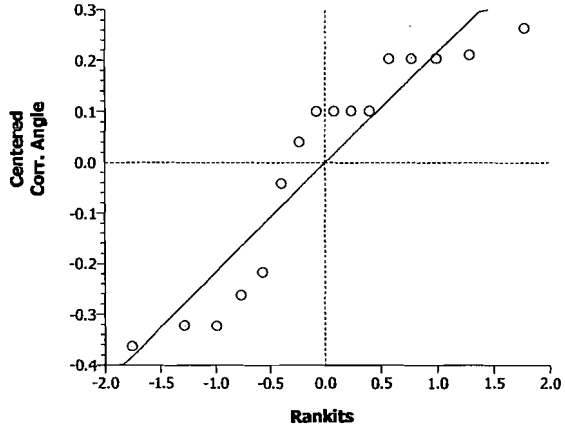
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	0.81250	0.50000	1.00000	0.17269	1.14835	0.78540	1.41202	0.21122
13446-011	8	0.85000	0.60000	1.00000	0.18516	1.20848	0.88608	1.41946	0.24656

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	0.90000	0.80000	0.90000	1.00000	0.90000	0.60000	0.90000	0.50000		
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.06763	8.88539	0.35872	Equal Variances
Distribution	Shapiro-Wilk W	0.98066	0.84420	0.94945	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.288225	1.288225	1	29.21	0.00009	Significant Effect
Error	0.6174751	0.0441054	14			
Total	1.90570003	1.3323303	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-016	5.40443	1.76131	0.0000	0.18495	Significant Effect

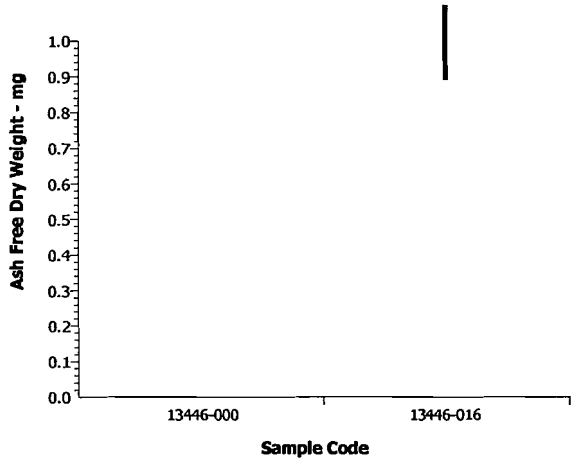
Data Summary

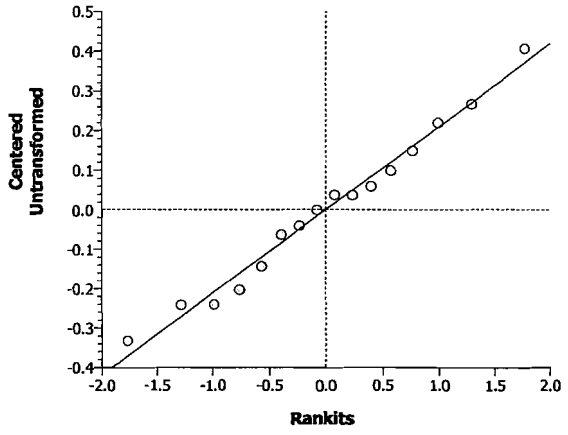
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-016	8	1.22375	0.89000	1.63000	0.24383				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.46141	8.88539	0.62912	Equal Variances
Distribution	Shapiro-Wilk W	0.93860	0.84420	0.32370	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.8556252	0.8556252	1	6.36	0.02441	Significant Effect
Error	1.88335	0.134525	14			
Total	2.73897517	0.9901502	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-011	-2.522	1.76131	0.9878	0.32300	Non-Significant Effect

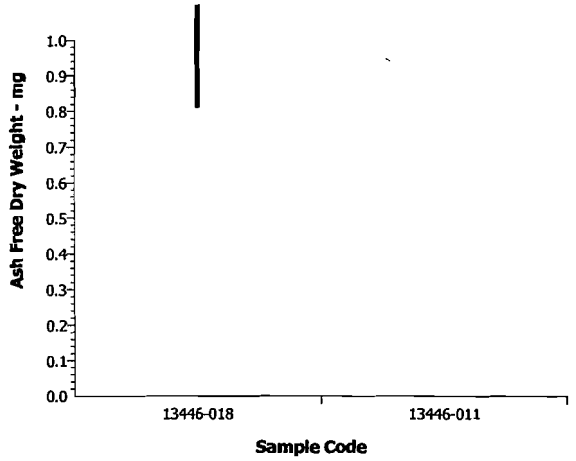
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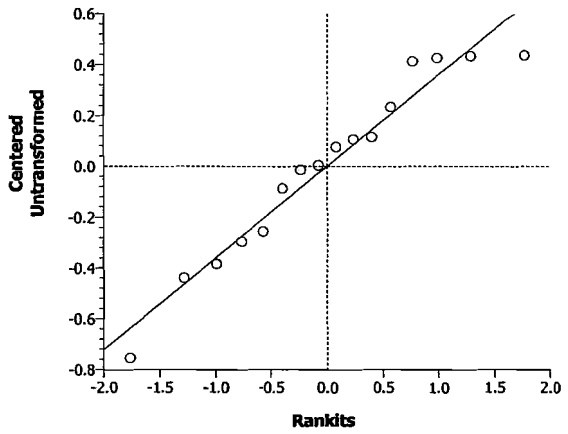
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-011	8	2.02750	1.59000	2.46000	0.33062				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.93987	8.88539	0.17814	Equal Variances
Distribution	Shapiro-Wilk W	0.94470	0.84420	0.39687	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3510562	0.3510562	1	8.19	0.01257	Significant Effect
Error	0.6003875	0.0428848	14			
Total	0.95144376	0.3939411	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-001	-2.8611	1.76131	0.9937	0.18237	Non-Significant Effect

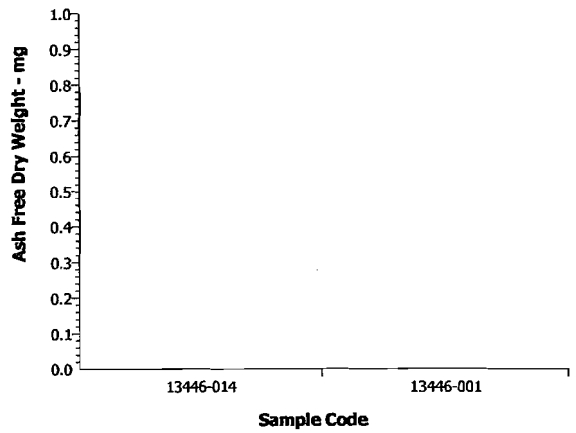
Data Summary

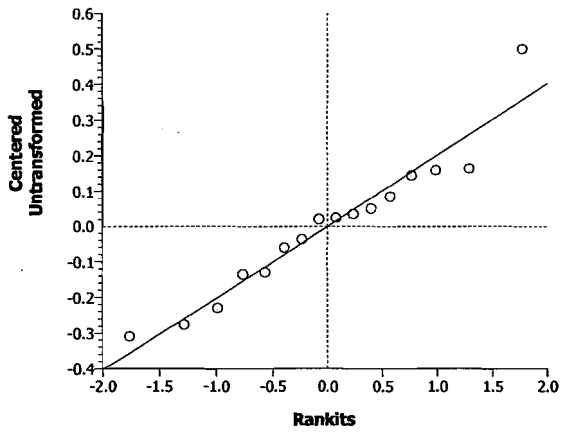
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	1.39000	1.08000	1.89000	0.25298				
13446-001	8	1.68625	1.41000	1.85000	0.14755				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.56914	8.88539	0.56675	Equal Variances
Distribution	Shapiro-Wilk W	0.78445	0.84420	0.00105	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0559129	0.0559129	1	1.80	0.20113	Non-Significant Effect
Error	0.4350024	0.0310716	14			
Total	0.49091522	0.0869845	15			

Group Comparisons

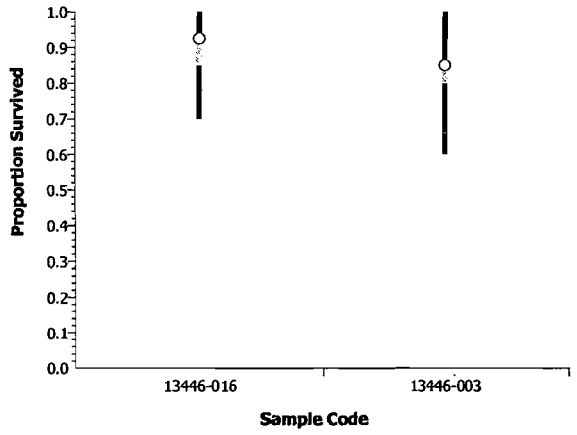
Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-016		13446-003	47		0.0652	4	Non-Significant Effect

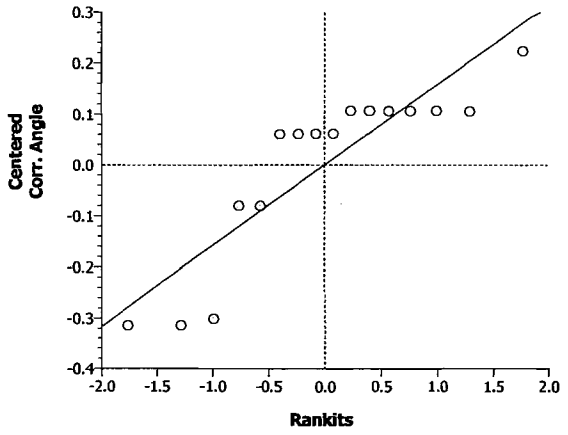
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	0.92500	0.70000	1.00000	0.13887	1.30680	0.99116	1.41202	0.19482
13446-003	8	0.85000	0.60000	1.00000	0.11952	1.18857	0.88608	1.41202	0.15553

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.00000	0.70000	0.70000	1.00000	1.00000	1.00000	1.00000	1.00000		
13446-003	0.60000	0.90000	1.00000	0.80000	0.90000	0.90000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	18.31187	8.88539	0.00106	Unequal Variances
Distribution	Shapiro-Wilk W	0.85334	0.84420	0.01409	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1341922	0.1341922	1	4.19	0.06002	Non-Significant Effect
Error	0.4487967	0.0320569	14			
Total	0.58298881	0.1662491	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-011	2.04599	1.89458	0.0400	0.16961	Significant Effect

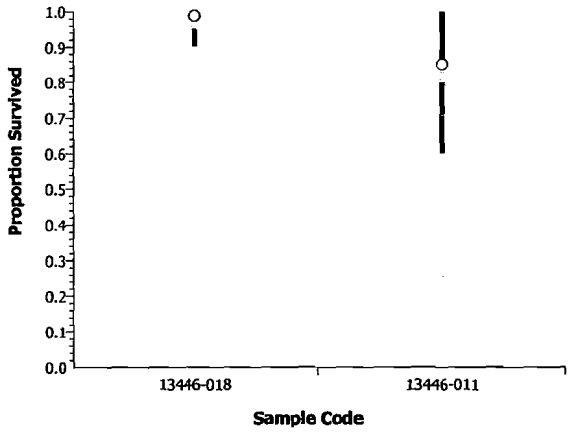
Data Summary

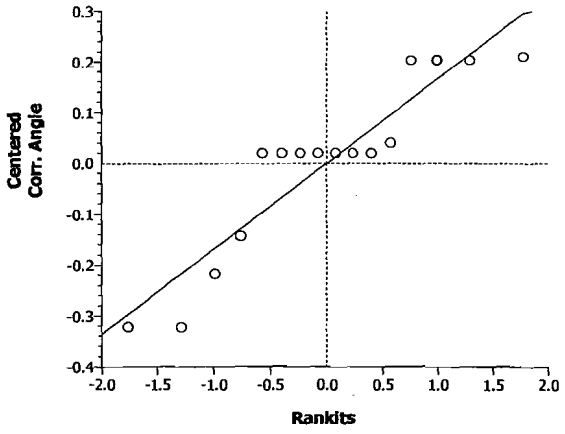
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-011	8	0.85000	0.60000	1.00000	0.18516	1.20848	0.88608	1.41946	0.24656

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.74318	8.88539	0.48074	Equal Variances
Distribution	Shapiro-Wilk W	0.85121	0.84420	0.01301	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5041	0.5041	1	2.02	0.17745	Non-Significant Effect
Error	3.4992	0.2499429	14			
Total	4.00330007	0.7540428	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-010	1.42016	1.76131	0.0887	0.44028	Non-Significant Effect

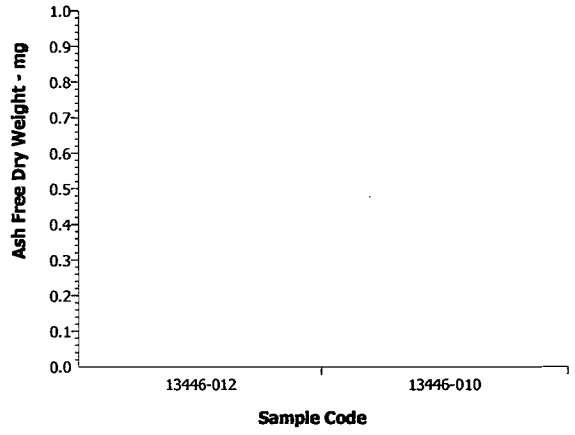
Data Summary

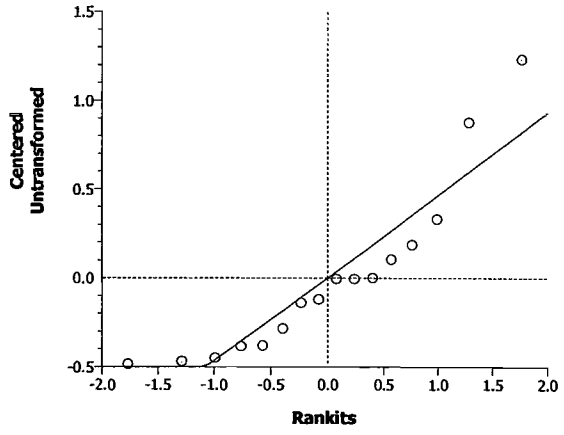
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	2.20000	1.73000	3.43000	0.56361				
13446-010	8	1.84500	1.36000	2.72000	0.42688				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	2.53000	2.08000	1.75000	1.82000	2.20000	3.43000	2.06000	1.73000		
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.27899	8.88539	0.29936	Equal Variances
Distribution	Shapiro-Wilk W	0.94700	0.84420	0.42770	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1225	0.1225	1	1.26	0.28114	Non-Significant Effect
Error	1.364675	0.0974768	14			
Total	1.48717504	0.2199768	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-016		13446-006	-1.1210	1.76131	0.8594	0.27495	Non-Significant Effect

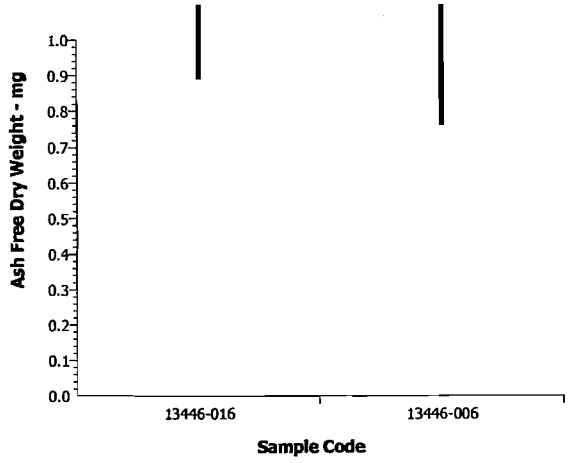
Data Summary

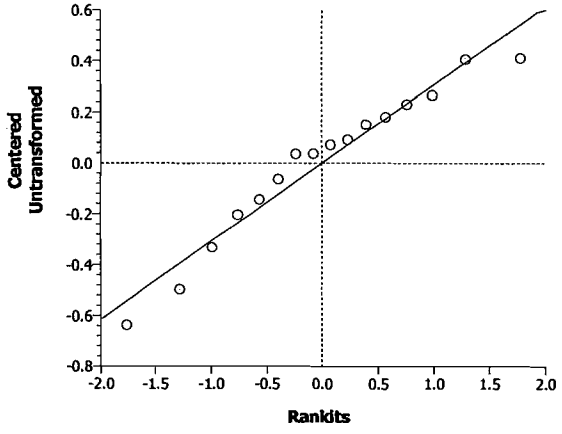
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-016	8	1.22375	0.89000	1.63000	0.24383				
13446-006	8	1.39875	0.76000	1.81000	0.36810				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-016	1.02000	1.26000	1.63000	1.16000	1.26000	1.49000	0.89000	1.08000		
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.80128	8.88539	0.09911	Equal Variances
Distribution	Shapiro-Wilk W	0.96824	0.84420	0.77465	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.2232563	0.2232563	1	3.23	0.09371	Non-Significant Effect
Error	0.9664376	0.0690313	14			
Total	1.18969388	0.2922876	15			

Group Comparisons

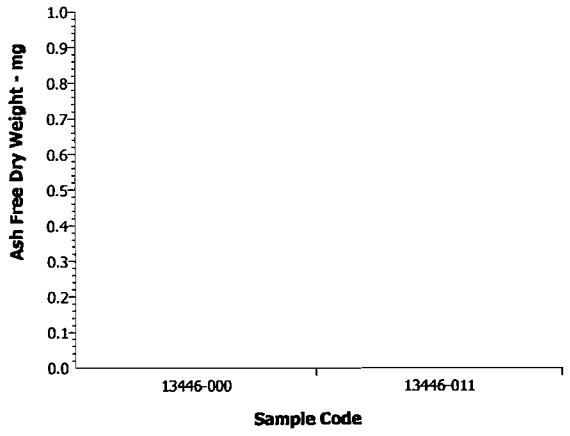
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-011	-1.7984	1.76131	0.9531	0.23138	Non-Significant Effect

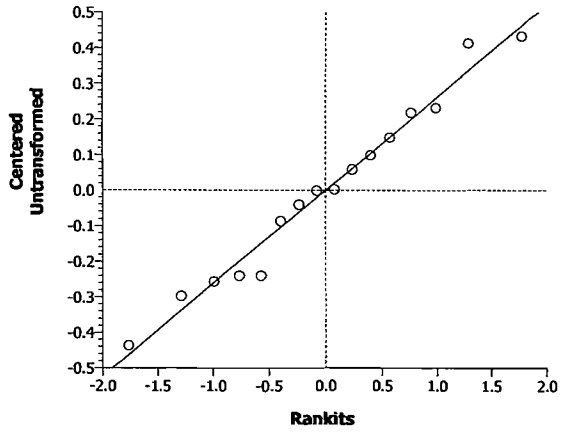
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-011	8	2.02750	1.59000	2.46000	0.33062				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-011	1.59000	1.94000	1.73000	2.46000	1.77000	2.26000	2.03000	2.44000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	5.16930	8.88539	0.04570	Equal Variances
Distribution	Shapiro-Wilk W	0.91859	0.84420	0.15951	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0360932	0.0360932	1	1.64	0.22050	Non-Significant Effect
Error	0.3072236	0.0219445	14			
Total	0.34331681	0.0580378	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-007	1.28248	1.76131	0.1103	0.13046	Non-Significant Effect

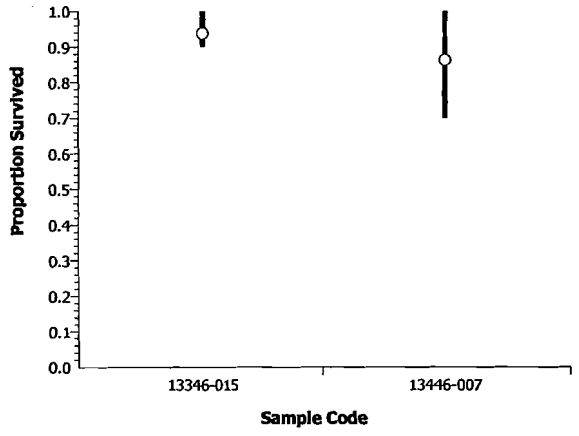
Data Summary

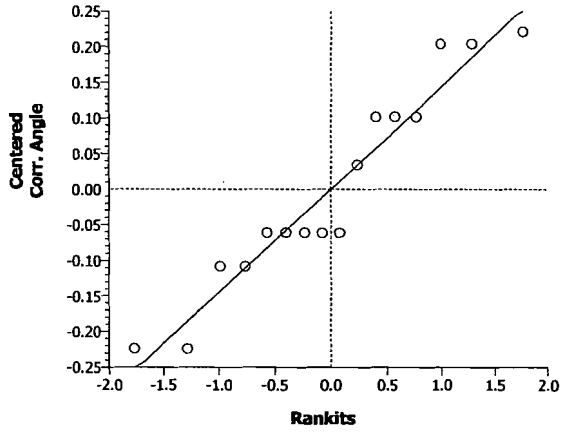
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	0.93750	0.90000	1.00000	0.05175	1.31016	1.24905	1.41202	0.08435
13446-007	8	0.86250	0.70000	1.00000	0.13025	1.21517	0.99116	1.43676	0.19177

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	0.90000	1.00000	0.90000	1.00000	0.90000	1.00000	0.90000	0.90000		
13446-007	1.00000	0.80000	0.70000	1.00000	0.90000	0.70000	1.00000	0.80000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.32089	8.88539	0.72278	Equal Variances
Distribution	Shapiro-Wilk W	0.92574	0.84420	0.20645	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0441	0.0441	1	1.75	0.20761	Non-Significant Effect
Error	0.3536751	0.0252625	14			
Total	0.39777512	0.0693625	15			

Group Comparisons

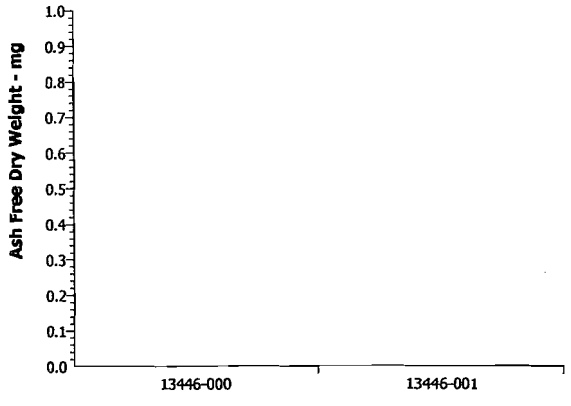
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-001	1.32124	1.76131	0.1038	0.13997	Non-Significant Effect

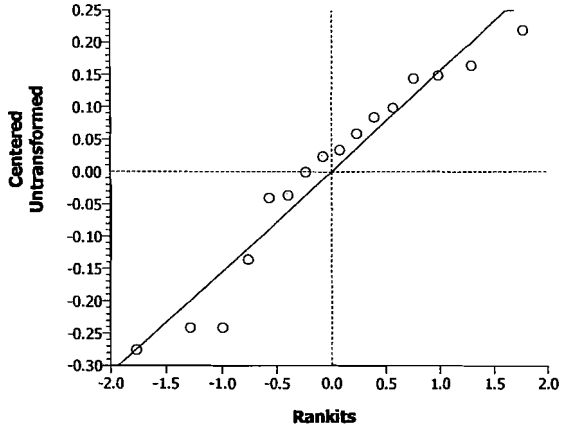
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-001	8	1.68625	1.41000	1.85000	0.14755				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-001	1.41000	1.71000	1.55000	1.85000	1.65000	1.83000	1.77000	1.72000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	11.51301	8.88539	0.00458	Unequal Variances
Distribution	Shapiro-Wilk W	0.80399	0.84420	0.00220	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.145567	1.145567	1	55.15	0.00000	Significant Effect
Error	0.290795	0.0207711	14			
Total	1.43636182	1.1663379	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-018		13446-010	63.5		0.0001	4	Significant Effect

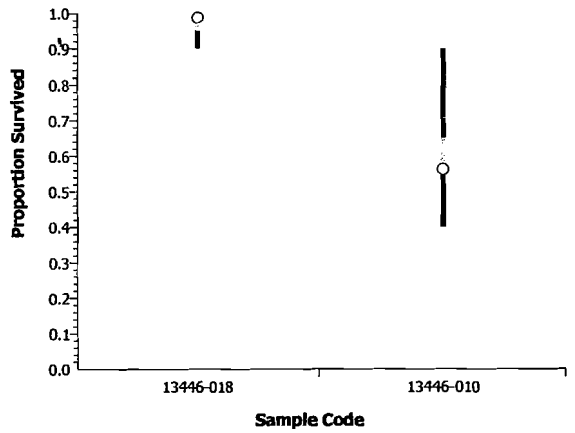
Data Summary

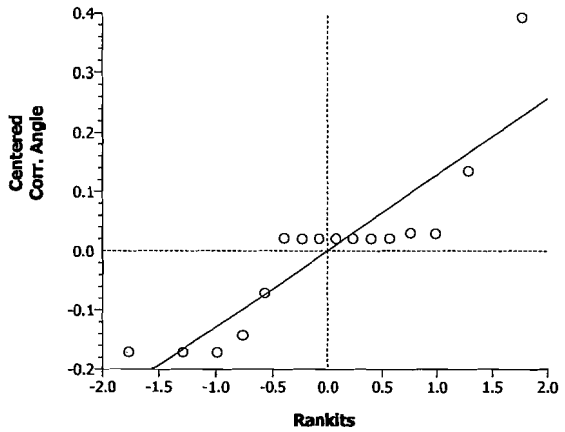
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	0.98750	0.90000	1.00000	0.03536	1.39164	1.24905	1.41202	0.05762
13446-010	8	0.56250	0.40000	0.90000	0.17678	0.85649	0.68472	1.24905	0.19551

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.00000	1.00000	1.00000	0.90000	1.00000	1.00000	1.00000	1.00000		
13446-010	0.50000	0.40000	0.90000	0.60000	0.60000	0.40000	0.70000	0.40000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.11984	8.88539	0.88514	Equal Variances
Distribution	Shapiro-Wilk W	0.94847	0.84420	0.44826	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0321354	0.0321354	1	0.64	0.43674	Non-Significant Effect
Error	0.7019106	0.0501365	14			
Total	0.73404596	0.0822719	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-006	-0.8006	1.76131	0.7816	0.19719	Non-Significant Effect

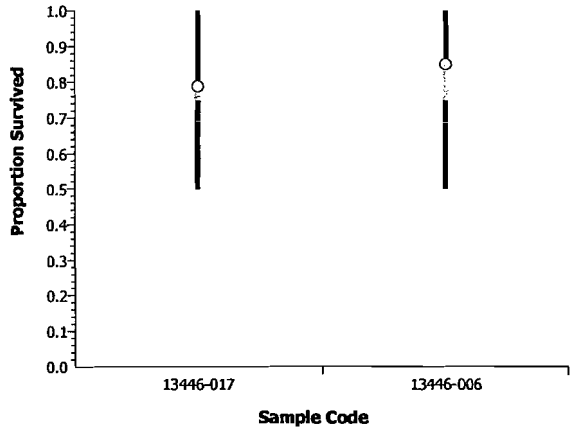
Data Summary

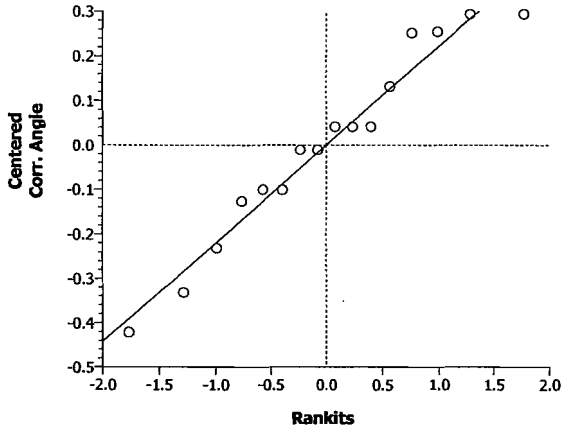
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	0.78750	0.50000	1.00000	0.18077	1.11875	0.78540	1.41202	0.23015
13446-006	8	0.85000	0.50000	1.00000	0.16036	1.20838	0.78540	1.46147	0.21749

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.00000	1.00000	0.50000	0.90000	0.70000	0.60000	0.80000	0.80000		
13446-006	0.90000	1.00000	1.00000	0.80000	0.50000	0.80000	0.90000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.14076	8.88539	0.86653	Equal Variances
Distribution	Shapiro-Wilk W	0.96461	0.84420	0.71166	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.3136001	0.3136001	1	1.83	0.19710	Non-Significant Effect
Error	2.3938	0.1709857	14			
Total	2.70740011	0.4845858	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-010	-1.3543	1.76131	0.9014	0.36415	Non-Significant Effect

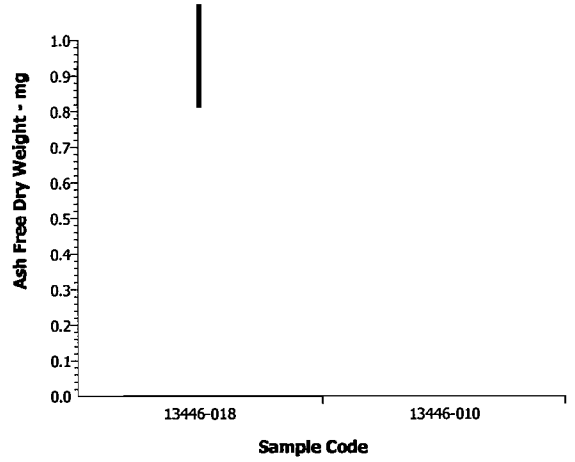
Data Summary

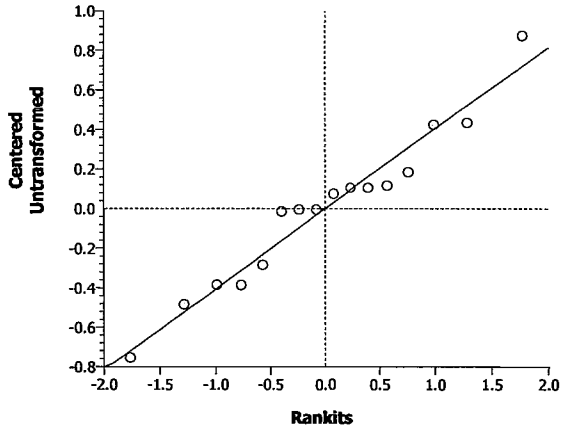
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-010	8	1.84500	1.36000	2.72000	0.42688				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-010	1.95000	2.03000	1.36000	1.84000	1.84000	2.72000	1.46000	1.56000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.68712	8.88539	0.50663	Equal Variances
Distribution	Shapiro-Wilk W	0.94828	0.84420	0.44561	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.5220062	0.5220062	1	4.10	0.06230	Non-Significant Effect
Error	1.780988	0.1272134	14			
Total	2.30299366	0.6492195	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-018		13446-009	2.02568	1.76131	0.0311	0.31410	Significant Effect

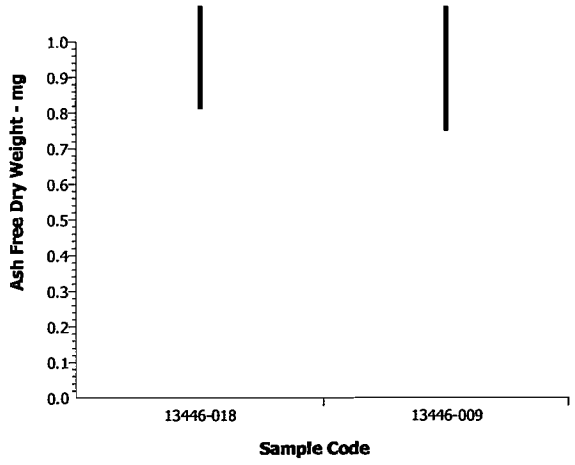
Data Summary

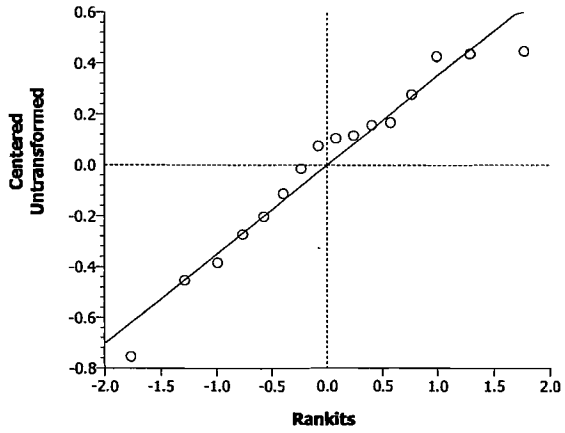
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-018	8	1.56500	0.81000	2.00000	0.39968				
13446-009	8	1.20375	0.75000	1.65000	0.30771				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-018	1.99000	0.81000	1.64000	2.00000	1.18000	1.68000	1.55000	1.67000		
13446-009	1.37000	1.65000	1.36000	0.93000	1.09000	1.00000	1.48000	0.75000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.27271	8.88539	0.07448	Equal Variances
Distribution	Shapiro-Wilk W	0.91980	0.84420	0.16671	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0025000	0.0025000	1	0.03	0.86519	Non-Significant Effect
Error	1.170475	0.0836054	14			
Total	1.17297501	0.0861054	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-006	0.17292	1.76131	0.4326	0.25464	Non-Significant Effect

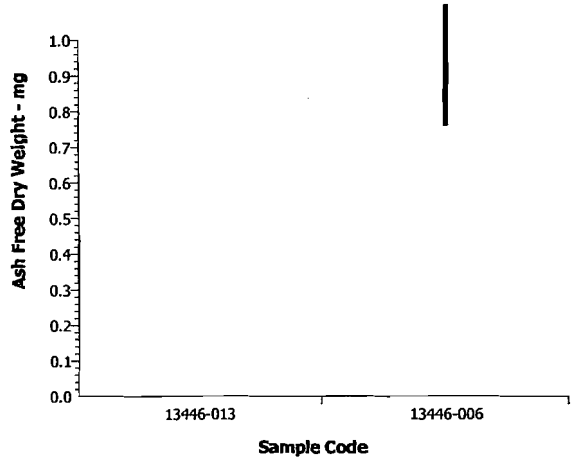
Data Summary

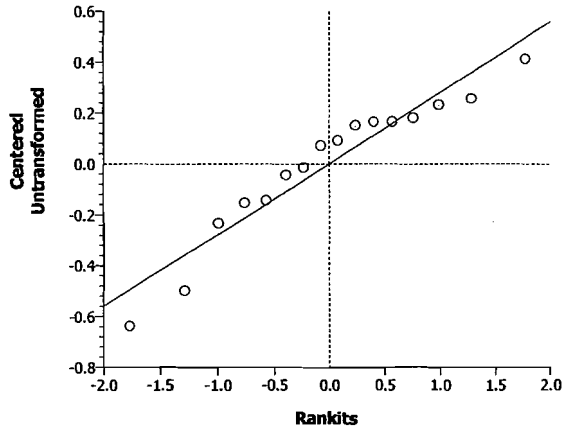
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-006	8	1.39875	0.76000	1.81000	0.36810				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-006	1.47000	0.76000	0.90000	1.55000	1.49000	1.58000	1.63000	1.81000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:26 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.22567	8.88539	0.31311	Equal Variances
Distribution	Shapiro-Wilk W	0.95230	0.84420	0.50523	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.6440062	0.6440062	1	13.89	0.00226	Significant Effect
Error	0.6492875	0.0463777	14			
Total	1.29329371	0.6903839	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-014	3.72641	1.76131	0.0011	0.18965	Significant Effect

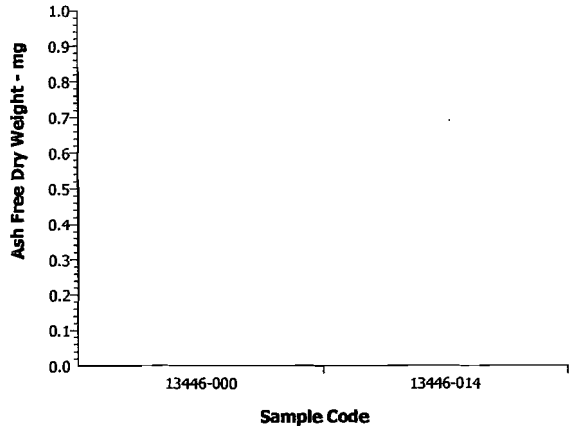
Data Summary

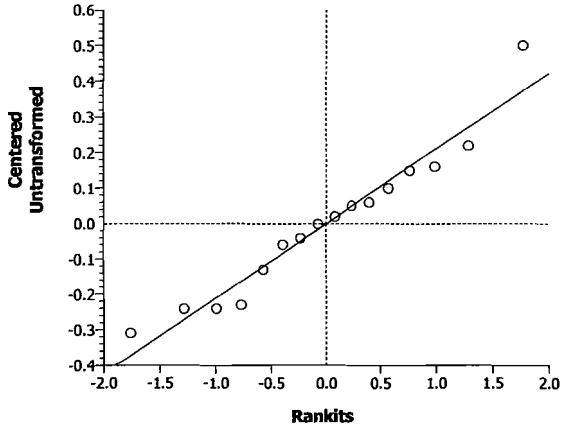
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-014	8	1.39000	1.08000	1.89000	0.25298				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-014	1.41000	1.33000	1.44000	1.16000	1.26000	1.08000	1.55000	1.89000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — EnviroSystems, Inc.

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	3.05983	8.88539	0.16325	Equal Variances
Distribution	Shapiro-Wilk W	0.86947	0.84420	0.02579	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0039267	0.0039267	1	0.10	0.75962	Non-Significant Effect
Error	0.5646359	0.0403311	14			
Total	0.56856252	0.0442578	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-012		13446-011	0.31203	1.76131	0.3798	0.17686	Non-Significant Effect

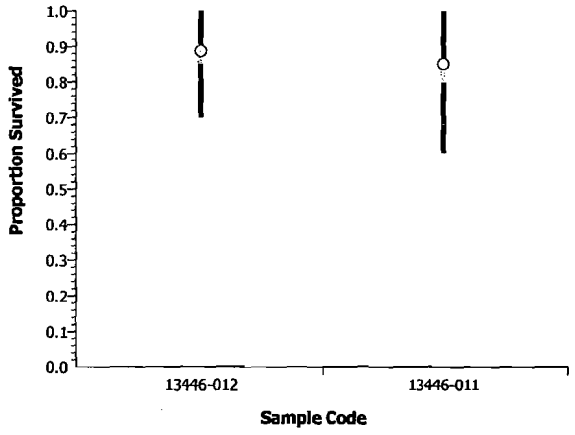
Data Summary

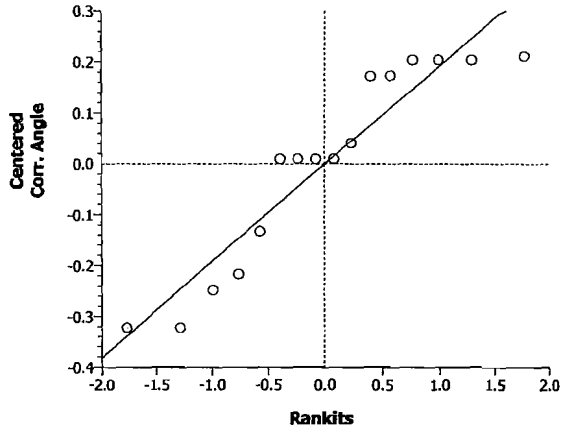
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-012	8	0.88750	0.70000	1.00000	0.09910	1.23982	0.99116	1.41202	0.14096
13446-011	8	0.85000	0.60000	1.00000	0.18516	1.20848	0.88608	1.41946	0.24656

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-012	0.70000	0.90000	1.00000	0.90000	0.90000	0.90000	0.80000	1.00000		
13446-011	1.00000	1.00000	1.00000	0.90000	1.00000	0.70000	0.60000	0.60000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:32 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	4.65010	8.88539	0.06015	Equal Variances
Distribution	Shapiro-Wilk W	0.87603	0.84420	0.03296	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0175563	0.0175563	1	0.13	0.72800	Non-Significant Effect
Error	1.952037	0.1394313	14			
Total	1.96959370	0.1569875	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13346-015		13446-007	-0.3548	1.76131	0.6360	0.32884	Non-Significant Effect

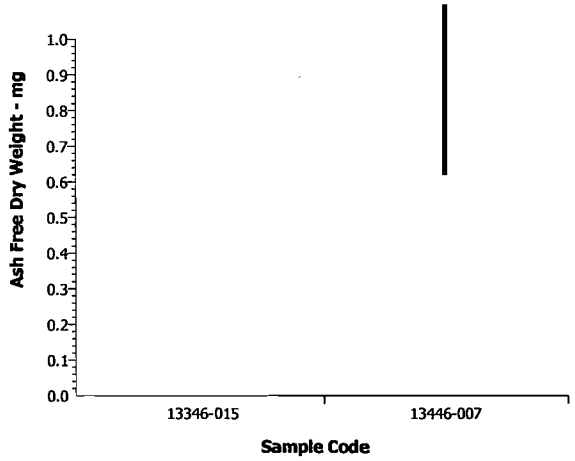
Data Summary

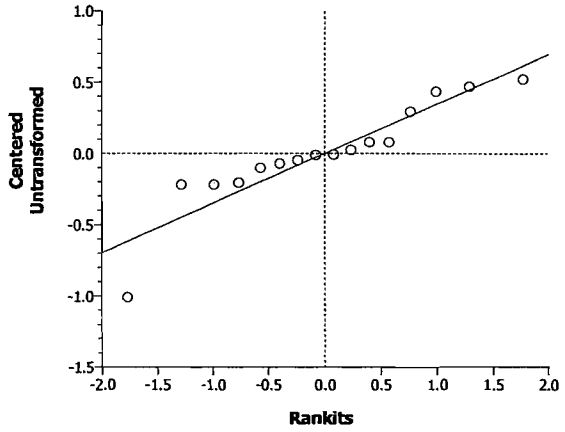
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13346-015	8	1.56125	1.34000	2.03000	0.22216				
13446-007	8	1.62750	0.62000	2.15000	0.47907				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13346-015	1.46000	1.34000	1.64000	2.03000	1.49000	1.55000	1.64000	1.34000		
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:29 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Unequal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	9.82797	8.88539	0.00741	Unequal Variances
Distribution	Shapiro-Wilk W	0.92080	0.84420	0.17284	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.4641	1.4641	1	8.53	0.01119	Significant Effect
Error	2.403675	0.171691	14			
Total	3.86777461	1.6357910	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-013		13446-003	-2.9202	1.85955	0.9904	0.38526	Non-Significant Effect

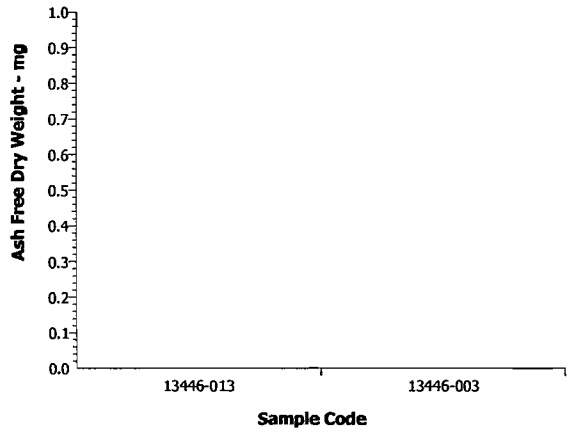
Data Summary

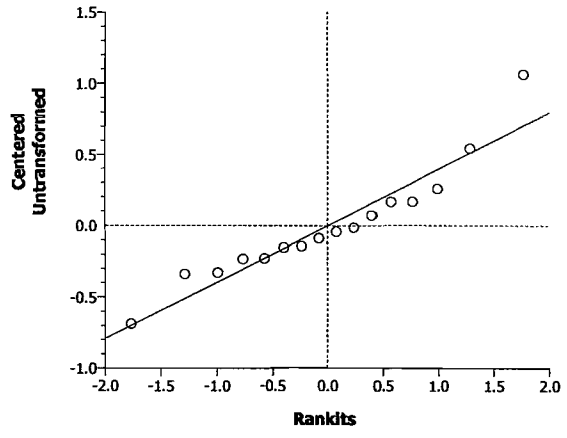
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-013	8	1.42375	1.19000	1.68000	0.17808				
13446-003	8	2.02875	1.34000	3.09000	0.55827				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-013	1.38000	1.41000	1.28000	1.27000	1.59000	1.59000	1.19000	1.68000		
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Mann-Whitney U	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	1.65751	8.88539	0.52098	Equal Variances
Distribution	Shapiro-Wilk W	0.76825	0.84420	0.00056	Non-normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0494684	0.0494684	1	3.01	0.10480	Non-Significant Effect
Error	0.2302307	0.0164451	14			
Total	0.27969906	0.0659134	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	Ties	Decision(0.05)
13446-014		13446-002	50.5		0.0249	4	Significant Effect

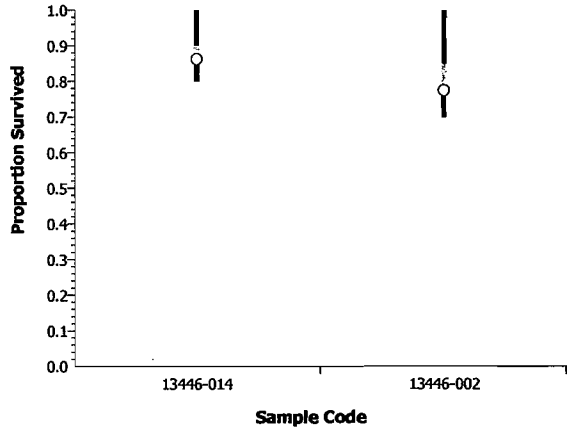
Data Summary

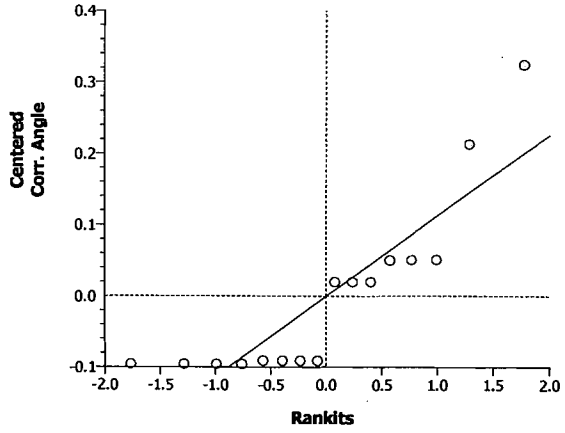
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-002	8	0.77500	0.70000	1.00000	0.10351	1.08726	0.99116	1.41202	0.14323

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-002	0.70000	0.70000	0.80000	0.80000	0.70000	0.70000	0.80000	1.00000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:30 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.82753	8.88539	0.19367	Equal Variances
Distribution	Shapiro-Wilk W	0.92240	0.84420	0.18308	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	1.221025	1.221025	1	5.79	0.03052	Significant Effect
Error	2.953275	0.2109482	14			
Total	4.1742996	1.4319731	15			

Group Comparisons

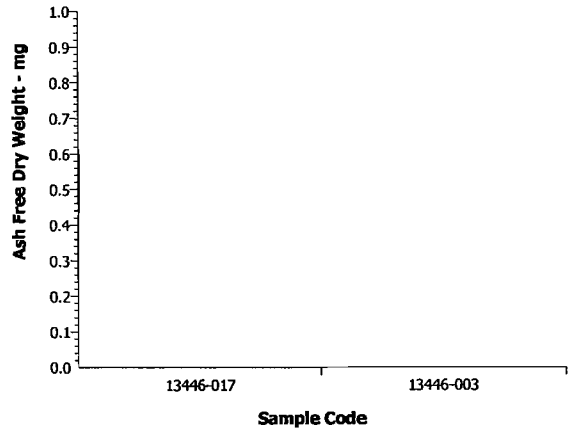
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-017		13446-003	-2.4059	1.76131	0.9847	0.40448	Non-Significant Effect

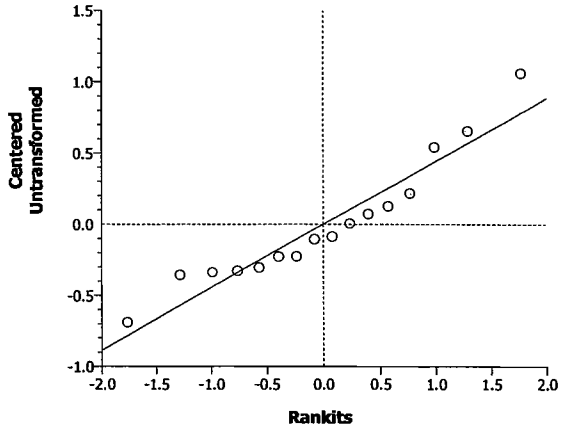
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-017	8	1.47625	1.12000	2.13000	0.33200				
13446-003	8	2.02875	1.34000	3.09000	0.55827				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-017	1.25000	1.37000	2.13000	1.48000	1.60000	1.17000	1.12000	1.69000		
13446-003	3.09000	2.57000	1.34000	1.70000	1.94000	1.80000	1.69000	2.10000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Proportion Survived	Comparison	11-9871-1008	11-9871-1008	28 Jul-05 4:31 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Angular (Corrected)				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	2.89437	8.88539	0.18423	Equal Variances
Distribution	Shapiro-Wilk W	0.90994	0.84420	0.11631	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.0568252	0.0568252	1	2.36	0.14693	Non-Significant Effect
Error	0.3373848	0.0240989	14			
Total	0.39420994	0.0809241	15			

Group Comparisons

Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-014		13446-001	1.53558	1.76131	0.0735	0.13671	Non-Significant Effect

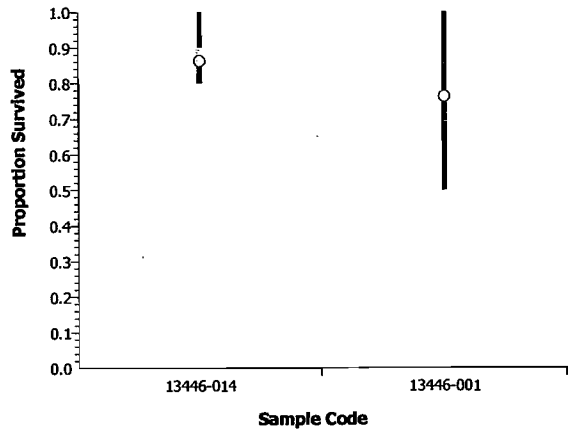
Data Summary

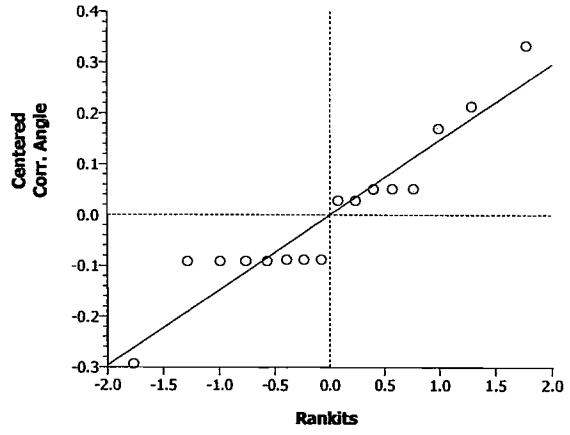
		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-014	8	0.86250	0.80000	1.00000	0.07440	1.19847	1.10715	1.41202	0.11125
13446-001	8	0.76250	0.50000	1.00000	0.15059	1.07928	0.78540	1.41202	0.18927

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-014	0.80000	0.80000	0.80000	0.90000	0.90000	1.00000	0.90000	0.80000		
13446-001	1.00000	0.70000	0.50000	0.70000	0.70000	0.80000	0.80000	0.90000		

Graphics





CETIS Analysis Detail

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
Ash Free Dry Weight - mg	Comparison	11-9871-1008	11-9871-1008	29 Jul-05 4:27 PM	CETISv1.026

Method	Alt H	Data Transform	Z	NOEL	LOEL	Toxic Units	ChV	MSDp
Equal Variance t	C > T	Untransformed				N/A		

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P Level	Decision(0.01)
Variances	Variance Ratio	7.98137	8.88539	0.01369	Equal Variances
Distribution	Shapiro-Wilk W	0.87720	0.84420	0.03444	Normal Distribution

ANOVA Table

Source	Sum of Squares	Mean Square	DF	F Statistic	P Level	Decision(0.05)
Between	0.1072562	0.1072562	1	0.83	0.37753	Non-Significant Effect
Error	1.807838	0.1291313	14			
Total	1.91509385	0.2363875	15			

Group Comparisons

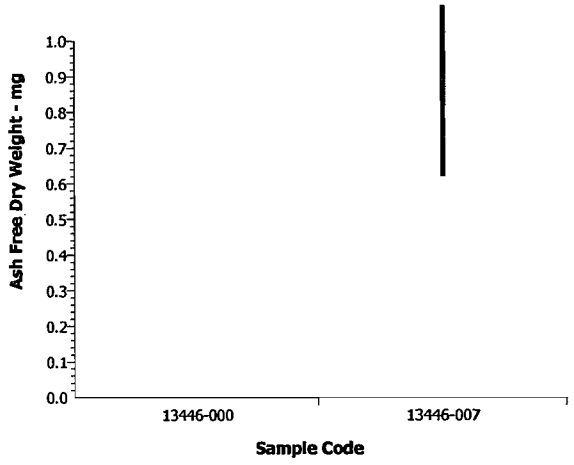
Sample	vs	Sample	Statistic	Critical	P Level	MSD	Decision(0.05)
13446-000		13446-007	0.91137	1.76131	0.1888	0.31646	Non-Significant Effect

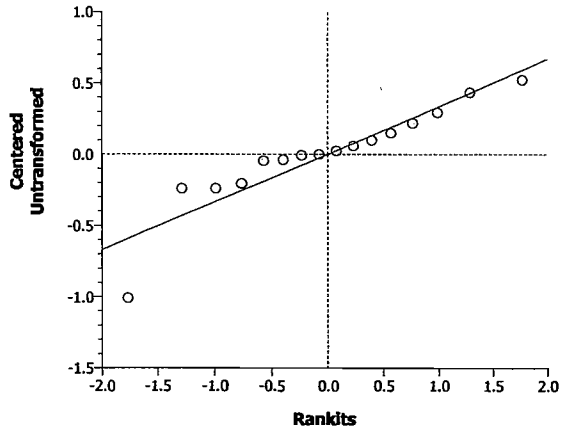
Data Summary		Original Data				Transformed Data			
Sample Code	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
13446-000	8	1.79125	1.55000	2.01000	0.16957				
13446-007	8	1.62750	0.62000	2.15000	0.47907				

Data Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
13446-000	1.85000	2.01000	1.55000	1.75000	1.94000	1.55000	1.79000	1.89000		
13446-007	0.62000	1.58000	2.15000	1.42000	1.65000	2.06000	1.62000	1.92000		

Graphics





CETIS Test Summary

Report Date: 19 Oct-05 3:31 PM
Link: 11-9871-1008

Chironomus 21-d Survival and Growth Sediment Test — **EnviroSystems, Inc.**

Test No:	14-9969-0677	**Test Type:**	Survival-AF Growth	**Duration:**	20d 0h
Start Date:	07 Jul-05 12:00 PM	**Protocol:**	EPA/600/R-99/064 (2000)	**Species:**	Chironomus tentans
Ending Date:	27 Jul-05 12:00 PM	**Dil Water:**	Natural Surface Water	**Source:**	Aquatic Biosystems, CO
Setup Date:	07 Jul-05 12:00 PM	**Brine:**	Not Applicable		

Sample No:	15-2759-3311	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 04:00 PM	**Code:**	13346-015	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 20h (4 °C)	**Station:**	T05BL-004 - 13446-015 - Pond Refere		
Sample No:	06-2942-1705	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	06 Jul-05 12:00 PM	**Code:**	13446-000	**Project:**	Ecologcal Risk Assessment
Receive Date:	06 Jul-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	24h	**Station:**	Lab Control		
Sample No:	03-5574-1378	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 11:00 AM	**Code:**	13446-001	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	16d 1h (4 °C)	**Station:**	T05PA-001 - 13446-001 - Pond		
Sample No:	06-2098-4840	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 12:30 PM	**Code:**	13446-002	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 23h (4 °C)	**Station:**	T05PD-002 - 13446-002 - Pond		
Sample No:	02-7805-4131	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:00 PM	**Code:**	13446-003	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 21h (4 °C)	**Station:**	T05BR-001 - 13446-003 - Riverine		
Sample No:	07-4822-9464	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 03:30 PM	**Code:**	13446-004	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 20h (4 °C)	**Station:**	T05PA-003 - 13446-004 - Pond		
Sample No:	09-5133-3778	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-006	**Project:**	Ecologcal Risk Assessment
Receive Date:	21 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 17h (4 °C)	**Station:**	T05BR-003 - 13446-006 - Riverine		
Sample No:	14-6644-4706	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	21 Jun-05 06:30 PM	**Code:**	13446-007	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 17h (4 °C)	**Station:**	T05PF-004 - 13446-007 - Pond		
Sample No:	11-7563-0513	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 11:00 AM	**Code:**	13446-009	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 1h (4 °C)	**Station:**	T05BR-005 - 13446-009 - Riverine		
Sample No:	10-0504-8146	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	22 Jun-05 10:45 AM	**Code:**	13446-010	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	15d 1h (4 °C)	**Station:**	T05BR-006 - 13446-010 - Riverine		
Sample No:	09-8620-6643	**Material:**	Freshwater Sedment	**Client:**	BBL Sciences, Inc.
Sample Date:	23 Jun-05 01:20 PM	**Code:**	13446-011	**Project:**	Ecologcal Risk Assessment
Receive Date:	24 Jun-05 12:00 PM	**Source:**	Blackstone River		
Sample Age:	13d 22h (4 °C)	**Station:**	T05BR-011 - 13446-011 - Riverine		

Appendix M

Historical Aerial Photographs and USEPA Site Analysis Summary


1941


1951


1956


1960


1963


1970


1976


1983


1983


1992


2000


1941


1951


1956


1960


1970


1975


1983


1985


1991


1992


1995


2000

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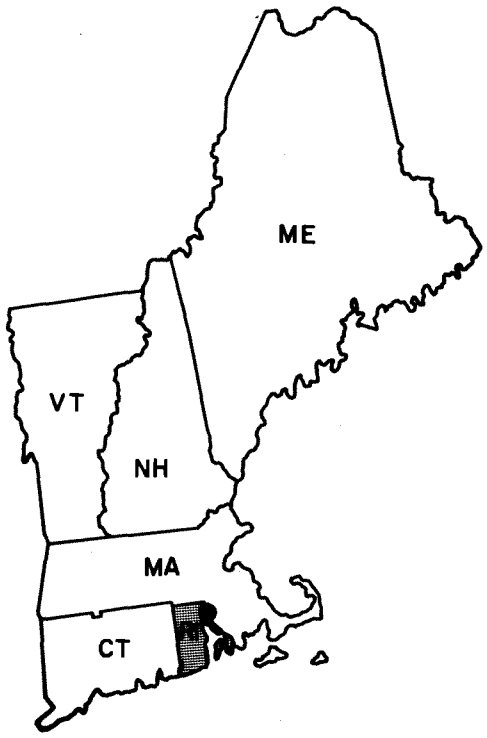
Research and Development

EPA

Site Analysis Peterson-Puritan, Inc. Study Area Lincoln/Cumberland, Rhode Island

Volume 1

EPA Region 1
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EPIC VOL 1

RETURN DOCUMENT TO:

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Site Analysis
Peterson-Puritan, Inc. Study Area
Lincoln/Cumberland, Rhode Island

Volume 1

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ABSTRACT

An analysis of historical aerial photography of the Peterson-Puritan, Inc. study area has been conducted to provide general information on the study area and to identify past disposal practices and possible sources of contamination detected in several municipal supply wells in the study area. General information on the study area consists of a land use analysis, historical river course change analysis, wetlands analysis, and a fracture trace analysis.

The study area is composed of five distinct operational areas: a section of an industrial park (seven facilities analyzed), an extraction area, a landfill, a disposal area, and a reported quarry/landfill. Features of interest detected in the study area include numerous drums, a possible spill, a liquid-filled pit, standing liquid, ground staining, debris, and discolored liquid (possibly leachate).

The Environmental Protection Agency's (EPA) Environmental Photographic Interpretation Center in Warrenton, Virginia, a field station of the Environmental Monitoring Systems Laboratory in Las Vegas, Nevada, performed this study at the request of EPA Region 1. This analysis covers the period between 1941 and 1986; the report was completed in March 1987.

CONTENTS

Volume 1	Page
Abstract	iii
Introduction	1
Methodology	3
Land Use	5
Aerial Photo Site Analysis:	
Summary	6
October 8, 1941	10
October 26, 1951	10
May 1, 1956	12
May 5, 1960	14
September 2, 1963	16
March 9, 1970	17
May 5, 1976	21
September 25, 1981	23
July 23, 1983	29
June 19, 1986	32
Fracture Trace Analysis	37
Historical River Changes	41
Wetland Analysis	43
References	46

TABLES

1.	Industrial Park Area	6
2.	Extraction Area, Landfill, Disposal Area, and Dexter Quarry/Landfill	8

FIGURES

Volume 2		Page
1.	Location Map.	1
2.	Land Use.	2
	Aerial Photos:	
3.	October 8, 1941	3
4.	October 26, 1951.	4
5.	May 1, 1956	5
6.	May 5, 1960	6
7.	September 2, 1963	7
8.	March 9, 1970	8
9.	May 5, 1976	9
10A.-10C.	September 25, 1981	10
10D.-10E.	September 25, 1981	11
10F.-10H.	September 25, 1981	12
11.	July 23, 1983	13
12A.	June 19, 1986	14
12B.	June 19, 1986	15
12C.	June 19, 1986	16
13.	Fracture Trace Analysis	17
14.	Historical River Changes	18
	Wetlands Analysis:	
15.	October 26, 1951	19
16.	May 5, 1976	20

INTRODUCTION

The Peterson-Puritan, Incorporated study area is an approximate 82-hectare (205-acre) area straddling the Blackstone River in the towns of Lincoln and Cumberland, Rhode Island. Figure 1 depicts the study area location, keyed to a U.S. Geological Survey (USGS) 1:24,000 scale topographic quadrangle map. Volatile organic contamination was detected in several municipal supply wells located in the study area.[1]

This analysis of historical aerial photography was conducted to provide general information on the study area and to identify past disposal practices and possible sources of contamination. Aerial photography of the study area was obtained to represent the period from 1941 to 1986.[2] Historical black and white photography for the years 1941, 1951, 1956, 1960, 1963, 1970, and 1976, and color photography for 1981, 1983, and 1986 were used for this analysis. The current color mission was flown on June 19, 1986. This report is divided into two volumes: Volume 1 includes the complete text and Volume 2 includes all figures.

In the Aerial Photo Site Analysis section of this report, the study area is divided into and referred to as five operational areas: an industrial park, an extraction area, a landfill (J.M. Mills Landfill[1]), a disposal area, and the Dexter Quarry/Landfill.[1] These five areas are outlined on Figures 3-9 and 11. Industries which are currently located in the section of the industrial park analyzed include Roger Williams Food, Incorporated (Area 2); Lonza, Incorporated (Area 3); Okonite Cable Company (Area 4); Peterson-Puritan, Incorporated (Area 5); and Healthtex Incorporated (Area 7).[1]

[1]Collateral information supplied by EPA Region 1.

[2]A complete listing of all maps and photography used for this report can be found in the References section.

The names of the industries located in Areas 1 and 6 were not determined. Throughout this analysis, the individual industrial sites will be referred to by area number only. Significant activities beyond the five operational areas are also discussed. Significant features are annotated and discussed the first year they are visible. They are generally not discussed further unless significant change is evident. Site boundaries or areas used in the analysis were determined from observations made from the aerial photography and do not denote legal property lines or ownership.

General information provided for the study area includes a land use analysis for the year 1983 (Figure 2), updated with 1986 photography. Surface drainage has been delineated on 1951 and 1983 photographs (Figures 4 and 11). A fracture trace analysis has been keyed to a 1951 photo (Figure 13). Historical changes in the Blackstone River course have also been plotted on a 1983 photo (Figure 14). A wetlands analysis was performed for the years 1951 and 1976 (Figures 15 and 16).

The Environmental Protection Agency's (EPA) Environmental Photographic Interpretation Center in Warrenton, Virginia, a field station of the Environmental Monitoring Systems Laboratory in Las Vegas, Nevada, performed this study at the request of EPA Region 1. This report was completed in March 1987.

METHODOLOGY

A search of government and commercial aerial photographic sources was undertaken to obtain the best photography available of the site spanning the desired time frame. A listing of all maps and photography used for this report can be found in the References section.

The analysis was performed by stereoscopically viewing transparencies, backlit on a light table. By observing the site three-dimensionally, and at various magnifications, the analyst could search for objects, features, or signatures associated with different environmental conditions. The term "signature" refers to a combination of characteristics (such as color, tone, shadow, texture and size) which indicate a specific object or condition, even though the object itself is not identifiable from the photography.

Prints were made from coverages which reveal significant changes in the study area. Findings are annotated on overlays to these prints, or to maps of the study area, and full descriptions are provided in the accompanying text. The resolution quality of the original, transparent photography used by the analyst is degraded on the prints due to factors inherent in the printing process. Therefore, some objects or features identified from the original film and described in the text may not be clearly discernible, or even visible, on the photographic prints presented in this report.

It should be noted that site boundaries or areas used in this analysis were determined by observations made from the aerial photography and do not denote legal property lines or ownership.

In this report, a distinction is made between probable and possible identifications. Probable is used when a limited number of discernible signatures allows the analyst to be reasonably sure of a particular identification. Possible is used when few signatures are discernible, and the analyst can only infer an identification.

LAND USE

Figure 2 depicts the various types of land uses within an approximate 2-kilometer (1.2-mile) radius of the Peterson-Puritan, Incorporated study area. The land use classification system used in this report was adapted from a United States Department of the Interior publication (Reference 1) on land use identification using remote sensor data. Minor modifications to this system were required to provide an accurate representation of land usage in the area.

The study area is mostly composed of industrial (13), residential (11), and extraction (75) land use areas. The analysis was performed from photography dated July 23, 1983 and updated with June 19, 1986 photography. The following categories are used in this analysis:

11 - Residential
12 - Commercial
13 - Industrial
14 - Transportation/Communication
16 - Mixed Urban or Built-Up Land
17 - Other Urban or Built-Up Land
18 - Institutional/Governmental
19 - Recreational
21 - Cropland and Pasture
24 - Farmsteads and Farm-Related Buildings
41 - Deciduous Forest
51 - Waterways, Streams and Canals
52 - Natural Lakes and Ponds
53 - Man-Made Reservoirs and Impoundments
61 - Forested Wetlands
62 - Non-Forested Wetlands
72 - Beaches and River Banks
75 - Extraction

AERIAL PHOTO SITE ANALYSIS

SUMMARY

Table 1 is a summary of significant features or activities observed in the Industri Park section of the study area. Table 2 summarizes significant features or activiti observed in the Extraction (EXT) Area, Landfill (LF), Disposal Area, and Dext Quarry/Landfill sections of the study area.

Features are listed in the year in which they are first noted and are not furth listed unless significant change occurs.

TABLE 1
INDUSTRIAL PARK AREA SUMMARY

Year	1	2	3	4	5	6	7
1941	NP	NP	NP	NP	Small bldg.; prob EX	Bldg.	Poss FA
1951	NP	NP	NP	Airfield	EX; poss stained parking lot	SL; poss liquid discharge structure	Faint acces road to poss FA
1956	2 construc-tion areas; bldg.	NP	2 tanks; small bldg; 2 EX	Construction of bldg. in former air-field; MM	EX enlarged; MM; poss stacked M	SL not visible	NC
1960	DKM; bldg. in former construction area; 2 tanks; poss GST	Small bldgs.; circular GS	EX graded	Bldg; MM not visible	EX enlarged; MM and poss stacked M not visible	NC	Acce road to non-deve lope area
1963	Stacked M; 2 tanks; no poss GST	NC	2 tanks removed	Containers in GST area; poss tank	New bldg. and GA in former EX; 9 tanks; GS	NC	NC

TABLE 1 (Cont'd)

r	1	2	3	4	5	6	7
0	3 tanks	Large bldg.; prob GST; poss stained area; prob pipe	Bldg. on former GA; 4 tanks	4 tanks; drainage pathway and poss tank not visible	Bldg. enlarged over GA; 23 tanks; prob pipe; drainage pathway to SL; GST	Poss discharge structure not visible	Bldg.; poss F with MM, SL
5	2 tanks not visible; 2 tanks added	Bldg. enlarged; GST surrounds 3-4 tanks	Bldg. enlarged	Additional containers	28 tanks; bldg. enlarged; prob pipes; drainage pathway, SL, GST not visible	NC	Bldg. enlarged stacke M; DA filled and RE
1	Cylindrical objects replace stacked M	GST, 3-4 tanks not visible; SL; MM; DB; tarpaulin-covered IM; tank	Approx. 1,278 drums; SL in EX; second EX; 26 tanks	Numerous spools; 6 tanks; GST; SL	Approx. 110 drums; 48 tanks; bldg. enlarged; crates; drainage channel and pathway; SL; compactor; SL in place of small bldg.	NC	Pipeli to river; crates tires; traile
3	4 tanks	MM not visible	Drums not discernible; stacked M; 11 prob tanks; pit with SL in EX	SL, one tank and GST not discernible; 5 tanks	Drums not discernible; stacked M; no SL, drainage channel or pathway visible; 28 tanks; other tanks probably remain	NC	Pipe-line, tires not discer ible; stacke M
5	No cylindrical objects visible	15 drums; tires; 2 pipelines to river	Approx. 1,167 drums; DKM in EX; GST, poss spill area borders 7 tanks, small bldg.; liquid-filled pit in EX larger; 16 tanks	6 tanks and wet GST again visible; 25 drums	1,150 drums; 43 tanks; GST; 2 empty revetted areas; drainage channel	NC	Pipe-line; tires

TABLE 2
EXTRACTION AREA, LANDFILL, DISPOSAL AREA
AND DEXTER QUARRY/LANDFILL SUMMARY

Year	EXT Area	LF	Disposal Area	Dexter Quarry/ LF
1941	Poss EXT activity	NP	NP	No photo coverage
1951	EXT activity; DA/prob EXT with SL	NP	NP	Poss FA; DK area with linear channels; IM
1956	Activity expanded; SL not visible	NP	NP	FA with DB; linear channels, IM not visible
1960	Activity expanded	NP	NP	FA expanded
1963	Activity expanded; poss SL	NP	NP	GST on expanded FA
1970	Activity expanded; poss linear scrapes replace poss SL	LF built between railroad bed and shifted main river channel; disturbed, scraped areas with SL; 3 TR; DB	MM; 2 pits with SL; bermed area with DB	FA occupies entire quarry; working fill face; GST not visible
1976	Activity expanded; poss linear scrapes not visible	LF built up; TR; DA filled; 2 pools SL	Less MM; filling at bermed area; 2 liquid-filled EX; 2 pits not visible; 3 pools SL; MM, DB adjacent to racetrack	Quarry filled to grade

TABLE 2 (Cont'd)

Year	EXT Area	LF	Disposal Area	Dexter Quarry/ LF
1981	Activity expanded; poss construction rubble	Portion of LF REV; 2 pools SL overgrown; working fill face; DB; 60 drums; rusted tank; discolored liquid	More EX with SL; 2 shalloow EX with discolored liquid; cylindrical DB in 2 liquid-filled EX; tires; filling not visible at former bermed area; bull-dozer; DB. Next to racetrack: DB; 285 drums; gatehouse to LF	No photo coverage
1983	Activity slightly expanded	Most of LF inactive; groups of DB at southern end; drums, rusted tank not visible	New liquid-filled EX; cylindrical DB, tires not discernible; bulldozer not present. Next to racetrack: large amount of DB; drums not discernible; gatehouse not visible	REV
1986	NC	DB at southern end; approx. 65 drums; 5 rusted tanks; large pool of poss LE	EX combined into one large, liquid-filled EX; small amount of DB. Next to racetrack: At least 500 drums in DB; red GST near drum group; tires; crates; 4 tanks	No photo coverage

OCTOBER 8, 1941 (FIGURE 3)

NOTE: Only partial, monoscopic film coverage was available.

Industrial Park[1]

Area 5: Probable excavation (EXC) and a small building (B) present.

Area 6: Building (not annotated) present.

Area 7: A possible former fill area which contains little vegetation appears associated with this area.

Extraction (EXT) Area

Possible extraction activity (sand/gravel mining) along the riverbank.

Other

A light-toned disturbed area (DA) borders a flooded area which is separated from the main channel of the Blackstone River by an elevated railroad bed. The Blackstone River is dammed at the southern end of the study area. Two additional disturbed areas and an extraction area are present west of the river.

OCTOBER 26, 1951 (FIGURE 4)

Industrial Park

Area 4: Area is being used as an airfield.

Area 5: A portion of the area has been excavated. A possibly stained parking lot (not annotated) borders a small building at the southwest corner of Area 5.

Area 6: Standing liquid (SL) may have drained from the large building in Area 6. The wellhouse covering the Martin Street well[2] is visible

[1]Each of the five operational areas, and the individual areas of the Industrial Park, are discussed only as they become active.

[2]Collateral information supplied by EPA Region 1.

west of Area 6 throughout the remainder of the analysis. A structure (S), possibly used for liquid discharge, is situated at the head of a drainage channel near the southwest corner of Area 6.

Area 7: A faint access road (not annotated) leads from the Martin Street wellhouse onto the possible fill area first visible in 1941.

Extraction Area

Probable extraction activity has expanded the light-toned area along the riverbank. A small, partially vegetated excavation is present north of the probable extraction activity. This excavation may have been related to nearby housing construction. A series of small excavations and a second probable extraction area are present near Mendon Road. The series of small excavations will not be further annotated or discussed unless significant change is evident. A disturbed area in which probable extraction activity has occurred is present at the southern tip of the encompassing extraction area. A pool of standing liquid is present in the disturbed area. This area was grassy and contained many trees in 1941.

Dexter Quarry/Landfill

The floor of the Dexter Quarry appears lightly mottled in tone and coarse in texture. A dark-toned (DK) area on the floor of the quarry contains a few linear channels. These channels possibly contain liquid, and may represent an attempt to drain a moist area of the quarry. A possible fill area containing lighter-toned and finer-textured material than that on the majority of the quarry floor is present in the quarry. A probable vehicle (V) is visible on the access road to the possible fill area. A liquid-filled impoundment (IM) and several partially dismantled structures north of the quarry may have been associated with quarry activities.

Other

The disturbed area bordering the flooded area in 1941 now appears smoothly graded (GR) and partially vegetated. This area may have been disturbed for construction purposes; it will not be discussed further. The northern disturbed area visible west of the river in 1941 has become an extraction area. The second disturbed area has been incorporated into a cultivated field, and will not be discussed further. The extraction area on the western edge of the river remains active. A small excavation is present in the northwestern portion of the study area.

MAY 1, 1956 (FIGURE 5)

NOTE: Only monoscopic film coverage was available for the area north of Martin Street.

Industrial Park

Area 1: Two construction areas and a new building are present.

Area 3: Two horizontal tanks (T) border a small building. Two excavated areas appear north of the building.

Area 4: A large building is under construction in the former airfield area. An access road leads through a large graded area west of Area 4 to the construction area. Light- and dark-toned mounded material (MM) is present between the graded area and Area 4.

Area 5: The excavation has been enlarged; it contains a small amount of mounded material. Possible stacked material (M) borders the railroad north of the building at the southwest corner of Area 5.

Area 6: Standing liquid is no longer visible. The possible discharge structure remains near the southwest tip of the area. Standing liquid is present on the floor of an excavation east of the area. A smaller adjacent excavation may be construction-related.

Area 7: Only traces remain of the access road (not annotated) from the Martin Street wellhouse to the possible fill area.

Extraction Area

. Extraction activity has expanded, and extraction-related equipment and vehicles (not annotated) are present. An access road (not annotated) to the active extraction area cuts through the former partially vegetated excavation visible in 1951. The extraction area near the disturbed area/probable extraction area has expanded. The disturbed area/probable extraction area has not changed significantly since 1951. Standing liquid is no longer visible in this area.

Dexter Quarry/Landfill

The floor of the quarry appears darker-toned than in 1951, although it is still coarse-textured. This change in tone may be due to the presence of vegetation. The linear channels seen on the quarry floor in 1951 are no longer visible. The possible fill area present in 1951 has expanded into a larger fill area which contains light-toned debris. Possible debris (DB) is visible in two other areas in the quarry. A probable vehicle is located on the access road to the fill area. The impoundment present in 1951 is no longer visible; slight ground scarring marks its location. One partially dismantled structure remains.

Other

The two extraction areas visible west of the river in 1951 have been enlarged. Standing liquid is visible in the westernmost extraction area. An access road runs from this extraction area to the road at the northern edge of the Dexter Quarry/Landfill. A triangular ground scar (GS) is visible next to the road, east of the quarry. The small excavation in the northwestern portion of the study area is revegetating. An impoundment has been built on the northern side of the dam at the southern end of the study area. A large portion of the river immediately north of the impoundment has filled with sediment.

MAY 5, 1960 (FIGURE 6)

Industrial Park

Area 1: Dark-toned material is stacked or mounded near the building at the north end of the area. A new large building occupies the former construction area. Two tanks are located near the two buildings. Possible ground staining (GST), some of which appears linear, is visible east of the new building.

Area 2: A small building, possibly a wellhouse, and an adjacent circular ground scar are present at the end of the access road (not annotated) that separates Area 1 from Area 3.

Area 3: The former excavated areas have been graded. The building (not annotated) and two tanks remain unchanged.

Area 4: The large building has been completed. The former graded area and access road west of Area 4 have revegetated (REV). A new access road parallels the western edge of Area 4. The mounded material present in 1956 is no longer visible.

Area 5: The excavation has been further enlarged; however, no mounded material remains. Possible stacked material is no longer visible near the building at the southwest corner of Area 5.

Area 6: No significant change is visible within Area 6. Probable standing liquid is present in one of the two excavations east of Area 6.

Area 7: A new access road leads southward from near the Martin Street wellhouse to an undeveloped area. The possible fill area appears disturbed.

Extraction Area

Extraction activity has further expanded. The disturbed area/probable extraction area has not changed significantly.

Dexter Quarry/Landfill

The fill area has expanded. Debris and possible debris are not discernible in this year. No vehicles are noted on the access road (not annotated) to the fill area. The partially dismantled structure remains north of the quarry.

Other

The western extraction area has expanded, and contains a pool of possible standing liquid. The other two extraction areas present in 1956 remain. A fourth extraction area has developed in the northwestern portion of the study area. The small revegetating excavation present in the northwestern portion of the study area in 1956 has been replaced by a graded area. Two other graded areas are present nearby. The impoundment north of the dam has been breached. The sediment-filled area (not annotated) north of the impoundment has not changed significantly, and will not be further discussed or annotated until significant change is noted.

Most of the flooded area has been drained. An impoundment and two rectangular liquid-filled excavations have formed at the southern end of the former flooded area. This impoundment will not be further discussed unless a significant change is noted.

SEPTEMBER 2, 1963 (FIGURE 7)

Industrial Park

. Area 1: Stacked material, possibly some type of crates/cases, is stored throughout Area 1. One of the two tanks present in 1960 is no longer visible; however, a new tank has been added nearby. Possible ground staining is no longer visible.

Area 2: No significant change.

Area 3: The two tanks have been removed. The remainder of the area is relatively unchanged.

Area 4: Several containers are stored in a ground stained area north of the Area 4 building (not annotated). A drainage pathway and a possible tank are present at the southwest corner of the building. The access road paralleling the western edge of Area 4 has been extended into Area 2.

Area 5: A new building and a large grassy graded area occupy most of the former excavated area. A railroad spur (not annotated) curves to the northern side of the building. An array of at least nine tanks has been placed on the west side of the building. The small building (not annotated) remains at the southwest corner of Area 5.

Area 6: No significant change is seen within Area 6. The excavation east of Area 6 which contained probable standing liquid in 1960 now contains dark-toned mounded material. A small building (not annotated) is visible in the eastern excavation.

Area 7: No significant change.

Extraction Area

Extraction activity has increased slightly since 1960; the eastern extraction area has been enlarged. Several linear pools of possible standing liquid are present near a roadblock at the southern end of the disturbed area/probable extraction area.

Dexter Quarry/Landfill

Ground staining is visible on the surface of the expanded fill area. A second small fill area has developed near the north end of the quarry. The structure remains north of the quarry.

Other

The extraction areas remain relatively unchanged. One of the graded areas present in 1960 has revegetated. Portions of the two remaining graded areas have also revegetated. The flooded area has once again become liquid-filled. The two liquid-filled excavations present in the flooded area in 1960 have been inundated. The impoundment north of the dam is also flooded.

MARCH 9, 1970 (FIGURE 8)

Industrial Park

Area 1: Stacked material remains stored throughout Area 1. One tank has been added near one of the two existing tanks.

Area 2: A large building has been placed onsite. Several probable ground stains are present at the northern end of the building. A large, dark-toned area, which may be stained extends beyond the northern edge of Area 2. A mound of material at the western side of the building is surrounded by a dark-toned area (not annotated) which may also be stained. Probable sections of pipe are present at the western edge of Area 2. They are apparently being placed into a pipeline which extends south to Martin Street, and joins a trench (TR) that leads west to the river.

Area 3: A building covers the former graded area. Four small tanks are seen beside the building. The remainder of the area has not changed significantly.

Area 4: Containers remain in the ground stained area north of the Area 4 building. Four tanks have been placed at the southern edge of the building. The drainage pathway and possible tank present in 1963 are no longer visible. The access road that paralleled the western edge of Area 4 in 1963 is no longer visible. A new permanent access road (not annotated) to Area 2 is visible near the river west of Area 4. This road will not be further discussed.

Area 5: The building has been enlarged, and now covers the former grassy graded area. The railroad spur (not annotated) has been rerouted to the western side of the building, near the array of tanks. At least 23 tanks are now in the array. Lengths of probable pipe are scattered north of the building. Containers are stored next to the building. A short drainage pathway leads to a small pool of

standing liquid (not annotated) at the northeast corner of the building. The drainage pathway may be an extension of a dark-toned ground stain that extends along the eastern side of the building. The small building (not annotated) remains at the southwestern corner of the area.

Area 6: No significant change is seen within Area 6. The excavation to the east of Area 6 has been partially converted into a parking lot (not annotated). The eastern former excavation now contains a new small building and several vehicles. The possible discharge structure is no longer visible.

Area 7: A large building has been erected onsite. The former possible fill area has been graded and is part of the lot surrounding the new building. The area adjacent to the northeast corner of Area 7 has been disturbed, and contains mounded material and two areas of standing liquid. This area may have been disturbed during the construction of a parking lot (not annotated) bordering Martin Street.

Extraction Area

Extraction activity has expanded towards the industrial park. Possible linear scrapes in the surface of the disturbed area/probable extraction area are probably the same features which contained pools of standing liquid in 1963. The roadblock has been moved closer to Mendon Road.

Landfill

The landfill has been established between the railroad bed and the shifted main channel of the river. It is accessible from both its north and south ends, although primary access appears to be from the south (landfill

access roads are annotated in this year only). The area nearest the railroad bed, which formerly contained a small channel of the river, appears disturbed, with several scraped areas containing standing liquid. Mounded material in this area may be used as cover or fill material. A trench has been excavated at the northwestern end of the disturbed area. At least two other trenches, one of which contains standing liquid, are present in the landfill. Debris is mounded at the ends of these trenches, and in two nearby locations. Light-toned (LT) standing liquid is impounded in a section of the old river channel at the southern end of the landfill. Similar light-toned standing liquid is visible in the portion of the old river channel immediately adjacent to the impounded light-toned standing liquid.

Disposal Area

The sediment-filled area formed north of the dam by 1956 is being reworked; mounded material (not annotated), which is probably being used as fill material, lines the perimeter, and is deposited throughout the area. Two pits containing standing liquid are present at the northwestern edge of the area. An earthen berm has been constructed in the southern section of the area. A small amount of debris has been deposited inside and to the west of the bermed area. Light- and dark-toned mounded material is being used as fill at the southeast edge of the disposal area, adjacent to an abandoned racetrack.

Dexter Quarry/Landfill

The fill area now occupies the entire quarry, filling most of it to grade. The working face is present at the southern end of the fill area. Individual piles of debris were not discernible. The structure (not annotated) remains north of the quarry.

Other

The southernmost extraction area appears inactive, although the other extraction areas remain relatively unchanged. Portions of the two graded areas which were present in 1963 have expanded. The impoundment north of the dam is no longer flooded; however, it does still contain liquid.

MAY 5, 1976 (FIGURE 9)

Industrial Park

Area 1: Stacked material remains stored throughout Area 1. The two southernmost tanks present in 1970 are no longer visible; the other tank present in 1970 remains. Two tanks have been added at the northern end of the area.

Area 2: The building has been enlarged. Ground staining surrounds three or four possible tanks at the northern end of the building. The large dark-toned, possibly stained area extending beyond the northern edge of Area 2 in 1970 is now vegetated and undisturbed. A probable tank is present at the southern end of the building. An earthen-bermed, liquid-filled lagoon (L) has been constructed south of the building. The probable sections of pipe are no longer visible west or south of Area 2.

Area 3: The building has been enlarged. The remainder of Area 3 has not changed significantly since 1970.

Area 4: More containers are stored around the building than in 1970. The four tanks visible in 1970 remain at the southern edge of the building.

Area 5: There are now at least 28 tanks in the array on the western side of the building. An extension has been built onto the southwest corner of the building. Stacked material, probably crates, occupies the area in which probable lengths of pipe were scattered in 1970. The drainage pathway and standing liquid present at the northeast corner of the building and the ground stain along the eastern side of the building in 1970 are no longer visible. The small building (not annotated) remains at the southern end of the area.

Area 6: No significant change is visible within Area 6 or the two excavations to the east.

Area 7: The building has been enlarged. Stacked material is stored at its southern end. The disturbed area adjacent to the northeast corner of Area 7 which contained mounded material and standing liquid in 1970 has been filled and has revegetated.

Extraction Area

Extraction activity has expanded further. The disturbed area/probable extraction area appears relatively unchanged since 1970. The possible linear scrapes are no longer visible.

Landfill

The landfill area has been built up considerably since 1970. Access to the landfill has not changed. The trenches and disturbed area that contained standing liquid in 1970 have been filled. The area at the southern end of the landfill which contained impounded light-toned standing liquid has also been filled. Two small liquid-filled impoundments are visible at the western edge of the landfill. Debris has been deposited in several areas on the landfill's surface, and near the southern entrance (not annotated) to the landfill.

Disposal Area

The disposal area continues to be reworked, although the amount of mounded material (not annotated) present has decreased since 1970. The southern end of the bermed area is being used as a fill area. Debris is no longer exposed near the bermed area. Two liquid-filled excavations are present. Three small pools of standing liquid border the northern excavation. The liquid-filled pits present near this area in 1970 are no longer visible. Mounded material and debris are present in the area adjacent to the abandoned racetrack.

Dexter Quarry/Landfill

The entire quarry has now been filled to grade. The structure present north of the quarry in preceding years has been removed.

Other

All of the extraction areas are partially revegetating. The two graded areas are also beginning to revegetate.

SEPTEMBER 25, 1981 (FIGURES 10A-10H)

Photographic prints have been included only for those areas in which significant change or activity is apparent.

Industrial Park

Area 1 (Figure 10A): Cylindrical objects, possibly large barrels or pipe segments, are stored around the Area 1 buildings. These objects are probably the same features identified as stacked material in previous years. The southernmost tank present in 1976 remains (not visible on Figure 10A). Available photography did not cover the northern end of the area.

Area 2 (Figures 10A and 10B): Ground staining and possible tanks present at the northern end of the building in 1976 are no longer visible. Standing liquid has accumulated near trailers (not annotated) parked at the northern end of the large building. Two mounds of very light-toned material are present between one of the pools of standing liquid and a tank trailer (not annotated). A new small building has been built near the southwest corner of the large building. Standing liquid is pooled in a loading dock area at the southwest corner of the large building. Equipment (EQ) and a small amount of debris are stored at the southern edge of the large building. The lagoon located at the southern tip of the area is covered with a black tarpaulin. A tank is visible at the northern edge of the lagoon.

Area 3 (Figures 10A and 10B): Approximately 400 drums (D) line an access road to an excavation at the northeast corner of the main building. No drums are visible within the excavation. Approximately 60 drums are stacked and scattered near three interconnected tanks at the northern edge of the area. At least 39 drums are stacked at the northern edge of the building; more may be obscured by the building's shadow. Approximately 42 drums are exposed at the edge of an open shed at the northwest corner of the building. Approximately 279 drums are neatly arranged on a concrete pad north of the shed. No ground staining is evident on the pad. Two small pools of standing liquid (not annotated), possibly accumulated rainfall, are present in an excavation north of the drum pad. Approximately 440 drums are neatly stacked beside three rusty tanks

south of the shed. A total of nine tanks are visible in two areas south of the drums. The four southernmost tanks appear to be in storage. Eleven tanks are present on the eastern side of the building. At least 18 drums are present at the edge of a loading dock at the southern side of the building.

Area 4 (Figures 10C and 10D): Many large spools are stored on the north, west, and south sides of the building. Crates are intermixed with the northern group of spools. Objects that were annotated as containers in previous years may have also been wire spools or crates. One tank and a ground stained area are visible near the northeast corner of the building. Standing liquid near the northwest corner of the building may have drained from the building. Five tanks are located at the southern edge of the building.

Area 5 (Figures 10C and 10D): Many crates are neatly stacked at the northern edge of Area 5. Approximately 50 drums, many of which are open, are stored between an open shed and four tanks near the northeastern corner of Area 5. Approximately 50 more drums are stored near a stack of crates in the northeastern corner of the site. A drainage channel leads from the northwestern corner of Area 5 down to the railroad bed. A drainage pathway leads from a compactor at the western edge of the building to one of the tanks included in the array of 42 tanks. Standing liquid visible between the tank array and the compactor may have drained from the tank array area. A railroad tank car is stopped in the midst of the tank array. Two additional tanks are present at the western edge

of the building. Approximately ten probable drums are visible between the two tanks. The southern third of the main building has been enlarged or rebuilt. The small building has been removed from the southwestern corner of Area 5. Several pools of standing liquid have collected in its place.

Area 6 (Figure 10E): No significant change is seen within Area 6 or the two excavations to the east.

Area 7 (Figure 10E): A pipeline now leads from the western edge of the building to the river's edge. A few crates are stored at the southwestern corner of the building (not visible on Figure 10E). A few tires (not visible on Figure 10E) have been discarded east of the building, along the access road to the landfill located south of the industrial park. The access road is lined with trailers.

Extraction Area (No print included)

Extraction activity has expanded further. A small amount of possible construction rubble is mounded at the western edge of the central portion of the extraction area (see Figure 11, 1983 photo enlargement for location). Extraction activity has expanded into the former disturbed area/probable extraction area.

Landfill (No print included)

The locations of many of the following features are annotated on Figure 11, a 1983 photo enlargement.

Debris is again visible in several areas of the landfill, although it is mostly concentrated at a working face at the southern end of the landfill. A small group of at least 20 drums is stored at the northern end of the

landfill, while a group of at least 50 drums is interspersed with other debris at the southern end. Many of the drums appear rusted. A rusted tank and a small pool of discolored liquid are present near the river's edge at the southern end of the landfill. The northern, southwestern, and northeastern edges of the landfill have begun to revegetate. Access to the landfill has not changed. Trailers edge the northern access road. The two pools of impounded standing liquid visible at the western edge of the landfill in 1976 are now mostly dry and overgrown with vegetation.

Disposal Area (Figures 10F-10H)

Extensive excavation activity has occurred since 1976. The northwestern excavation (Figure 10F), which was present in 1976, is now bordered by a liquid-filled excavation which extends along the eastern edge of the disposal area. The color of the liquid in these two excavations varies from brownish-green to brownish-orange. The area between these two large excavations has also been excavated and graded. Two additional small shallow excavations (Figure 10F) at the edge of the excavated/graded area contain discolored brownish-orange liquid. The three small pools of standing liquid bordering the northwestern excavation in 1976 were not observed. An L-shaped excavation (Figure 10G) filled with brownish-green liquid borders the northern and western sides of the former bermed area. The southern tip of this L-shaped excavation was present and liquid-filled in 1976. Debris composed of dark, cylindrical objects is half-submerged in this portion of the excavation. Dark-toned standing liquid has pooled in a smaller shallow excavation at the eastern edge of the excavation. A new small excavation, filled with discolored brownish-orange liquid, visible within the former bermed area, also

contains cylindrical debris. Scattered debris throughout the former bermed area includes discarded tires (not annotated). Filling (1976) could no longer be detected within the former bermed area. East of the former bermed area a bulldozer is pushing earthen material toward the long excavation at the eastern edge of the area. An earthen ridge rises above the water level inside the western edge of this excavation. Two piles of debris are present west of the former bermed area and L-shaped excavation. Discarded lumber and possible containers are visible in the southern pile of debris.

The southeastern end of the disposal area (Figure 10H) is now debris-filled, and is associated with the landfill north of the disposal area. The gatehouse permitting access to the landfill is located in this area. Grey material has been mounded next to the landfill access road. Three groups totaling at least 285 drums are stored among the debris in the western half of the area. Most of the debris is composed of discarded equipment and containers, although one area of finer-textured debris is present. Spools similar to those located at Area 4 are also visible.

Dexter Quarry/Landfill; Other

No photo coverage was available of these areas.

JULY 23, 1983 (FIGURE 11)

Industrial Park

Area 1: Fewer cylindrical objects are present than in 1981. Four tanks are now visible in the area.

Area 2: Probable standing liquid is evident near trailers (not annotated) at the northern end of the building. Mounded material is no longer visible in the northeast corner of the area. Standing liquid (1981) is no longer visible in the loading dock area (not annotated) at the southwest corner of the large building. Equipment and debris (not annotated) remain stored at the southern edge of the large building. The tarpaulin-covered lagoon and the tank at the southern tip of the area remain relatively unchanged since 1981.

Area 3: Individual drums could not be discerned on this photography; however, stacked material that could be drums is located in most of the areas which contained drums in 1981. The excavation remains at the northeast corner of Area 3. The three interconnected tanks present in 1981 at the northern edge of the area are no longer visible. At least six probable tanks are visible at the northeast corner of the building (not annotated). The shed remains at the northwest corner of the building. The drum pad and excavation (neither are annotated) remain north of the shed. The excavation now contains a pit with standing liquid. Stacked material on the drum pad may be drums. At least five probable tanks are present south of the shed, in the area that contained nine tanks in 1981.

Area 4: Probable spools are neatly stored at the northern and western edges of the area. The tank and ground stained area visible near the

northeast corner of the building in 1981 could not be discerned on this photography. Five tanks remain at the southern edge of the building. Standing liquid (1981) is no longer visible.

Area 5: Stacked material lines the northern edge of Area 5. The individual crates, drums and small tanks visible in this area in 1981 could not be discerned on the 1983 photography. A small building has been added next to the shed (not annotated) visible in this area in 1981. Standing liquid and drainage channels or pathways which were visible in 1981 are no longer visible. The compactor visible in 1981 remains. At least 28 large tanks remain visible in the array at the western edge of the building. A bright white signature is visible in the area of the tank array that contained smaller tanks; the brightness of the signature precludes counting these probable tanks (not annotated). Six railroad tank cars (not annotated) are stopped in the midst of the tank array. Standing liquid is no longer pooled at the southwestern corner of Area 5.

Area 6: No significant change.

Area 7: The pipeline present in 1981 could not be discerned on this photography. Stacked material (probably crates) is stored at the southwestern corner of the building. East of the building, trailers remain along the northern access road to the landfill; however, tires noted in 1981 could not be discerned.

Extraction Area

Extraction activity has expanded slightly since 1981. The location of rubble noted in 1981 is annotated on this photo.

Landfill

Most of the landfill appears inactive; the northern, southwestern and northeastern edges of the landfill continue to revegetate. Access to the landfill has not changed. Groups of debris remain at the southern end of the landfill, although a working face is no longer present. The pool of discolored liquid noted in 1981 remains at the southern end of the landfill. Other features, such as debris, the working face drums, and a rusty tank noted in 1981 are no longer visible. Their former locations are noted on this photo.

Disposal Area

The area remains basically unchanged since 1981. A new small liquid-filled excavation is present near the two largest liquid-filled excavations noted in 1981. Liquid in the large excavation at the eastern edge of the disposal area and in the L-shaped excavation no longer appears discolored. Small features such as the cylindrical objects, scattered debris, discarded lumber and possible containers noted in 1981 could not be discerned on this photography. Two mounds of debris are present in the area which contained the lumber and possible containers in 1981. The bulldozer present in 1981 is no longer visible.

The southeastern end of the disposal area is relatively unchanged and still contains a large amount of debris. The grey mounded material, finer-textured debris, spools, and drums visible in 1981 could not be distinguished on this photography. The gatehouse present in 1981 on the access road to the northern landfill is no longer present, and access to the landfill from this road has been blocked. Access to the landfill (not annotated) has been rerouted to the northeastern edge of this portion of the disposal area.

Dexter Quarry/Landfill

The northern two-thirds of the quarry is beginning to revegetate. No access roads are visible onsite.

Other

The extraction areas are relatively unchanged since 1976. Houses have been built on the two former graded areas.

JUNE 19, 1986 (FIGURES 12A-12C)

Figures 12A-12C are photo enlargements of only the portions of the study area in which the most significant features, activities, or changes in activity are evident. Features that are annotated on the photo enlargement are marked with an asterisk (*) in the accompanying discussion. Significant features that do not appear on the photo enlargements are also discussed.

Industrial Park

Area 1 (No photo included): Cylindrical objects are no longer visible. No photo coverage was available of the northern end of Area 1, which contained four tanks in 1983.

Area 2 (Figure 12A): A few puddles of standing liquid, probably rainwater, have accumulated near trailers* at the northern end of the building.* Discarded tires and at least seven drums are stored near the northwest corner of Area 2. Two pipelines lead from two structures at the western edge of Area 2 to the river's edge. Equipment* and debris,* including at least eight drums, are stored at the southern edge of the large building. The tarpaulin-covered lagoon and the tank remain at the southern tip of the area.

Area 3 (Figure 12A): Many drums are again visible onsite. At least 485 drums* are stored between the northeast corner of the building* and the excavation* at the northeast corner of the site. A small amount of dark-toned material* is visible in the excavation. At least 169 drums* are stored at the northern edge of the building. One large tank,* six smaller tanks,* and a small building* have been placed at the northern edge of the site. Ground staining,* which may have originated from a spill in the tank area (arrows denote probable flow from one tank), surrounds one end of the large tanks and extends north to a more darkly stained area which contains a pool of discolored liquid (not visible on photo). Two dead trees stand at the western end of the darkly stained area (not visible on photo). A patch of dead vegetation* and a small pool of standing liquid* are present east of the tank area. The liquid-filled pit in the excavation at the northwest corner of the site (not visible on photo) appears larger than in 1983. The shed* remains at the northwest corner of the building. Approximately 488 drums* are neatly stored on three concrete pads (not annotated) around the shed. Two of the three pads are revetted or fenced. Four revetted or fenced tanks* are located near the drum pads. An additional twelve revetted tanks* are located at the eastern edge of the building. A group of 25 drums* is stored next to two of these tanks. A small amount of debris,* possibly discarded equipment, is stored near a building* at the southwest corner of the site.

Area 4 (Figure 12A): Many spools are again stored at the northern and western edges of the site. At least 25 drums* are stored next to

spools* in a wet, darkly stained area* in the northeast corner of the site. The tank* that was visible in this area in 1981 remains (the tank was not discernible on the 1983 photography). Five tanks remain at the southern edge of the building.*

Area 5 (Figure 12A): At least 1,150 drums* are neatly stored at the northern edge of the site. Several crates* are stacked near the drums. A second small building* has been added west of the building* and shed* noted at the northern end of the site in 1983. A tank* bordered by a ground stain* and two empty revetted areas* are present in the northeast corner of the site. A drainage channel* along the northern edge of the site extends west to the railroad tracks,* where it bends south; it appears to be routed under the railroad tracks to Area 4, then flows south to Martin Street, where it can no longer be traced.

As in 1981, there are 42 tanks* in the array at the western edge of the building. Three railroad tank cars* are stopped in the midst of the tank array. The compactor* remains at the western edge of the building.*

Area 6: No significant change.

Area 7: The pipeline is again visible. A few crates are stored south and west of the building. East of the building, trailers and a few discarded tires remain along the northern access road to the landfill. Dark- and light-toned mounded material borders the access road to the Martin Street wellhouse. A ground stain and ground scar are present beside the wellhouse. Fuel oil reportedly leaked from a broken fill cap in this area.[1]

[1]Collateral information provided by EPA Region 1.

Extraction Area

No significant change.

Landfill (Figure 12B)

Most of the landfill appears inactive; however, debris, including a total of at least 65 drums,* remains scattered at its southern end.[1] Five rusted tanks* are also scattered among the debris. The pool of discolored liquid noted at the southern end of the landfill in 1981 and 1983* is now open to the river channel; the liquid appears identical in tone to that in the river channel. A large pool of discolored liquid,* possibly leachate, is present near the river on the southwestern edge of the landfill. The landfill remains accessible from both its northern and southern ends.

Disposal Area (Figure 12C)

The liquid-filled excavations present in 1983 have been combined into one liquid-filled excavation occupying most of the northern part of the disposal area. Many marshy areas and pools of standing liquid dot the remainder of the area. A small amount of debris, including discarded lumber, remains near the southwestern corner of the large liquid-filled excavation.

A large amount of debris remains at the southeastern end of the disposal area next to the racetrack. At least 500 drums* are scattered throughout this area.[2] A red stain* is present near one group of drums. Numerous tires* crates,* and at least four tanks* are also scattered among the debris. A tall

[1]Because the drums are widely scattered in small groups, the actual number of drums at each specific location is not annotated.

[2]Because this large number of drums is so widely dispersed throughout this area, the number of drums at each location has not been annotated. Smaller groups of drums may also not have been annotated to prevent cluttering of the overlay.

gate or wall* blocks the road that leads across the dam.* The road* leading from the road crossing the dam to the main portion of the disposal area has washed out.

Dexter Quarry/Landfill; Other

No photo coverage of these areas was available.

FRACTURE TRACE ANALYSIS

The cracks, joints, faults and other breaks in bedrock are known as fractures. These fractures or zones of fracturing represent specific pathways by which ground water may move within an aquifer, potentially increasing ground water flow rates and, in some cases, directing flow away from expected flow directions.

Fracture trace analysis involves the identification, on aerial photography, of linear features on the earth's surface that may represent the surficial expression of fractured bedrock; these linear features, called "fracture traces," are believed to be surface expressions of vertical or near-vertical fractures in underlying bedrock. Photographic signatures such as soil-tonal variations, differences in vegetation growth, offset or straight stream segments, and linear topographic depressions are identified, analyzed and compared to cultural and geologic information to determine if the signatures can be categorized as fracture traces.

Forty fracture traces were identified on 1:20,000 scale aerial photography from October 1951, and their approximate locations were annotated on the included photo enlargement (Figure 13). The following rose diagram (Diagram A) illustrates the approximate orientations of the annotated fracture traces. Two trends are apparent: (1) approximately 25% of the fracture traces are oriented between N 0-10 E; and (2) approximately 30% of the fracture traces are distributed between N 50-80 W.

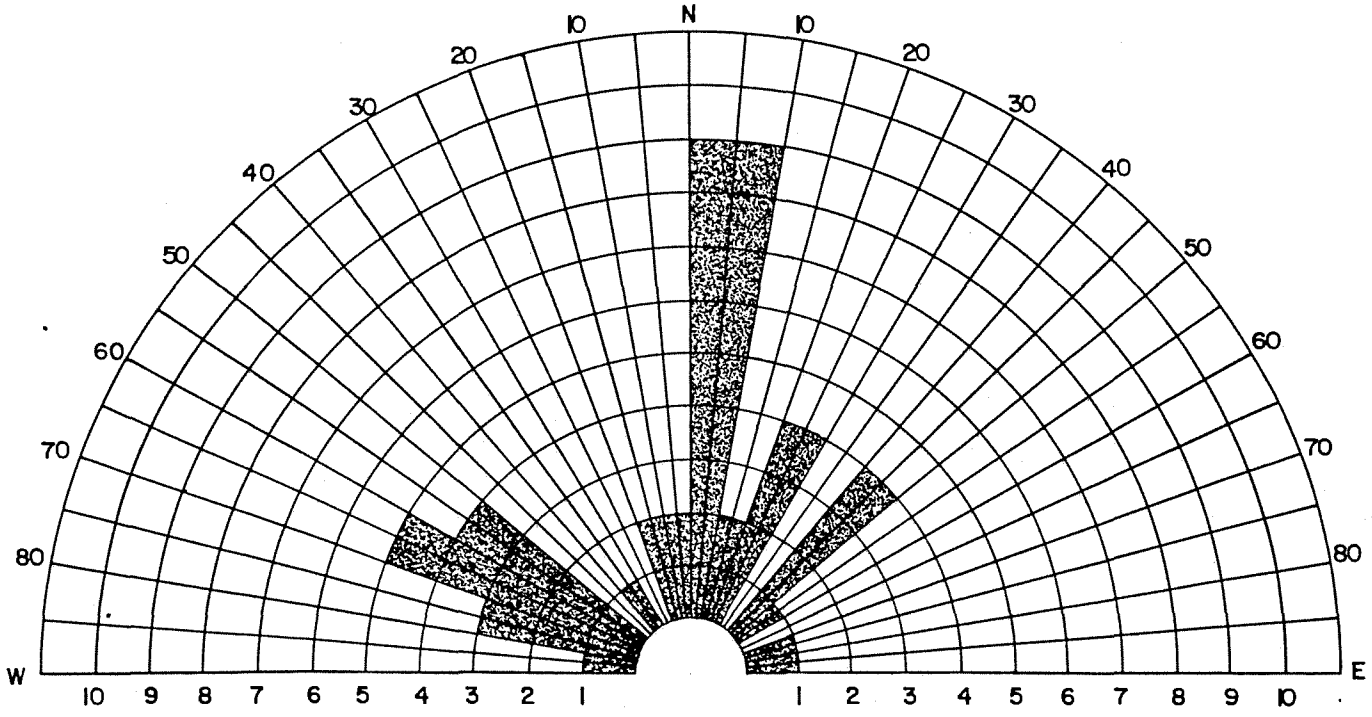


DIAGRAM A: ORIENTATIONS OF FORTY FRACTURE TRACES

Most of the study area is underlain by metamorphic rocks of the Blackstone Series, primarily quartzite, schist, and greenstone (Reference 5). The Blackstone Series in the Blackstone River Valley has northwest strikes of bedding with moderate northeast dips (Reference 4). The area was covered by broad masses of glacial ice one or more times during the Pleistocene Epoch. This ice sheet moved S 15-20 E across the Pawtucket quadrangle area. Glacial deposits in the study area include kame terraces, river-terrace alluvium, flood plain alluvium, and ground moraine (Reference 2). Only one of the forty fracture traces identified extends onto kame terrace; the remainder lie in ground moraine areas in which bedrock outcrops are also present.

A fracture pattern analysis was conducted in 1980 in the vicinity of the Dexter Quarry/Landfill by Ecology and Environment, Inc. (E&E) (Reference 6). For the purpose of comparison, the 104 field measurements which were plotted onto a stereographic net by E&E were transferred to the following Rose Diagram format (Diagram B).

Two dominant trends emerge between N 20-30 E and N 40-50 E. The majority of the measurements are distributed within a 130-degree arc between N 40 W and N 90 E. The difference in results between the fracture trace analysis and the field fracture pattern analysis may be the result of at least two factors: (1) Fracture pattern measurements taken by E&E were localized near the Dexter Quarry/Landfill and may reflect fracture systems in the local bedrock only. Fracture traces identified on the aerial photography are regional in scale, illustrating fracture systems across several bedrock terranes. (2) Fracture traces identified on aerial photography are believed to be surface expressions of vertical or near-vertical fractures in the underlying bedrock. Fracture measurements taken by E&E included non-vertical fractures.

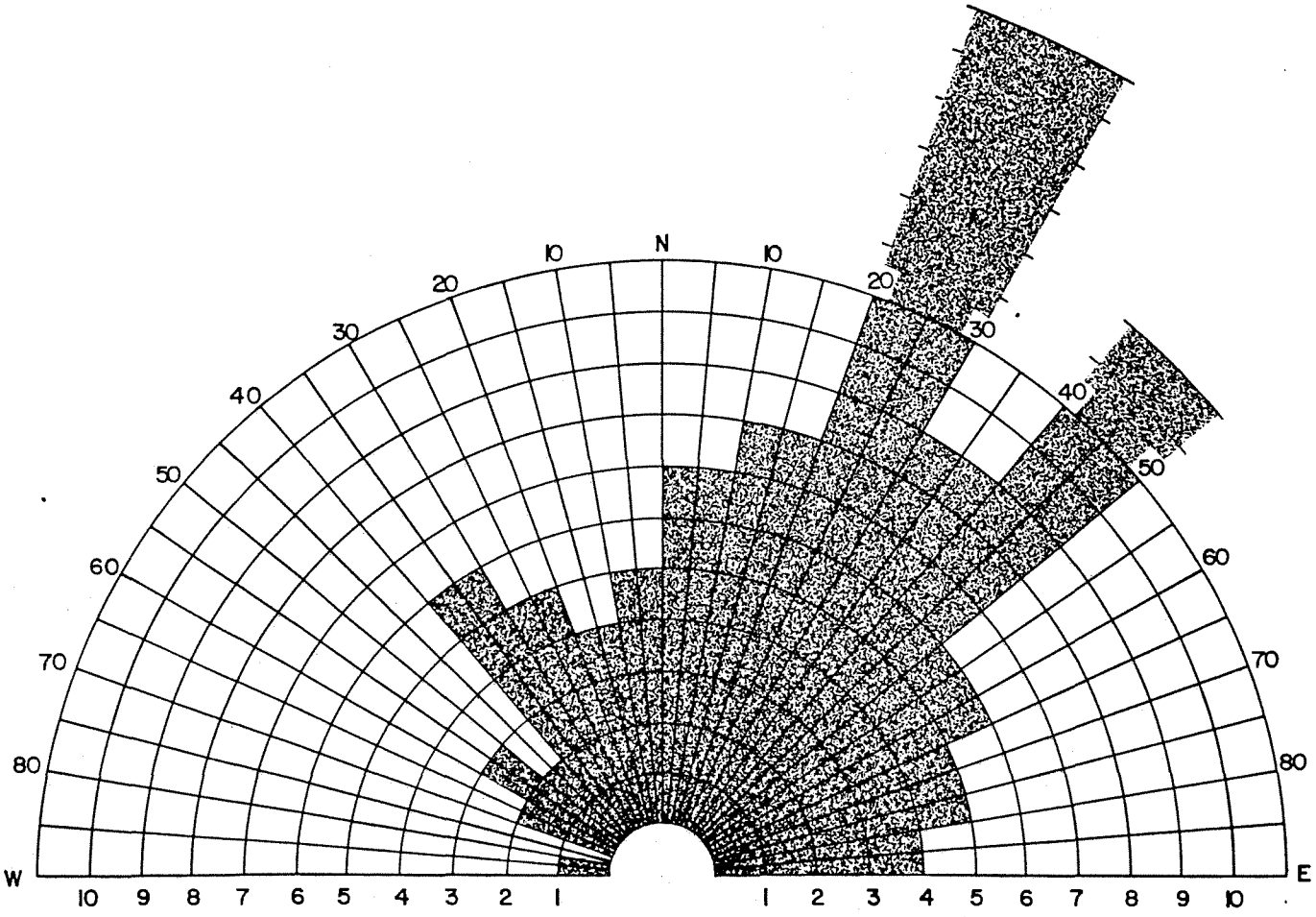


DIAGRAM B: ORIENTATIONS OF FIELD MEASUREMENTS

HISTORICAL RIVER CHANGES

A series of three overlays for the years 1951, 1956 and 1970 illustrate significant changes in the course of the Blackstone River, especially those resulting from artificial and/or natural filling activities. These overlays have been keyed to a July 23, 1983 photo (Figure 14).[1] A fourth overlay for 1983 illustrates the river in its present-day configuration. Shaded areas indicate open water. The following is a summary of the changes that occurred between 1941 and 1986:

1941 (No overlay included) - The southeast-flowing Blackstone River and Blackstone Canal bisect the study area. The canal does not change significantly throughout the course of the analysis and will not be discussed further. The river is impounded by a dam at the southeastern tip of the study area. A small channel northeast of the dam helps to drain the impounded area. An additional flooded or impounded area is separated from the main channel of the river by an elevated railroad bed.

1951 - The course of the Blackstone River and the associated flooded area has not changed significantly since 1941.

1956 - A new impoundment has been built at the northern side of the dam on the Blackstone River. A large portion of the river immediately north of the dam and impoundment has filled with sediment; the river channel bows to the northeast of the sediment-filled area, following the edge of the railroad bed. The channel that flowed northeast of the dam in 1951 and 1941 has been cut off and filled.

[1]These three overlays were traced from the 1951, 1956, and 1970 photos and mechanically transferred to the same scale as the 1983 photo.

1960 (No overlay included) - The main channel of the river has not changed significantly since 1956. Most of the flooded area between the railroad bed and the extraction area has been drained. An impoundment and two rectangular liquid-filled excavations have formed at the southern end of the flooded area.

1963 (No overlay included) - The main channel of the river has not changed significantly since 1956. The area between the railroad bed and the extraction area is once again flooded. The impoundment at the southern end of the flooded area may be used for recreation. The wall of the impoundment north of the dam has been breached.

1970 - The construction of a landfill has shifted the main channel of the river to the southwest (nearer the Blackstone Canal). The landfill has filled a former small channel of the river which flowed next to the railroad bed. The northern and southern ends of a second channel on the western side of the disposal area are dammed. The flooded area is relatively unchanged, although it is partially ice-covered.

1976 (No overlay included) - The main channel of the river is relatively unchanged since 1970. The water level is much lower than in previous years in the flooded area, and vegetation is beginning to fill the area.

1981 (No overlay included) - The main channel of the river is relatively unchanged since 1976. Most of the former flooded area has drained or sedimented and vegetated, although open water remains at its edges.

1983 - The main channel of the river and the former flooded area have not changed significantly since 1981.

1986 (No overlay included) - The main channel of the river has not changed significantly since 1983. The water level in the former flooded area is slightly higher than in 1983.

WETLANDS ANALYSIS

Historical photography from October 1951 and May 1976 (Figures 15 and 16) was analyzed to classify wetlands located within the study area and to denote significant changes in wetland areas over the 25-year period.[1] A hierarchical classification system developed by the U.S. Fish and Wildlife Service (see Reference 3) was used in this analysis. The wetlands identified on the two years of photography have been classified by SYSTEM and CLASS. The term SYSTEM refers to: "a complex of wetlands and deepwater habitats that share the influence of similar hydrologic, geomorphologic, chemical, or biological factors" (Reference 3). CLASS represents a lower taxonomic unit than SYSTEM, and: "describes the general appearance of the habitat in terms of either the dominant life form of the vegetation or the physiography and composition of the substrate" (Reference 3). The following is a list of brief definitions of the Systems and Classes identified in this analysis:[2]

SYSTEM:

Riverine (R) - "includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts in excess of 0.5%."

Lacustrine (L) - "includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30% areal coverage; and (3) total area exceeds 8 hectares (20 acres)."

Palustrine (P) - "includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens."

[1]The need for vertical, conventional (9x9-inch) photography during leaf-off conditions for wetlands analysis precluded the use of the more recent (1981, 1983, and 1986) historical photography available.

[2]For a more complete definition of terms, see Reference 3.

CLASS:

Emergent Wetland (EM) - "characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens."[1]

Scrub-Shrub Wetland (SS) - "incudes areas dominated by woody vegetation less than 6 meters (20 feet) tall."

Unconsolidated Bottom (UB) - "includes all wetland and deepwater habitats with at least 25% cover of particles smaller than stones, and a vegetative cover less than 30%."

Unconsolidated Shore (US) - "includes all wetland habitats having three characteristics: (1) unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; (2) less than 30% areal cover of vegetation other than pioneering plants; and (3) any of the following water regimes: irregularly exposed, regularly flooded, irregularly flooded, seasonally flooded, temporarily flooded, intermittently flooded, saturated, or artificially flooded."

The majority of the wetlands in the study area were clustered within the flood plain of the Blackstone River. This section of the Blackstone River flood plain represents a Riverine System influenced by man's activities (e.g., damming, filling), which have allowed Palustrine and Lacustrine Systems to develop also.

OCTOBER 26, 1951 (FIGURE 15)

Damming of the river at the southern end of the study area has impounded a large amount of water, changing the system near the dam from Riverine to Lacustrine. Railroad bed filling (not annotated) northwest of the dam also appears to have isolated or impounded a portion of the river, creating a second Lacustrine area. Unconsolidated bottom (LUB) is the dominant class within these two areas, although some Emergents (LEM) are also present. Northwest of the dam, the Riverine and Palustrine Systems dominate, and primarily contain the Riverine Unconsolidated Bottom (RUB) and Palustrine Scrub-Shrub (PSS) and Emergent (PEM) classes.

[1]In this study, the presence of persistent or nonpersistent Emergents provided a critical distinction in classifying wetlands as belonging to the Riverine, Palustrine, or Lacustrine Systems.

MAY 5, 1976 (FIGURE 16)

A combination of natural and artificial filling has greatly reduced the amout of wetlands present, and changed the course of the Blackstone River. The natural filling has resulted from accumulation of river sediments in the impounded area behind the dam. The filling attributable to human activity has probably involved earthmoving to relocate naturally deposited sediments and possibly also involved import of additional fill. Furthermore, the dam may now be used to maintain a lower water level than in 1951. As a result of these factors, the dam no longer impounds a large pool; the Blackstone River is restricted to its channel and has changed from Lacustrine to Riverine classification.

Because the second Lacustrine wetland present northwest of the dam in 1951 contains less water and has probably also accumulated sediment, allowing new Scrub-Shrub and Emergent vegetation to become established, this wetland has been reclassified as Palustrine. Fewer Palustrine wetlands are present along the remainder of the river flood plain than in 1951.

WETLANDS LOSS/GAIN

A second overlay illustrating significant wetlands loss and gain from 1951 to 1976 has also been keyed to this 1976 photo enlargement (Figure 16). Since wetlands are naturally dynamic structures, small fluctuations in their shape or size have not been considered indicative of significant wetland loss or gain.

Wetland loss or gain may be induced by natural or artificial means. Wetland loss at Area A is the result of landfill encroachment. Wetland loss at Areas B and C appears related to a combination of natural and artificial filling activities and to the fact that the dam at the southeastern end of the study area no longer impounds a large pool.

REFERENCES

AERIAL PHOTOGRAPHY

Date	Agency	Mission Code	Frame #	Orig. Scale	EPIC Frame #
October 8, 1941	NARA[1]	W	2:77	1:14,500	6402:64
October 26, 1951	ASCS[2]	DPJ	3H:9-12	1:20,000	14286:116-119
May 1, 1956	NOS[3]	56W	172-175	1:30,000	15185-15187,15691
May 5, 1960	USAF[4]	59033	6571-6573; 6651-6653	1:60,000	15348-15353
September 2, 1963	ASCS	DPJ	2DD:181-185, 247-251	1:20,000	14872:030-039
March 9/10, 1970	USGS[5]	VCLG	3:8-10; 2:140-143	1:24,000	14675-14680;14854
May 5, 1976	SCS[6]	44007	176:80-82, 93-96	1:38,000	15000:062-068
September 25, 1981	EPA[7]	81/065	111-132;385-413	Variable	81/065:111-132; 385-413
July 23, 1983	EPA	83030	236-238	1:24,000	83/098:236-238
June 19, 1986	EPA	86/031	071-092;319-346	Variable	86/031:071-092; 319-346

MAPS

Source	Name	Scale	Date
USGS	Pawtucket, RI-MA	1:24,000	1975
USGS	Surficial Geology of the Pawtucket Quadrangle, RI-MA (Reference 2)	1:31,680	1949
USGS	Bedrock Geology of the Pawtucket Quadrangle, RI-MA (Reference 5)	1:31,680	1949

[1]National Archives and Records Administration

[2]Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture

[3]National Ocean Survey, U.S. Department of Commerce

[4]U.S. Air Force

[5]U.S. Geological Survey, U.S. Department of the Interior

[6]Soil Conservation Service, U.S. Department of Agriculture

[7]U.S. Environmental Protection Agency

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1. Anderson, J.R., E.E. Hardy, J.T. Roach, and R.E. Whitmer. 1976. A Land Use and Land Cover Classification System for Use with Remote Sensor Data. U.S. Department of the Interior, Geological Survey Professional Paper 964.

2. Chute, N.E. 1949. Surficial Geology of the Pawtucket Quadrangle, Rhode Island-Massachusetts. U.S. Department of the Interior, U.S. Geological Survey.

3. Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, FWS/OBS-79/31.

4. Quinn, A.W. 1971. Bedrock Geology of Rhode Island. U.S. Department of the Interior, U.S. Geological Survey Bulletin 1295.

5. Quinn, A.W., R.G. Ray, and W.L. Seymour. 1949. Bedrock Geology of the Pawtucket Quadrangle, Rhode Island-Massachusetts. U.S. Department of the Interior, U.S. Geological Survey.

6. Smart, G. and R. DiNitto. 1981. Fracture Pattern Analysis of the Blackstone Series Bedrock in Lincoln, Rhode Island. Ecology and Environment, Inc., TDD# F1-8006-02.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

December 4, 1995

Chris Washbush
ENSR Consulting and Engineering
35 Nagog Park
Acton, MA 01720

Re: Transmittal of EMSL Site Analysis

Dear Chris:

Per your request, I am enclosing a copy of the two volume EMSL Site Analysis for your use. I request that upon completion of your review that you return the documents to EPA. You may also be aware that the P/P Site File contains other EPIC aerial photography which can be reviewed at your request and by appointment at the EPA Record Center located at 90 Canal St. Please call me if wish further information or assistance.

Sincerely,

David J. Newton, RPM
RI/NH SF Section

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Agency

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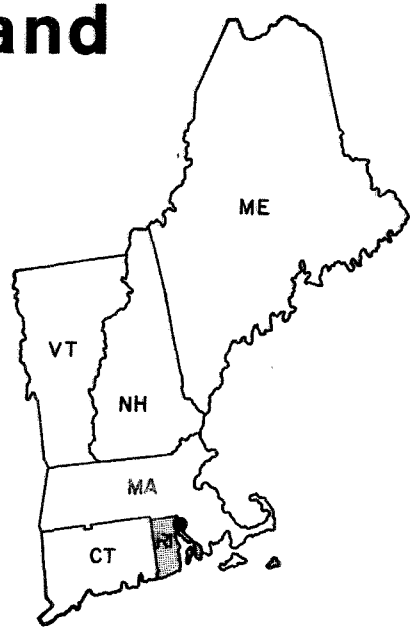
TS-PIC-86064
March 1987

Research and Development

EPA

Site Analysis Peterson-Puritan, Inc. Study Area Lincoln/Cumberland, Rhode Island Volume 2

EPA Region 1
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EPIC VOL 2.

RETURN DOCUMENT TO:

DAVID J. NEWTON
GEOLOGIST/SITE MANAGER
HAZARDOUS WASTE DIVISION

REGION 1
U.S. ENVIRONMENTAL PROTECTION AGENCY
J.F.K. FEDERAL BUILDING
BOSTON, MA 02203

(617) 223-6586

Site Analysis
Peterson-Puritan, Inc. Study Area
Lincoln/Cumberland, Rhode Island

Volume 2

by
Wendy Fox Dial, Imagery Analyst
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Contract No. 68-03-3161

Project Officer
Thomas R. Osberg
Environmental Photographic Interpretation Center
Environmental Monitoring Systems Laboratory
Warrenton, Virginia 22186, FTS 557-3110

ENVIRONMENTAL MONITORING SYSTEMS LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY
LAS VEGAS, NEVADA 89114

FIGURES

Volume 2		Page
1.	Location Map.	1
2.	Land Use.	2
	Aerial Photos:	
3.	October 8, 1941	3
4.	October 26, 1951.	4
5.	May 1, 1956	5
6.	May 5, 1960	6
7.	September 2, 1963	7
8.	March 9, 1970	8
9.	May 5, 1976	9
10A.-10C.	September 25, 1981	10
10D.-10E.	September 25, 1981	11
10F.-10H.	September 25, 1981	12
11.	July 23, 1983	13
12A.	June 19, 1986	14
12B.	June 19, 1986	15
12C.	June 19, 1986	16
13.	Fracture Trace Analaysis	17
14.	Historical River Changes	18
	Wetlands Analysis:	
15.	October 26, 1951	19
16.	May 5, 1976	20

LAND USE LEGEND

11 - Residential
12 - Commercial
13 - Industrial
14 - Transportation/Communication
16 - Mixed Urban or Built-Up Land
17 - Other Urban or Built-Up Land
18 - Institutional/Governmental
19 - Recreational
21 - Cropland and Pasture
24 - Farmsteads and Farm-Related Buildings
41 - Deciduous Forest
51 - Waterways, Streams and Canals
52 - Natural Lakes and Ponds
53 - Man-Made Reservoirs and Impoundments
61 - Forested Wetlands
62 - Non-Forested Wetlands
72 - Beaches and River Banks
75 - Extraction

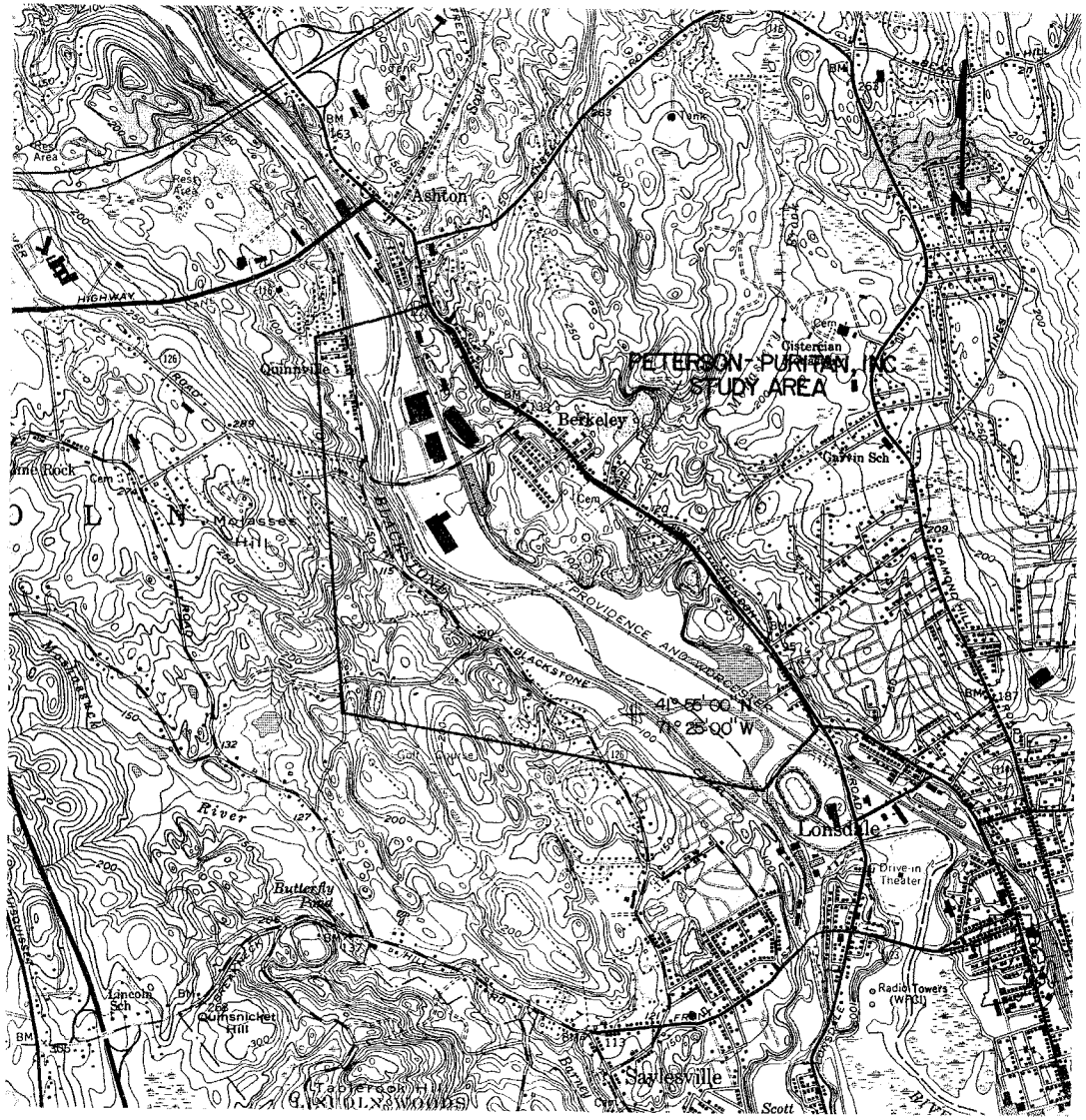


FIGURE 1
PETERSON-PURITAN

LOCATION MAP
PAWTUCKET, R.I.-MASS. QUAD

SCALE 1:24,000

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — — - Access Road
→→→→→ - Berm
→ · — · → - Drainage
═══ - Study Area Boundary
——— - Operational Areas
– – – – – - Industrial Areas



FIGURE 2
PETERSON-PURITAN

LAND USE
JULY 23, 1983

APPROX SCALE 1:24,000

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — - Access Road
→→→→ - Berm
→·——·→ - Drainage
═══ - Study Area Boundary
——— - Operational Areas
– – – – - Industrial Areas



FIGURE 3
PETERSON-PURITAN OCTOBER 8, 1941 APPROX SCALE 1:15,400

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — - Access Road
→→→→→ - Berm
→ · — · → - Drainage
——— - Study Area Boundary
——— - Operational Areas
– – – – – - Industrial Areas

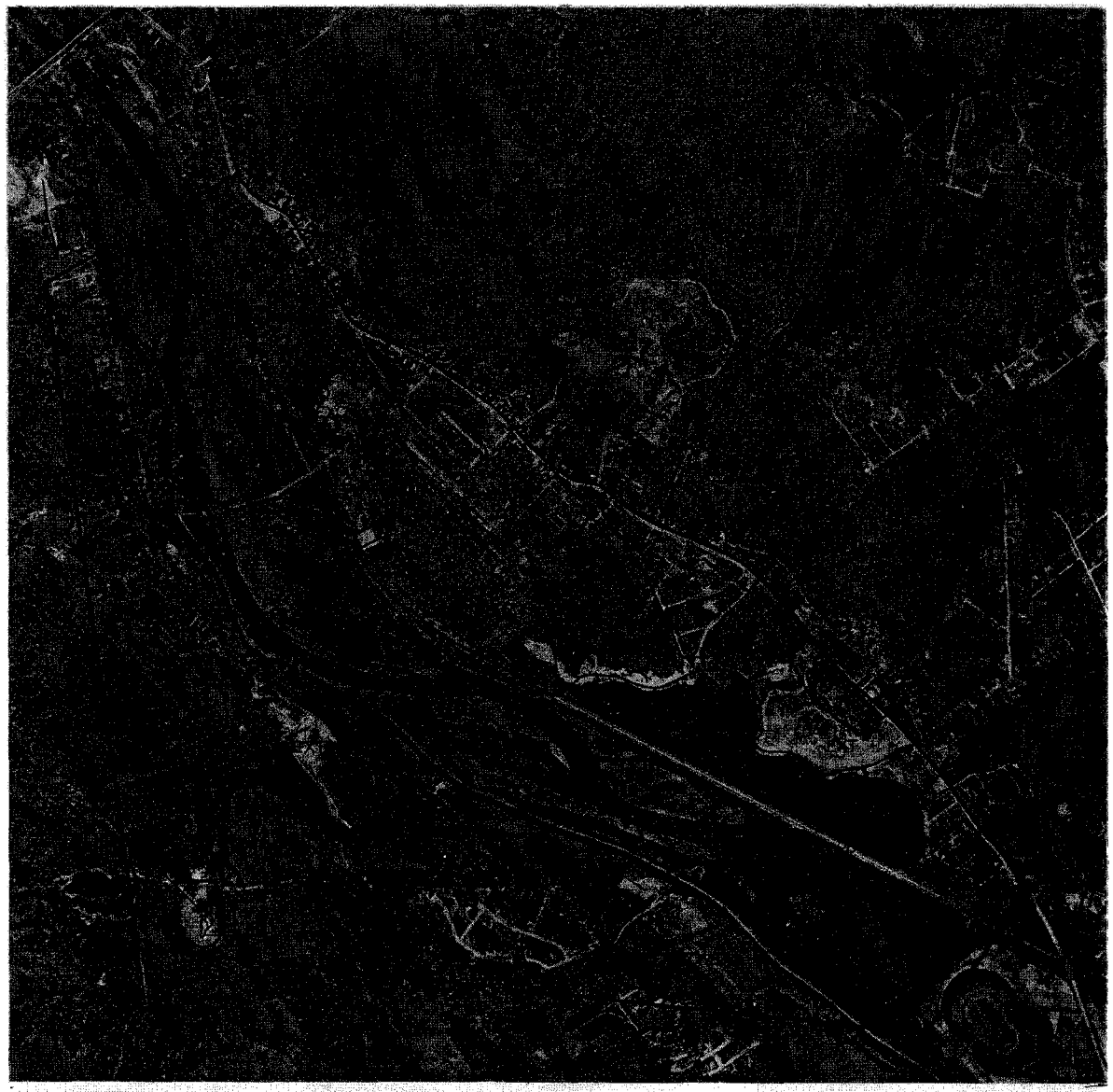
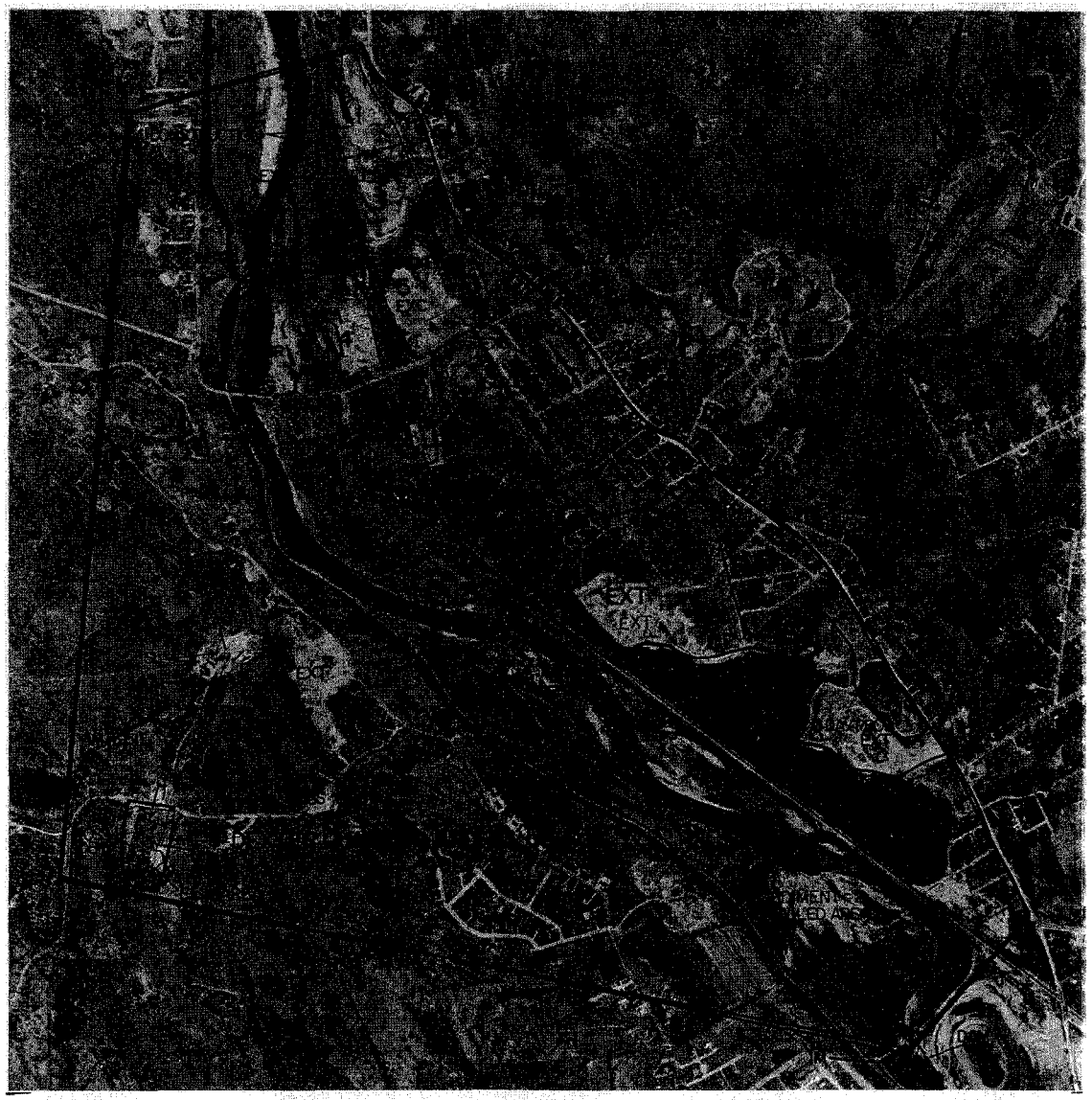


FIGURE 4
PETERSON-PURITAN OCTOBER 26, 1951 APPROX SCALE 1" = 2,400

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — - Access Road
>>>>>> - Berm
—·——·— - Drainage
═══ - Study Area Boundary
——— - Operational Areas
– – – – – - Industrial Areas


EXT
EXT
EXT

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — - Access Road
→→→→→ - Berm
→ · — · → - Drainage
——— - Study Area Boundary
——— - Operational Areas
– – – – – - Industrial Areas



FIGURE 6
PETERSON-PURITAN MAY 5, 1960 APPROX SCALE 1:13,500

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
- Access Road
- Berm
- Drainage
- Study Area Boundary
- Operational Areas
- Industrial Areas

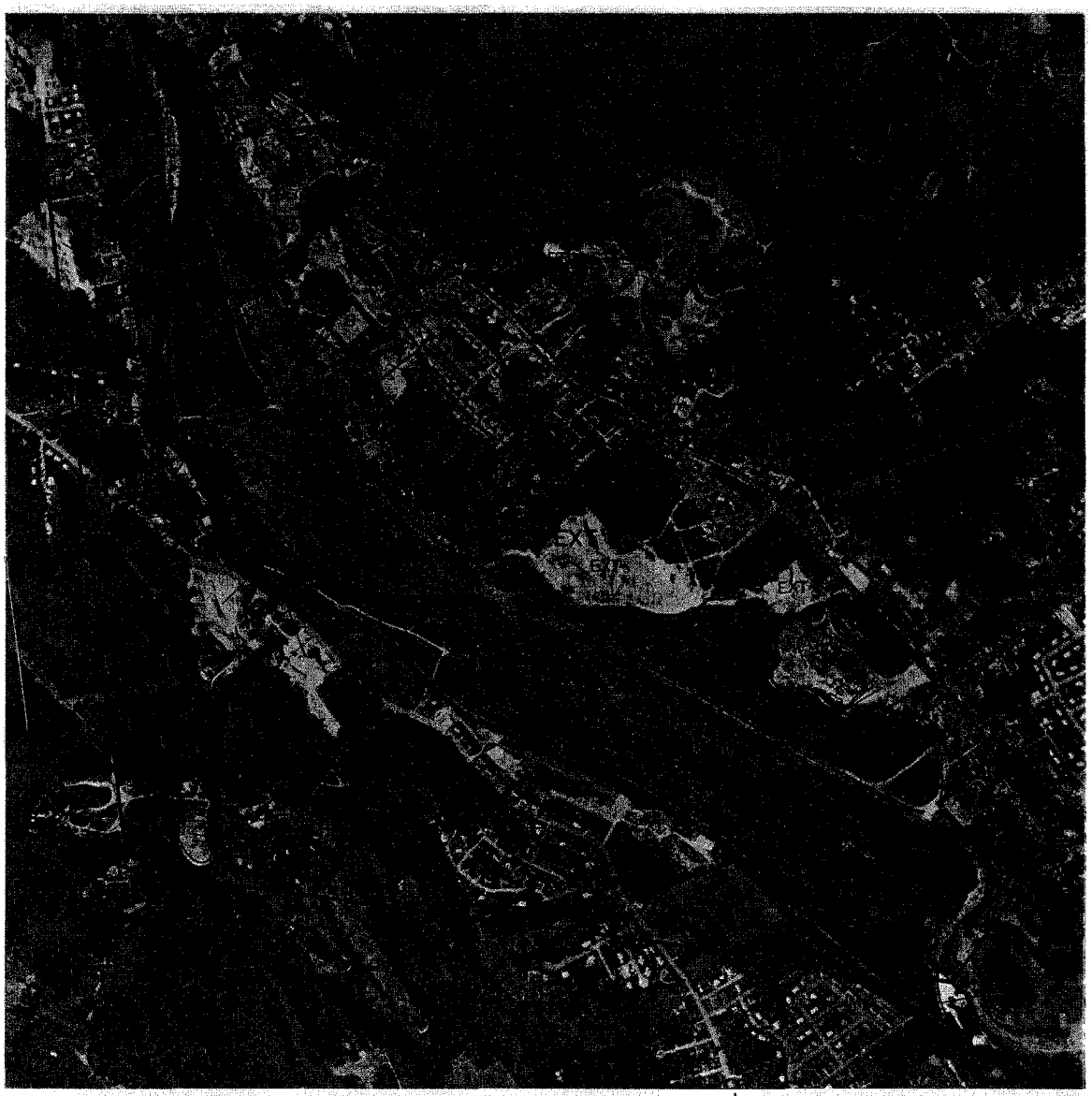


FIGURE 7
PETERSON-PURITAN SEPTEMBER 2, 1963 APPROX SCALE 1:12,300

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — - Access Road
- Berm
- Drainage
- Study Area Boundary
- Operational Areas
- - - - - - - Industrial Areas



FIGURE 8
PETERSON - PURITAN MARCH 9, 1970 APPROX SCALE 1:13,400

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — - Access Road
→→→→→ - Berm
—·——·—→ - Drainage
——————— - Study Area Boundary
——————— - Operational Areas
— — — — — - Industrial Areas

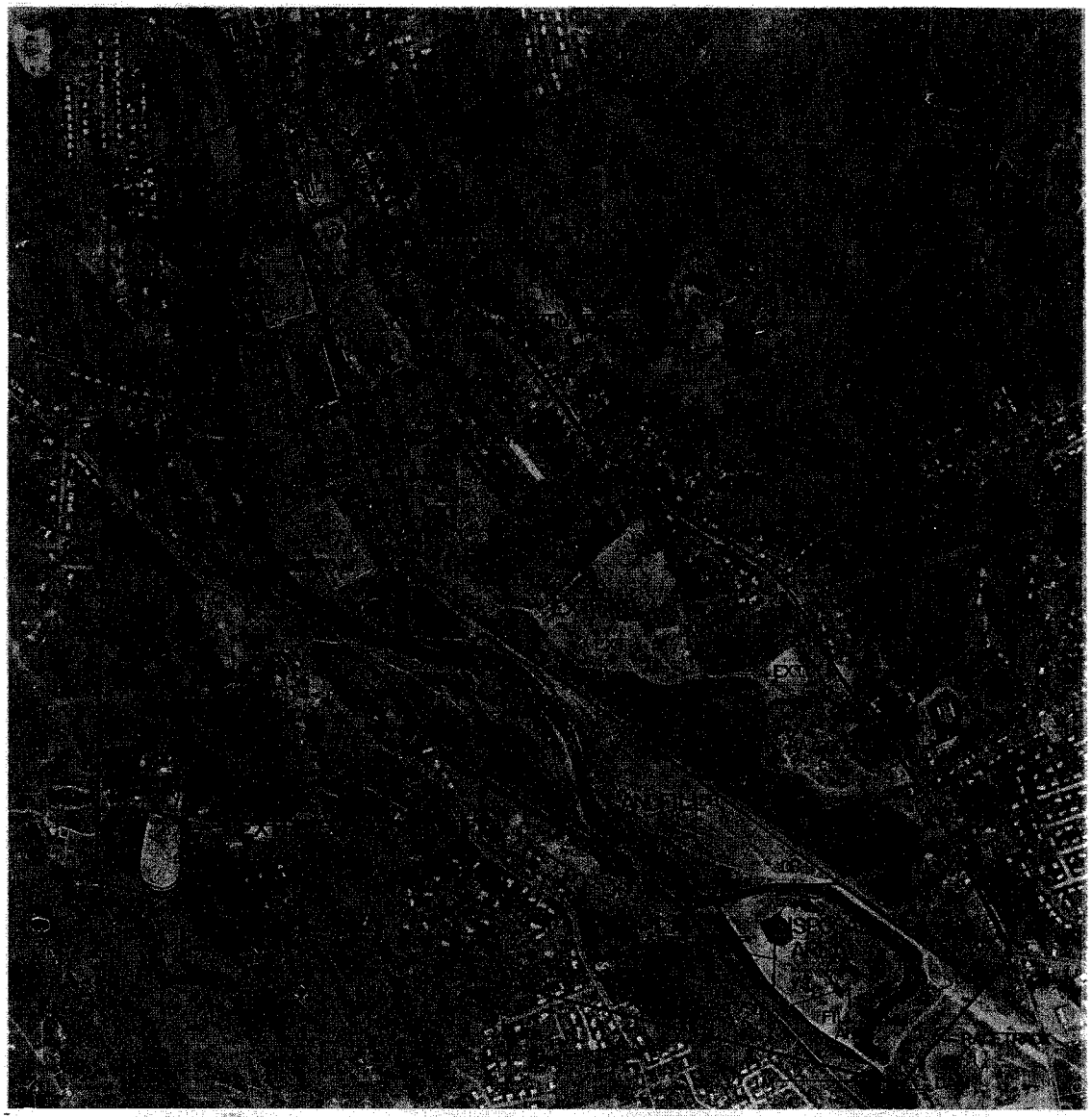


FIGURE 9
PETERSON-PURITAN MAY 5, 1976 APPROX SCALE 1:12,800

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
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T - Tank
TR - Trench
V - Vehicle
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→ · — · → - Drainage
═══ - Study Area Boundary
——— - Operational Areas
– – – – – - Industrial Areas

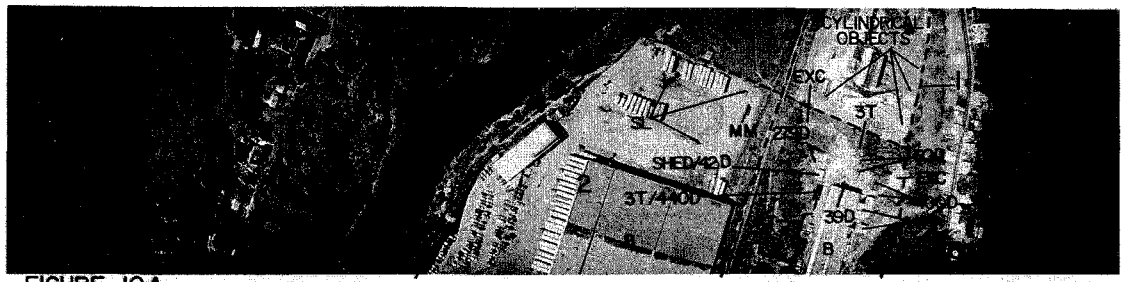


FIGURE 10A

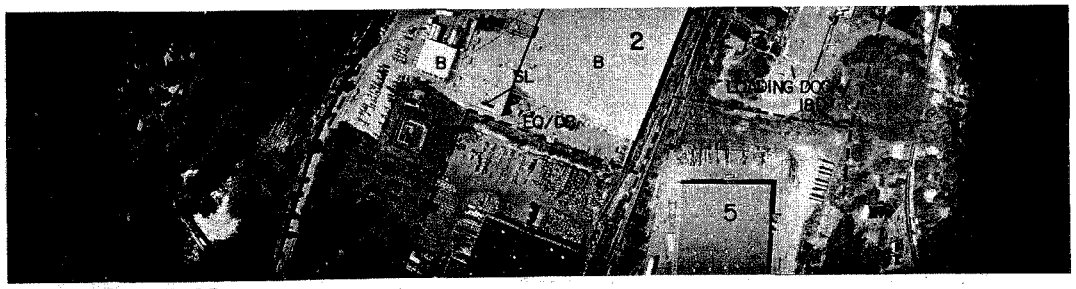


FIGURE 10B

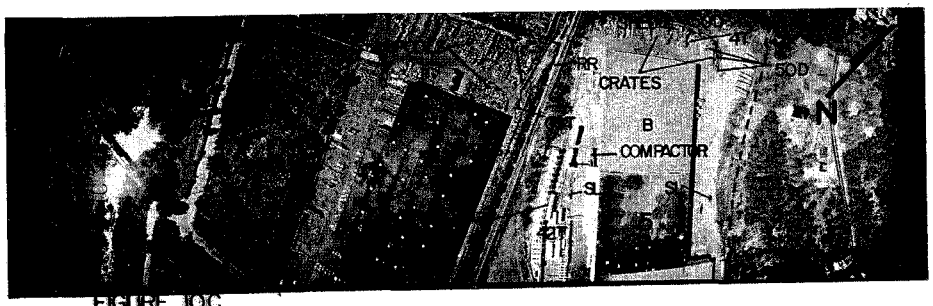


FIGURE 10C
PETERSON-PURITAN SEPTEMBER 25, 1981 VARIABLE SCALE

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
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V - Vehicle
— — — — — - Access Road
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——————— - Study Area Boundary
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— — — — — - Industrial Areas

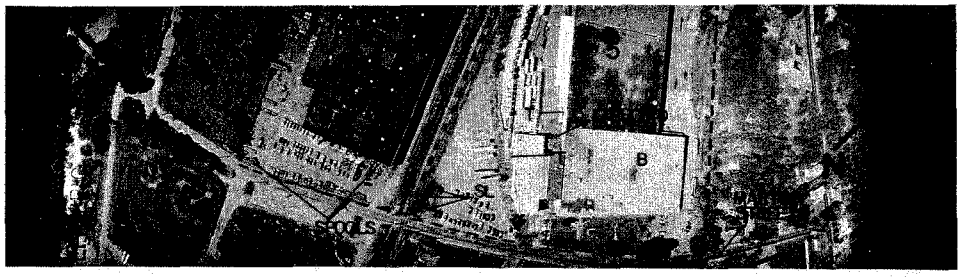


FIGURE 10D

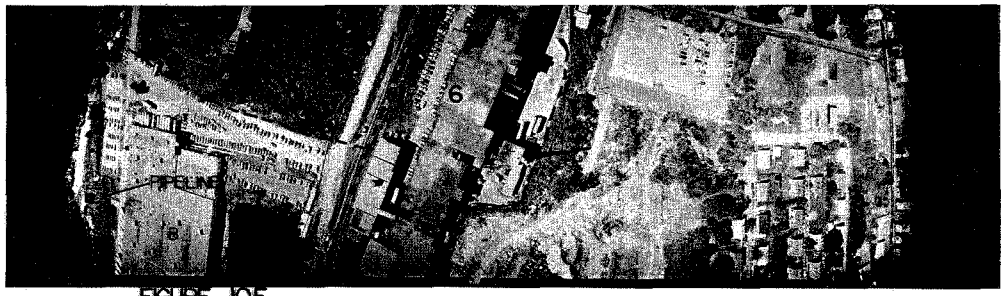


FIGURE 10E
PETERSON-PURITAN SEPTEMBER 25,1981 VARIABLE SCALE

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
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MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
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FIGURE 10F

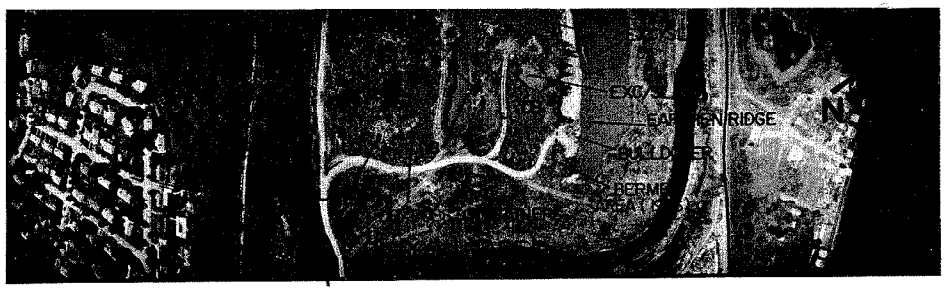


FIGURE 10G



FIGURE 10H
PETERSON-PURITAN SEPTEMBER 25, 1981 VARIABLE SCALE

LEGEND

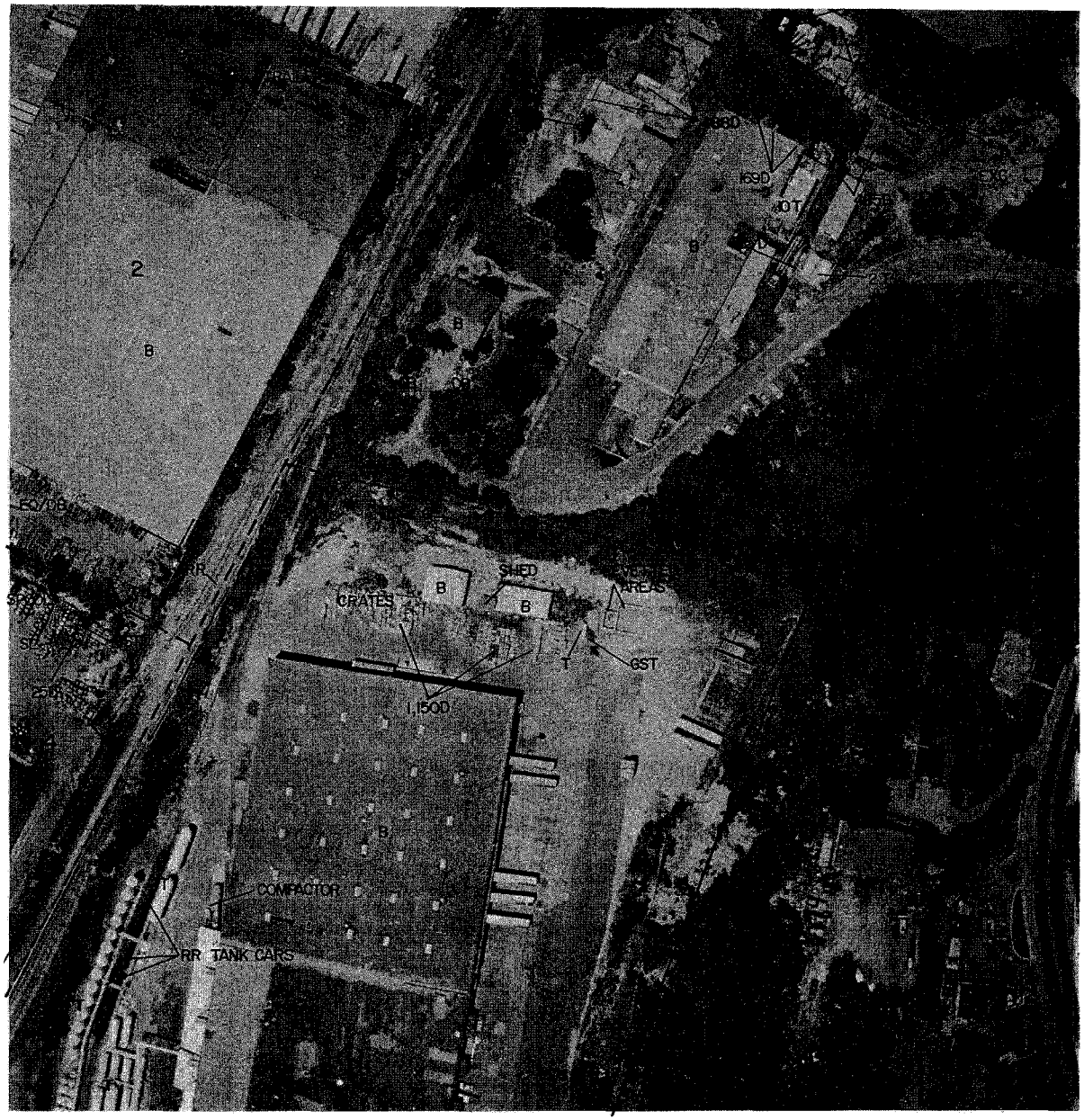
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DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
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GST - Ground Stain
IM - Impoundment
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LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
——— - Access Road
→→→→→ - Berm
——·——→ - Drainage
═══ - Study Area Boundary
——— - Operational Areas
– – – – – - Industrial Areas



FIGURE 11
PETERSON-PURITAN JULY 23, 1983 APPROX SCALE 1:12,300

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — - Access Road
→→→→→ - Berm
→·—·→ - Drainage
═══ - Study Area Boundary
——— - Operational Areas
– – – – - Industrial Areas


2
B
B
B

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
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TR - Trench
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═══ - Study Area Boundary
——— - Operational Areas
– – – – - Industrial Areas

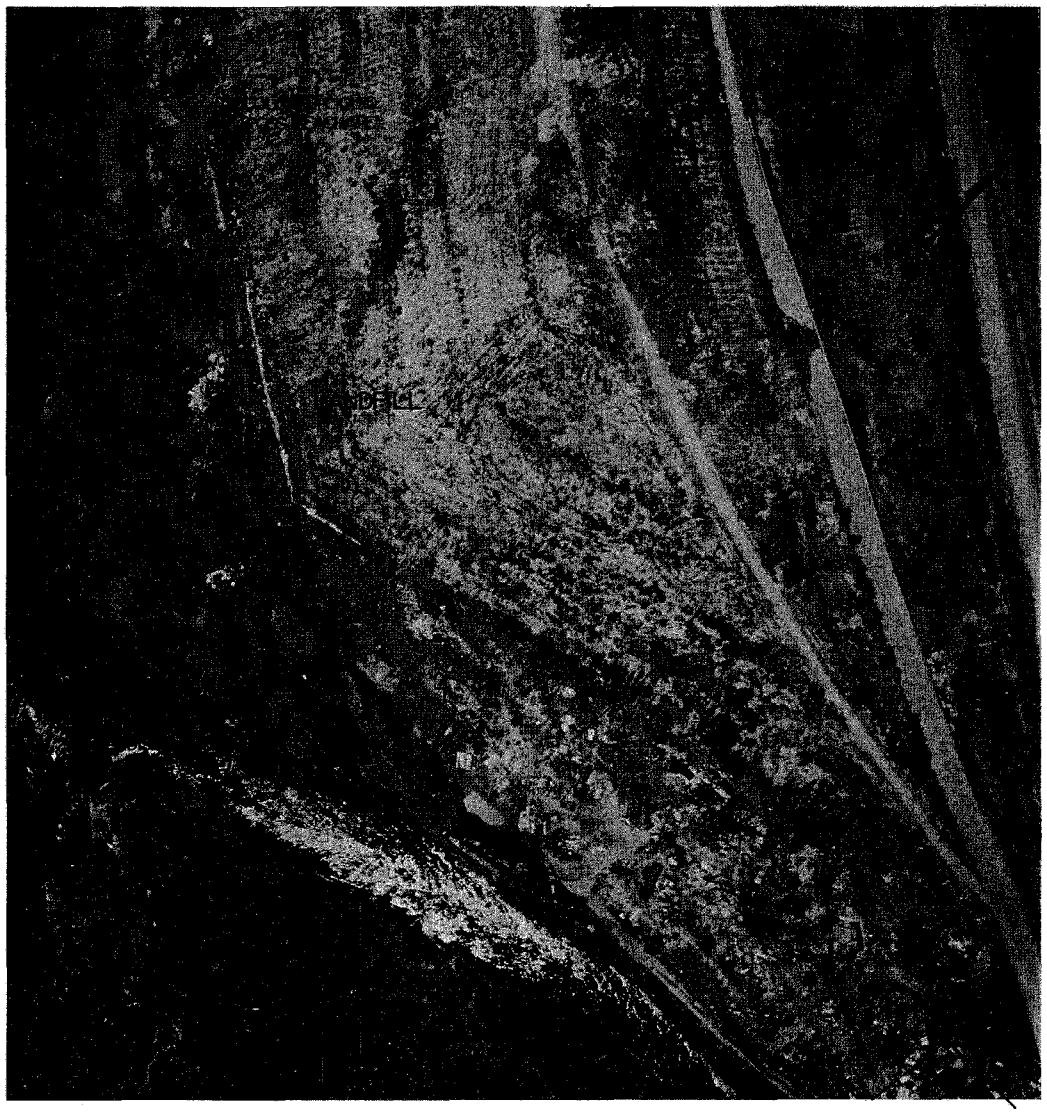


FIGURE 12B
PETERSON - PURITAN JUNE 19, 1986 APPROX SCALE 1:1,300

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
— — — — - Access Road
→→→→→ - Berm
→·——·—→ - Drainage
——————— - Study Area Boundary
——————— - Operational Areas
— — — — — - Industrial Areas



FIGURE 12C
PETERSON-PURITAN JUNE 19, 1986 APPROX SCALE 1:1,300

LEGEND

B - Building
D - Drums
DA - Disturbed Area
DB - Debris
DK - Dark-Toned
EQ - Equipment
EXC - Excavation
EXT - Extraction Area
GR - Graded Area
GS - Ground Scar
GST - Ground Stain
IM - Impoundment
L - Lagoon
LT - Light-Toned
M - Material
MM - Mounded Material
REV - Revegetated
S - Structure
SL - Standing Liquid
T - Tank
TR - Trench
V - Vehicle
- Access Road
- Berm
- Drainage
- Study Area Boundary
- Operational Areas
- Industrial Areas



FIGURE 13
PETERSON-PURITAN

FRACTURE TRACE ANALYSIS
OCTOBER 26, 1951

APPROX SCALE 1:12,400

WETLANDS LEGEND

SYSTEM:

R - Riverine
L - Lacustrine
P - Palustrine

CLASS:

EM - Emergent
SS - Scrub-Shrub
UB - Unconsolidated Bottom
US - Unconsolidated Shore

~ - Upland



WETLANDS LEGEND

SYSTEM:

R - Riverine
L - Lacustrine
P - Palustrine

CLASS:

EM - Emergent
SS - Scrub-Shrub
UB - Unconsolidated Bottom
US - Unconsolidated Shore

~ - Upland



FIGURE 15
PETERSON - PURITAN

OCTOBER 26, 1951
WETLANDS

APPROX SCALE 1:12,400

WETLANDS LEGEND

SYSTEM:

R - Riverine
L - Lacustrine
P - Palustrine

CLASS:

EM - Emergent
SS - Scrub-Shrub
UB - Unconsolidated Bottom
US - Unconsolidated Shore

ↄ - Upland

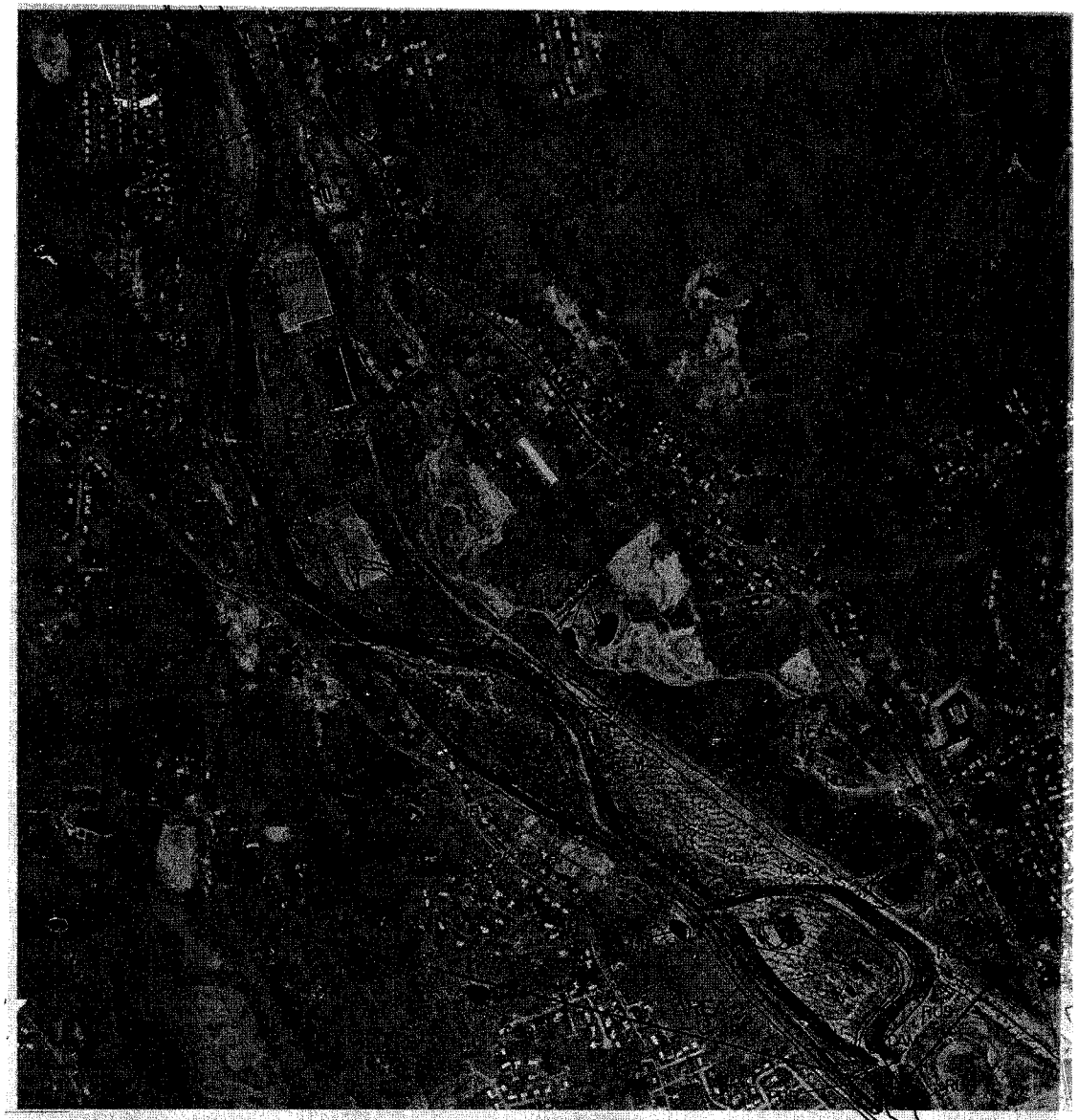


FIGURE 16
PETERSON - PURITAN

WETLANDS/WETLANDS LOSS/GAIN
MAY 5, 1976 APPROX SCALE 12,800

Appendix N

Previous or Updated Figures
(Cross Sections, Bedrock Surface, Potentiometric Surface Maps, Hydrographs)

Figure B-1
Comparative Hydrographs, Peterson/Puritan OU2
Quinnville Wellfield

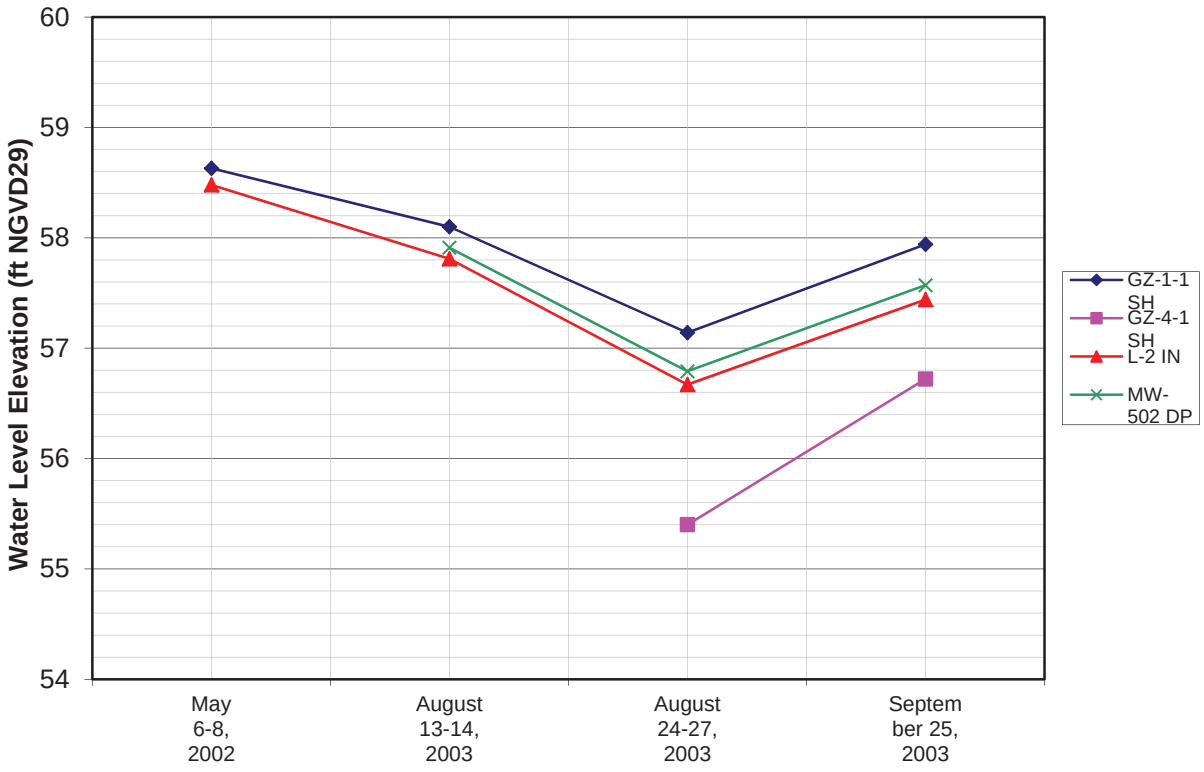


Figure B-2 (a)
Comparative Hydrographs, Peterson/Puritan OU2
Unnamed Island

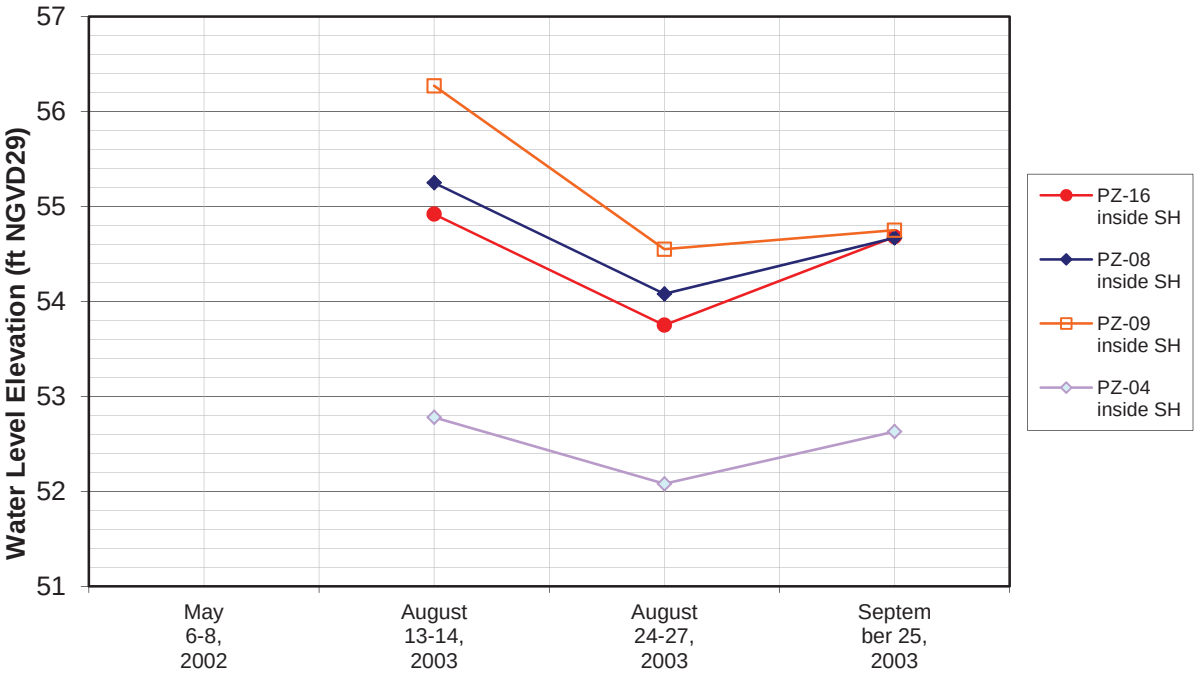


Figure B-2 (b)
Comparative Hydrographs, Peterson/Puritan OU2
Unnamed Island

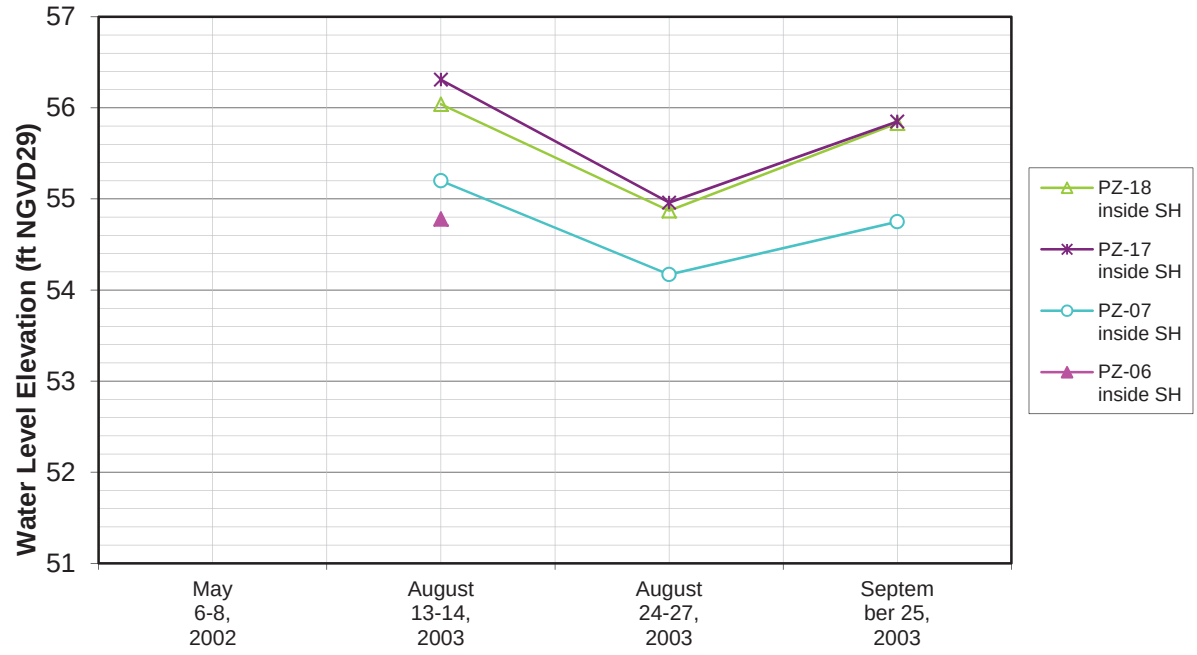


Figure B-3 (a)
Comparative Hydrographs, Peterson/Puritan OU2
Northwest: MW-106, MW-501 and PZ-14

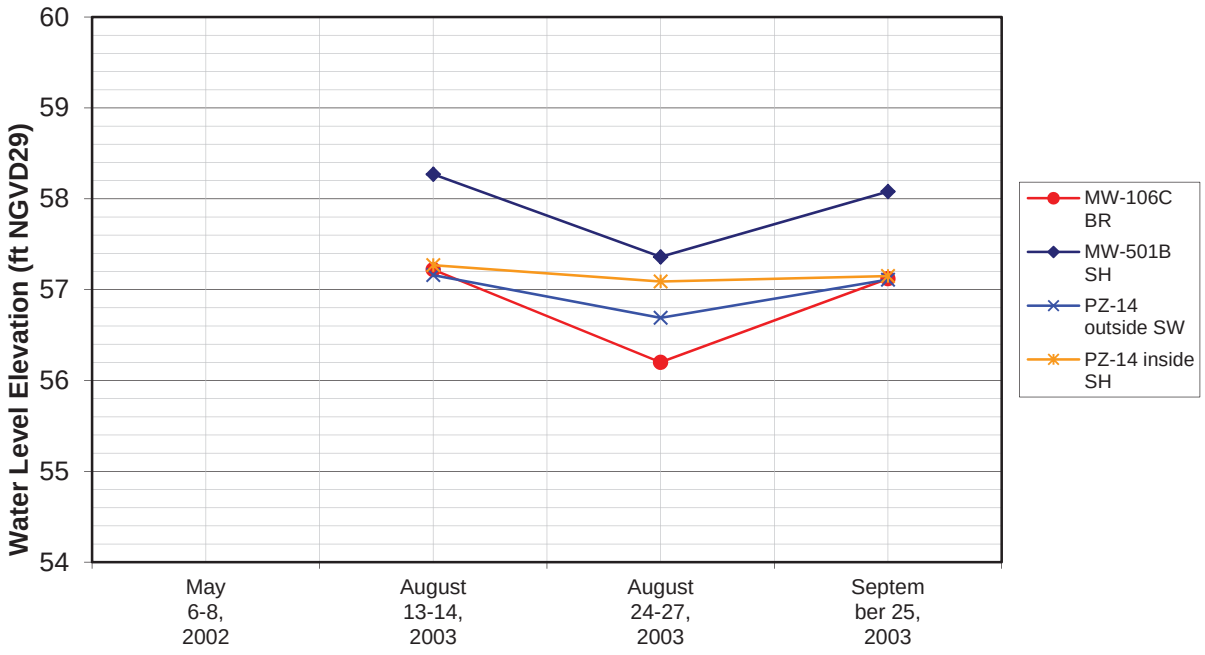


Figure B-3 (b)
Comparative Hydrographs, Peterson/Puritan OU2
Northwest: MW-106, MW-501 and PZ-14

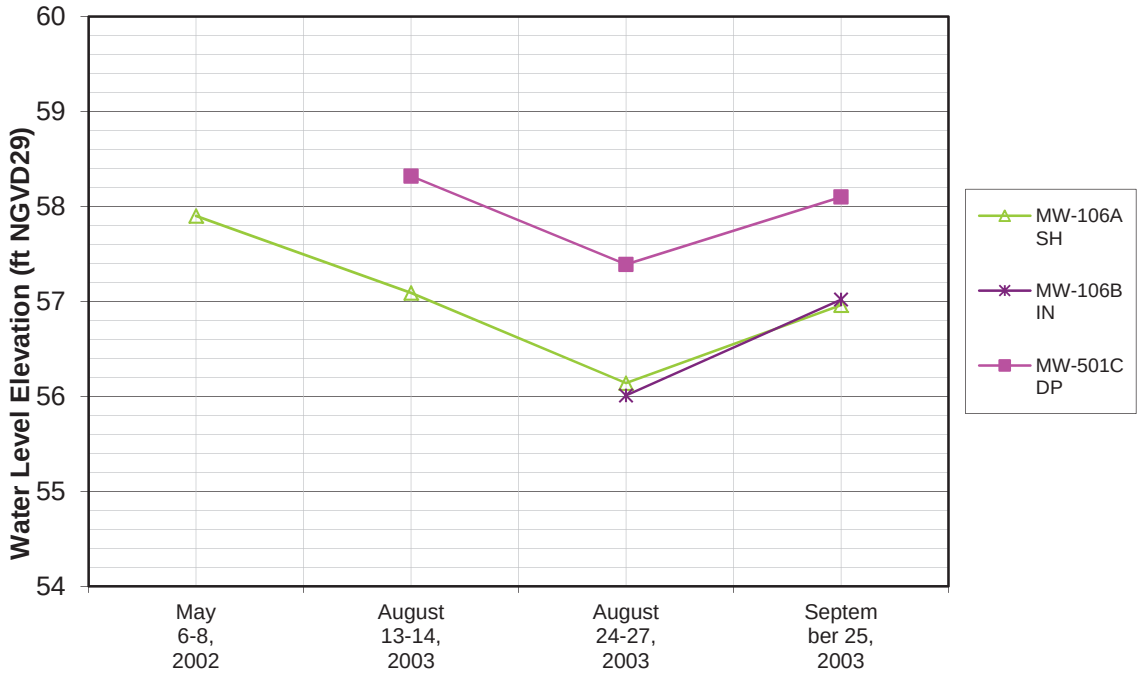


Figure B-4 (a)
Comparative Hydrographs, Peterson/Puritan OU2
Wetlands

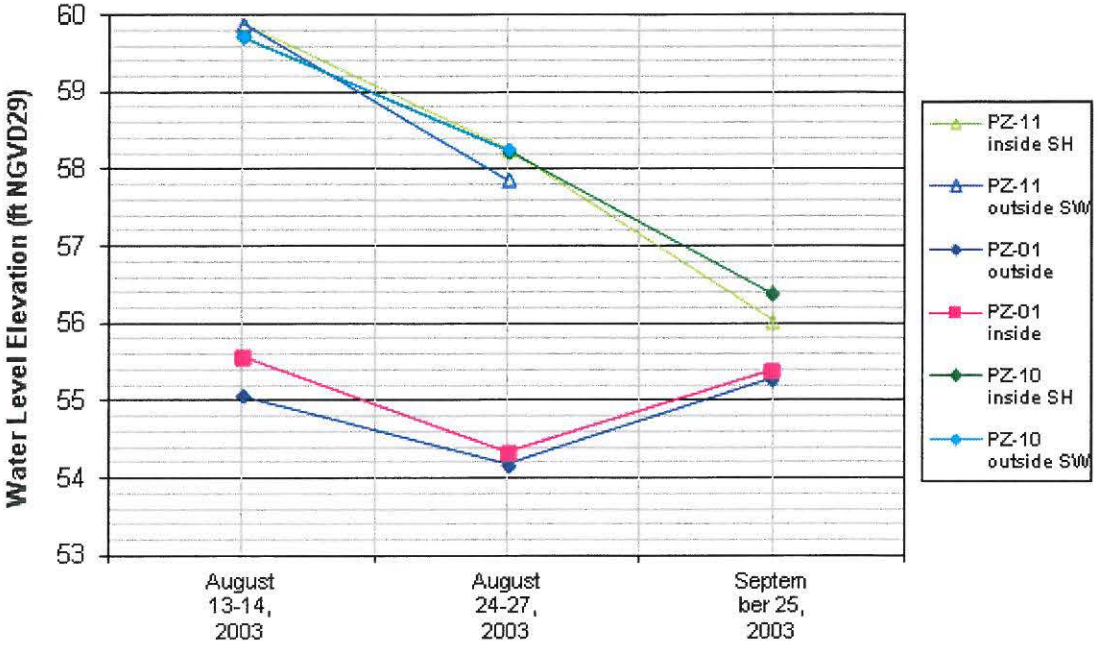


Figure B-4 (b)
Comparative Hydrographs, Peterson/Puritan OU2
Wetlands

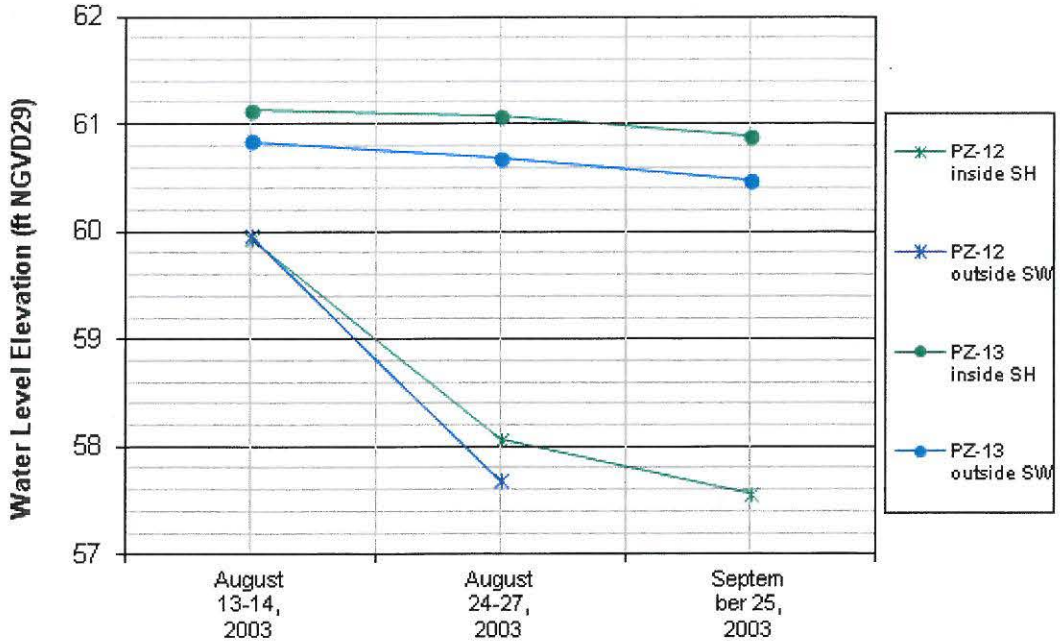


Figure B-5 (a)
Comparative Hydrographs, Peterson/Puritan OU2
Northeast Landfill

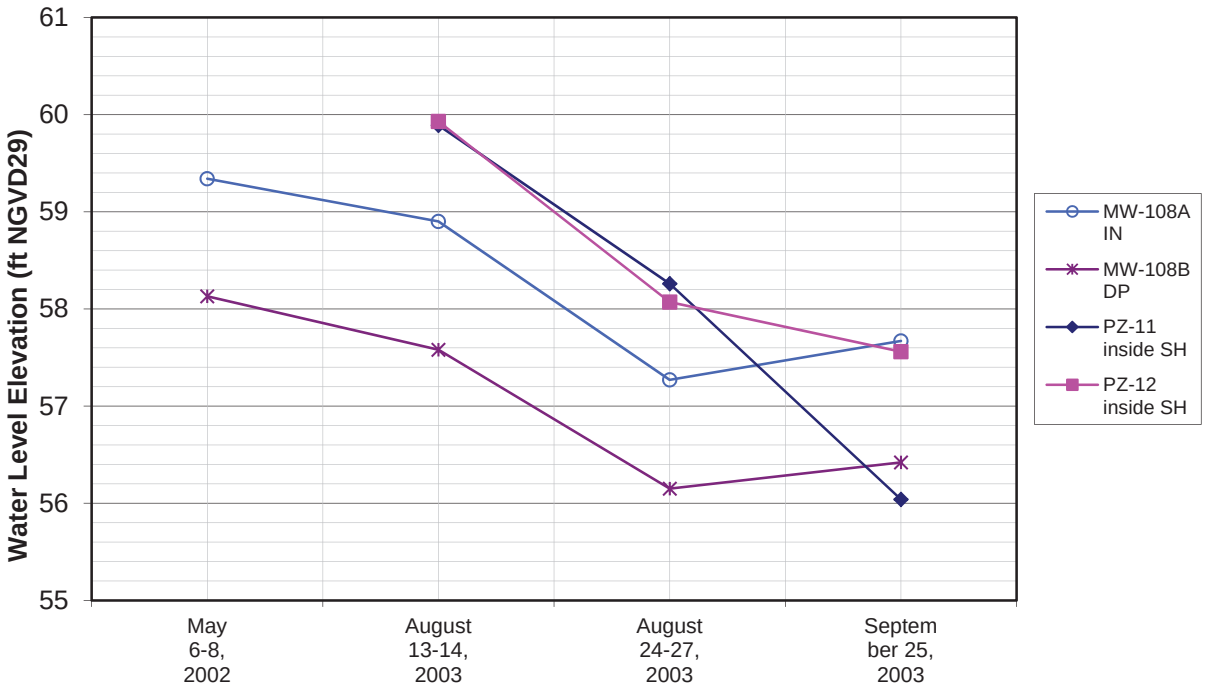


Figure B-5 (b)
Comparative Hydrographs, Peterson/Puritan OU2
Northeast Landfill

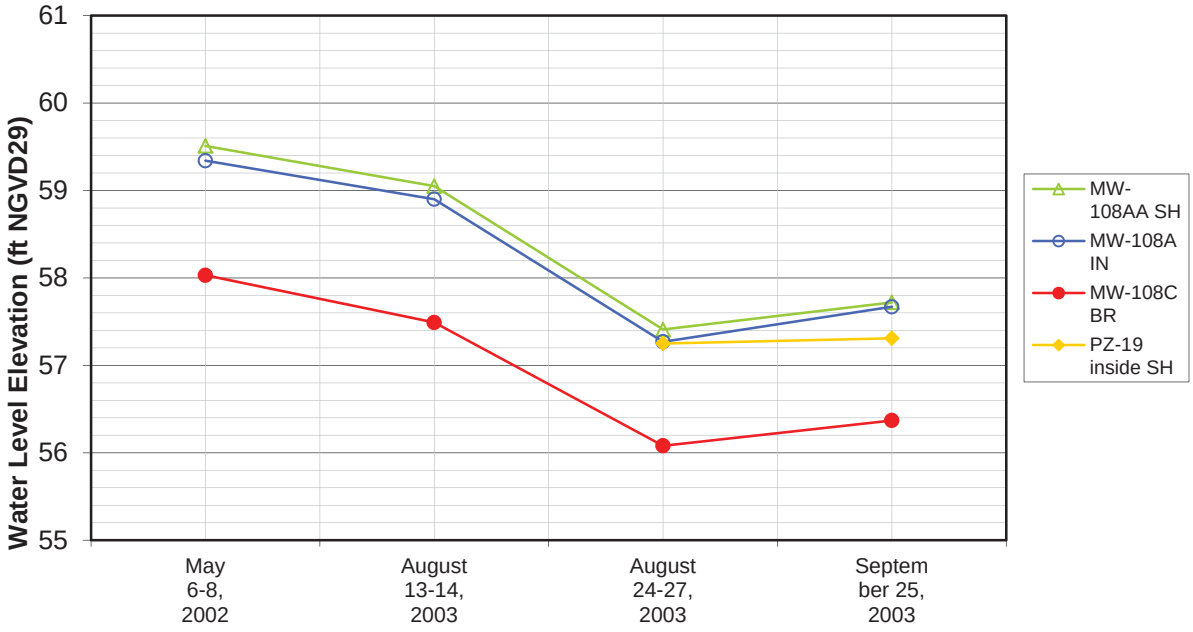


Figure B-6 (a)
Comparative Hydrographs, Peterson/Puritan OU2
Southwest Landfill: Ponds B and C

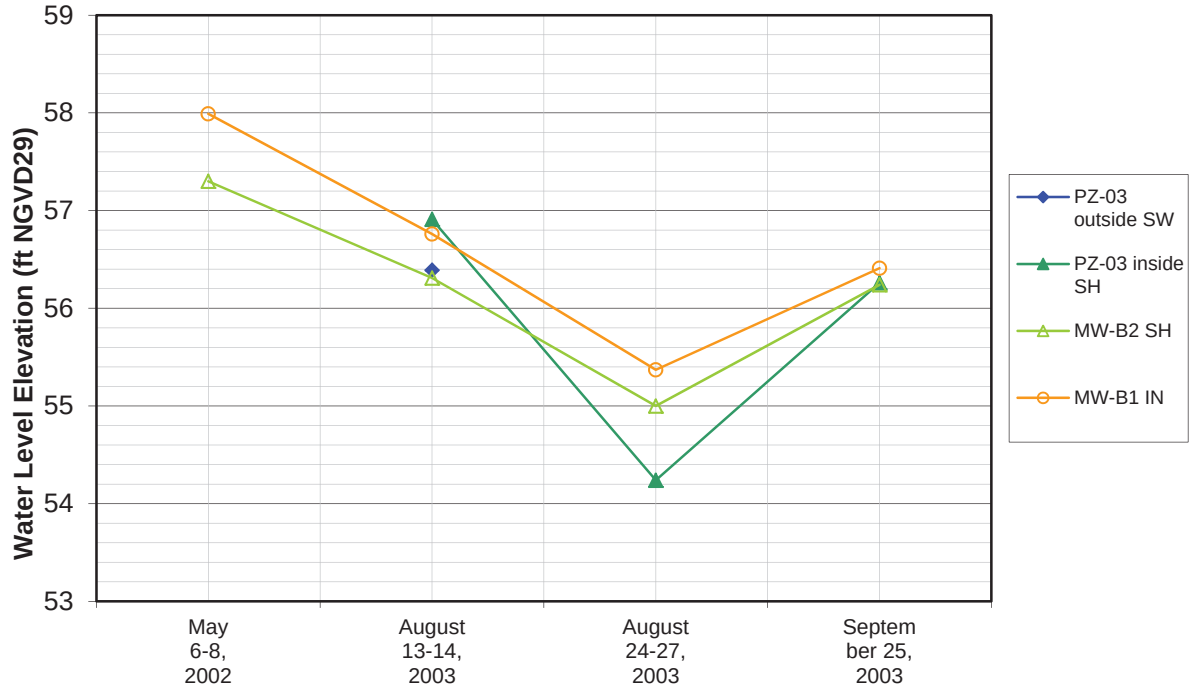


Figure B-6 (b)
Comparative Hydrographs, Peterson/Puritan OU2
Southwest Landfill: Ponds B and C

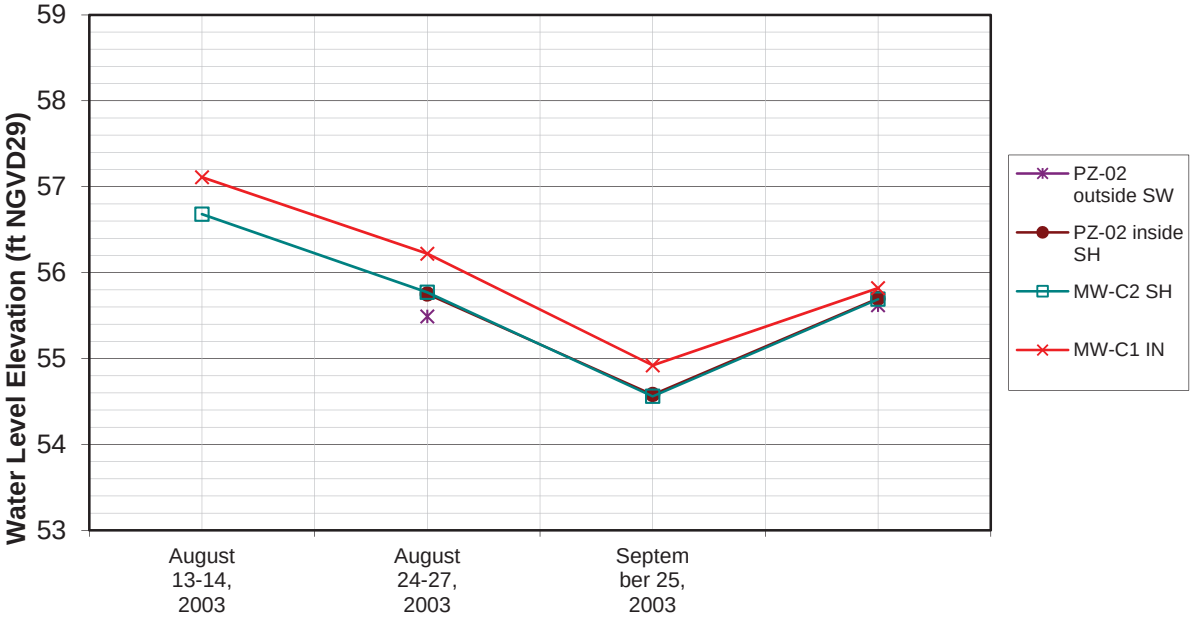


Figure B-7 (a)
Comparative Hydrographs, Peterson/Puritan OU2
Southeast Landfill

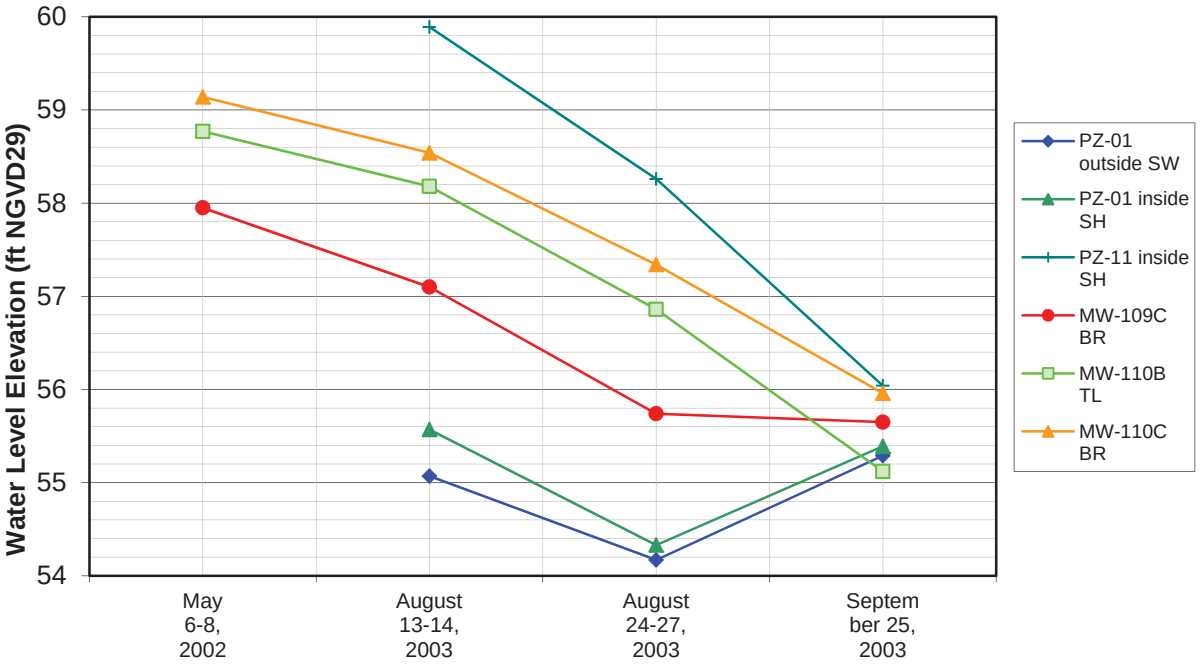


Figure B-7 (b)
Comparative Hydrographs, Peterson/Puritan OU2
Southeast Landfill

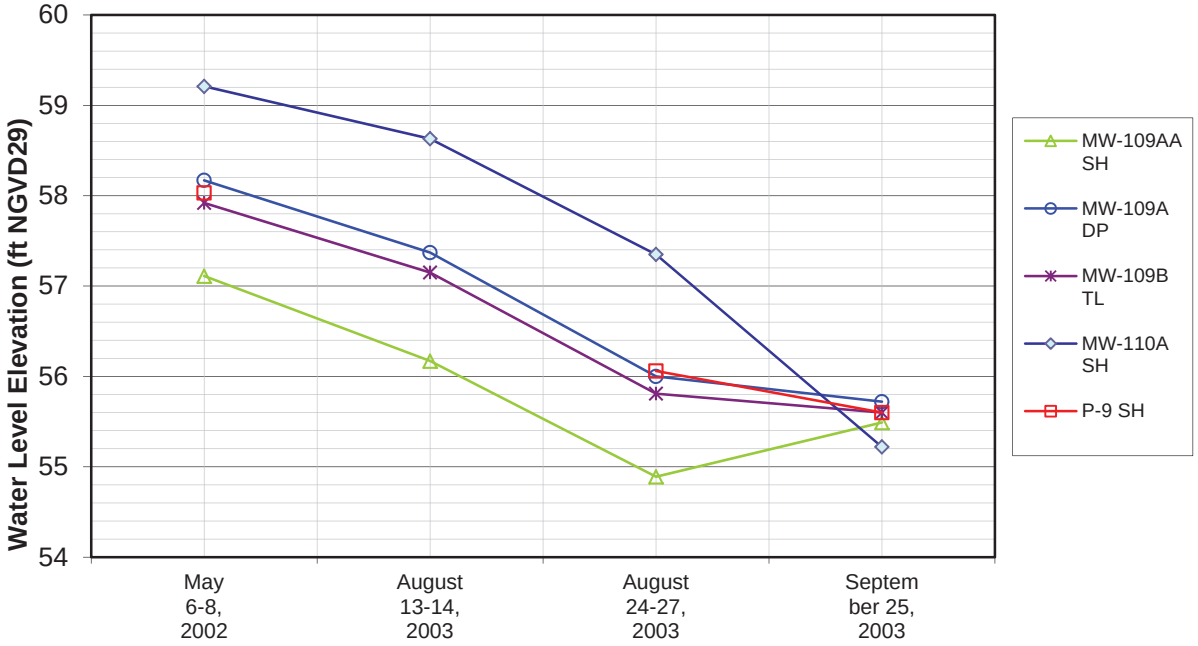


Figure B-8 (a)
Comparative Hydrographs, Peterson/Puritan OU2
Lenox Street Well Area

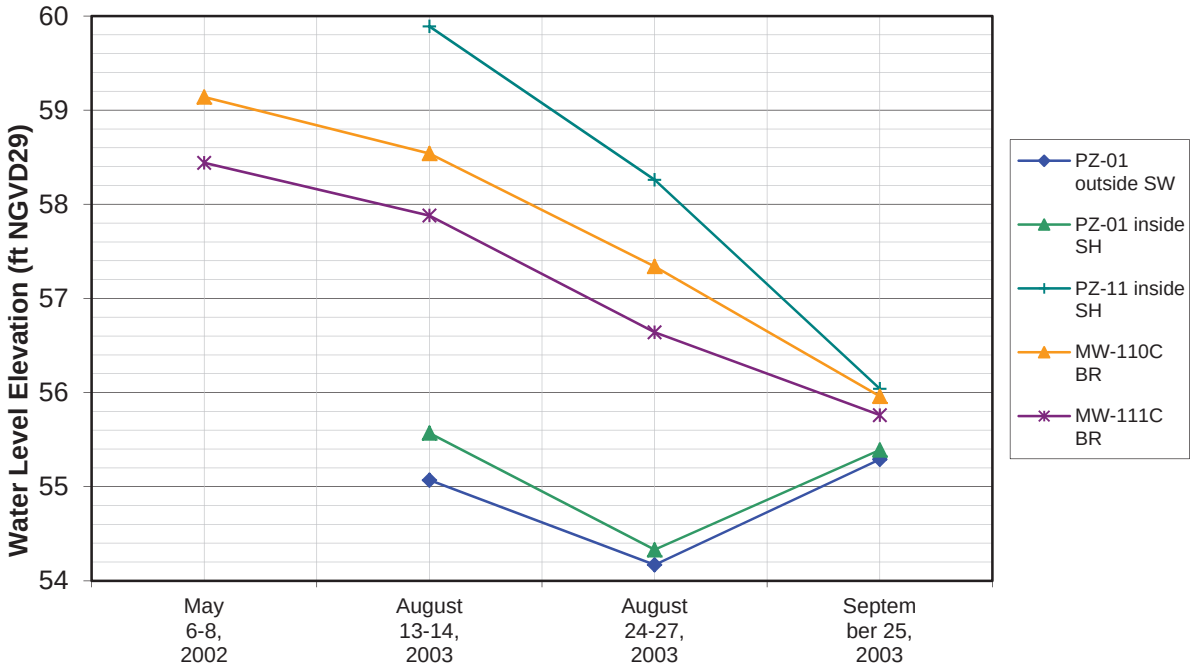


Figure B-8 (b)
Comparative Hydrographs, Peterson/Puritan OU2
Lenox Street Well Area

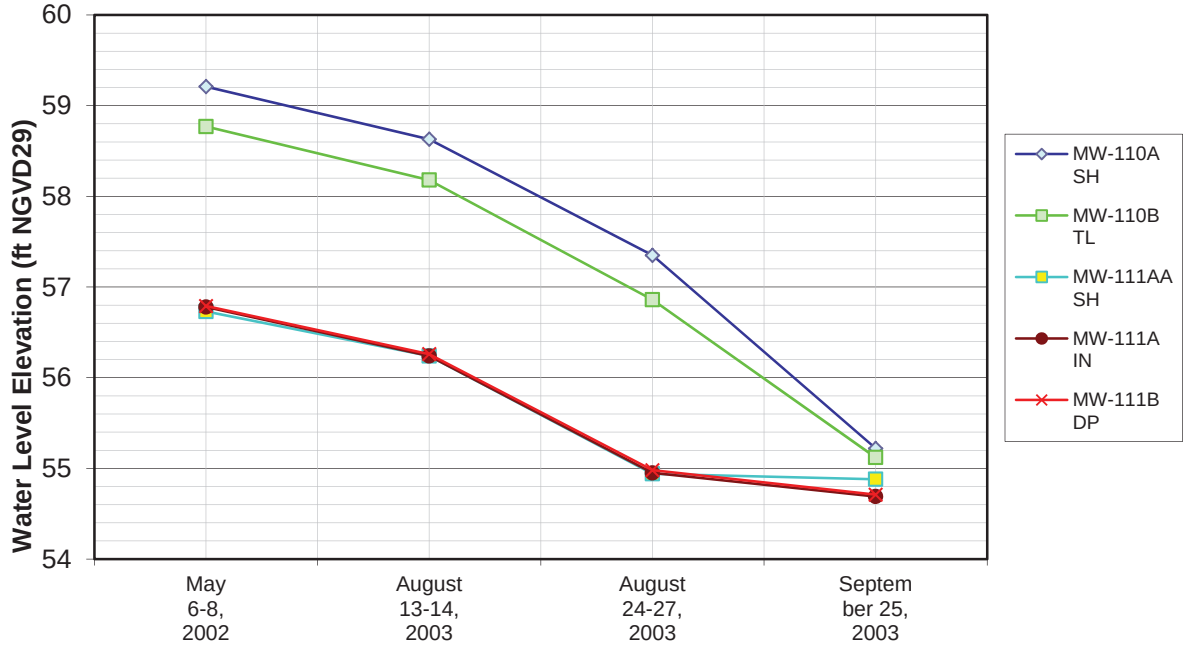


Figure B-9 (a)
Comparative Hydrographs, Peterson/Puritan OU2
Lenox Street Well and Transfer Station Areas

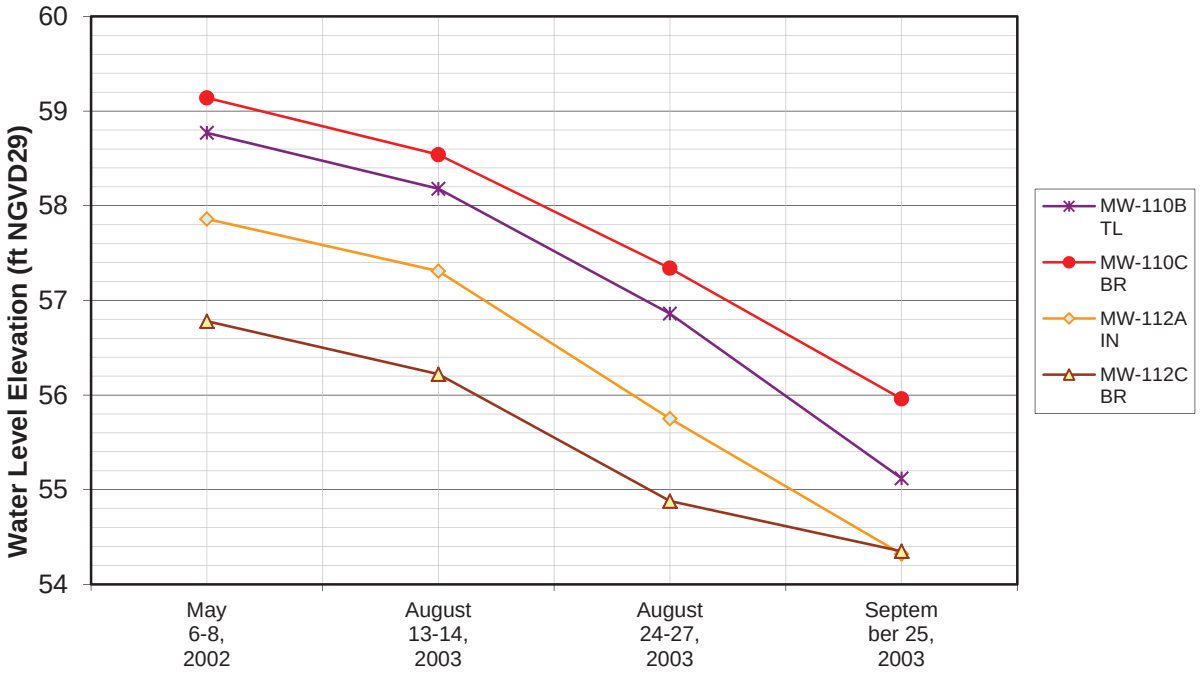
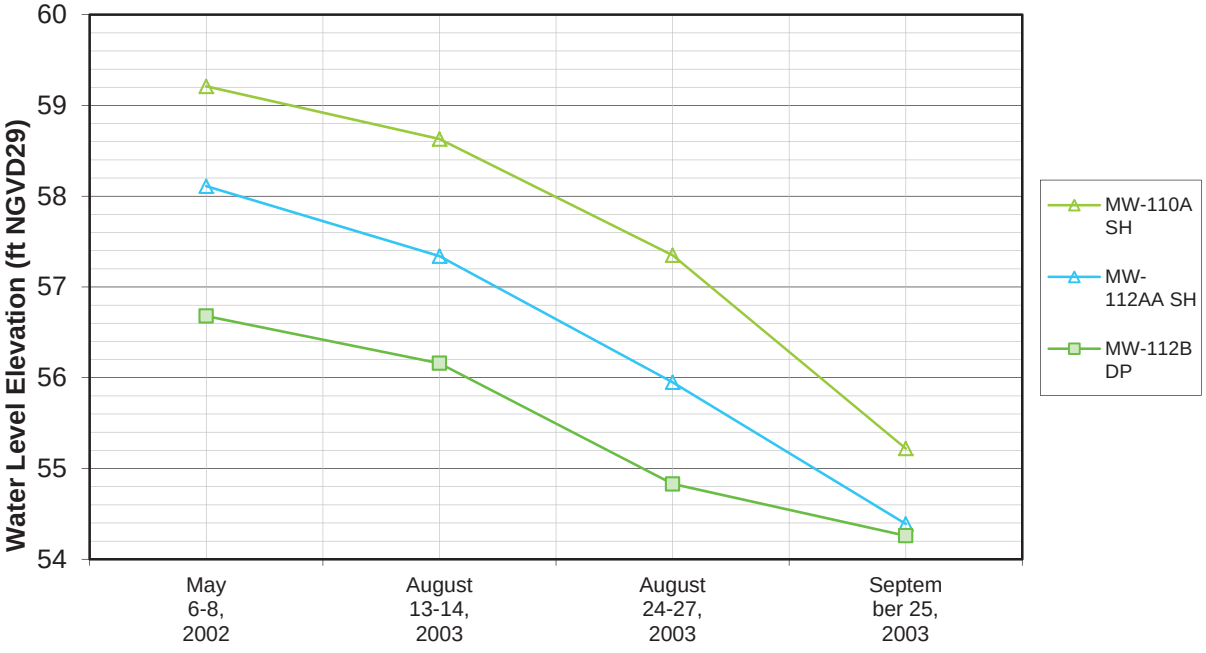
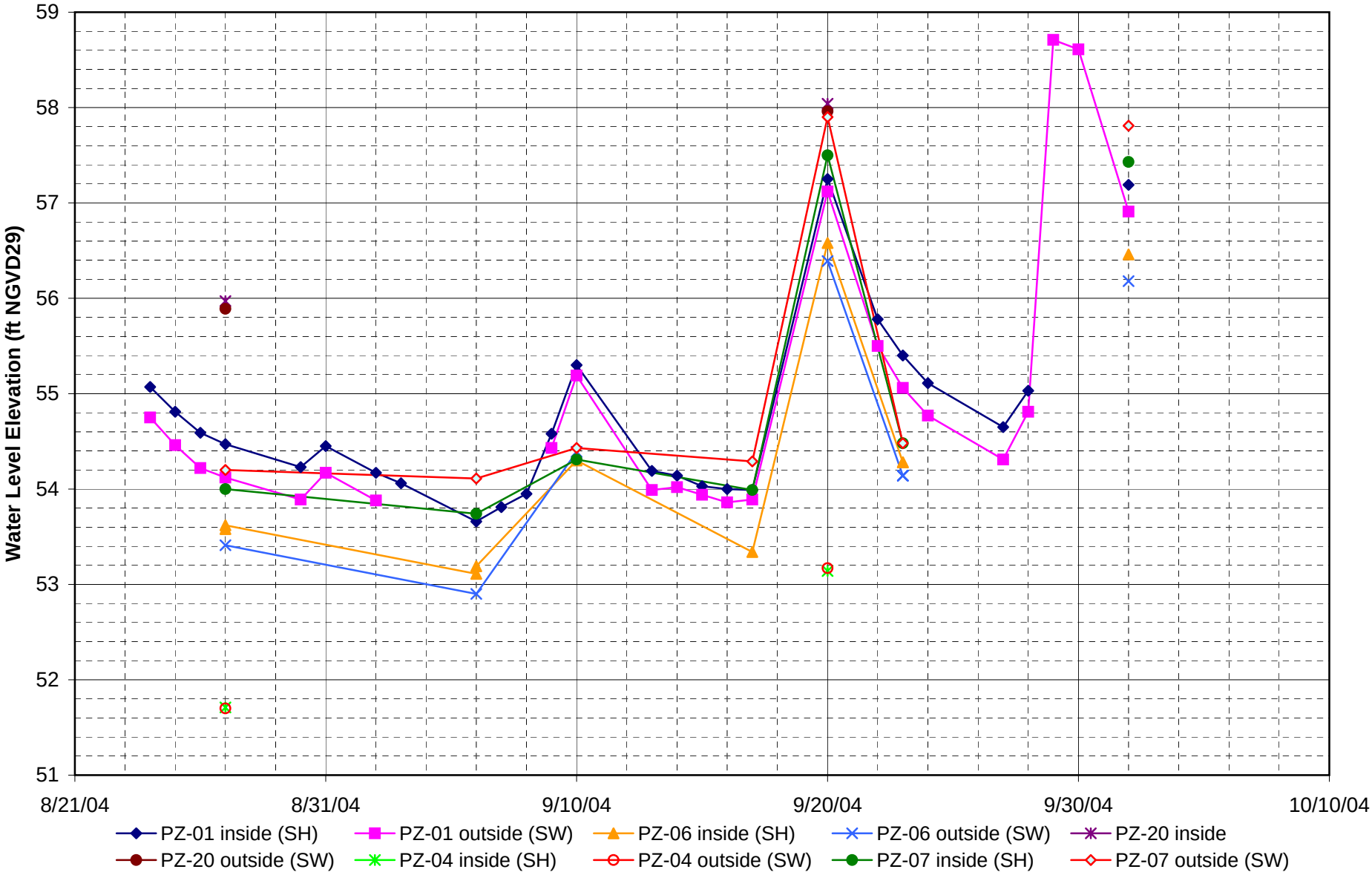


Figure B-9 (b)
Comparative Hydrographs, Peterson/Puritan OU2
Lenox Street Well and Transfer Station Areas



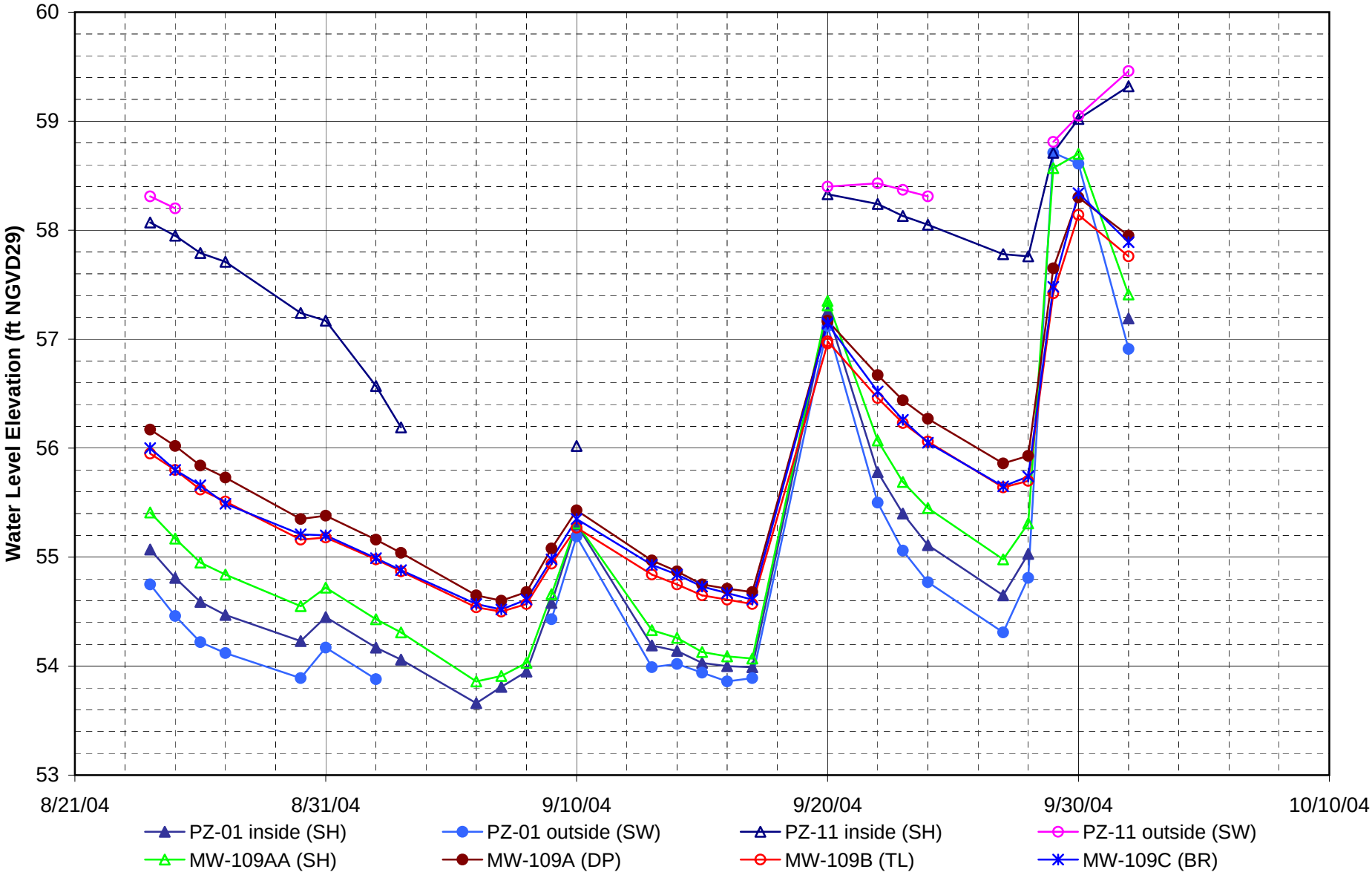
River 2004

Peterson/Puritan OU2
Hydrographs



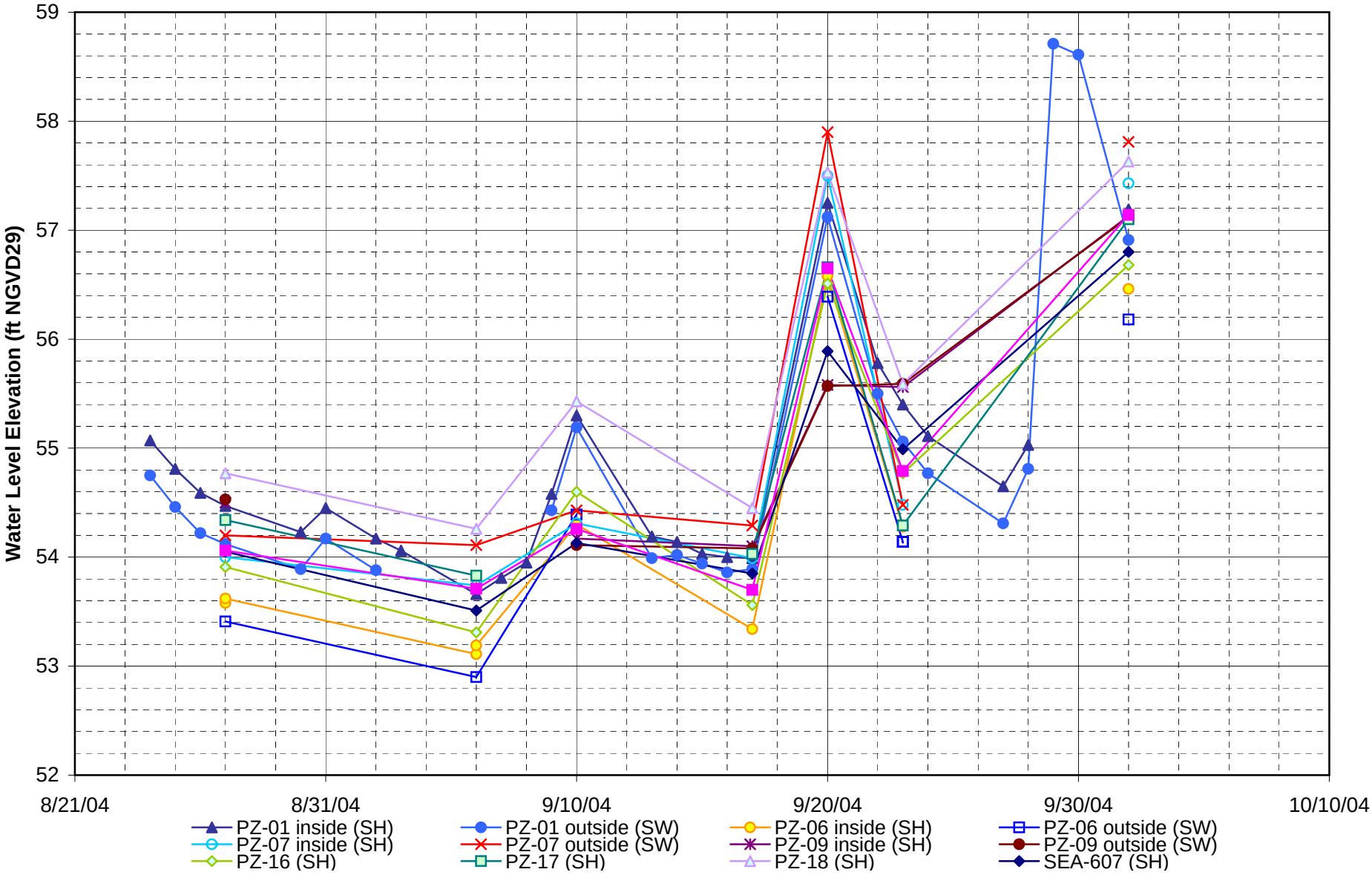
River WT 2004

Peterson/Puritan OU2
Hydrographs



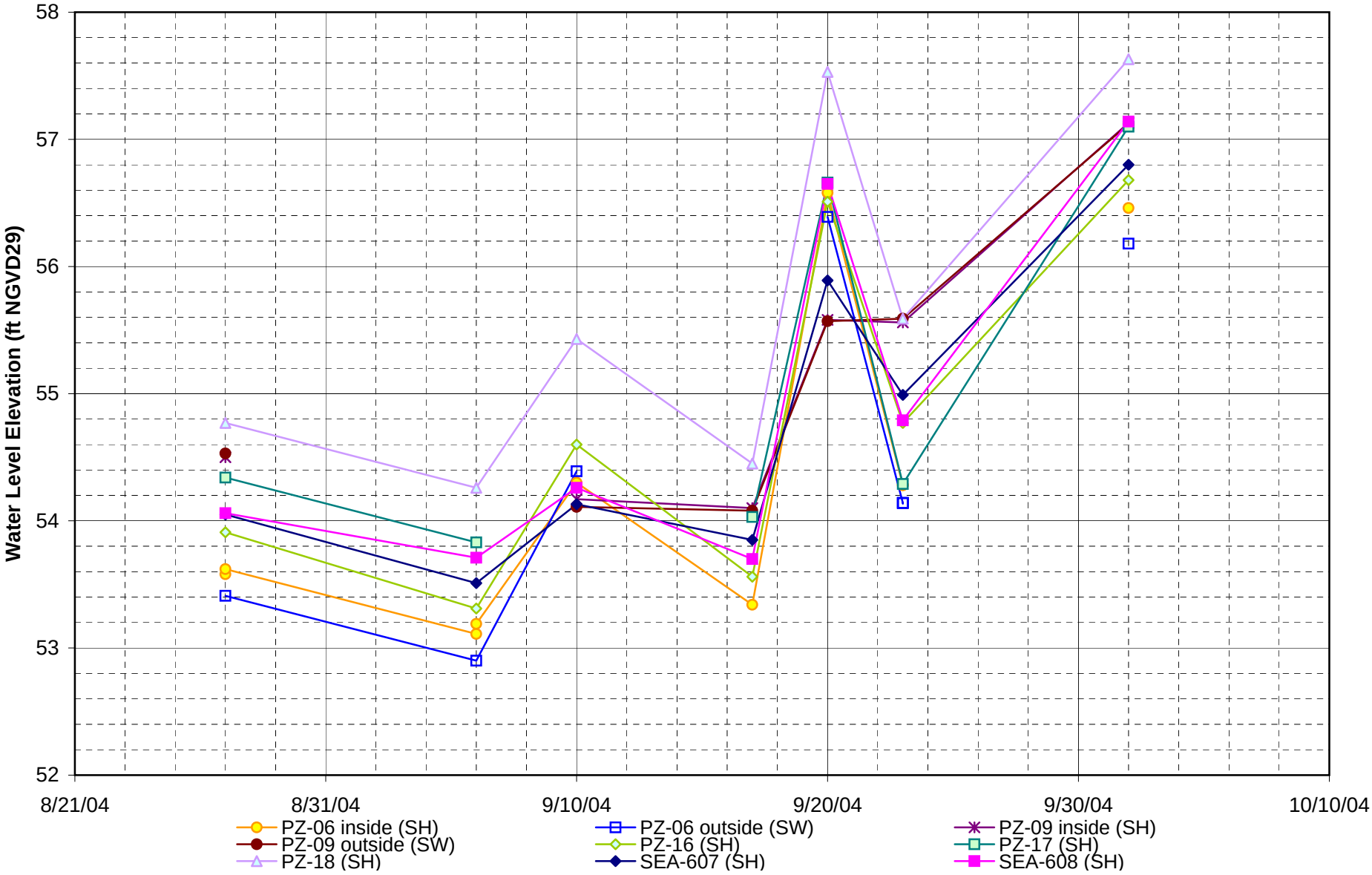
River UI 2004

Peterson/Puritan OU2
Hydrographs



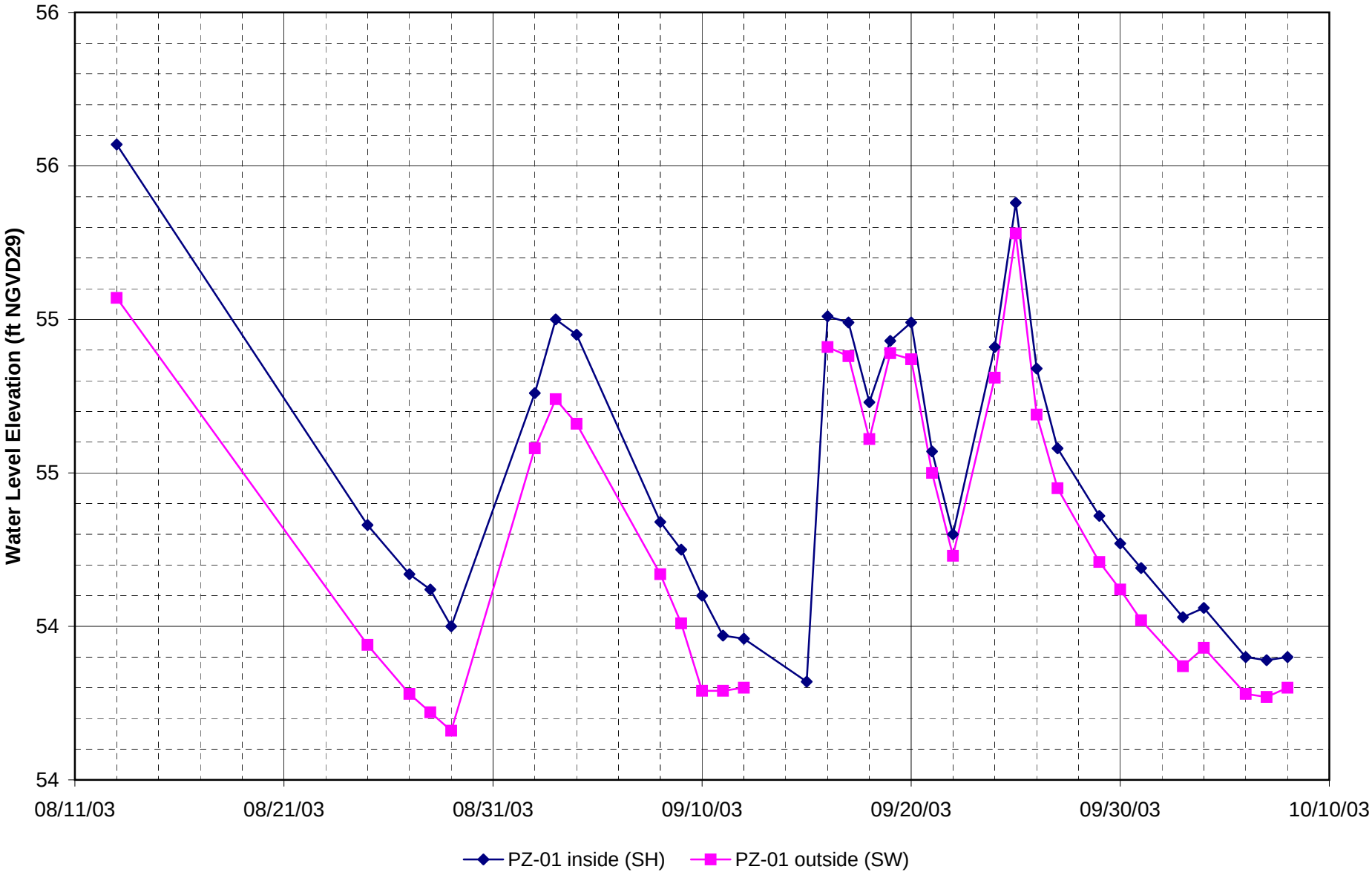
UI 2004

Peterson/Puritan OU2
Hydrographs



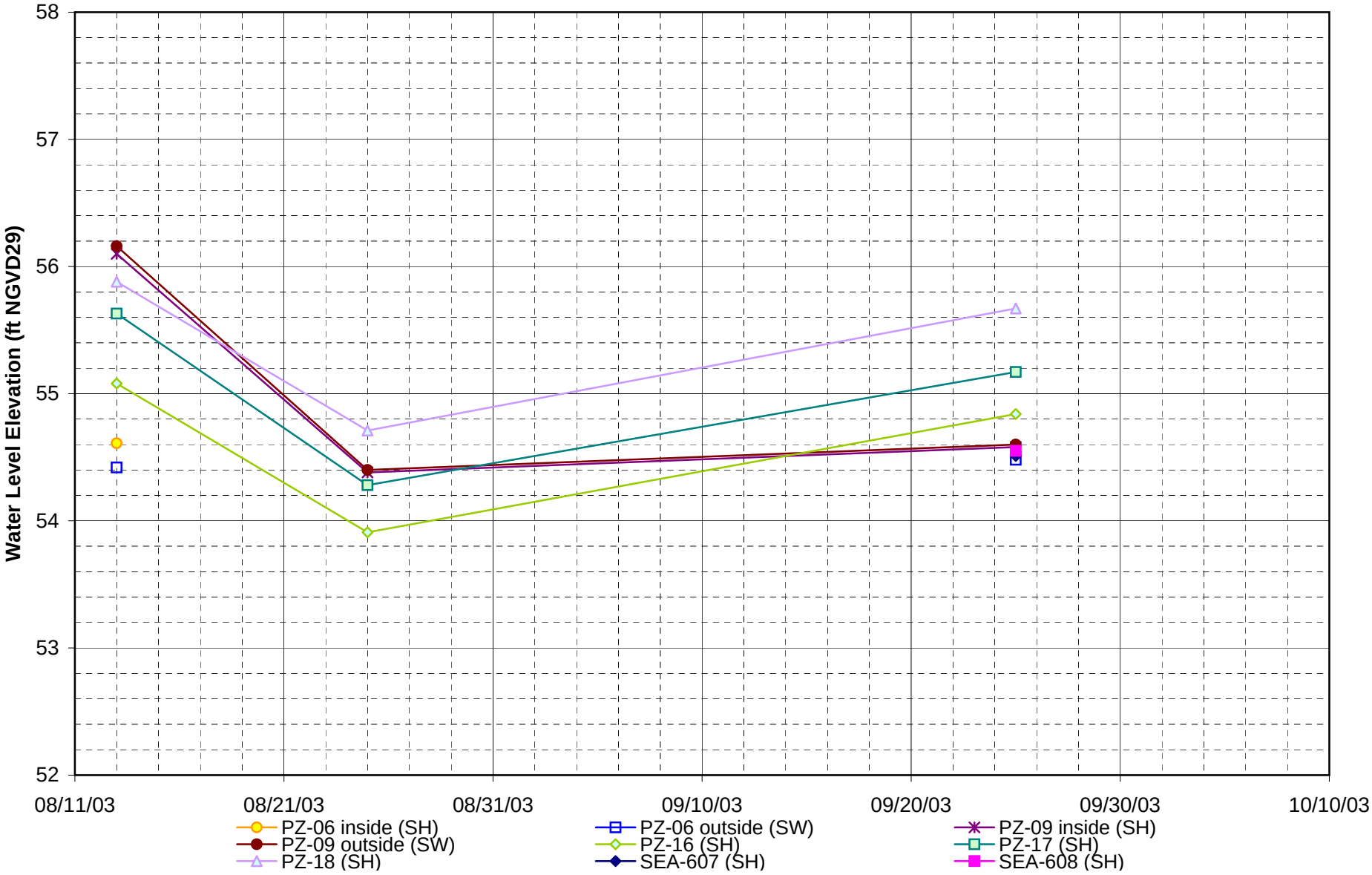
PZ-01 2003

Peterson/Puritan OU2
Hydrographs



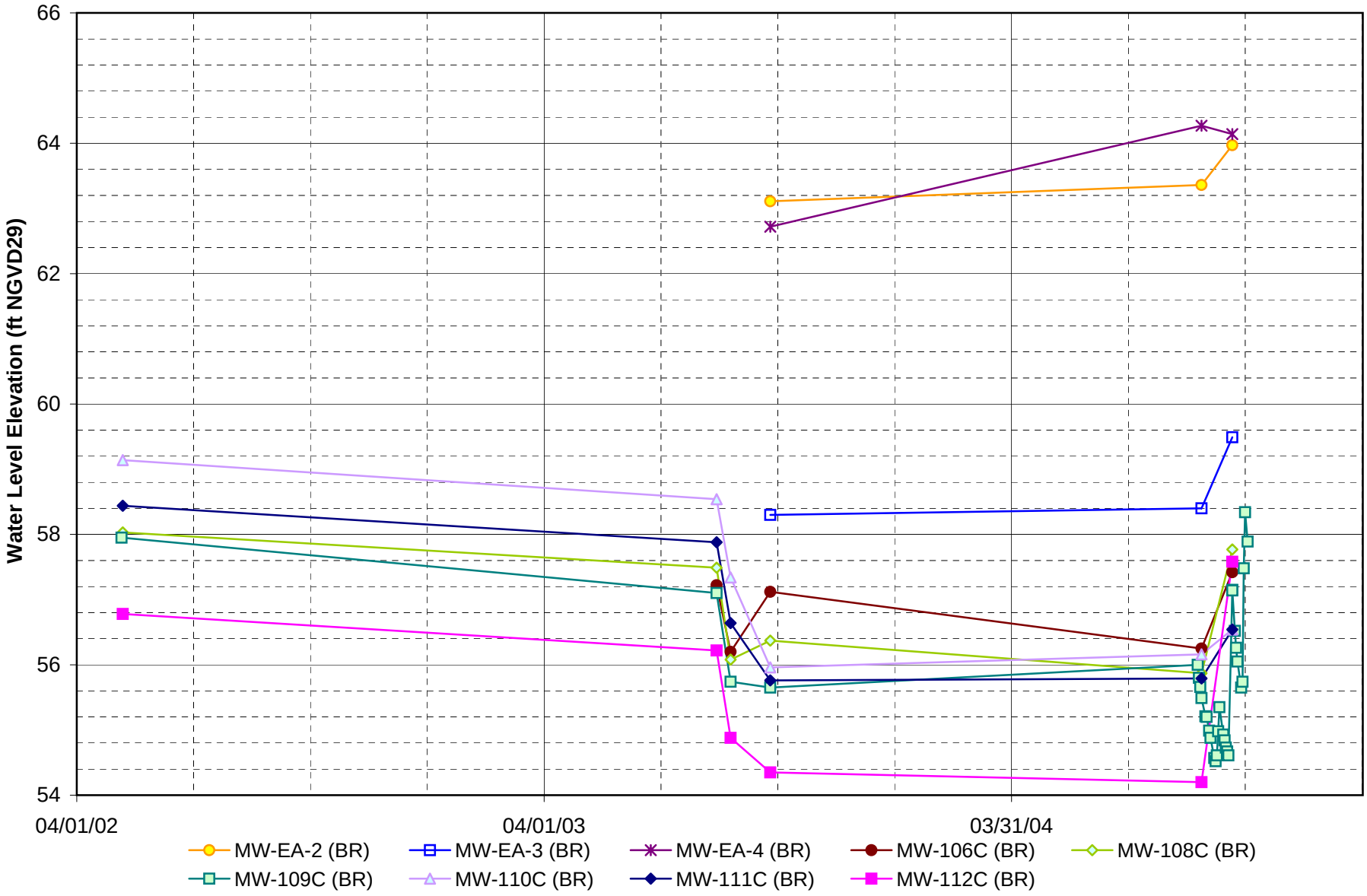
UI 2003

Peterson/Puritan OU2
Hydrographs



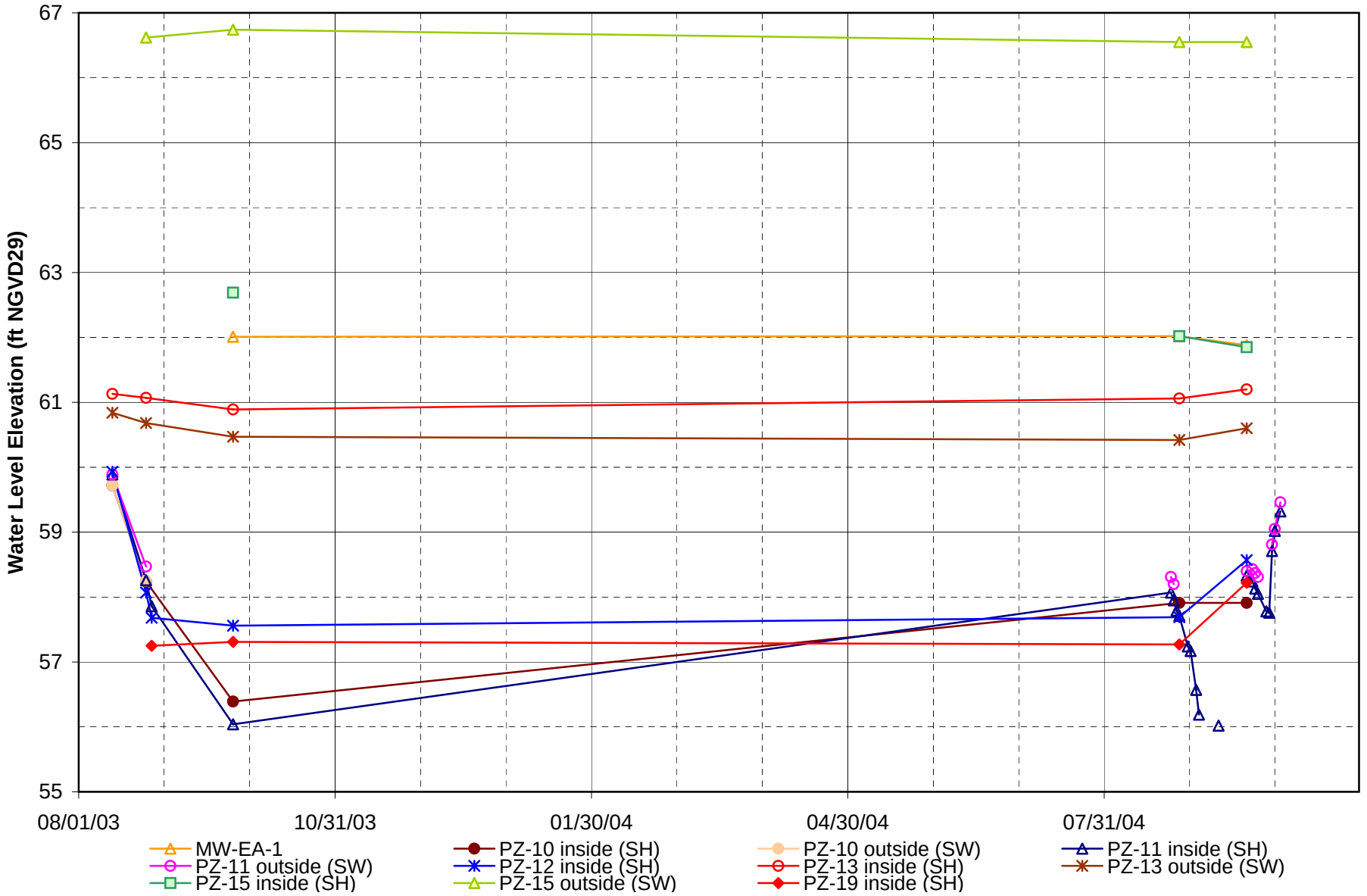
Bedrock

Peterson/Puritan OU2
Hydrographs



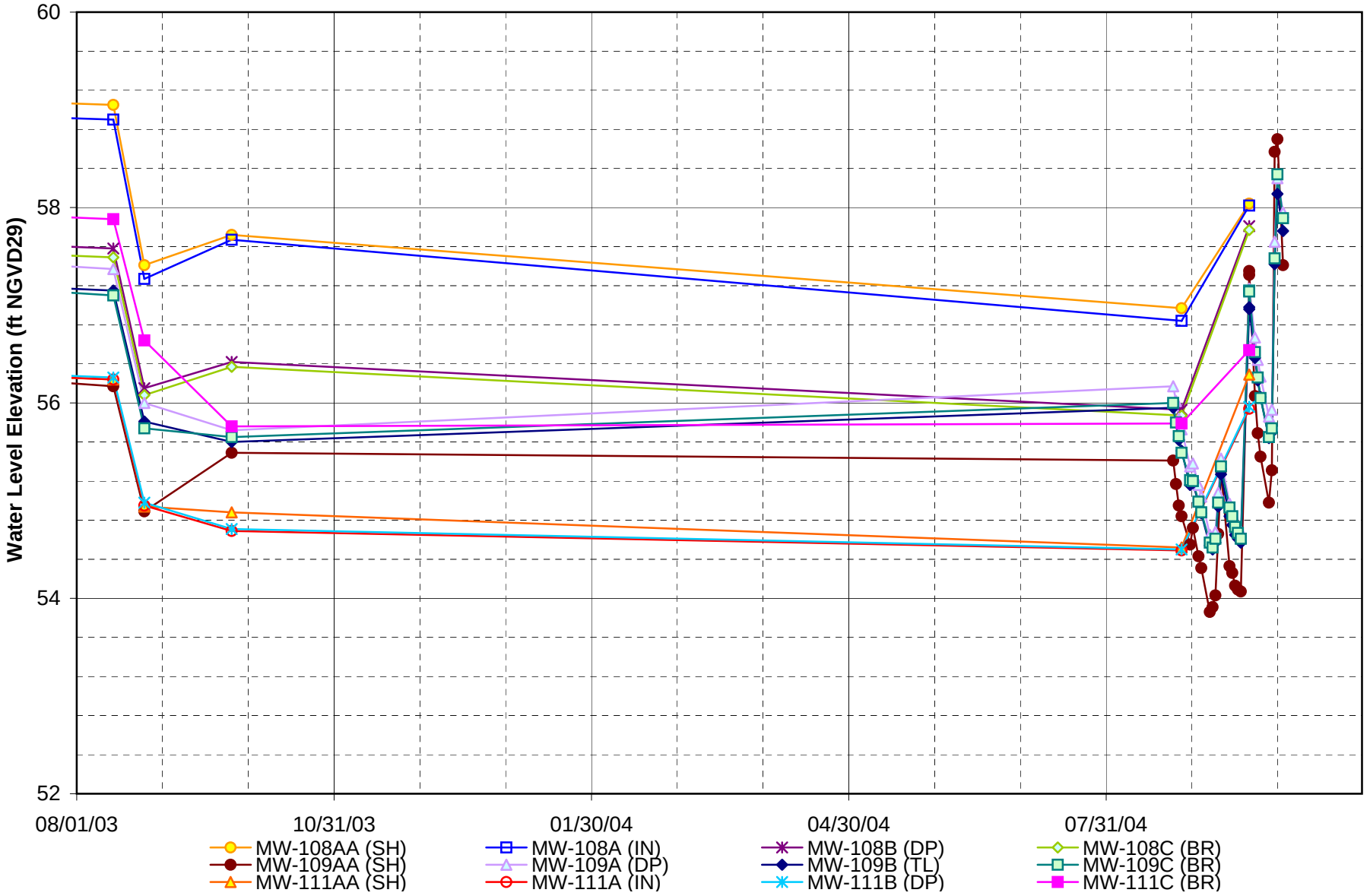
Wetlands

Peterson/Puritan OU2
Hydrographs



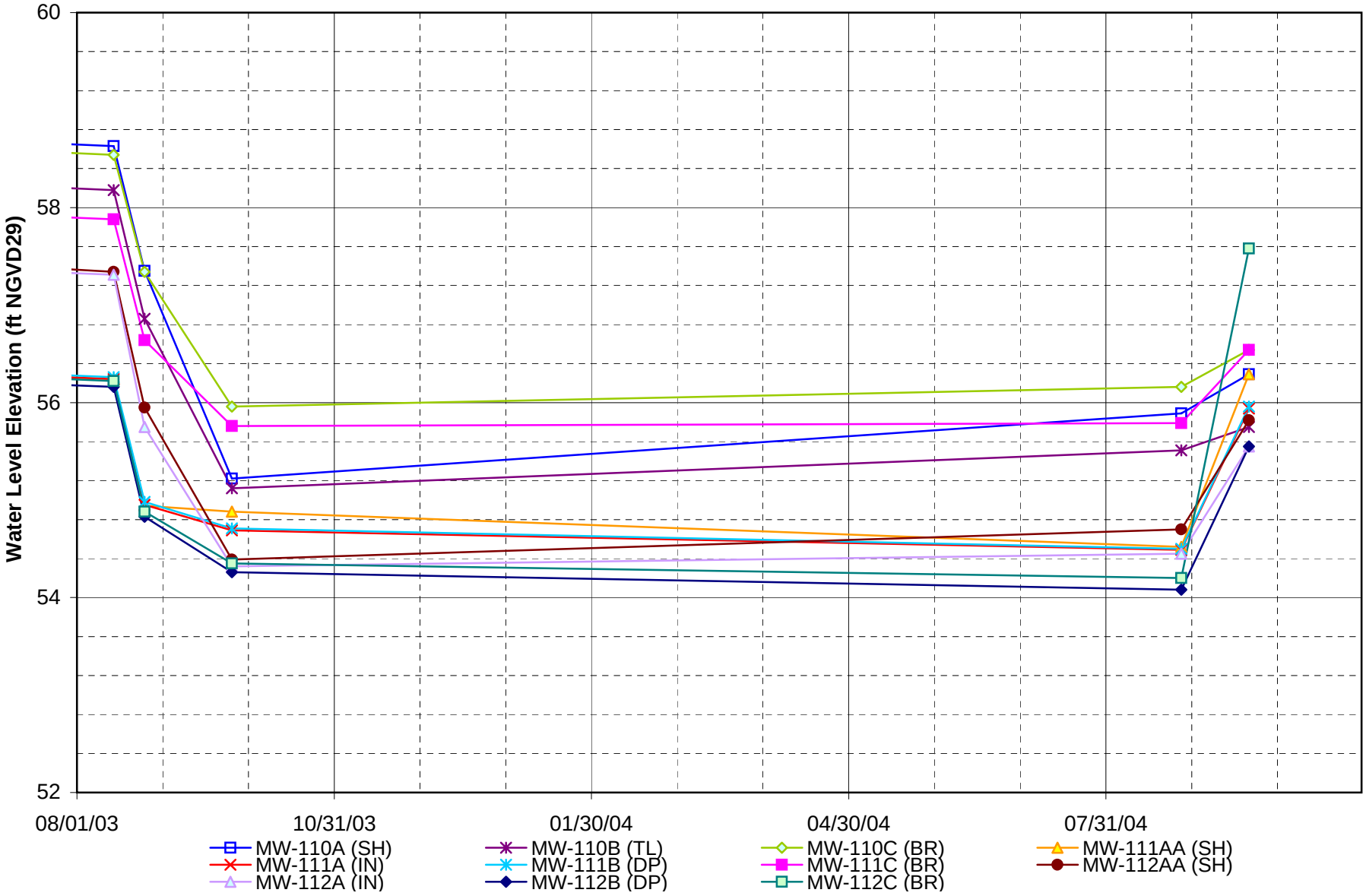
Lenox St 1

Peterson/Puritan OU2
Hydrographs



Lenox St 2

Peterson/Puritan OU2
Hydrographs

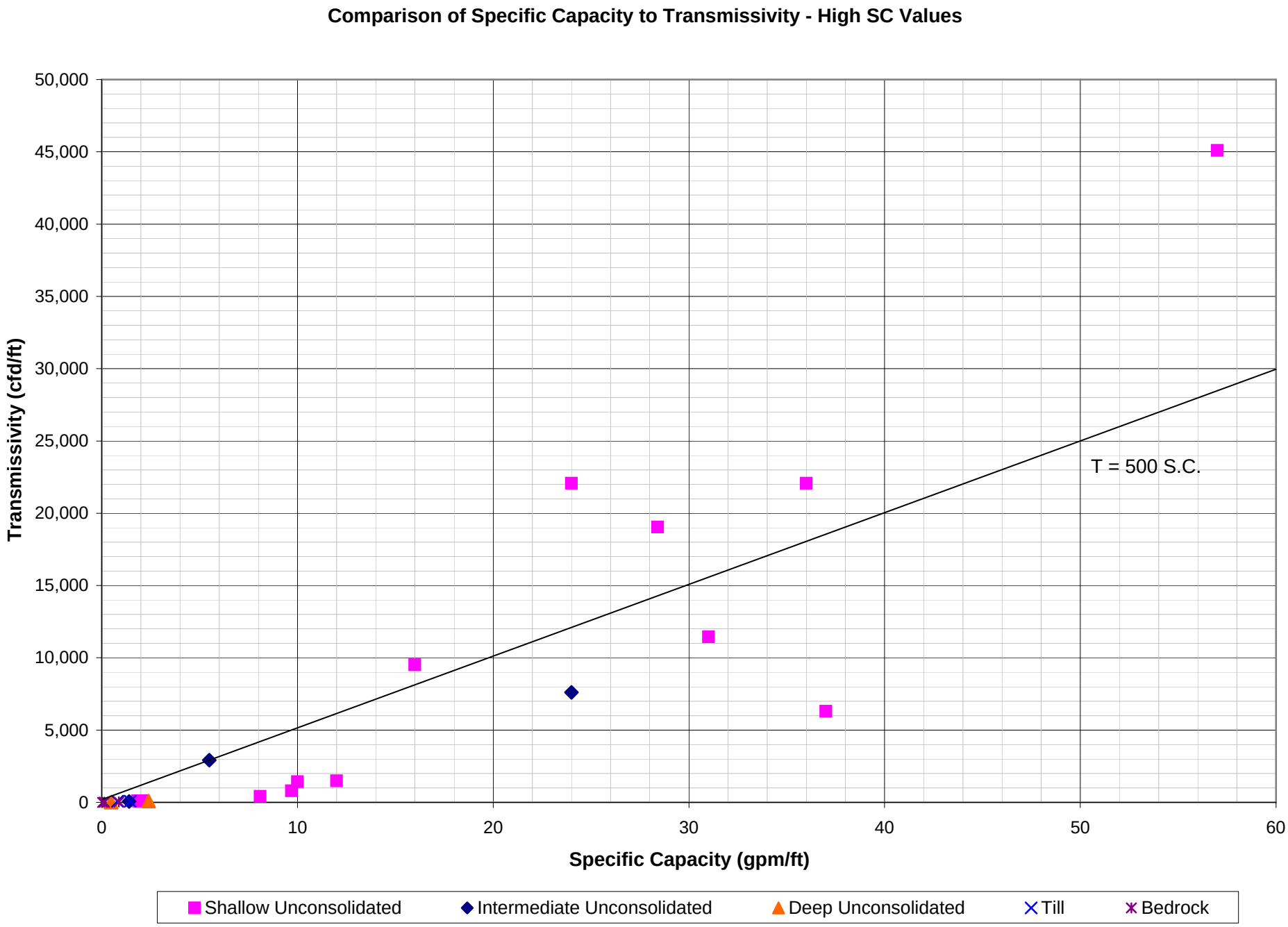


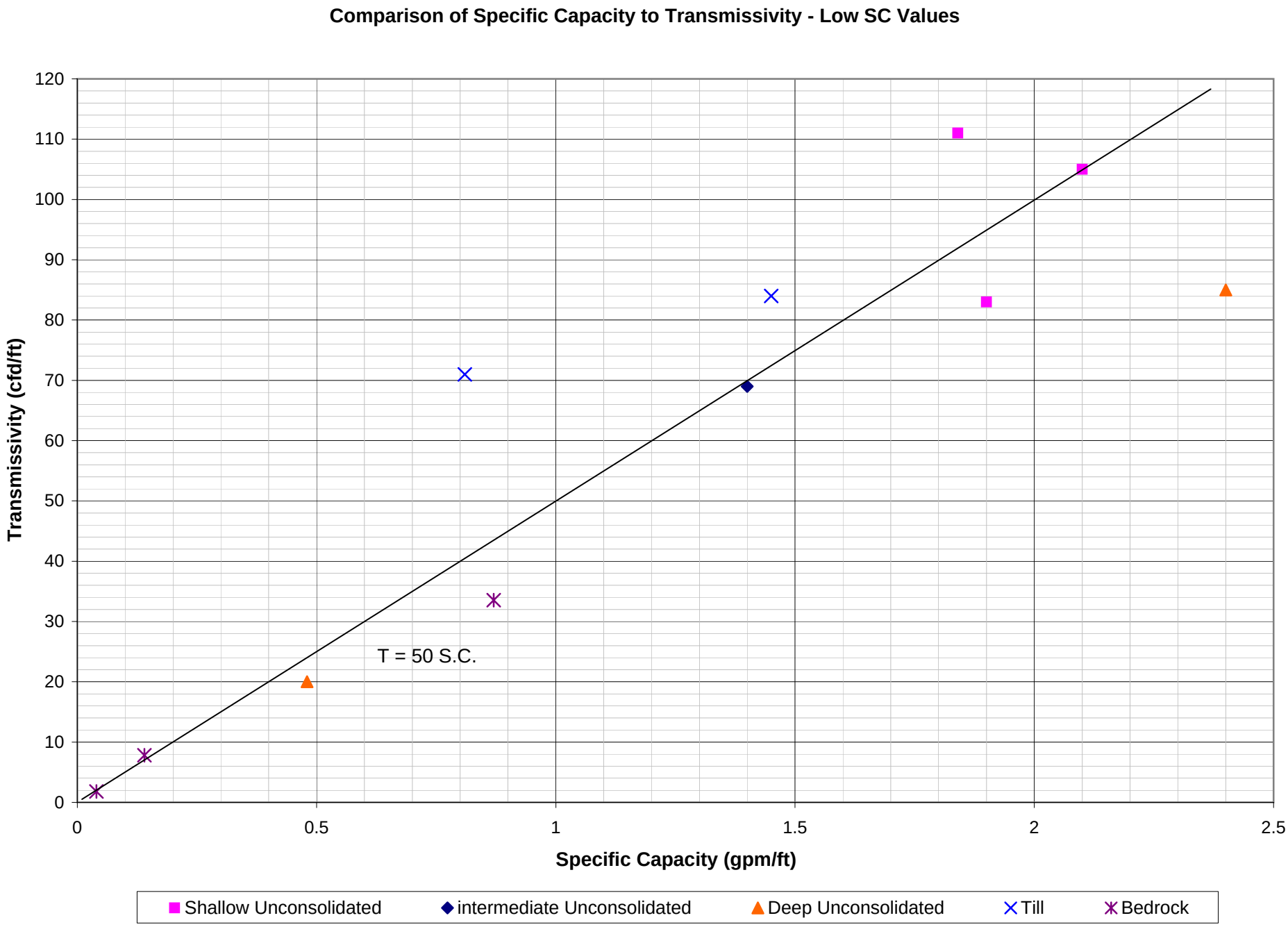
Appendix O

Phase 1A Hydraulic Gradient Calculations

Table F1-1
Summary of Single Well Pump-and-Recovery Test Results - October 2003
Peterson/Puritan OU2

Well Number	FM	Trans-missivity cfd/ft	Hydraulic Conductivity fpd	Hydraulic Conductivity cm/sec	Specific Capacity During Testing gpm/ft	Specific Capacity During Sampling gpm/ft
Shallow Unconsolidated						
SEA-601	SH	45,095	4,510	1.6E+00	57	8.6
SEA-602A	SH	22,078	2,208	7.8E-01	24	79
SEA-603	SH	19,047	1,905	6.7E-01	28	66
SEA-604	SH	105	11	3.7E-03	2.1	3.6
SEA-605	SH	6,302	630	2.2E-01	37	82
SEA-606	SH	415	42	1.5E-02	8.1	7.3
SEA-607	SH	1,427	143	5.0E-02	10	8.1
SEA-608	SH	9,512	951	3.4E-01	16	78
MW-106A	SH	---	---	---	---	6.3
MW-108AA	SH	11,450	1,318	4.6E-01	31	74
MW-109AA	SH	796	81	2.9E-02	9.7	2.9
MW-110A	SH	111	18	6.2E-03	1.8	2.6
MW-111AA	SH	83	8.3	2.9E-03	1.9	2.4
MW-112AA	SH	---	---	---	---	82
MW-A2	SH	---	---	---	---	21
MW-B2	SH	---	---	---	---	32
MW-C2	SH	---	---	---	---	1.3
P-7	SH	1,497	150	5.3E-02	12	82
P-8	SH	22,078	2,208	7.8E-01	36	66
GZ-4-1	SH	---	---	---	---	95
Maximum			**4,510**	**1.6E+00**	**57**	**95**
Minimum			**8.3**	**2.9E-03**	**1.8**	**1.3**
Geometric Mean			**251**	**8.8E-02**	**12**	**18**
Intermediate Unconsolidated						
SEA-602B	IN	7,613	761	2.7E-01	24	6.9
MW-108A	IN	69	6.9	2.4E-03	1.4	1.7
MW-111A	IN	2,915	292	1.0E-01	5.5	6.6
MW-112A	IN	---	---	---	---	6.3
MW-B1	IN	---	---	---	---	0.3
MW-C1	IN	---	---	---	---	0.3
Maximum			**761**	**2.7E-01**	**24**	**7**
Minimum			**6.9**	**2.4E-03**	**1.4**	**0.3**
Geometric Mean			**115**	**4.1E-02**	**6**	**2**
Deep Unconsolidated						
MW-108B	DP	85	8.2	3.0E-03	2.4	---
MW-109A	DP	20	2.0	7.1E-04	0.5	0.2
Maximum			**8.2**	**3.0E-03**	**2.4**	
Minimum			**2.0**	**7.1E-04**	**0.5**	
Geometric Mean			**4.0**	**1.5E-03**	**1.1**	
Till						
MW-109B	TL	71	7.1	2.5E-03	0.81	---
MW-110B	TL	84	8.4	3.0E-03	1.5	3.6
Maximum			**8.4**	**3.0E-03**	**1.5**	
Minimum			**7.1**	**2.5E-03**	**0.81**	
Geometric Mean			**7.7**	**2.7E-03**	**1.1**	
Bedrock						
MW-108C	BR	34	1.7	5.9E-04	0.87	---
MW-109C	BR	1.8	0.09	3.2E-05	0.04	---
MW-110C	BR	7.8	0.39	1.4E-04	0.14	---
Maximum			**1.7**	**5.9E-04**	**0.87**	
Minimum			**0.09**	**3.2E-05**	**0.04**	
Geometric Mean			**0.39**	**1.4E-04**	**0.17**	


Comparison of Specific Capacity to Transmissivity - High SC Values
Transmissivity (cfd/ft)
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
0
10
20
30
40
50
60
Specific Capacity (gpm/ft)
T = 500 S.C.
Shallow Unconsolidated
Intermediate Unconsolidated
Deep Unconsolidated
Till
Bedrock


Comparison of Specific Capacity to Transmissivity - Low SC Values
Transmissivity (cfd/ft)
120
110
100
90
80
70
60
50
40
30
20
10
0
0
0.5
1
1.5
2
2.5
Specific Capacity (gpm/ft)
T = 50 S.C.
Shallow Unconsolidated
intermediate Unconsolidated
Deep Unconsolidated
Till
Bedrock

ARCADIS

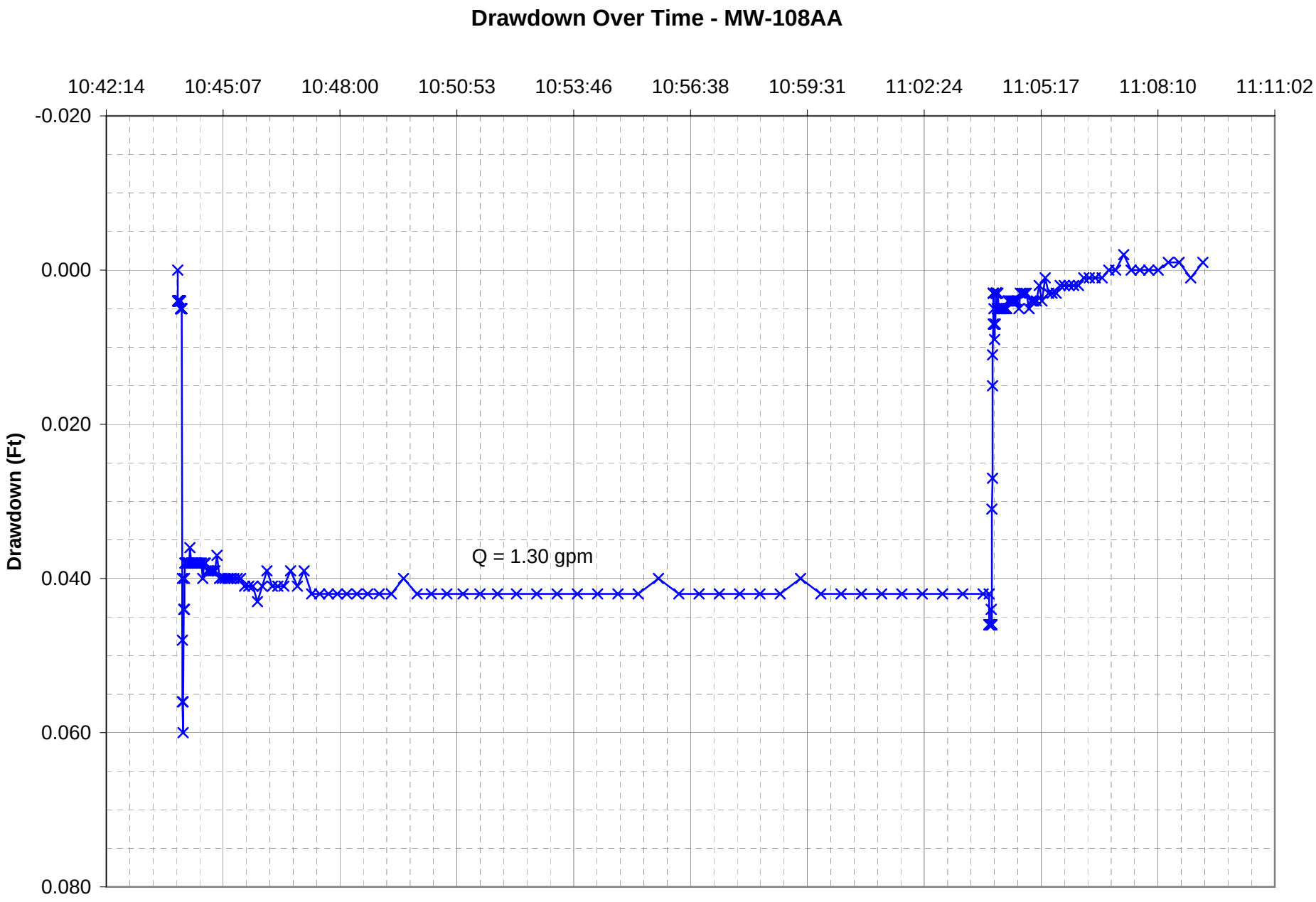
Appendix P

Hydraulic Conductivity Tests

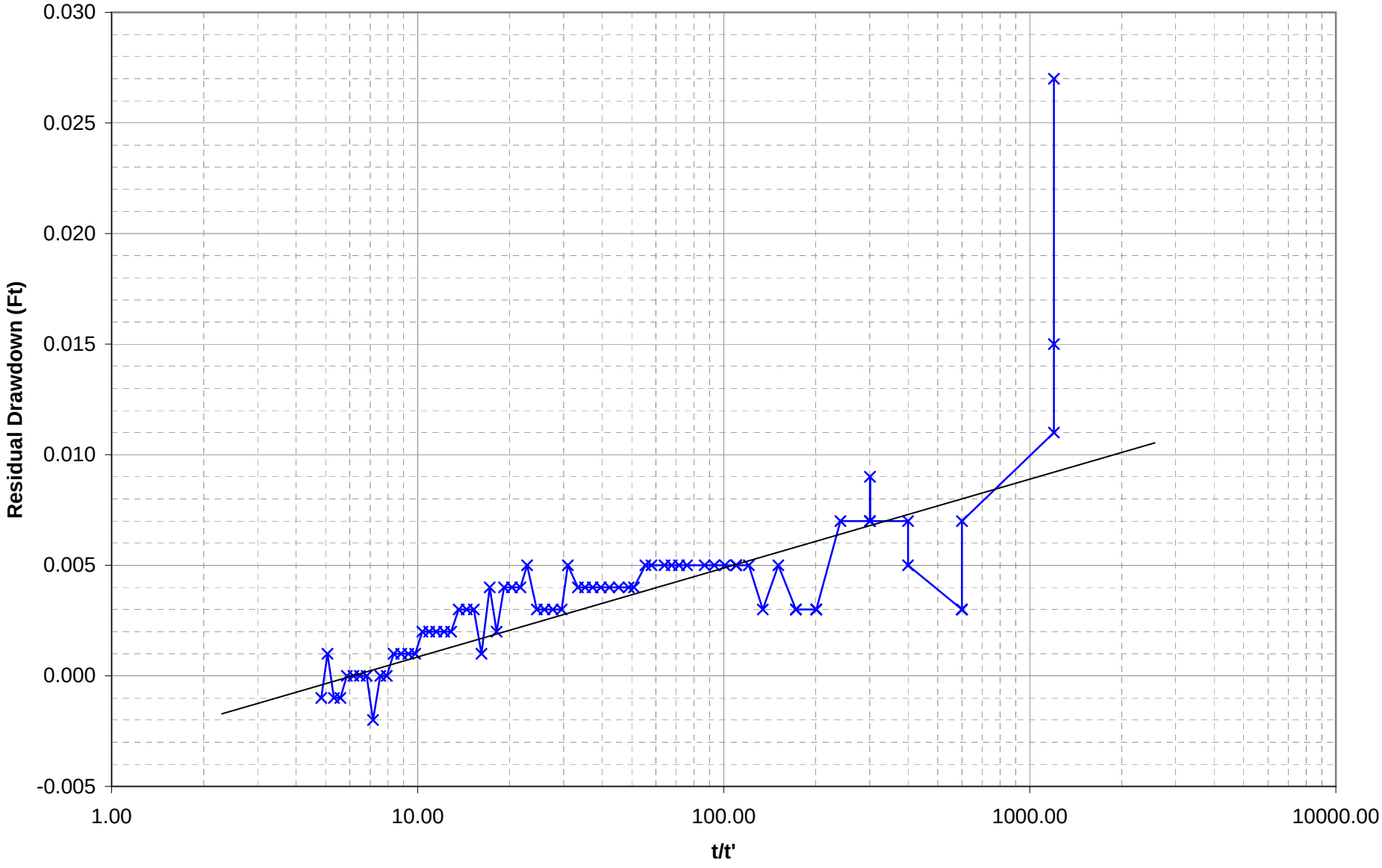
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-108AA**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/8/2003	10:44:00			
Test end date and time	10/8/2003	11:09:16			
Period of pumping	20	minutes			
Static depth to water	13.51	feet below top of casing			
Starting transducer depth	3.3	feet below static water level			
Total well depth	22.2	feet below top of casing			
Depth to top of screen	12.2	feet below top of casing			
Height of interval tested [b]	8.7	feet			
Average pumping rate [Q]	1.3	gpm, or	250	cfd	
Average drawdown [s]	0.042	ft			
Specific capacity [Q/s]	30.95	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.004	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			11,450	cfd/ft	
Hydraulic conductivity [K = T/b]			1,318	fpd, or	4.6E-01 cm/sec


Drawdown Over Time - MW-108AA
10:42:14
10:45:07
10:48:00
10:50:53
10:53:46
10:56:38
10:59:31
11:02:24
11:05:17
11:08:10
11:11:02
-0.020
0.000
0.020
0.040
0.060
0.080
Drawdown (Ft)
Q = 1.30 gpm

Recovery Plot - MW-108AA



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-108AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	10:15:00								DTW = 13.51 at 10:15
10/8/2003	10:37:00								DTW = 13.51 at 10:37
10/8/2003	10:44:00	0	67.93	3.3	0.000				Start Test 1
10/8/2003	10:44:00	0.3	67.95	3.296	0.004				
10/8/2003	10:44:00	0.6	67.98	3.296	0.004				
10/8/2003	10:44:00	0.9	67.98	3.296	0.004				
10/8/2003	10:44:01	1.2	67.98	3.296	0.004				
10/8/2003	10:44:01	1.5	67.98	3.296	0.004				
10/8/2003	10:44:01	1.8	68	3.296	0.004				
10/8/2003	10:44:02	2.1	68	3.296	0.004				
10/8/2003	10:44:02	2.4	68	3.296	0.004				
10/8/2003	10:44:02	2.7	68	3.296	0.004				
10/8/2003	10:44:03	3	68	3.296	0.004				
10/8/2003	10:44:03	3.3	68	3.296	0.004				
10/8/2003	10:44:03	3.6	68	3.296	0.004				
10/8/2003	10:44:03	3.9	68	3.296	0.004				
10/8/2003	10:44:04	4.2	68	3.296	0.004				
10/8/2003	10:44:04	4.5	68.02	3.295	0.005				
10/8/2003	10:44:04	4.8	68	3.296	0.004				
10/8/2003	10:44:05	5.1	68.02	3.295	0.005				
10/8/2003	10:44:05	5.4	68.02	3.295	0.005				
10/8/2003	10:44:05	5.7	68.02	3.295	0.005				
10/8/2003	10:44:06	6	68.02	3.295	0.005				
10/8/2003	10:44:06	6.4	68.02	3.295	0.005				
10/8/2003	10:44:06	6.7	68.02	3.295	0.005	0.00			Pump Start
10/8/2003	10:44:07	7.1	68.02	3.252	0.048	0.02			
10/8/2003	10:44:07	7.5	68.02	3.26	0.040	0.02			
10/8/2003	10:44:07	8	68.02	3.244	0.056	0.02			
10/8/2003	10:44:08	8.4	68.02	3.24	0.060	0.03			
10/8/2003	10:44:08	8.9	68.02	3.244	0.056	0.03			
10/8/2003	10:44:09	9.5	68.02	3.256	0.044	0.05			
10/8/2003	10:44:10	10	68.02	3.256	0.044	0.07			
10/8/2003	10:44:10	10.6	68.02	3.26	0.040	0.07			
10/8/2003	10:44:11	11.3	68.02	3.262	0.038	0.08			
10/8/2003	10:44:11	11.9	68.02	3.262	0.038	0.08			
10/8/2003	10:44:12	12.6	68	3.262	0.038	0.10			
10/8/2003	10:44:13	13.4	68	3.262	0.038	0.12			
10/8/2003	10:44:14	14.2	68	3.262	0.038	0.13			
10/8/2003	10:44:15	15	68	3.262	0.038	0.15			
10/8/2003	10:44:15	15.9	68	3.262	0.038	0.15			
10/8/2003	10:44:16	16.8	68	3.262	0.038	0.17			
10/8/2003	10:44:17	17.8	68	3.262	0.038	0.18			
10/8/2003	10:44:18	18.9	68	3.264	0.036	0.20			
10/8/2003	10:44:20	20	68	3.262	0.038	0.23			
10/8/2003	10:44:21	21.2	68	3.262	0.038	0.25			
10/8/2003	10:44:22	22.4	68	3.262	0.038	0.27			
10/8/2003	10:44:23	23.8	68	3.262	0.038	0.28			
10/8/2003	10:44:25	25.2	68.02	3.262	0.038	0.32			
10/8/2003	10:44:26	26.7	68.02	3.262	0.038	0.33			
10/8/2003	10:44:28	28.2	68.02	3.262	0.038	0.37			
10/8/2003	10:44:29	29.8	68.02	3.262	0.038	0.38			
10/8/2003	10:44:31	31.5	68.04	3.262	0.038	0.42			
10/8/2003	10:44:33	33.3	68.04	3.262	0.038	0.45			
10/8/2003	10:44:35	35.2	68.04	3.262	0.038	0.48			
10/8/2003	10:44:37	37.3	68.04	3.26	0.040	0.52			
10/8/2003	10:44:39	39.5	68.07	3.262	0.038	0.55			
10/8/2003	10:44:41	41.8	68.07	3.262	0.038	0.58			
10/8/2003	10:44:44	44.3	68.09	3.261	0.039	0.63			
10/8/2003	10:44:46	46.9	68.11	3.261	0.039	0.67			
10/8/2003	10:44:49	49.7	68.11	3.261	0.039	0.72			
10/8/2003	10:44:52	52.6	68.14	3.261	0.039	0.77			
10/8/2003	10:44:55	55.7	68.16	3.261	0.039	0.82			
10/8/2003	10:44:58	59	68.16	3.263	0.037	0.87			
10/8/2003	10:45:02	62.5	68.18	3.26	0.040	0.93			
10/8/2003	10:45:06	66.2	68.2	3.26	0.040	1.00			

Well No. **MW-108AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	10:45:10	70.1	68.2	3.26	0.040	1.07			
10/8/2003	10:45:14	74.3	68.23	3.26	0.040	1.13			
10/8/2003	10:45:18	78.7	68.25	3.26	0.040	1.20			
10/8/2003	10:45:23	83.4	68.25	3.26	0.040	1.28			
10/8/2003	10:45:28	88.4	68.27	3.26	0.040	1.37			
10/8/2003	10:45:33	93.7	68.27	3.26	0.040	1.45			
10/8/2003	10:45:39	99.3	68.29	3.259	0.041	1.55			
10/8/2003	10:45:45	105.2	68.29	3.259	0.041	1.65			
10/8/2003	10:45:51	111.5	68.32	3.259	0.041	1.75			
10/8/2003	10:45:58	118.1	68.32	3.257	0.043	1.87			
10/8/2003	10:46:05	125.1	68.34	3.259	0.041	1.98			1.33 gpm flow rate
10/8/2003	10:46:12	132.6	68.34	3.261	0.039	2.10			
10/8/2003	10:46:20	140.5	68.34	3.259	0.041	2.23			
10/8/2003	10:46:28	148.9	68.36	3.259	0.041	2.37			
10/8/2003	10:46:37	157.8	68.36	3.259	0.041	2.52			
10/8/2003	10:46:47	167.2	68.36	3.261	0.039	2.68			
10/8/2003	10:46:57	177.2	68.36	3.259	0.041	2.85			
10/8/2003	10:47:07	187.8	68.36	3.261	0.039	3.02			
10/8/2003	10:47:18	199	68.38	3.258	0.042	3.20			
10/8/2003	10:47:30	210.9	68.38	3.258	0.042	3.40			
10/8/2003	10:47:43	223.5	68.38	3.258	0.042	3.62			
10/8/2003	10:47:56	236.8	68.38	3.258	0.042	3.83			
10/8/2003	10:48:10	250.9	68.38	3.258	0.042	4.07			
10/8/2003	10:48:25	265.8	68.38	3.258	0.042	4.32			
10/8/2003	10:48:41	281.6	68.38	3.258	0.042	4.58			
10/8/2003	10:48:58	298.4	68.38	3.258	0.042	4.87			
10/8/2003	10:49:16	316.2	68.38	3.258	0.042	5.17			1.40 gpm flow rate
10/8/2003	10:49:34	335	68.38	3.26	0.040	5.47			
10/8/2003	10:49:54	354.9	68.38	3.258	0.042	5.80			
10/8/2003	10:50:15	376	68.38	3.258	0.042	6.15			
10/8/2003	10:50:38	398.4	68.38	3.258	0.042	6.53			
10/8/2003	10:51:02	422.1	68.38	3.258	0.042	6.93			
10/8/2003	10:51:27	447.2	68.38	3.258	0.042	7.35			
10/8/2003	10:51:53	473.8	68.38	3.258	0.042	7.78			
10/8/2003	10:52:21	502	68.38	3.258	0.042	8.25			
10/8/2003	10:52:51	531.9	68.38	3.258	0.042	8.75			
10/8/2003	10:53:21	561.9	68.38	3.258	0.042	9.25			
10/8/2003	10:53:51	591.9	68.38	3.258	0.042	9.75			
10/8/2003	10:54:21	621.9	68.38	3.258	0.042	10.25			
10/8/2003	10:54:51	651.9	68.38	3.258	0.042	10.75			
10/8/2003	10:55:21	681.9	68.38	3.258	0.042	11.25			1.30 gpm flow rate
10/8/2003	10:55:51	711.9	68.41	3.26	0.040	11.75			
10/8/2003	10:56:21	741.9	68.38	3.258	0.042	12.25			
10/8/2003	10:56:51	771.9	68.41	3.258	0.042	12.75			
10/8/2003	10:57:21	801.9	68.41	3.258	0.042	13.25			
10/8/2003	10:57:51	831.9	68.38	3.258	0.042	13.75			
10/8/2003	10:58:21	861.9	68.38	3.258	0.042	14.25			
10/8/2003	10:58:51	891.9	68.41	3.258	0.042	14.75			
10/8/2003	10:59:21	921.9	68.38	3.26	0.040	15.25			
10/8/2003	10:59:51	951.9	68.41	3.258	0.042	15.75			
10/8/2003	11:00:21	981.9	68.41	3.258	0.042	16.25			1.25 gpm flow rate
10/8/2003	11:00:51	1011.9	68.41	3.258	0.042	16.75			
10/8/2003	11:01:21	1041.9	68.41	3.258	0.042	17.25			
10/8/2003	11:01:51	1071.9	68.41	3.258	0.042	17.75			
10/8/2003	11:02:21	1101.9	68.41	3.258	0.042	18.25			
10/8/2003	11:02:51	1131.9	68.41	3.258	0.042	18.75			
10/8/2003	11:03:21	1161.9	68.41	3.258	0.042	19.25			
10/8/2003	11:03:51	1191.9	68.41	3.258	0.042	19.75			
10/8/2003	11:04:00	0	68.41	3.258	0.042	19.90			Start Test 2
10/8/2003	11:04:00	0.3	68.43	3.254	0.046	19.90			
10/8/2003	11:04:00	0.6	68.43	3.254	0.046	19.90			
10/8/2003	11:04:00	0.9	68.45	3.254	0.046	19.90			
10/8/2003	11:04:01	1.2	68.45	3.254	0.046	19.92			
10/8/2003	11:04:01	1.5	68.45	3.254	0.046	19.92			
10/8/2003	11:04:01	1.8	68.45	3.254	0.046	19.92			
10/8/2003	11:04:02	2.1	68.45	3.254	0.046	19.93			
10/8/2003	11:04:02	2.4	68.47	3.254	0.046	19.93			
10/8/2003	11:04:02	2.7	68.47	3.254	0.046	19.93			
10/8/2003	11:04:03	3	68.47	3.254	0.046	19.95			

Well No. **MW-108AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	11:04:03	3.3	68.47	3.254	0.046	19.95			
10/8/2003	11:04:03	3.6	68.47	3.256	0.044	19.95			
10/8/2003	11:04:03	3.9	68.47	3.254	0.046	19.95			
10/8/2003	11:04:04	4.2	68.47	3.254	0.046	19.97			
10/8/2003	11:04:04	4.5	68.47	3.254	0.046	19.97	0.00		Pump Stop
10/8/2003	11:04:04	4.8	68.47	3.269	0.031	19.97	0.00		
10/8/2003	11:04:05	5.1	68.47	3.273	0.027	19.98	0.02	1199.00	
10/8/2003	11:04:05	5.4	68.47	3.285	0.015	19.98	0.02	1199.00	
10/8/2003	11:04:05	5.7	68.47	3.289	0.011	19.98	0.02	1199.00	
10/8/2003	11:04:06	6	68.5	3.293	0.007	20.00	0.03	600.00	
10/8/2003	11:04:06	6.4	68.5	3.297	0.003	20.00	0.03	600.00	
10/8/2003	11:04:06	6.7	68.5	3.297	0.003	20.00	0.03	600.00	
10/8/2003	11:04:07	7.1	68.5	3.295	0.005	20.02	0.05	400.33	
10/8/2003	11:04:07	7.5	68.5	3.293	0.007	20.02	0.05	400.33	
10/8/2003	11:04:08	8	68.5	3.293	0.007	20.03	0.07	300.50	
10/8/2003	11:04:08	8.4	68.5	3.291	0.009	20.03	0.07	300.50	
10/8/2003	11:04:08	8.9	68.5	3.293	0.007	20.03	0.07	300.50	
10/8/2003	11:04:09	9.5	68.5	3.293	0.007	20.05	0.08	240.60	
10/8/2003	11:04:10	10	68.5	3.297	0.003	20.07	0.10	200.67	
10/8/2003	11:04:10	10.6	68.47	3.297	0.003	20.07	0.10	200.67	
10/8/2003	11:04:11	11.3	68.47	3.297	0.003	20.08	0.12	172.14	
10/8/2003	11:04:11	11.9	68.47	3.297	0.003	20.08	0.12	172.14	
10/8/2003	11:04:12	12.6	68.47	3.295	0.005	20.10	0.13	150.75	
10/8/2003	11:04:13	13.4	68.47	3.297	0.003	20.12	0.15	134.11	
10/8/2003	11:04:14	14.2	68.47	3.295	0.005	20.13	0.17	120.80	
10/8/2003	11:04:15	15	68.47	3.295	0.005	20.15	0.18	109.91	
10/8/2003	11:04:15	15.9	68.45	3.295	0.005	20.15	0.18	109.91	
10/8/2003	11:04:16	16.8	68.45	3.295	0.005	20.17	0.20	100.83	
10/8/2003	11:04:17	17.8	68.45	3.295	0.005	20.18	0.22	93.15	
10/8/2003	11:04:18	18.9	68.45	3.295	0.005	20.20	0.23	86.57	
10/8/2003	11:04:20	20	68.45	3.295	0.005	20.23	0.27	75.87	
10/8/2003	11:04:21	21.2	68.45	3.295	0.005	20.25	0.28	71.47	
10/8/2003	11:04:22	22.4	68.45	3.295	0.005	20.27	0.30	67.56	
10/8/2003	11:04:23	23.8	68.43	3.295	0.005	20.28	0.32	64.05	
10/8/2003	11:04:25	25.2	68.43	3.295	0.005	20.32	0.35	58.05	
10/8/2003	11:04:26	26.7	68.43	3.295	0.005	20.33	0.37	55.45	
10/8/2003	11:04:28	28.2	68.41	3.296	0.004	20.37	0.40	50.92	
10/8/2003	11:04:29	29.8	68.41	3.296	0.004	20.38	0.42	48.92	
10/8/2003	11:04:31	31.5	68.41	3.296	0.004	20.42	0.45	45.37	
10/8/2003	11:04:33	33.3	68.38	3.296	0.004	20.45	0.48	42.31	
10/8/2003	11:04:35	35.2	68.36	3.296	0.004	20.48	0.52	39.65	
10/8/2003	11:04:37	37.3	68.36	3.296	0.004	20.52	0.55	37.30	
10/8/2003	11:04:39	39.5	68.34	3.296	0.004	20.55	0.58	35.23	
10/8/2003	11:04:41	41.8	68.32	3.296	0.004	20.58	0.62	33.38	
10/8/2003	11:04:44	44.3	68.32	3.295	0.005	20.63	0.67	30.95	
10/8/2003	11:04:46	46.9	68.29	3.297	0.003	20.67	0.70	29.52	
10/8/2003	11:04:49	49.7	68.27	3.297	0.003	20.72	0.75	27.62	
10/8/2003	11:04:52	52.6	68.25	3.297	0.003	20.77	0.80	25.96	
10/8/2003	11:04:55	55.7	68.25	3.297	0.003	20.82	0.85	24.49	
10/8/2003	11:04:59	59	68.23	3.295	0.005	20.88	0.92	22.78	
10/8/2003	11:05:02	62.5	68.2	3.296	0.004	20.93	0.97	21.66	
10/8/2003	11:05:06	66.2	68.18	3.296	0.004	21.00	1.03	20.32	
10/8/2003	11:05:10	70.1	68.16	3.296	0.004	21.07	1.10	19.15	
10/8/2003	11:05:14	74.3	68.14	3.298	0.002	21.13	1.17	18.11	
10/8/2003	11:05:18	78.7	68.11	3.296	0.004	21.20	1.23	17.19	
10/8/2003	11:05:23	83.4	68.09	3.299	0.001	21.28	1.32	16.16	
10/8/2003	11:05:28	88.4	68.04	3.297	0.003	21.37	1.40	15.26	
10/8/2003	11:05:33	93.7	68.04	3.297	0.003	21.45	1.48	14.46	
10/8/2003	11:05:39	99.3	68.02	3.297	0.003	21.55	1.58	13.61	
10/8/2003	11:05:45	105.2	67.98	3.298	0.002	21.65	1.68	12.86	
10/8/2003	11:05:51	111.5	67.98	3.298	0.002	21.75	1.78	12.20	
10/8/2003	11:05:58	118.1	67.93	3.298	0.002	21.87	1.90	11.51	
10/8/2003	11:06:05	125.1	67.93	3.298	0.002	21.98	2.02	10.90	
10/8/2003	11:06:12	132.6	67.91	3.298	0.002	22.10	2.13	10.36	
10/8/2003	11:06:20	140.5	67.89	3.299	0.001	22.23	2.27	9.81	
10/8/2003	11:06:28	148.9	67.86	3.299	0.001	22.37	2.40	9.32	
10/8/2003	11:06:37	157.8	67.84	3.299	0.001	22.52	2.55	8.83	
10/8/2003	11:06:47	167.2	67.82	3.299	0.001	22.68	2.72	8.35	
10/8/2003	11:06:57	177.2	67.8	3.3	0.000	22.85	2.88	7.92	

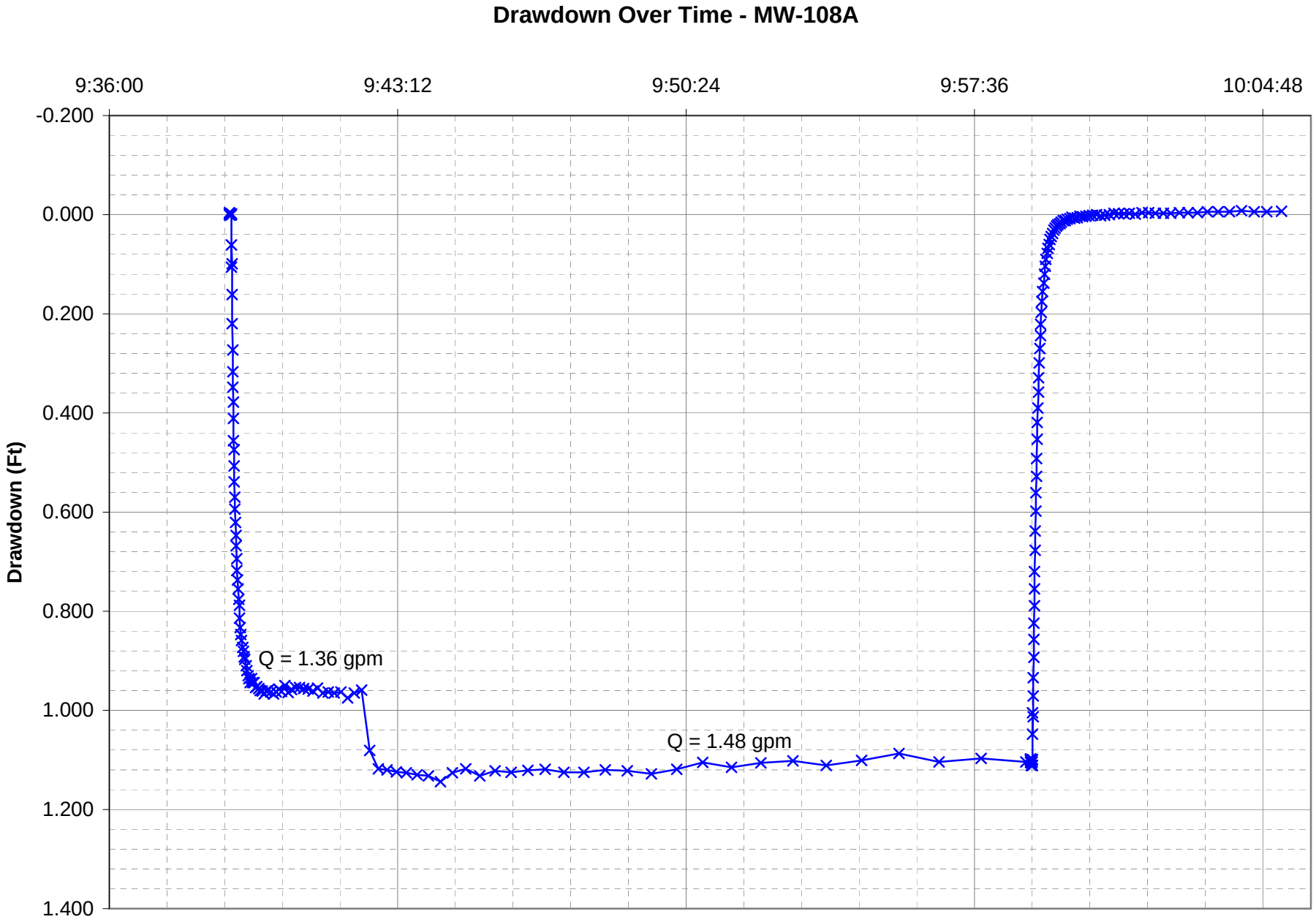
Well No. **MW-108AA**

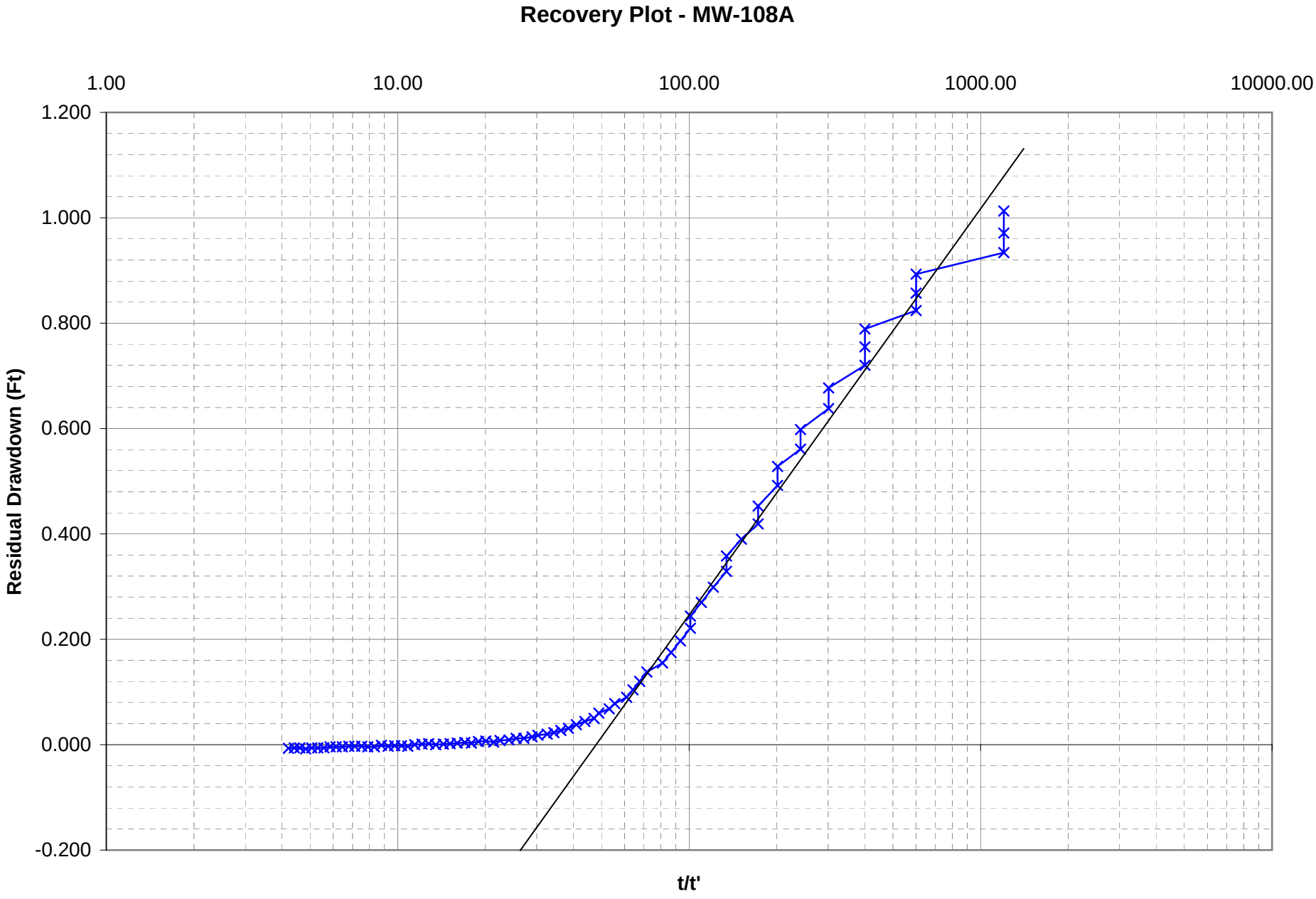
Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	11:07:07	187.8	67.77	3.3	0.000	23.02	3.05	7.55	
10/8/2003	11:07:19	199	67.77	3.302	-0.002	23.22	3.25	7.14	
10/8/2003	11:07:30	210.9	67.75	3.3	0.000	23.40	3.43	6.82	
10/8/2003	11:07:43	223.5	67.73	3.3	0.000	23.62	3.65	6.47	
10/8/2003	11:07:56	236.8	67.71	3.3	0.000	23.83	3.87	6.16	
10/8/2003	11:08:10	250.9	67.71	3.3	0.000	24.07	4.10	5.87	
10/8/2003	11:08:25	265.8	67.68	3.301	-0.001	24.32	4.35	5.59	
10/8/2003	11:08:41	281.6	67.68	3.301	-0.001	24.58	4.62	5.32	
10/8/2003	11:08:58	298.4	67.68	3.299	0.001	24.87	4.90	5.07	
10/8/2003	11:09:16	316.2	67.66	3.301	-0.001	25.17	5.20	4.84	

Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-108A**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/8/2003	9:39:00			
Test end date and time	10/8/2003	10:05:16			
Period of pumping	20	minutes			
Static depth to water	13.38	feet below top of casing			
Starting transducer depth	4.271	feet below static water level			
Total well depth	45.5	feet below top of casing			
Depth to top of screen	35.5	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.48	gpm, or	285	cfd	
Average drawdown [s]	1.10	ft			
Specific capacity [Q/s]	1.35	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.76	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			68.6	cfd/ft	
Hydraulic conductivity [K = T/b]			6.9	fpd, or	2.4E-03 cm/sec


Drawdown Over Time - MW-108A
9:36:00
9:43:12
9:50:24
9:57:36
10:04:48
-0.200
0.000
0.200
0.400
0.600
0.800
1.000
1.200
1.400
Drawdown (Ft)
Q = 1.36 gpm
Q = 1.48 gpm


Recovery Plot - MW-108A
1.00
10.00
100.00
1000.00
10000.00
1.200
1.000
0.800
0.600
0.400
0.200
0.000
-0.200
Residual Drawdown (Ft)
t/t'

Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-108A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	9:08:00								DTW = 13.38 at 9:08
10/8/2003	9:39:00	0	65.06	4.275	-0.004				Start Test 1
10/8/2003	9:39:00	0.3	65.08	4.273	-0.002				
10/8/2003	9:39:00	0.6	65.08	4.271	0.000				
10/8/2003	9:39:00	0.9	65.11	4.271	0.000				
10/8/2003	9:39:01	1.2	65.11	4.271	0.000				
10/8/2003	9:39:01	1.5	65.11	4.271	0.000				
10/8/2003	9:39:01	1.8	65.11	4.271	0.000				
10/8/2003	9:39:02	2.1	65.11	4.271	0.000				
10/8/2003	9:39:02	2.4	65.13	4.271	0.000				
10/8/2003	9:39:02	2.7	65.13	4.271	0.000				
10/8/2003	9:39:03	3	65.13	4.273	-0.002				
10/8/2003	9:39:03	3.3	65.13	4.271	0.000	0.00			Pump Start
10/8/2003	9:39:03	3.6	65.13	4.165	0.106	0.00			
10/8/2003	9:39:03	3.9	65.13	4.21	0.061	0.00			
10/8/2003	9:39:04	4.2	65.13	4.172	0.099	0.02			
10/8/2003	9:39:04	4.5	65.13	4.11	0.161	0.02			
10/8/2003	9:39:04	4.8	65.13	4.051	0.220	0.02			
10/8/2003	9:39:05	5.1	65.13	3.998	0.273	0.03			
10/8/2003	9:39:05	5.4	65.13	3.954	0.317	0.03			
10/8/2003	9:39:05	5.7	65.13	3.923	0.348	0.03			
10/8/2003	9:39:06	6	65.13	3.893	0.378	0.05			
10/8/2003	9:39:06	6.4	65.13	3.86	0.411	0.05			
10/8/2003	9:39:06	6.7	65.15	3.815	0.456	0.05			
10/8/2003	9:39:07	7.1	65.15	3.797	0.474	0.07			
10/8/2003	9:39:07	7.5	65.15	3.764	0.507	0.07			
10/8/2003	9:39:07	8	65.15	3.732	0.539	0.07			
10/8/2003	9:39:08	8.4	65.15	3.701	0.570	0.08			
10/8/2003	9:39:08	8.9	65.15	3.677	0.594	0.08			
10/8/2003	9:39:09	9.5	65.15	3.65	0.621	0.10			
10/8/2003	9:39:10	10	65.15	3.624	0.647	0.12			
10/8/2003	9:39:10	10.6	65.13	3.603	0.668	0.12			
10/8/2003	9:39:11	11.3	65.13	3.577	0.694	0.13			
10/8/2003	9:39:11	11.9	65.13	3.553	0.718	0.13			
10/8/2003	9:39:12	12.6	65.13	3.534	0.737	0.15			
10/8/2003	9:39:13	13.4	65.13	3.516	0.755	0.17			
10/8/2003	9:39:14	14.2	65.13	3.495	0.776	0.18			
10/8/2003	9:39:15	15	65.13	3.483	0.788	0.20			
10/8/2003	9:39:15	15.9	65.13	3.457	0.814	0.20			
10/8/2003	9:39:16	16.8	65.13	3.438	0.833	0.22			
10/8/2003	9:39:17	17.8	65.13	3.424	0.847	0.23			
10/8/2003	9:39:18	18.9	65.13	3.412	0.859	0.25			
10/8/2003	9:39:20	20	65.13	3.398	0.873	0.28			
10/8/2003	9:39:21	21.2	65.13	3.39	0.881	0.30			
10/8/2003	9:39:22	22.4	65.13	3.379	0.892	0.32			
10/8/2003	9:39:23	23.8	65.15	3.374	0.897	0.33			
10/8/2003	9:39:25	25.2	65.15	3.361	0.910	0.37			
10/8/2003	9:39:26	26.7	65.15	3.351	0.920	0.38			
10/8/2003	9:39:28	28.2	65.15	3.341	0.930	0.42			
10/8/2003	9:39:29	29.8	65.17	3.335	0.936	0.43			
10/8/2003	9:39:31	31.5	65.17	3.327	0.944	0.47			
10/8/2003	9:39:33	33.3	65.17	3.335	0.936	0.50			
10/8/2003	9:39:35	35.2	65.2	3.327	0.944	0.53			
10/8/2003	9:39:37	37.3	65.2	3.327	0.944	0.57			
10/8/2003	9:39:39	39.5	65.22	3.317	0.954	0.60			
10/8/2003	9:39:41	41.8	65.22	3.319	0.952	0.63			
10/8/2003	9:39:44	44.3	65.24	3.315	0.956	0.68			
10/8/2003	9:39:46	46.9	65.24	3.311	0.960	0.72			
10/8/2003	9:39:49	49.7	65.26	3.31	0.961	0.77			
10/8/2003	9:39:52	52.6	65.29	3.304	0.967	0.82			
10/8/2003	9:39:55	55.7	65.29	3.31	0.961	0.87			
10/8/2003	9:39:58	59	65.31	3.312	0.959	0.92			
10/8/2003	9:40:02	62.5	65.33	3.308	0.963	0.98			
10/8/2003	9:40:06	66.2	65.33	3.304	0.967	1.05			
10/8/2003	9:40:10	70.1	65.35	3.308	0.963	1.12			

Well No. **MW-108A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	9:40:14	74.3	65.35	3.314	0.957	1.18			
10/8/2003	9:40:18	78.7	65.38	3.309	0.962	1.25			
10/8/2003	9:40:23	83.4	65.4	3.321	0.950	1.33			
10/8/2003	9:40:28	88.4	65.4	3.307	0.964	1.42			
10/8/2003	9:40:33	93.7	65.42	3.313	0.958	1.50			
10/8/2003	9:40:39	99.3	65.42	3.317	0.954	1.60			
10/8/2003	9:40:45	105.2	65.44	3.317	0.954	1.70			
10/8/2003	9:40:51	111.5	65.44	3.315	0.956	1.80			
10/8/2003	9:40:58	118.1	65.47	3.314	0.957	1.92			
10/8/2003	9:41:05	125.1	65.47	3.31	0.961	2.03			1.36 gpm flow rate
10/8/2003	9:41:12	132.6	65.49	3.316	0.955	2.15			
10/8/2003	9:41:20	140.5	65.49	3.306	0.965	2.28			
10/8/2003	9:41:28	148.9	65.49	3.308	0.963	2.42			
10/8/2003	9:41:37	157.8	65.51	3.306	0.965	2.57			
10/8/2003	9:41:47	167.2	65.51	3.308	0.963	2.73			
10/8/2003	9:41:57	177.2	65.51	3.296	0.975	2.90			
10/8/2003	9:42:07	187.8	65.51	3.306	0.965	3.07			
10/8/2003	9:42:18	199	65.51	3.312	0.959	3.25			
10/8/2003	9:42:30	210.9	65.51	3.19	1.081	3.45			
10/8/2003	9:42:43	223.5	65.53	3.153	1.118	3.67			
10/8/2003	9:42:56	236.8	65.53	3.151	1.120	3.88			
10/8/2003	9:43:10	250.9	65.53	3.147	1.124	4.12			
10/8/2003	9:43:25	265.8	65.53	3.145	1.126	4.37			
10/8/2003	9:43:41	281.6	65.53	3.141	1.130	4.63			
10/8/2003	9:43:58	298.4	65.53	3.139	1.132	4.92			
10/8/2003	9:44:16	316.2	65.53	3.127	1.144	5.22			
10/8/2003	9:44:34	335	65.51	3.145	1.126	5.52			
10/8/2003	9:44:54	354.9	65.49	3.153	1.118	5.85			
10/8/2003	9:45:15	376	65.47	3.139	1.132	6.20			
10/8/2003	9:45:38	398.4	65.47	3.149	1.122	6.58			
10/8/2003	9:46:02	422.1	65.44	3.146	1.125	6.98			1.5 gpm flow rate
10/8/2003	9:46:27	447.2	65.42	3.15	1.121	7.40			
10/8/2003	9:46:53	473.8	65.4	3.152	1.119	7.83			
10/8/2003	9:47:21	502	65.38	3.146	1.125	8.30			
10/8/2003	9:47:51	531.9	65.35	3.146	1.125	8.80			
10/8/2003	9:48:23	563.5	65.33	3.151	1.120	9.33			
10/8/2003	9:48:56	597	65.31	3.149	1.122	9.88			
10/8/2003	9:49:32	632.5	65.26	3.143	1.128	10.48			
10/8/2003	9:50:10	670.1	65.24	3.152	1.119	11.12			1.5 gpm flow rate
10/8/2003	9:50:49	709.9	65.2	3.166	1.105	11.77			
10/8/2003	9:51:32	752.1	65.15	3.156	1.115	12.48			
10/8/2003	9:52:16	796.8	65.11	3.165	1.106	13.22			
10/8/2003	9:53:04	844.2	65.06	3.169	1.102	14.02			
10/8/2003	9:53:54	894.4	65.01	3.16	1.111	14.85			
10/8/2003	9:54:47	947.5	64.97	3.17	1.101	15.73			
10/8/2003	9:55:43	1003.8	64.9	3.184	1.087	16.67			1.46 gpm flow rate
10/8/2003	9:56:43	1063.4	64.86	3.167	1.104	17.67			
10/8/2003	9:57:46	1126.6	64.77	3.174	1.097	18.72			
10/8/2003	9:58:53	1193.5	64.7	3.167	1.104	19.83			
10/8/2003	9:59:00	0	64.7	3.173	1.098	19.95			Start Test 2
10/8/2003	9:59:00	0.3	64.7	3.171	1.100	19.95			
10/8/2003	9:59:00	0.6	64.72	3.166	1.105	19.95			
10/8/2003	9:59:00	0.9	64.74	3.17	1.101	19.95			
10/8/2003	9:59:01	1.2	64.74	3.166	1.105	19.97			
10/8/2003	9:59:01	1.5	64.74	3.172	1.099	19.97			
10/8/2003	9:59:01	1.8	64.74	3.16	1.111	19.97			
10/8/2003	9:59:02	2.1	64.74	3.168	1.103	19.98			
10/8/2003	9:59:02	2.4	64.77	3.168	1.103	19.98			
10/8/2003	9:59:02	2.7	64.77	3.166	1.105	19.98			
10/8/2003	9:59:03	3	64.77	3.16	1.111	20.00			
10/8/2003	9:59:03	3.3	64.77	3.172	1.099	20.00			
10/8/2003	9:59:03	3.6	64.77	3.266	1.005	20.00	0.00		Pump Stop
10/8/2003	9:59:03	3.9	64.77	3.223	1.048	20.00	0.00		
10/8/2003	9:59:04	4.2	64.77	3.258	1.013	20.02	0.02	1201.00	
10/8/2003	9:59:04	4.5	64.77	3.3	0.971	20.02	0.02	1201.00	
10/8/2003	9:59:04	4.8	64.77	3.337	0.934	20.02	0.02	1201.00	
10/8/2003	9:59:05	5.1	64.77	3.378	0.893	20.03	0.03	601.00	
10/8/2003	9:59:05	5.4	64.77	3.414	0.857	20.03	0.03	601.00	
10/8/2003	9:59:05	5.7	64.77	3.447	0.824	20.03	0.03	601.00	

Well No. **MW-108A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	9:59:06	6	64.77	3.482	0.789	20.05	0.05	401.00	
10/8/2003	9:59:06	6.4	64.79	3.516	0.755	20.05	0.05	401.00	
10/8/2003	9:59:06	6.7	64.77	3.551	0.720	20.05	0.05	401.00	
10/8/2003	9:59:07	7.1	64.79	3.594	0.677	20.07	0.07	301.00	
10/8/2003	9:59:07	7.5	64.79	3.633	0.638	20.07	0.07	301.00	
10/8/2003	9:59:08	8	64.79	3.673	0.598	20.08	0.08	241.00	
10/8/2003	9:59:08	8.4	64.77	3.71	0.561	20.08	0.08	241.00	
10/8/2003	9:59:09	8.9	64.79	3.743	0.528	20.10	0.10	201.00	
10/8/2003	9:59:09	9.5	64.79	3.779	0.492	20.10	0.10	201.00	
10/8/2003	9:59:10	10	64.77	3.818	0.453	20.12	0.12	172.43	
10/8/2003	9:59:10	10.6	64.77	3.852	0.419	20.12	0.12	172.43	
10/8/2003	9:59:11	11.3	64.77	3.881	0.390	20.13	0.13	151.00	
10/8/2003	9:59:12	11.9	64.77	3.913	0.358	20.15	0.15	134.33	
10/8/2003	9:59:12	12.6	64.74	3.942	0.329	20.15	0.15	134.33	
10/8/2003	9:59:13	13.4	64.74	3.972	0.299	20.17	0.17	121.00	
10/8/2003	9:59:14	14.2	64.74	4.001	0.270	20.18	0.18	110.09	
10/8/2003	9:59:15	15	64.74	4.027	0.244	20.20	0.20	101.00	
10/8/2003	9:59:15	15.9	64.74	4.05	0.221	20.20	0.20	101.00	
10/8/2003	9:59:16	16.8	64.72	4.074	0.197	20.22	0.22	93.31	
10/8/2003	9:59:17	17.8	64.72	4.096	0.175	20.23	0.23	86.71	
10/8/2003	9:59:18	18.9	64.72	4.116	0.155	20.25	0.25	81.00	
10/8/2003	9:59:20	20	64.7	4.133	0.138	20.28	0.28	71.59	
10/8/2003	9:59:21	21.2	64.7	4.151	0.120	20.30	0.30	67.67	
10/8/2003	9:59:22	22.4	64.68	4.167	0.104	20.32	0.32	64.16	
10/8/2003	9:59:23	23.8	64.68	4.181	0.090	20.33	0.33	61.00	
10/8/2003	9:59:25	25.2	64.65	4.193	0.078	20.37	0.37	55.55	
10/8/2003	9:59:26	26.7	64.63	4.203	0.068	20.38	0.38	53.17	
10/8/2003	9:59:28	28.2	64.61	4.211	0.060	20.42	0.42	49.00	
10/8/2003	9:59:29	29.8	64.58	4.221	0.050	20.43	0.43	47.15	
10/8/2003	9:59:31	31.5	64.56	4.227	0.044	20.47	0.47	43.86	
10/8/2003	9:59:33	33.3	64.52	4.233	0.038	20.50	0.50	41.00	
10/8/2003	9:59:35	35.2	64.49	4.24	0.031	20.53	0.53	38.50	
10/8/2003	9:59:37	37.3	64.45	4.244	0.027	20.57	0.57	36.29	
10/8/2003	9:59:39	39.5	64.4	4.248	0.023	20.60	0.60	34.33	
10/8/2003	9:59:41	41.8	64.36	4.251	0.020	20.63	0.63	32.58	
10/8/2003	9:59:44	44.3	64.29	4.253	0.018	20.68	0.68	30.27	
10/8/2003	9:59:46	46.9	64.22	4.256	0.015	20.72	0.72	28.91	
10/8/2003	9:59:49	49.7	64.15	4.259	0.012	20.77	0.77	27.09	
10/8/2003	9:59:52	52.6	64.09	4.259	0.012	20.82	0.82	25.49	
10/8/2003	9:59:55	55.7	64.02	4.262	0.009	20.87	0.87	24.08	
10/8/2003	9:59:59	59	63.93	4.263	0.008	20.93	0.93	22.43	
10/8/2003	10:00:02	62.5	63.84	4.266	0.005	20.98	0.98	21.34	
10/8/2003	10:00:06	66.2	63.77	4.264	0.007	21.05	1.05	20.05	
10/8/2003	10:00:10	70.1	63.68	4.265	0.006	21.12	1.12	18.91	
10/8/2003	10:00:14	74.3	63.59	4.268	0.003	21.18	1.18	17.90	
10/8/2003	10:00:18	78.7	63.5	4.267	0.004	21.25	1.25	17.00	
10/8/2003	10:00:23	83.4	63.41	4.268	0.003	21.33	1.33	16.00	
10/8/2003	10:00:28	88.4	63.3	4.269	0.002	21.42	1.42	15.12	
10/8/2003	10:00:33	93.7	63.23	4.27	0.001	21.50	1.50	14.33	
10/8/2003	10:00:39	99.3	63.14	4.271	0.000	21.60	1.60	13.50	
10/8/2003	10:00:45	105.2	63.05	4.269	0.002	21.70	1.70	12.76	
10/8/2003	10:00:51	111.5	62.96	4.27	0.001	21.80	1.80	12.11	
10/8/2003	10:00:58	118.1	62.89	4.271	0.000	21.92	1.92	11.43	
10/8/2003	10:01:05	125.1	62.8	4.274	-0.003	22.03	2.03	10.84	
10/8/2003	10:01:12	132.6	62.73	4.273	-0.002	22.15	2.15	10.30	
10/8/2003	10:01:20	140.5	62.66	4.273	-0.002	22.28	2.28	9.76	
10/8/2003	10:01:28	148.9	62.59	4.274	-0.003	22.42	2.42	9.28	
10/8/2003	10:01:37	157.8	62.55	4.272	-0.001	22.57	2.57	8.79	
10/8/2003	10:01:47	167.2	62.5	4.275	-0.004	22.73	2.73	8.32	
10/8/2003	10:01:57	177.2	62.44	4.275	-0.004	22.90	2.90	7.90	
10/8/2003	10:02:07	187.8	62.41	4.274	-0.003	23.07	3.07	7.52	
10/8/2003	10:02:19	199	62.37	4.274	-0.003	23.27	3.27	7.12	
10/8/2003	10:02:30	210.9	62.34	4.274	-0.003	23.45	3.45	6.80	
10/8/2003	10:02:43	223.5	62.32	4.275	-0.004	23.67	3.67	6.45	
10/8/2003	10:02:56	236.8	62.3	4.275	-0.004	23.88	3.88	6.15	
10/8/2003	10:03:10	250.9	62.28	4.275	-0.004	24.12	4.12	5.86	
10/8/2003	10:03:25	265.8	62.28	4.277	-0.006	24.37	4.37	5.58	
10/8/2003	10:03:41	281.6	62.28	4.277	-0.006	24.63	4.63	5.32	
10/8/2003	10:03:58	298.4	62.28	4.277	-0.006	24.92	4.92	5.07	

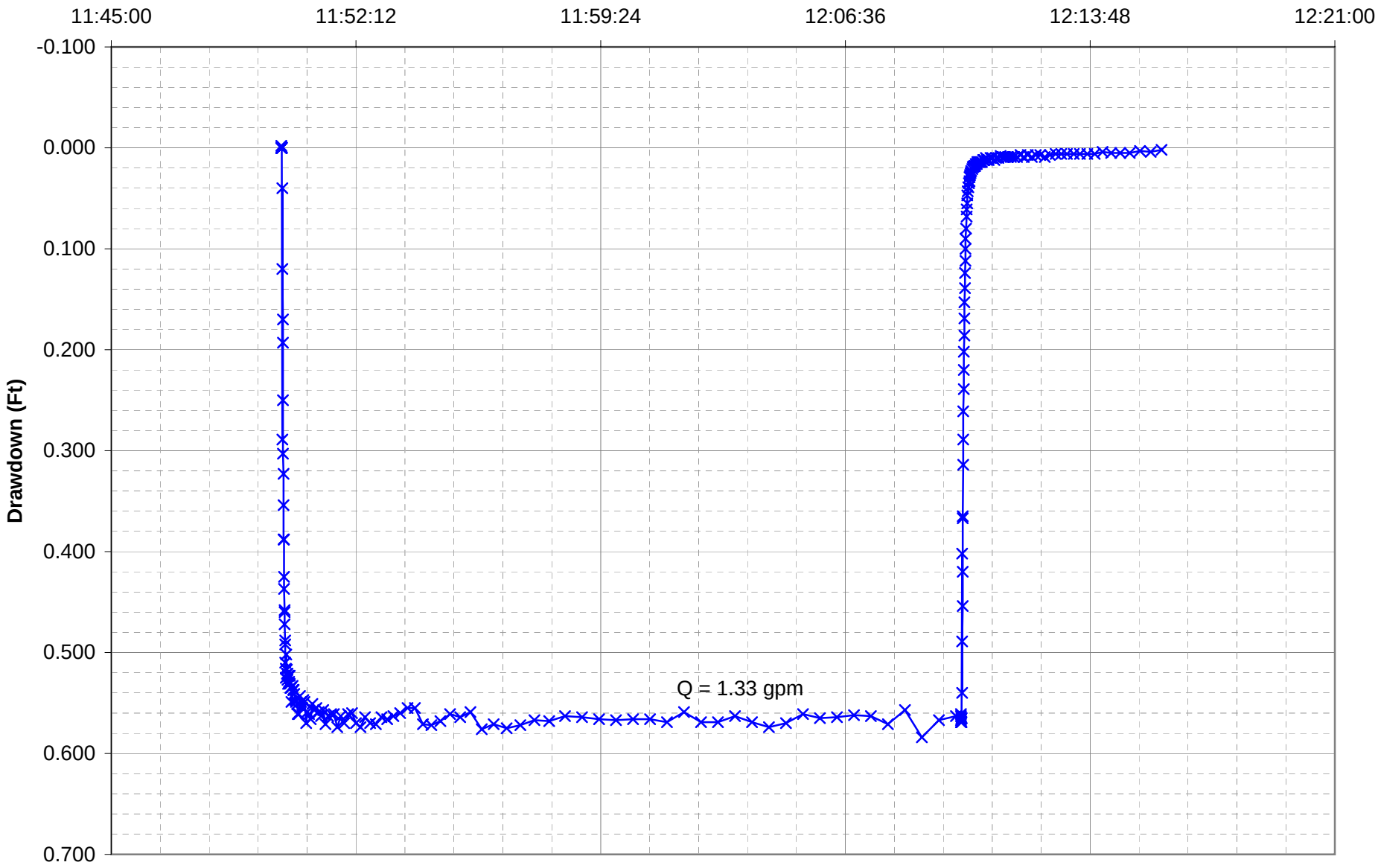
Well No. **MW-108A**

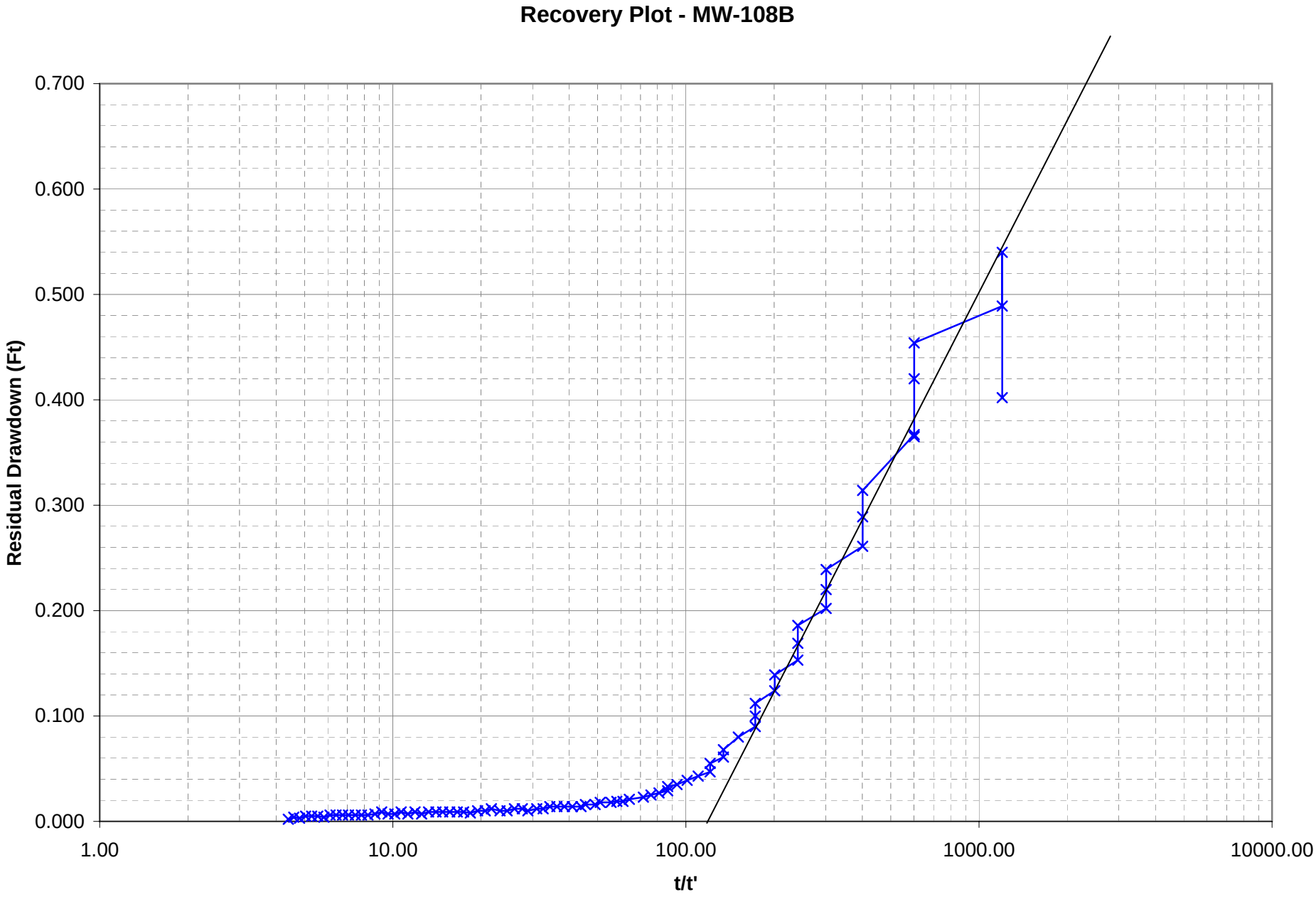
Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	10:04:16	316.2	62.28	4.279	-0.008	25.22	5.22	4.83	
10/8/2003	10:04:35	335	62.3	4.277	-0.006	25.53	5.53	4.61	
10/8/2003	10:04:54	354.9	62.3	4.277	-0.006	25.85	5.85	4.42	
10/8/2003	10:05:16	376	62.32	4.278	-0.007	26.22	6.22	4.22	
10/8/2003	10:53:00								DTW = 13.38 at 10:53

Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-108B**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/8/2003	11:50:00			
Test end date and time	10/8/2003	12:15:54			
Period of pumping	20	minutes			
Static depth to water	14.14	feet below top of casing			
Starting transducer depth	5.695	feet below static water level			
Total well depth	99.0	feet below top of casing			
Depth to top of screen	89.0	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.33	gpm, or	256	cfd	
Average drawdown [s]	0.56	ft			
Specific capacity [Q/s]	2.38	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.55	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			85.2	cfd/ft	
Hydraulic conductivity [K = T/b]			8.5	fpd, or	3.0E-03 cm/sec


Drawdown Over Time - MW-108B
11:45:00
11:52:12
11:59:24
12:06:36
12:13:48
12:21:00
-0.100
0.000
0.100
0.200
0.300
0.400
0.500
0.600
0.700
Drawdown (Ft)
Q = 1.33 gpm


Recovery Plot - MW-108B
Residual Drawdown (Ft)
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000
1.00
10.00
100.00
1000.00
10000.00
t/t'

Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-108B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	11:24:00								DTW = 14.14 at 11:24
10/8/2003	11:42:00								DTW = 14.14 at 11:42
10/8/2003	11:50:00	0	64.74	5.697	-0.002				Start Test 1
10/8/2003	11:50:00	0.3	64.77	5.695	0.000				
10/8/2003	11:50:00	0.6	64.77	5.695	0.000				
10/8/2003	11:50:00	0.9	64.79	5.695	0.000				
10/8/2003	11:50:01	1.2	64.79	5.695	0.000				
10/8/2003	11:50:01	1.5	64.79	5.695	0.000				
10/8/2003	11:50:01	1.8	64.79	5.695	0.000	0.00			Pump Start
10/8/2003	11:50:02	2.1	64.81	5.406	0.289	0.02			
10/8/2003	11:50:02	2.4	64.79	5.655	0.040	0.02			
10/8/2003	11:50:02	2.7	64.81	5.575	0.120	0.02			
10/8/2003	11:50:03	3	64.81	5.525	0.170	0.03			
10/8/2003	11:50:03	3.3	64.81	5.502	0.193	0.03			
10/8/2003	11:50:03	3.6	64.81	5.445	0.250	0.03			
10/8/2003	11:50:03	3.9	64.81	5.392	0.303	0.03			
10/8/2003	11:50:04	4.2	64.81	5.372	0.323	0.05			
10/8/2003	11:50:04	4.5	64.81	5.341	0.354	0.05			
10/8/2003	11:50:04	4.8	64.81	5.307	0.388	0.05			
10/8/2003	11:50:05	5.1	64.81	5.307	0.388	0.07			
10/8/2003	11:50:05	5.4	64.81	5.27	0.425	0.07			
10/8/2003	11:50:05	5.7	64.81	5.258	0.437	0.07			
10/8/2003	11:50:06	6	64.81	5.237	0.458	0.08			
10/8/2003	11:50:06	6.4	64.81	5.235	0.460	0.08			
10/8/2003	11:50:06	6.7	64.81	5.223	0.472	0.08			
10/8/2003	11:50:07	7.1	64.81	5.203	0.492	0.10			
10/8/2003	11:50:07	7.5	64.83	5.207	0.488	0.10			
10/8/2003	11:50:07	8	64.81	5.185	0.510	0.10			
10/8/2003	11:50:08	8.4	64.83	5.17	0.525	0.12			
10/8/2003	11:50:08	8.9	64.83	5.179	0.516	0.12			
10/8/2003	11:50:09	9.5	64.83	5.193	0.502	0.13			
10/8/2003	11:50:10	10	64.81	5.174	0.521	0.15			
10/8/2003	11:50:10	10.6	64.81	5.178	0.517	0.15			
10/8/2003	11:50:11	11.3	64.81	5.174	0.521	0.17			
10/8/2003	11:50:11	11.9	64.81	5.168	0.527	0.17			
10/8/2003	11:50:12	12.6	64.81	5.164	0.531	0.18			
10/8/2003	11:50:13	13.4	64.79	5.172	0.523	0.20			
10/8/2003	11:50:14	14.2	64.81	5.166	0.529	0.22			
10/8/2003	11:50:15	15	64.81	5.172	0.523	0.23			
10/8/2003	11:50:15	15.9	64.81	5.164	0.531	0.23			
10/8/2003	11:50:16	16.8	64.79	5.16	0.535	0.25			
10/8/2003	11:50:17	17.8	64.79	5.16	0.535	0.27			
10/8/2003	11:50:18	18.9	64.79	5.146	0.549	0.28			
10/8/2003	11:50:20	20	64.79	5.162	0.533	0.32			
10/8/2003	11:50:21	21.2	64.79	5.158	0.537	0.33			
10/8/2003	11:50:22	22.4	64.79	5.158	0.537	0.35			
10/8/2003	11:50:23	23.8	64.79	5.154	0.541	0.37			
10/8/2003	11:50:25	25.2	64.79	5.148	0.547	0.40			
10/8/2003	11:50:26	26.7	64.81	5.146	0.549	0.42			
10/8/2003	11:50:28	28.2	64.81	5.144	0.551	0.45			
10/8/2003	11:50:29	29.8	64.81	5.134	0.561	0.47			
10/8/2003	11:50:31	31.5	64.81	5.134	0.561	0.50			
10/8/2003	11:50:33	33.3	64.81	5.152	0.543	0.53			
10/8/2003	11:50:35	35.2	64.81	5.146	0.549	0.57			
10/8/2003	11:50:37	37.3	64.81	5.14	0.555	0.60			
10/8/2003	11:50:39	39.5	64.81	5.148	0.547	0.63			
10/8/2003	11:50:41	41.8	64.81	5.146	0.549	0.67			
10/8/2003	11:50:44	44.3	64.81	5.125	0.570	0.72			
10/8/2003	11:50:46	46.9	64.83	5.136	0.559	0.75			
10/8/2003	11:50:49	49.7	64.83	5.134	0.561	0.80			
10/8/2003	11:50:52	52.6	64.81	5.129	0.566	0.85			
10/8/2003	11:50:55	55.7	64.83	5.144	0.551	0.90			
10/8/2003	11:50:58	59	64.83	5.138	0.557	0.95			
10/8/2003	11:51:02	62.5	64.83	5.14	0.555	1.02			
10/8/2003	11:51:06	66.2	64.83	5.136	0.559	1.08			

Well No. **MW-108B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	11:51:10	70.1	64.83	5.132	0.563	1.15			
10/8/2003	11:51:14	74.3	64.83	5.138	0.557	1.22			
10/8/2003	11:51:18	78.7	64.83	5.124	0.571	1.28			
10/8/2003	11:51:23	83.4	64.83	5.132	0.563	1.37			
10/8/2003	11:51:28	88.4	64.83	5.134	0.561	1.45			
10/8/2003	11:51:33	93.7	64.81	5.134	0.561	1.53			
10/8/2003	11:51:39	99.3	64.81	5.121	0.574	1.63			
10/8/2003	11:51:45	105.2	64.81	5.132	0.563	1.73			
10/8/2003	11:51:51	111.5	64.81	5.125	0.570	1.83			
10/8/2003	11:51:58	118.1	64.81	5.134	0.561	1.95			
10/8/2003	11:52:05	125.1	64.79	5.135	0.560	2.07			
10/8/2003	11:52:12	132.6	64.79	5.125	0.570	2.18			
10/8/2003	11:52:20	140.5	64.77	5.121	0.574	2.32			
10/8/2003	11:52:28	148.9	64.74	5.131	0.564	2.45			
10/8/2003	11:52:37	157.8	64.72	5.125	0.570	2.60			
10/8/2003	11:52:47	167.2	64.68	5.124	0.571	2.77			
10/8/2003	11:52:57	177.2	64.61	5.131	0.564	2.93			
10/8/2003	11:53:07	187.8	64.54	5.129	0.566	3.10			1.30 gpm flow rate
10/8/2003	11:53:18	199	64.45	5.132	0.563	3.28			
10/8/2003	11:53:30	210.9	64.38	5.135	0.560	3.48			
10/8/2003	11:53:43	223.5	64.29	5.14	0.555	3.70			
10/8/2003	11:53:56	236.8	64.2	5.14	0.555	3.92			
10/8/2003	11:54:10	250.9	64.11	5.124	0.571	4.15			
10/8/2003	11:54:25	265.8	64.02	5.123	0.572	4.40			
10/8/2003	11:54:41	281.6	63.93	5.127	0.568	4.67			
10/8/2003	11:54:58	298.4	63.82	5.134	0.561	4.95			
10/8/2003	11:55:16	316.2	63.73	5.131	0.564	5.25			1.33 gpm flow rate
10/8/2003	11:55:34	335	63.66	5.136	0.559	5.55			
10/8/2003	11:55:54	354.9	63.57	5.119	0.576	5.88			
10/8/2003	11:56:15	376	63.5	5.124	0.571	6.23			
10/8/2003	11:56:38	398.4	63.45	5.12	0.575	6.62			
10/8/2003	11:57:02	422.1	63.39	5.123	0.572	7.02			
10/8/2003	11:57:27	447.2	63.3	5.128	0.567	7.43			
10/8/2003	11:57:53	473.8	63.2	5.127	0.568	7.87			
10/8/2003	11:58:21	502	63.09	5.132	0.563	8.33			
10/8/2003	11:58:51	531.9	63	5.131	0.564	8.83			
10/8/2003	11:59:21	561.9	62.91	5.129	0.566	9.33			
10/8/2003	11:59:51	591.9	62.84	5.128	0.567	9.83			
10/8/2003	12:00:21	621.9	62.8	5.129	0.566	10.33			1.33 gpm flow rate
10/8/2003	12:00:51	651.9	62.8	5.129	0.566	10.83			
10/8/2003	12:01:21	681.9	62.71	5.126	0.569	11.33			
10/8/2003	12:01:51	711.9	62.59	5.136	0.559	11.83			
10/8/2003	12:02:21	741.9	62.48	5.126	0.569	12.33			
10/8/2003	12:02:51	771.9	62.41	5.126	0.569	12.83			
10/8/2003	12:03:21	801.9	62.41	5.132	0.563	13.33			
10/8/2003	12:03:51	831.9	62.3	5.126	0.569	13.83			
10/8/2003	12:04:21	861.9	62.19	5.121	0.574	14.33			
10/8/2003	12:04:51	891.9	62.12	5.125	0.570	14.83			
10/8/2003	12:05:21	921.9	62.07	5.134	0.561	15.33			1.33 gpm flow rate
10/8/2003	12:05:51	951.9	62.03	5.13	0.565	15.83			
10/8/2003	12:06:21	981.9	61.98	5.131	0.564	16.33			
10/8/2003	12:06:51	1011.9	61.96	5.133	0.562	16.83			
10/8/2003	12:07:21	1041.9	61.89	5.132	0.563	17.33			
10/8/2003	12:07:51	1071.9	61.85	5.124	0.571	17.83			
10/8/2003	12:08:21	1101.9	61.8	5.138	0.557	18.33			
10/8/2003	12:08:51	1131.9	61.78	5.111	0.584	18.83			
10/8/2003	12:09:21	1161.9	61.69	5.128	0.567	19.33			
10/8/2003	12:09:51	1191.9	61.64	5.132	0.563	19.83			
10/8/2003	12:10:00	0	61.64	5.134	0.561	19.98			Start Test 2
10/8/2003	12:10:00	0.3	61.67	5.132	0.563	19.98			
10/8/2003	12:10:00	0.6	61.67	5.126	0.569	19.98			
10/8/2003	12:10:00	0.9	61.69	5.128	0.567	19.98			
10/8/2003	12:10:01	1.2	61.69	5.13	0.565	20.00			
10/8/2003	12:10:01	1.5	61.69	5.13	0.565	20.00			
10/8/2003	12:10:01	1.8	61.69	5.126	0.569	20.00	0.00		Pump Stop
10/8/2003	12:10:02	2.1	61.69	5.293	0.402	20.02	0.02	1201.00	
10/8/2003	12:10:02	2.4	61.71	5.155	0.540	20.02	0.02	1201.00	
10/8/2003	12:10:02	2.7	61.71	5.206	0.489	20.02	0.02	1201.00	
10/8/2003	12:10:03	3	61.71	5.241	0.454	20.03	0.03	601.00	

Well No. **MW-108B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	12:10:03	3.3	61.71	5.275	0.420	20.03	0.03	601.00	
10/8/2003	12:10:03	3.6	61.71	5.33	0.365	20.03	0.03	601.00	
10/8/2003	12:10:03	3.9	61.71	5.328	0.367	20.03	0.03	601.00	
10/8/2003	12:10:04	4.2	61.71	5.381	0.314	20.05	0.05	401.00	
10/8/2003	12:10:04	4.5	61.71	5.406	0.289	20.05	0.05	401.00	
10/8/2003	12:10:04	4.8	61.71	5.434	0.261	20.05	0.05	401.00	
10/8/2003	12:10:05	5.1	61.71	5.456	0.239	20.07	0.07	301.00	
10/8/2003	12:10:05	5.4	61.71	5.475	0.220	20.07	0.07	301.00	
10/8/2003	12:10:05	5.7	61.71	5.493	0.202	20.07	0.07	301.00	
10/8/2003	12:10:06	6	61.71	5.509	0.186	20.08	0.08	241.00	
10/8/2003	12:10:06	6.4	61.71	5.526	0.169	20.08	0.08	241.00	
10/8/2003	12:10:06	6.7	61.73	5.542	0.153	20.08	0.08	241.00	
10/8/2003	12:10:07	7.1	61.73	5.556	0.139	20.10	0.10	201.00	
10/8/2003	12:10:07	7.5	61.73	5.571	0.124	20.10	0.10	201.00	
10/8/2003	12:10:08	8	61.73	5.583	0.112	20.12	0.12	172.43	
10/8/2003	12:10:08	8.4	61.73	5.595	0.100	20.12	0.12	172.43	
10/8/2003	12:10:08	8.9	61.73	5.605	0.090	20.12	0.12	172.43	
10/8/2003	12:10:09	9.5	61.73	5.615	0.080	20.13	0.13	151.00	
10/8/2003	12:10:10	10	61.71	5.627	0.068	20.15	0.15	134.33	
10/8/2003	12:10:10	10.6	61.71	5.634	0.061	20.15	0.15	134.33	
10/8/2003	12:10:11	11.3	61.71	5.64	0.055	20.17	0.17	121.00	
10/8/2003	12:10:11	11.9	61.71	5.648	0.047	20.17	0.17	121.00	
10/8/2003	12:10:12	12.6	61.71	5.652	0.043	20.18	0.18	110.09	
10/8/2003	12:10:13	13.4	61.71	5.656	0.039	20.20	0.20	101.00	
10/8/2003	12:10:14	14.2	61.71	5.66	0.035	20.22	0.22	93.31	
10/8/2003	12:10:15	15	61.71	5.662	0.033	20.23	0.23	86.71	
10/8/2003	12:10:15	15.9	61.71	5.666	0.029	20.23	0.23	86.71	
10/8/2003	12:10:16	16.8	61.71	5.668	0.027	20.25	0.25	81.00	
10/8/2003	12:10:17	17.8	61.71	5.67	0.025	20.27	0.27	76.00	
10/8/2003	12:10:18	18.9	61.71	5.672	0.023	20.28	0.28	71.59	
10/8/2003	12:10:20	20	61.71	5.674	0.021	20.32	0.32	64.16	
10/8/2003	12:10:21	21.2	61.71	5.676	0.019	20.33	0.33	61.00	
10/8/2003	12:10:22	22.4	61.71	5.676	0.019	20.35	0.35	58.14	
10/8/2003	12:10:23	23.8	61.73	5.677	0.018	20.37	0.37	55.55	
10/8/2003	12:10:25	25.2	61.73	5.677	0.018	20.40	0.40	51.00	
10/8/2003	12:10:26	26.7	61.73	5.679	0.016	20.42	0.42	49.00	
10/8/2003	12:10:28	28.2	61.73	5.679	0.016	20.45	0.45	45.44	
10/8/2003	12:10:29	29.8	61.73	5.681	0.014	20.47	0.47	43.86	
10/8/2003	12:10:31	31.5	61.73	5.681	0.014	20.50	0.50	41.00	
10/8/2003	12:10:33	33.3	61.73	5.681	0.014	20.53	0.53	38.50	
10/8/2003	12:10:35	35.2	61.73	5.681	0.014	20.57	0.57	36.29	
10/8/2003	12:10:37	37.3	61.76	5.681	0.014	20.60	0.60	34.33	
10/8/2003	12:10:39	39.5	61.76	5.683	0.012	20.63	0.63	32.58	
10/8/2003	12:10:41	41.8	61.76	5.683	0.012	20.67	0.67	31.00	
10/8/2003	12:10:44	44.3	61.76	5.685	0.010	20.72	0.72	28.91	
10/8/2003	12:10:46	46.9	61.76	5.683	0.012	20.75	0.75	27.67	
10/8/2003	12:10:49	49.7	61.78	5.683	0.012	20.80	0.80	26.00	
10/8/2003	12:10:52	52.6	61.78	5.685	0.010	20.85	0.85	24.53	
10/8/2003	12:10:55	55.7	61.78	5.685	0.010	20.90	0.90	23.22	
10/8/2003	12:10:59	59	61.78	5.683	0.012	20.97	0.97	21.69	
10/8/2003	12:11:02	62.5	61.8	5.685	0.010	21.02	1.02	20.67	
10/8/2003	12:11:06	66.2	61.8	5.685	0.010	21.08	1.08	19.46	
10/8/2003	12:11:10	70.1	61.8	5.687	0.008	21.15	1.15	18.39	
10/8/2003	12:11:14	74.3	61.82	5.686	0.009	21.22	1.22	17.44	
10/8/2003	12:11:18	78.7	61.82	5.686	0.009	21.28	1.28	16.58	
10/8/2003	12:11:23	83.4	61.85	5.686	0.009	21.37	1.37	15.63	
10/8/2003	12:11:28	88.4	61.85	5.686	0.009	21.45	1.45	14.79	
10/8/2003	12:11:33	93.7	61.85	5.686	0.009	21.53	1.53	14.04	
10/8/2003	12:11:39	99.3	61.87	5.686	0.009	21.63	1.63	13.24	
10/8/2003	12:11:45	105.2	61.87	5.688	0.007	21.73	1.73	12.54	
10/8/2003	12:11:51	111.5	61.87	5.686	0.009	21.83	1.83	11.91	
10/8/2003	12:11:58	118.1	61.85	5.688	0.007	21.95	1.95	11.26	
10/8/2003	12:12:05	125.1	61.85	5.686	0.009	22.07	2.07	10.68	
10/8/2003	12:12:12	132.6	61.85	5.688	0.007	22.18	2.18	10.16	
10/8/2003	12:12:20	140.5	61.82	5.688	0.007	22.32	2.32	9.63	
10/8/2003	12:12:28	148.9	61.82	5.686	0.009	22.45	2.45	9.16	
10/8/2003	12:12:37	157.8	61.82	5.688	0.007	22.60	2.60	8.69	
10/8/2003	12:12:47	167.2	61.8	5.689	0.006	22.77	2.77	8.23	
10/8/2003	12:12:57	177.2	61.8	5.689	0.006	22.93	2.93	7.82	

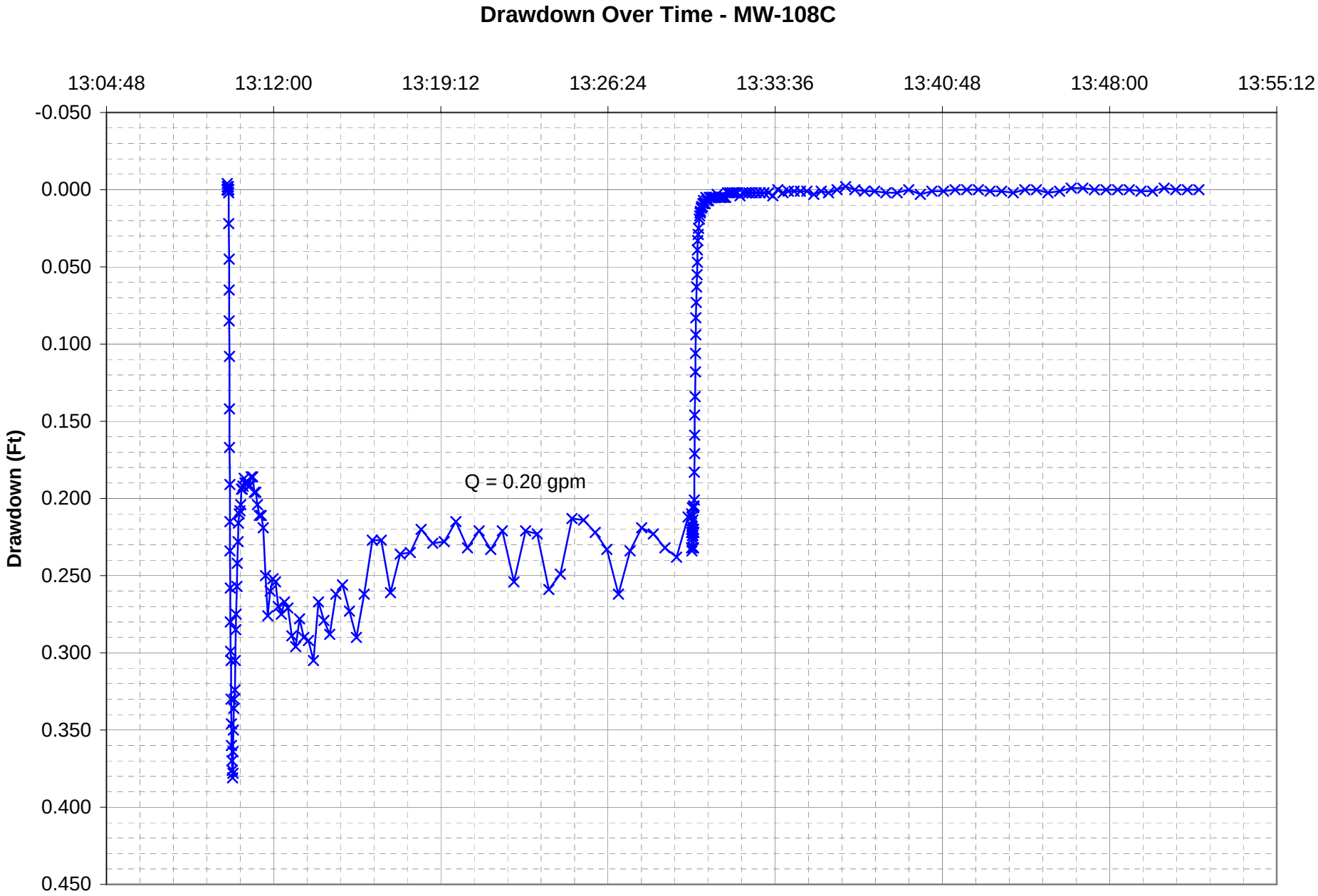
Well No. **MW-108B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	12:13:07	187.8	61.8	5.689	0.006	23.10	3.10	7.45	
10/8/2003	12:13:19	199	61.78	5.689	0.006	23.30	3.30	7.06	
10/8/2003	12:13:30	210.9	61.78	5.689	0.006	23.48	3.48	6.74	
10/8/2003	12:13:43	223.5	61.78	5.689	0.006	23.70	3.70	6.41	
10/8/2003	12:13:56	236.8	61.8	5.689	0.006	23.92	3.92	6.11	
10/8/2003	12:14:10	250.9	61.8	5.691	0.004	24.15	4.15	5.82	
10/8/2003	12:14:25	265.8	61.82	5.69	0.005	24.40	4.40	5.55	
10/8/2003	12:14:41	281.6	61.85	5.69	0.005	24.67	4.67	5.29	
10/8/2003	12:14:58	298.4	61.87	5.69	0.005	24.95	4.95	5.04	
10/8/2003	12:15:16	316.2	61.89	5.692	0.003	25.25	5.25	4.81	
10/8/2003	12:15:35	335	61.92	5.691	0.004	25.57	5.57	4.59	
10/8/2003	12:15:54	354.9	61.96	5.693	0.002	25.88	5.88	4.40	
10/8/2003	12:25:00								DTW = 14.14 at 12:25

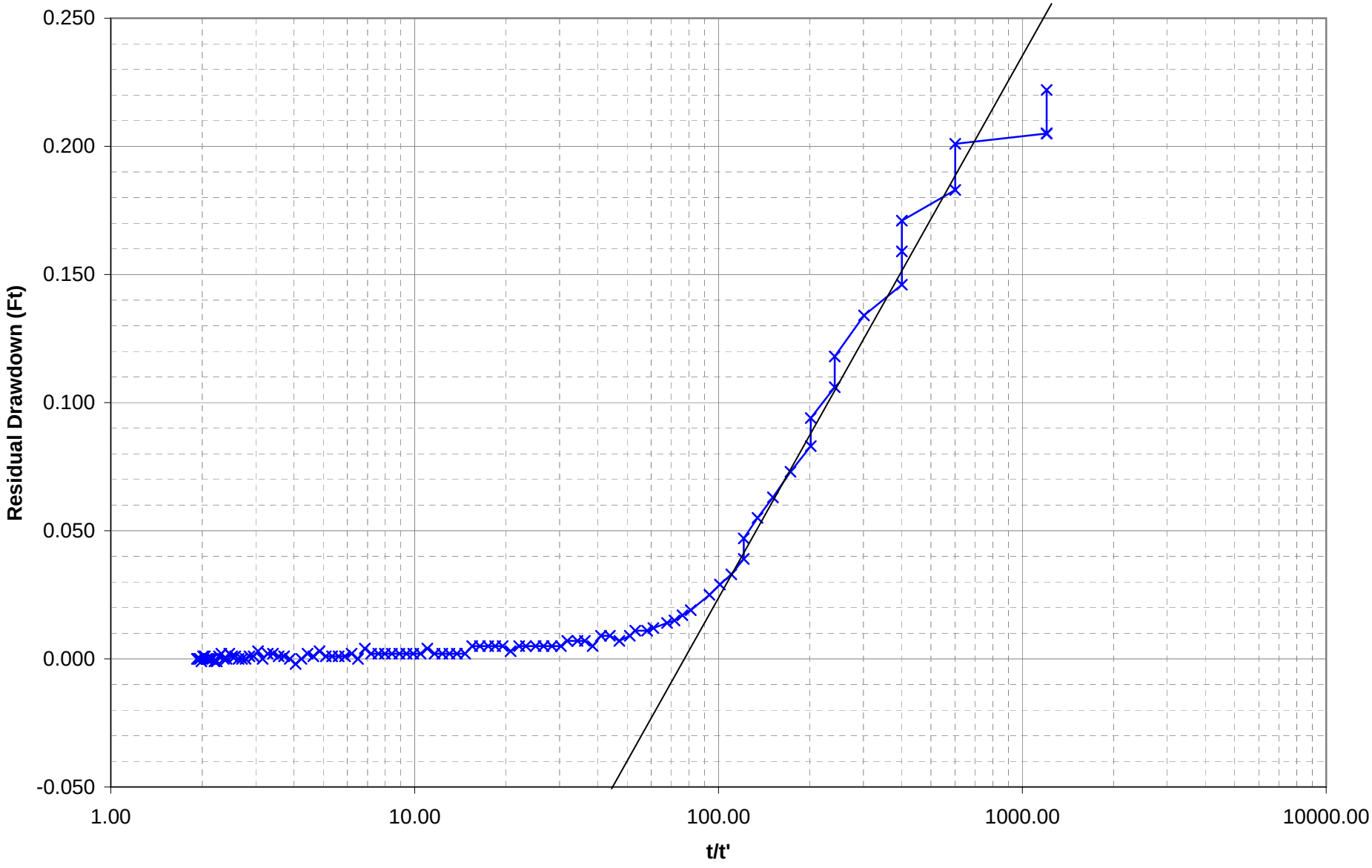
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-108C**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/8/2003	13:10:00			
Test end date and time	10/8/2003	13:51:51			
Period of pumping	20	minutes			
Static depth to water	14.16	feet below top of casing			
Startiing transducer depth	3.892	feet below static water level			
Total well depth	139.4	feet below top of casing			
Depth to top of screen	119.4	feet below top of casing			
Height of interval tested [b]	20.0	feet			
Average pumping rate [Q]	0.20	gpm, or	38	cfd	
Average drawdown [s]	0.23	ft			
Specific capacity [Q/s]	0.87	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.21	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			33.6	cfd/ft	
Hydraulic conductivity [K = T/b]			1.7	fpd, or	5.9E-04 cm/sec


Drawdown Over Time - MW-108C
13:04:48
13:12:00
13:19:12
13:26:24
13:33:36
13:40:48
13:48:00
13:55:12
-0.050
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
0.450
Drawdown (Ft)
Q = 0.20 gpm

Recovery Plot - MW-108C



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-108C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	12:45:00								DTW = 14.16 at 12:45
10/8/2003	12:52:00								DTW = 14.16 at 12:52
10/8/2003	12:54:00								DTW = 14.16 at 12:54
10/8/2003	13:08:00								DTW = 14.16 at 13:08
10/8/2003	13:10:00	0	64.63	3.896	-0.004				Start Test 1
10/8/2003	13:10:00	0.3	64.63	3.894	-0.002				
10/8/2003	13:10:00	0.6	64.65	3.892	0.000				
10/8/2003	13:10:00	0.9	64.68	3.892	0.000				
10/8/2003	13:10:01	1.2	64.68	3.892	0.000				
10/8/2003	13:10:01	1.5	64.68	3.892	0.000				
10/8/2003	13:10:01	1.8	64.68	3.892	0.000				
10/8/2003	13:10:02	2.1	64.68	3.892	0.000				
10/8/2003	13:10:02	2.4	64.7	3.892	0.000				
10/8/2003	13:10:02	2.7	64.7	3.892	0.000				
10/8/2003	13:10:03	3	64.7	3.892	0.000				
10/8/2003	13:10:03	3.3	64.7	3.894	-0.002				
10/8/2003	13:10:03	3.6	64.7	3.892	0.000				
10/8/2003	13:10:03	3.9	64.7	3.892	0.000				
10/8/2003	13:10:04	4.2	64.7	3.892	0.000	0.00			Pump Start
10/8/2003	13:10:04	4.5	64.7	3.89	0.002	0.00			
10/8/2003	13:10:04	4.8	64.7	3.87	0.022	0.00			
10/8/2003	13:10:05	5.1	64.7	3.847	0.045	0.02			
10/8/2003	13:10:05	5.4	64.7	3.827	0.065	0.02			
10/8/2003	13:10:05	5.7	64.7	3.807	0.085	0.02			
10/8/2003	13:10:06	6	64.7	3.784	0.108	0.03			
10/8/2003	13:10:06	6.4	64.7	3.75	0.142	0.03			
10/8/2003	13:10:06	6.7	64.7	3.725	0.167	0.03			
10/8/2003	13:10:07	7.1	64.72	3.701	0.191	0.05			
10/8/2003	13:10:07	7.5	64.72	3.677	0.215	0.05			
10/8/2003	13:10:07	8	64.72	3.658	0.234	0.05			
10/8/2003	13:10:08	8.4	64.72	3.634	0.258	0.07			
10/8/2003	13:10:08	8.9	64.72	3.612	0.280	0.07			
10/8/2003	13:10:09	9.5	64.72	3.593	0.299	0.08			
10/8/2003	13:10:10	10	64.7	3.587	0.305	0.10			
10/8/2003	13:10:10	10.6	64.7	3.562	0.330	0.10			
10/8/2003	13:10:11	11.3	64.7	3.546	0.346	0.12			
10/8/2003	13:10:11	11.9	64.7	3.532	0.360	0.12			
10/8/2003	13:10:12	12.6	64.7	3.522	0.370	0.13			
10/8/2003	13:10:13	13.4	64.7	3.516	0.376	0.15			
10/8/2003	13:10:14	14.2	64.7	3.511	0.381	0.17			
10/8/2003	13:10:15	15	64.7	3.514	0.378	0.18			
10/8/2003	13:10:15	15.9	64.7	3.528	0.364	0.18			
10/8/2003	13:10:16	16.8	64.68	3.542	0.350	0.20			
10/8/2003	13:10:17	17.8	64.68	3.556	0.336	0.22			
10/8/2003	13:10:18	18.9	64.68	3.562	0.330	0.23			
10/8/2003	13:10:20	20	64.68	3.568	0.324	0.27			
10/8/2003	13:10:21	21.2	64.68	3.587	0.305	0.28			
10/8/2003	13:10:22	22.4	64.68	3.607	0.285	0.30			
10/8/2003	13:10:23	23.8	64.68	3.617	0.275	0.32			
10/8/2003	13:10:25	25.2	64.68	3.635	0.257	0.35			
10/8/2003	13:10:26	26.7	64.68	3.65	0.242	0.37			
10/8/2003	13:10:28	28.2	64.68	3.664	0.228	0.40			
10/8/2003	13:10:29	29.8	64.68	3.676	0.216	0.42			
10/8/2003	13:10:31	31.5	64.68	3.682	0.210	0.45			
10/8/2003	13:10:33	33.3	64.65	3.684	0.208	0.48			
10/8/2003	13:10:35	35.2	64.65	3.688	0.204	0.52			
10/8/2003	13:10:37	37.3	64.65	3.698	0.194	0.55			
10/8/2003	13:10:39	39.5	64.65	3.698	0.194	0.58			
10/8/2003	13:10:41	41.8	64.65	3.7	0.192	0.62			
10/8/2003	13:10:44	44.3	64.65	3.705	0.187	0.67			
10/8/2003	13:10:46	46.9	64.63	3.702	0.190	0.70			
10/8/2003	13:10:49	49.7	64.65	3.702	0.190	0.75			
10/8/2003	13:10:52	52.6	64.63	3.702	0.190	0.80			
10/8/2003	13:10:55	55.7	64.63	3.7	0.192	0.85			
10/8/2003	13:10:58	59	64.63	3.7	0.192	0.90			

Well No. **MW-108C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	13:11:02	62.5	64.63	3.706	0.186	0.97			
10/8/2003	13:11:06	66.2	64.61	3.706	0.186	1.03			
10/8/2003	13:11:10	70.1	64.61	3.696	0.196	1.10			
10/8/2003	13:11:14	74.3	64.61	3.696	0.196	1.17			
10/8/2003	13:11:18	78.7	64.61	3.688	0.204	1.23			
10/8/2003	13:11:23	83.4	64.58	3.681	0.211	1.32			
10/8/2003	13:11:28	88.4	64.58	3.681	0.211	1.40			
10/8/2003	13:11:33	93.7	64.56	3.673	0.219	1.48			
10/8/2003	13:11:39	99.3	64.56	3.642	0.250	1.58			
10/8/2003	13:11:45	105.2	64.56	3.616	0.276	1.68			
10/8/2003	13:11:51	111.5	64.54	3.632	0.260	1.78			
10/8/2003	13:11:58	118.1	64.54	3.64	0.252	1.90			
10/8/2003	13:12:05	125.1	64.52	3.638	0.254	2.02			
10/8/2003	13:12:12	132.6	64.52	3.622	0.270	2.13			
10/8/2003	13:12:20	140.5	64.49	3.617	0.275	2.27			
10/8/2003	13:12:28	148.9	64.49	3.625	0.267	2.40			
10/8/2003	13:12:37	157.8	64.47	3.621	0.271	2.55			
10/8/2003	13:12:47	167.2	64.45	3.603	0.289	2.72			
10/8/2003	13:12:57	177.2	64.43	3.596	0.296	2.88			
10/8/2003	13:13:07	187.8	64.4	3.614	0.278	3.05			
10/8/2003	13:13:18	199	64.38	3.602	0.290	3.23			
10/8/2003	13:13:30	210.9	64.36	3.6	0.292	3.43			
10/8/2003	13:13:43	223.5	64.34	3.587	0.305	3.65			
10/8/2003	13:13:56	236.8	64.29	3.625	0.267	3.87			
10/8/2003	13:14:10	250.9	64.27	3.613	0.279	4.10			
10/8/2003	13:14:25	265.8	64.22	3.604	0.288	4.35			
10/8/2003	13:14:41	281.6	64.18	3.63	0.262	4.62			
10/8/2003	13:14:58	298.4	64.11	3.636	0.256	4.90			
10/8/2003	13:15:16	316.2	64.06	3.619	0.273	5.20			0.233 gpm flow rate
10/8/2003	13:15:34	335	63.97	3.602	0.290	5.50			
10/8/2003	13:15:54	354.9	63.91	3.63	0.262	5.83			
10/8/2003	13:16:15	376	63.82	3.665	0.227	6.18			
10/8/2003	13:16:38	398.4	63.73	3.665	0.227	6.57			
10/8/2003	13:17:02	422.1	63.61	3.631	0.261	6.97			0.202 gpm flow rate
10/8/2003	13:17:27	447.2	63.5	3.656	0.236	7.38			
10/8/2003	13:17:53	473.8	63.39	3.657	0.235	7.82			
10/8/2003	13:18:21	502	63.3	3.672	0.220	8.28			
10/8/2003	13:18:51	531.9	63.16	3.663	0.229	8.78			
10/8/2003	13:19:21	561.9	63.05	3.664	0.228	9.28			
10/8/2003	13:19:51	591.9	62.93	3.677	0.215	9.78			
10/8/2003	13:20:21	621.9	62.82	3.66	0.232	10.28			
10/8/2003	13:20:51	651.9	62.73	3.671	0.221	10.78			
10/8/2003	13:21:21	681.9	62.62	3.659	0.233	11.28			
10/8/2003	13:21:51	711.9	62.55	3.671	0.221	11.78			
10/8/2003	13:22:21	741.9	62.46	3.638	0.254	12.28			
10/8/2003	13:22:51	771.9	62.39	3.671	0.221	12.78			
10/8/2003	13:23:21	801.9	62.32	3.669	0.223	13.28			
10/8/2003	13:23:51	831.9	62.25	3.633	0.259	13.78			0.194 gpm flow rate
10/8/2003	13:24:21	861.9	62.19	3.643	0.249	14.28			
10/8/2003	13:24:51	891.9	62.12	3.679	0.213	14.78			
10/8/2003	13:25:21	921.9	62.07	3.678	0.214	15.28			
10/8/2003	13:25:51	951.9	62.01	3.67	0.222	15.78			
10/8/2003	13:26:21	981.9	61.94	3.659	0.233	16.28			
10/8/2003	13:26:51	1011.9	61.89	3.63	0.262	16.78			
10/8/2003	13:27:21	1041.9	61.82	3.658	0.234	17.28			0.207 gpm flow rate
10/8/2003	13:27:51	1071.9	61.78	3.673	0.219	17.78			
10/8/2003	13:28:21	1101.9	61.73	3.669	0.223	18.28			
10/8/2003	13:28:51	1131.9	61.67	3.66	0.232	18.78			
10/8/2003	13:29:21	1161.9	61.62	3.654	0.238	19.28			
10/8/2003	13:29:51	1191.9	61.58	3.68	0.212	19.78			
10/8/2003	13:30:00	0	61.58	3.682	0.210	19.93			Start Test 2
10/8/2003	13:30:00	0.3	61.6	3.67	0.222	19.93			
10/8/2003	13:30:00	0.6	61.62	3.66	0.232	19.93			
10/8/2003	13:30:00	0.9	61.62	3.672	0.220	19.93			
10/8/2003	13:30:01	1.2	61.62	3.674	0.218	19.95			
10/8/2003	13:30:01	1.5	61.62	3.68	0.212	19.95			
10/8/2003	13:30:01	1.8	61.62	3.658	0.234	19.95			
10/8/2003	13:30:02	2.1	61.64	3.67	0.222	19.97			
10/8/2003	13:30:02	2.4	61.64	3.668	0.224	19.97			

Well No. **MW-108C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	13:30:02	2.7	61.64	3.686	0.206	19.97			
10/8/2003	13:30:03	3	61.64	3.666	0.226	19.98			
10/8/2003	13:30:03	3.3	61.64	3.67	0.222	19.98			
10/8/2003	13:30:03	3.6	61.64	3.668	0.224	19.98			
10/8/2003	13:30:03	3.9	61.64	3.678	0.214	19.98			
10/8/2003	13:30:04	4.2	61.64	3.672	0.220	20.00			
10/8/2003	13:30:04	4.5	61.64	3.66	0.232	20.00			
10/8/2003	13:30:04	4.8	61.64	3.67	0.222	20.00			
10/8/2003	13:30:05	5.1	61.64	3.672	0.220	20.02			
10/8/2003	13:30:05	5.4	61.64	3.686	0.206	20.02			
10/8/2003	13:30:05	5.7	61.64	3.66	0.232	20.02	0.00		Pump Stop
10/8/2003	13:30:06	6	61.64	3.67	0.222	20.03	0.02	1202.00	
10/8/2003	13:30:06	6.4	61.67	3.687	0.205	20.03	0.02	1202.00	
10/8/2003	13:30:06	6.7	61.67	3.687	0.205	20.03	0.02	1202.00	
10/8/2003	13:30:07	7.1	61.67	3.691	0.201	20.05	0.03	601.50	
10/8/2003	13:30:07	7.5	61.67	3.709	0.183	20.05	0.03	601.50	
10/8/2003	13:30:08	8	61.67	3.721	0.171	20.07	0.05	401.33	
10/8/2003	13:30:08	8.4	61.67	3.733	0.159	20.07	0.05	401.33	
10/8/2003	13:30:08	8.9	61.67	3.746	0.146	20.07	0.05	401.33	
10/8/2003	13:30:09	9.5	61.67	3.758	0.134	20.08	0.07	301.25	
10/8/2003	13:30:10	10	61.64	3.774	0.118	20.10	0.08	241.20	
10/8/2003	13:30:10	10.6	61.64	3.786	0.106	20.10	0.08	241.20	
10/8/2003	13:30:11	11.3	61.64	3.798	0.094	20.12	0.10	201.17	
10/8/2003	13:30:11	11.9	61.64	3.809	0.083	20.12	0.10	201.17	
10/8/2003	13:30:12	12.6	61.64	3.819	0.073	20.13	0.12	172.57	
10/8/2003	13:30:13	13.4	61.62	3.829	0.063	20.15	0.13	151.12	
10/8/2003	13:30:14	14.2	61.62	3.837	0.055	20.17	0.15	134.44	
10/8/2003	13:30:15	15	61.62	3.845	0.047	20.18	0.17	121.10	
10/8/2003	13:30:15	15.9	61.62	3.853	0.039	20.18	0.17	121.10	
10/8/2003	13:30:16	16.8	61.62	3.859	0.033	20.20	0.18	110.18	
10/8/2003	13:30:17	17.8	61.62	3.863	0.029	20.22	0.20	101.08	
10/8/2003	13:30:18	18.9	61.62	3.867	0.025	20.23	0.22	93.38	
10/8/2003	13:30:20	20	61.62	3.873	0.019	20.27	0.25	81.07	
10/8/2003	13:30:21	21.2	61.62	3.875	0.017	20.28	0.27	76.06	
10/8/2003	13:30:22	22.4	61.62	3.877	0.015	20.30	0.28	71.65	
10/8/2003	13:30:23	23.8	61.62	3.878	0.014	20.32	0.30	67.72	
10/8/2003	13:30:25	25.2	61.62	3.88	0.012	20.35	0.33	61.05	
10/8/2003	13:30:26	26.7	61.6	3.881	0.011	20.37	0.35	58.19	
10/8/2003	13:30:28	28.2	61.6	3.881	0.011	20.40	0.38	53.22	
10/8/2003	13:30:29	29.8	61.6	3.883	0.009	20.42	0.40	51.04	
10/8/2003	13:30:31	31.5	61.6	3.885	0.007	20.45	0.43	47.19	
10/8/2003	13:30:33	33.3	61.6	3.883	0.009	20.48	0.47	43.89	
10/8/2003	13:30:35	35.2	61.6	3.883	0.009	20.52	0.50	41.03	
10/8/2003	13:30:37	37.3	61.6	3.887	0.005	20.55	0.53	38.53	
10/8/2003	13:30:39	39.5	61.6	3.885	0.007	20.58	0.57	36.32	
10/8/2003	13:30:41	41.8	61.6	3.885	0.007	20.62	0.60	34.36	
10/8/2003	13:30:44	44.3	61.6	3.885	0.007	20.67	0.65	31.79	
10/8/2003	13:30:46	46.9	61.58	3.887	0.005	20.70	0.68	30.29	
10/8/2003	13:30:49	49.7	61.58	3.887	0.005	20.75	0.73	28.30	
10/8/2003	13:30:52	52.6	61.58	3.887	0.005	20.80	0.78	26.55	
10/8/2003	13:30:55	55.7	61.55	3.887	0.005	20.85	0.83	25.02	
10/8/2003	13:30:59	59	61.55	3.887	0.005	20.92	0.90	23.24	
10/8/2003	13:31:02	62.5	61.55	3.887	0.005	20.97	0.95	22.07	
10/8/2003	13:31:06	66.2	61.53	3.889	0.003	21.03	1.02	20.69	
10/8/2003	13:31:10	70.1	61.53	3.887	0.005	21.10	1.08	19.48	
10/8/2003	13:31:14	74.3	61.51	3.887	0.005	21.17	1.15	18.41	
10/8/2003	13:31:18	78.7	61.51	3.887	0.005	21.23	1.22	17.45	
10/8/2003	13:31:23	83.4	61.51	3.887	0.005	21.32	1.30	16.40	
10/8/2003	13:31:28	88.4	61.51	3.887	0.005	21.40	1.38	15.47	
10/8/2003	13:31:33	93.7	61.49	3.89	0.002	21.48	1.47	14.65	
10/8/2003	13:31:39	99.3	61.49	3.89	0.002	21.58	1.57	13.78	
10/8/2003	13:31:45	105.2	61.49	3.89	0.002	21.68	1.67	13.01	
10/8/2003	13:31:51	111.5	61.46	3.89	0.002	21.78	1.77	12.33	
10/8/2003	13:31:58	118.1	61.46	3.89	0.002	21.90	1.88	11.63	
10/8/2003	13:32:05	125.1	61.46	3.888	0.004	22.02	2.00	11.01	
10/8/2003	13:32:12	132.6	61.46	3.89	0.002	22.13	2.12	10.46	
10/8/2003	13:32:20	140.5	61.46	3.89	0.002	22.27	2.25	9.90	
10/8/2003	13:32:28	148.9	61.46	3.89	0.002	22.40	2.38	9.40	
10/8/2003	13:32:37	157.8	61.46	3.89	0.002	22.55	2.53	8.90	

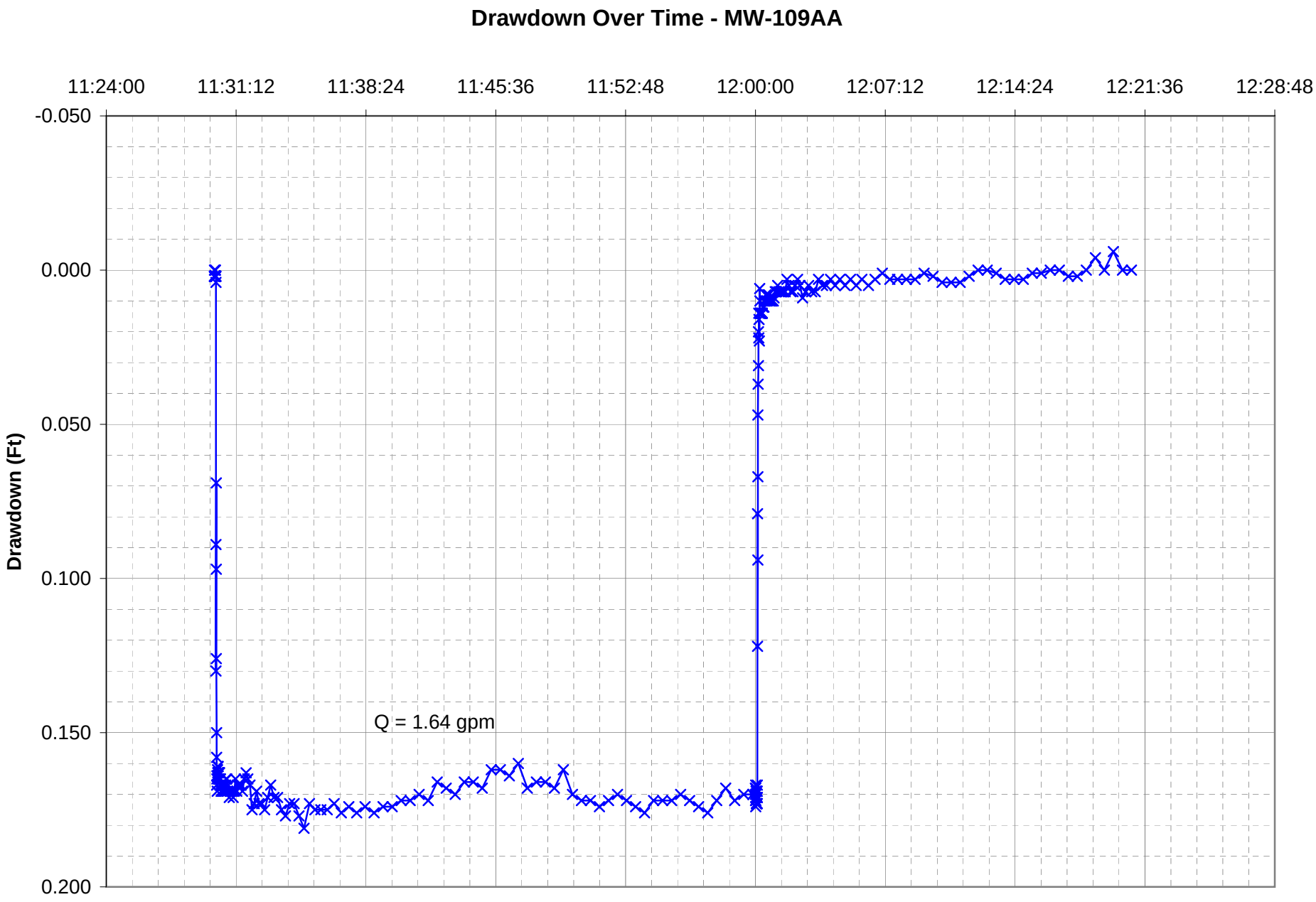
Well No. **MW-108C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	13:32:47	167.2	61.46	3.89	0.002	22.72	2.70	8.41	
10/8/2003	13:32:57	177.2	61.46	3.89	0.002	22.88	2.87	7.98	
10/8/2003	13:33:07	187.8	61.46	3.89	0.002	23.05	3.03	7.60	
10/8/2003	13:33:19	199	61.46	3.89	0.002	23.25	3.23	7.19	
10/8/2003	13:33:30	210.9	61.49	3.888	0.004	23.43	3.42	6.86	
10/8/2003	13:33:43	223.5	61.49	3.892	0.000	23.65	3.63	6.51	
10/8/2003	13:33:56	236.8	61.49	3.89	0.002	23.87	3.85	6.20	
10/8/2003	13:34:10	250.9	61.51	3.891	0.001	24.10	4.08	5.90	
10/8/2003	13:34:25	265.8	61.53	3.891	0.001	24.35	4.33	5.62	
10/8/2003	13:34:41	281.6	61.53	3.891	0.001	24.62	4.60	5.35	
10/8/2003	13:34:58	298.4	61.55	3.891	0.001	24.90	4.88	5.10	
10/8/2003	13:35:16	316.2	61.58	3.889	0.003	25.20	5.18	4.86	
10/8/2003	13:35:35	335	61.58	3.891	0.001	25.52	5.50	4.64	
10/8/2003	13:35:54	354.9	61.62	3.89	0.002	25.83	5.82	4.44	
10/8/2003	13:36:16	376	61.64	3.892	0.000	26.20	6.18	4.24	
10/8/2003	13:36:38	398.4	61.67	3.894	-0.002	26.57	6.55	4.06	
10/8/2003	13:37:02	422.1	61.69	3.892	0.000	26.97	6.95	3.88	
10/8/2003	13:37:27	447.2	61.73	3.891	0.001	27.38	7.37	3.72	
10/8/2003	13:37:53	473.8	61.76	3.891	0.001	27.82	7.80	3.57	
10/8/2003	13:38:22	502	61.8	3.89	0.002	28.30	8.28	3.42	
10/8/2003	13:38:51	531.9	61.85	3.89	0.002	28.78	8.77	3.28	
10/8/2003	13:39:21	561.9	61.87	3.892	0.000	29.28	9.27	3.16	
10/8/2003	13:39:51	591.9	61.92	3.889	0.003	29.78	9.77	3.05	
10/8/2003	13:40:21	621.9	61.96	3.891	0.001	30.28	10.27	2.95	
10/8/2003	13:40:51	651.9	61.98	3.891	0.001	30.78	10.77	2.86	
10/8/2003	13:41:21	681.9	62.03	3.892	0.000	31.28	11.27	2.78	
10/8/2003	13:41:51	711.9	62.07	3.892	0.000	31.78	11.77	2.70	
10/8/2003	13:42:21	741.9	62.1	3.892	0.000	32.28	12.27	2.63	
10/8/2003	13:42:51	771.9	62.14	3.891	0.001	32.78	12.77	2.57	
10/8/2003	13:43:21	801.9	62.16	3.891	0.001	33.28	13.27	2.51	
10/8/2003	13:43:51	831.9	62.21	3.89	0.002	33.78	13.77	2.45	
10/8/2003	13:44:21	861.9	62.23	3.892	0.000	34.28	14.27	2.40	
10/8/2003	13:44:51	891.9	62.25	3.892	0.000	34.78	14.77	2.36	
10/8/2003	13:45:21	921.9	62.3	3.89	0.002	35.28	15.27	2.31	
10/8/2003	13:45:51	951.9	62.32	3.891	0.001	35.78	15.77	2.27	
10/8/2003	13:46:21	981.9	62.37	3.893	-0.001	36.28	16.27	2.23	
10/8/2003	13:46:51	1011.9	62.39	3.893	-0.001	36.78	16.77	2.19	
10/8/2003	13:47:21	1041.9	62.41	3.892	0.000	37.28	17.27	2.16	
10/8/2003	13:47:51	1071.9	62.44	3.892	0.000	37.78	17.77	2.13	
10/8/2003	13:48:21	1101.9	62.48	3.892	0.000	38.28	18.27	2.10	
10/8/2003	13:48:51	1131.9	62.5	3.892	0.000	38.78	18.77	2.07	
10/8/2003	13:49:21	1161.9	62.53	3.891	0.001	39.28	19.27	2.04	
10/8/2003	13:49:51	1191.9	62.55	3.891	0.001	39.78	19.77	2.01	
10/8/2003	13:50:21	1221.9	62.59	3.893	-0.001	40.28	20.27	1.99	
10/8/2003	13:50:51	1251.9	62.62	3.892	0.000	40.78	20.77	1.96	
10/8/2003	13:51:21	1281.9	62.64	3.892	0.000	41.28	21.27	1.94	
10/8/2003	13:51:51	1311.9	62.66	3.892	0.000	41.78	21.77	1.92	

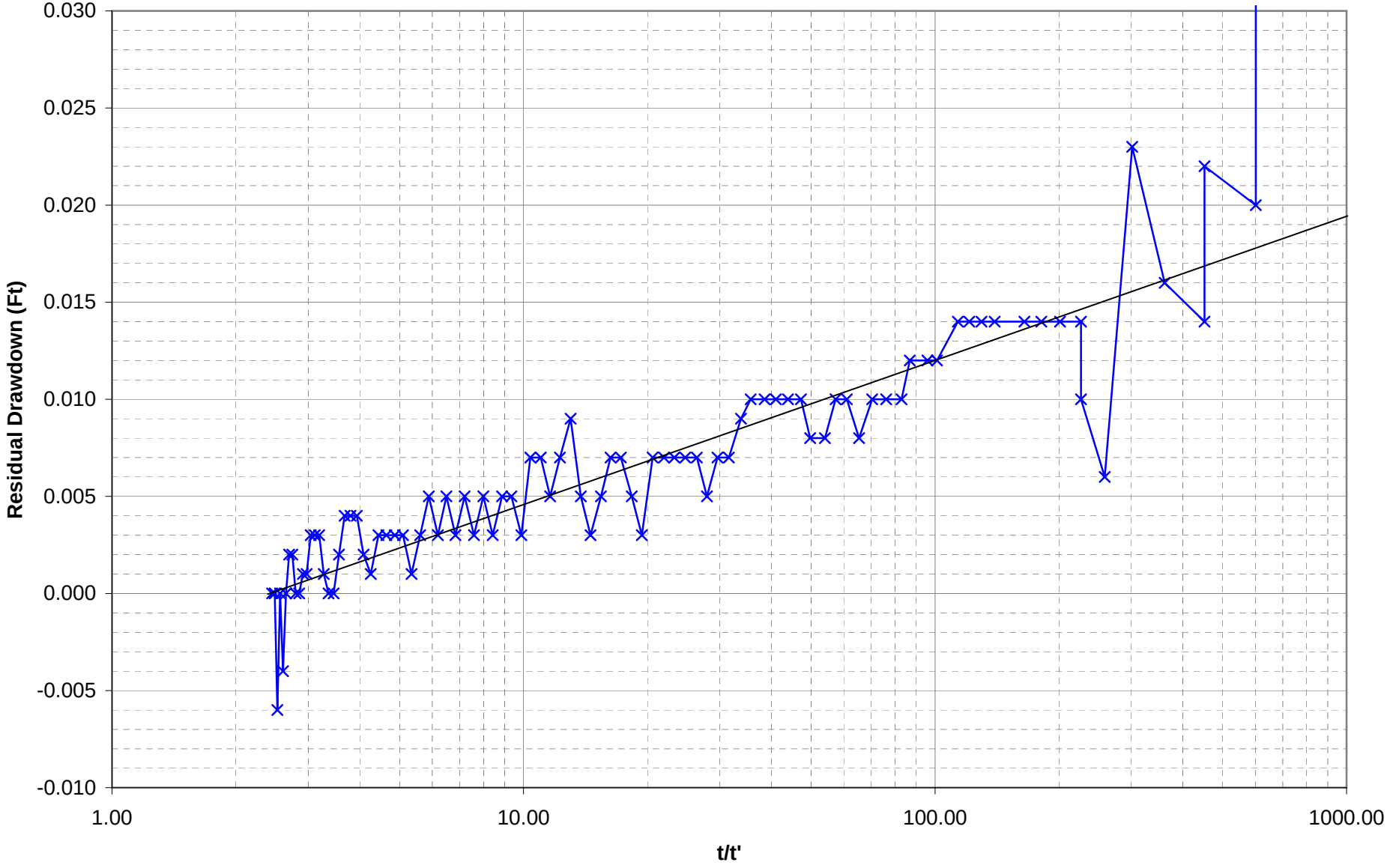
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-109AA**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/2/2003	11:30:00			
Test end date and time	10/2/2003	12:20:51			
Period of pumping	30	minutes			
Static depth to water	13.48	feet below top of casing			
Starting transducer depth	5.103	feet below static water level			
Total well depth	23.3	feet below top of casing			
Depth to top of screen	13.3	feet below top of casing			
Height of interval tested [b]	9.8	feet			
Average pumping rate [Q]	1.65	gpm, or	318	cfd	
Average drawdown [s]	0.17	ft			
Specific capacity [Q/s]	9.71	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.073	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			796	cfd/ft	
Hydraulic conductivity [K = T/b]			81	fpd, or	2.9E-02 cm/sec


Drawdown Over Time - MW-109AA
11:24:00
11:31:12
11:38:24
11:45:36
11:52:48
12:00:00
12:07:12
12:14:24
12:21:36
12:28:48
-0.050
0.000
0.050
0.100
0.150
0.200
Drawdown (Ft)
Q = 1.64 gpm

Recovery Plot - MW-109AA



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-109AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/2/2003	11:20:00								DTW = 13.48 at 11:20
10/2/2003	11:30:00	0	71.16	5.103	0.000				Start Test 1
10/2/2003	11:30:00	0.3	71.19	5.101	0.002				
10/2/2003	11:30:00	0.6	71.19	5.101	0.002				
10/2/2003	11:30:00	0.9	71.21	5.101	0.002				
10/2/2003	11:30:01	1.2	71.21	5.101	0.002				
10/2/2003	11:30:01	1.5	71.21	5.101	0.002				
10/2/2003	11:30:01	1.8	71.21	5.101	0.002				
10/2/2003	11:30:02	2.1	71.23	5.101	0.002				
10/2/2003	11:30:02	2.4	71.23	5.101	0.002				
10/2/2003	11:30:02	2.7	71.23	5.103	0.000				
10/2/2003	11:30:03	3	71.23	5.101	0.002				
10/2/2003	11:30:03	3.3	71.23	5.101	0.002				
10/2/2003	11:30:03	3.6	71.23	5.101	0.002				
10/2/2003	11:30:03	3.9	71.23	5.103	0.000				
10/2/2003	11:30:04	4.2	71.23	5.101	0.002				
10/2/2003	11:30:04	4.5	71.23	5.101	0.002				
10/2/2003	11:30:04	4.8	71.23	5.101	0.002				
10/2/2003	11:30:05	5.1	71.23	5.099	0.004				Pump Start
10/2/2003	11:30:05	5.4	71.23	5.014	0.089	0.00			
10/2/2003	11:30:05	5.7	71.23	4.973	0.130	0.00			
10/2/2003	11:30:06	6	71.25	5.034	0.069	0.02			
10/2/2003	11:30:06	6.4	71.25	5.006	0.097	0.02			
10/2/2003	11:30:06	6.7	71.25	4.977	0.126	0.02			
10/2/2003	11:30:07	7.1	71.25	4.953	0.150	0.03			
10/2/2003	11:30:07	7.5	71.25	4.945	0.158	0.03			
10/2/2003	11:30:07	8	71.25	4.936	0.167	0.03			
10/2/2003	11:30:08	8.4	71.25	4.939	0.164	0.05			
10/2/2003	11:30:08	8.9	71.25	4.938	0.165	0.05			
10/2/2003	11:30:09	9.5	71.25	4.934	0.169	0.07			
10/2/2003	11:30:10	10	71.25	4.941	0.162	0.08			
10/2/2003	11:30:10	10.6	71.25	4.939	0.164	0.08			
10/2/2003	11:30:11	11.3	71.23	4.942	0.161	0.10			
10/2/2003	11:30:11	11.9	71.23	4.94	0.163	0.10			
10/2/2003	11:30:12	12.6	71.23	4.942	0.161	0.12			
10/2/2003	11:30:13	13.4	71.23	4.94	0.163	0.13			
10/2/2003	11:30:14	14.2	71.23	4.938	0.165	0.15			
10/2/2003	11:30:15	15	71.23	4.938	0.165	0.17			
10/2/2003	11:30:15	15.9	71.23	4.94	0.163	0.17			
10/2/2003	11:30:16	16.8	71.23	4.938	0.165	0.18			
10/2/2003	11:30:17	17.8	71.23	4.94	0.163	0.20			
10/2/2003	11:30:18	18.9	71.23	4.936	0.167	0.22			
10/2/2003	11:30:20	20	71.21	4.938	0.165	0.25			
10/2/2003	11:30:21	21.2	71.21	4.936	0.167	0.27			
10/2/2003	11:30:22	22.4	71.21	4.934	0.169	0.28			
10/2/2003	11:30:23	23.8	71.21	4.936	0.167	0.30			
10/2/2003	11:30:25	25.2	71.21	4.934	0.169	0.33			
10/2/2003	11:30:26	26.7	71.21	4.934	0.169	0.35			
10/2/2003	11:30:28	28.2	71.21	4.934	0.169	0.38			
10/2/2003	11:30:29	29.8	71.21	4.936	0.167	0.40			
10/2/2003	11:30:31	31.5	71.21	4.936	0.167	0.43			
10/2/2003	11:30:33	33.3	71.21	4.934	0.169	0.47			
10/2/2003	11:30:35	35.2	71.21	4.934	0.169	0.50			
10/2/2003	11:30:37	37.3	71.21	4.936	0.167	0.53			
10/2/2003	11:30:39	39.5	71.21	4.938	0.165	0.57			
10/2/2003	11:30:41	41.8	71.21	4.938	0.165	0.60			
10/2/2003	11:30:44	44.3	71.21	4.934	0.169	0.65			
10/2/2003	11:30:46	46.9	71.21	4.936	0.167	0.68			
10/2/2003	11:30:49	49.7	71.21	4.932	0.171	0.73			
10/2/2003	11:30:52	52.6	71.21	4.934	0.169	0.78			
10/2/2003	11:30:55	55.7	71.21	4.934	0.169	0.83			
10/2/2003	11:30:58	59	71.21	4.934	0.169	0.88			
10/2/2003	11:31:02	62.5	71.21	4.932	0.171	0.95			
10/2/2003	11:31:06	66.2	71.21	4.934	0.169	1.02			
10/2/2003	11:31:10	70.1	71.21	4.938	0.165	1.08			
10/2/2003	11:31:14	74.3	71.21	4.934	0.169	1.15			
10/2/2003	11:31:18	78.7	71.21	4.936	0.167	1.22			

Well No. **MW-109AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/2/2003	11:31:23	83.4	71.21	4.936	0.167	1.30			
10/2/2003	11:31:28	88.4	71.21	4.936	0.167	1.38			
10/2/2003	11:31:33	93.7	71.21	4.934	0.169	1.47			
10/2/2003	11:31:39	99.3	71.21	4.938	0.165	1.57			
10/2/2003	11:31:45	105.2	71.21	4.94	0.163	1.67			
10/2/2003	11:31:51	111.5	71.21	4.938	0.165	1.77			
10/2/2003	11:31:58	118.1	71.21	4.936	0.167	1.88			
10/2/2003	11:32:05	125.1	71.21	4.928	0.175	2.00			
10/2/2003	11:32:12	132.6	71.21	4.93	0.173	2.12			
10/2/2003	11:32:20	140.5	71.21	4.934	0.169	2.25			
10/2/2003	11:32:28	148.9	71.21	4.93	0.173	2.38			
10/2/2003	11:32:37	157.8	71.21	4.93	0.173	2.53			
10/2/2003	11:32:47	167.2	71.23	4.928	0.175	2.70			
10/2/2003	11:32:57	177.2	71.23	4.932	0.171	2.87			
10/2/2003	11:33:07	187.8	71.23	4.936	0.167	3.03			
10/2/2003	11:33:18	199	71.23	4.932	0.171	3.22			
10/2/2003	11:33:30	210.9	71.23	4.932	0.171	3.42			1.62 gpm flow rate
10/2/2003	11:33:43	223.5	71.23	4.928	0.175	3.63			
10/2/2003	11:33:56	236.8	71.23	4.926	0.177	3.85			
10/2/2003	11:34:10	250.9	71.23	4.93	0.173	4.08			
10/2/2003	11:34:25	265.8	71.23	4.93	0.173	4.33			
10/2/2003	11:34:41	281.6	71.25	4.926	0.177	4.60			
10/2/2003	11:34:58	298.4	71.23	4.922	0.181	4.88			
10/2/2003	11:35:16	316.2	71.25	4.93	0.173	5.18			
10/2/2003	11:35:34	335	71.25	4.928	0.175	5.48			
10/2/2003	11:35:54	354.9	71.25	4.928	0.175	5.82			
10/2/2003	11:36:15	376	71.25	4.928	0.175	6.17			
10/2/2003	11:36:38	398.4	71.25	4.93	0.173	6.55			
10/2/2003	11:37:02	422.1	71.28	4.927	0.176	6.95			
10/2/2003	11:37:27	447.2	71.28	4.929	0.174	7.37			
10/2/2003	11:37:53	473.8	71.28	4.927	0.176	7.80			
10/2/2003	11:38:21	502	71.28	4.929	0.174	8.27			1.67 gpm flow rate
10/2/2003	11:38:51	531.9	71.28	4.927	0.176	8.77			
10/2/2003	11:39:21	561.9	71.28	4.929	0.174	9.27			
10/2/2003	11:39:51	591.9	71.28	4.929	0.174	9.77			
10/2/2003	11:40:21	621.9	71.28	4.931	0.172	10.27			
10/2/2003	11:40:51	651.9	71.28	4.931	0.172	10.77			
10/2/2003	11:41:21	681.9	71.28	4.933	0.170	11.27			
10/2/2003	11:41:51	711.9	71.28	4.931	0.172	11.77			
10/2/2003	11:42:21	741.9	71.28	4.937	0.166	12.27			
10/2/2003	11:42:51	771.9	71.3	4.935	0.168	12.77			
10/2/2003	11:43:21	801.9	71.3	4.933	0.170	13.27			1.67 gpm flow rate
10/2/2003	11:43:51	831.9	71.3	4.937	0.166	13.77			
10/2/2003	11:44:21	861.9	71.3	4.937	0.166	14.27			
10/2/2003	11:44:51	891.9	71.3	4.935	0.168	14.77			
10/2/2003	11:45:21	921.9	71.3	4.941	0.162	15.27			
10/2/2003	11:45:51	951.9	71.3	4.941	0.162	15.77			
10/2/2003	11:46:21	981.9	71.3	4.939	0.164	16.27			
10/2/2003	11:46:51	1011.9	71.3	4.943	0.160	16.77			
10/2/2003	11:47:21	1041.9	71.3	4.935	0.168	17.27			
10/2/2003	11:47:51	1071.9	71.3	4.937	0.166	17.77			
10/2/2003	11:48:21	1101.9	71.3	4.937	0.166	18.27			
10/2/2003	11:48:51	1131.9	71.3	4.935	0.168	18.77			
10/2/2003	11:49:21	1161.9	71.3	4.941	0.162	19.27			
10/2/2003	11:49:51	1191.9	71.32	4.933	0.170	19.77			
10/2/2003	11:50:21	1221.9	71.32	4.931	0.172	20.27			1.64 gpm flow rate
10/2/2003	11:50:51	1251.9	71.32	4.931	0.172	20.77			
10/2/2003	11:51:21	1281.9	71.32	4.929	0.174	21.27			
10/2/2003	11:51:51	1311.9	71.32	4.931	0.172	21.77			
10/2/2003	11:52:21	1341.9	71.32	4.933	0.170	22.27			
10/2/2003	11:52:51	1371.9	71.32	4.931	0.172	22.77			
10/2/2003	11:53:21	1401.9	71.32	4.929	0.174	23.27			
10/2/2003	11:53:51	1431.9	71.3	4.927	0.176	23.77			
10/2/2003	11:54:21	1461.9	71.32	4.931	0.172	24.27			
10/2/2003	11:54:51	1491.9	71.32	4.931	0.172	24.77			
10/2/2003	11:55:21	1521.9	71.32	4.931	0.172	25.27			
10/2/2003	11:55:51	1551.9	71.32	4.933	0.170	25.77			
10/2/2003	11:56:21	1581.9	71.32	4.931	0.172	26.27			
10/2/2003	11:56:51	1611.9	71.32	4.929	0.174	26.77			
10/2/2003	11:57:21	1641.9	71.32	4.927	0.176	27.27			
10/2/2003	11:57:51	1671.9	71.32	4.931	0.172	27.77			

Well No. **MW-109AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/2/2003	11:58:21	1701.9	71.32	4.935	0.168	28.27			
10/2/2003	11:58:51	1731.9	71.32	4.931	0.172	28.77			
10/2/2003	11:59:21	1761.9	71.32	4.933	0.170	29.27			
10/2/2003	11:59:51	1791.9	71.32	4.933	0.170	29.77			
10/2/2003	12:00:00	0	71.32	4.935	0.168	29.92			Start Test 2
10/2/2003	12:00:00	0.3	71.34	4.933	0.170	29.92			
10/2/2003	12:00:00	0.6	71.34	4.935	0.168	29.92			
10/2/2003	12:00:00	0.9	71.37	4.931	0.172	29.92			
10/2/2003	12:00:01	1.2	71.37	4.929	0.174	29.93			
10/2/2003	12:00:01	1.5	71.37	4.931	0.172	29.93			
10/2/2003	12:00:01	1.8	71.37	4.936	0.167	29.93			
10/2/2003	12:00:02	2.1	71.39	4.932	0.171	29.95			
10/2/2003	12:00:02	2.4	71.39	4.932	0.171	29.95			
10/2/2003	12:00:02	2.7	71.39	4.934	0.169	29.95			
10/2/2003	12:00:03	3	71.39	4.932	0.171	29.97			
10/2/2003	12:00:03	3.3	71.39	4.93	0.173	29.97			
10/2/2003	12:00:03	3.6	71.39	4.932	0.171	29.97			
10/2/2003	12:00:03	3.9	71.39	4.934	0.169	29.97			
10/2/2003	12:00:04	4.2	71.39	4.93	0.173	29.98			
10/2/2003	12:00:04	4.5	71.39	4.932	0.171	29.98			
10/2/2003	12:00:04	4.8	71.39	4.934	0.169	29.98			
10/2/2003	12:00:05	5.1	71.41	4.934	0.169	30.00			
10/2/2003	12:00:05	5.4	71.41	4.932	0.171	30.00			
10/2/2003	12:00:05	5.7	71.41	4.934	0.169	30.00			
10/2/2003	12:00:06	6	71.41	4.932	0.171	30.02			
10/2/2003	12:00:06	6.4	71.41	4.936	0.167	30.02			
10/2/2003	12:00:06	6.7	71.41	4.93	0.173	30.02			
10/2/2003	12:00:07	7.1	71.41	5.024	0.079	30.03	0.00		Pump Stop
10/2/2003	12:00:07	7.5	71.41	4.981	0.122	30.03	0.00		
10/2/2003	12:00:08	8	71.41	5.009	0.094	30.05	0.02	1803.00	
10/2/2003	12:00:08	8.4	71.41	5.036	0.067	30.05	0.02	1803.00	
10/2/2003	12:00:08	8.9	71.41	5.056	0.047	30.05	0.02	1803.00	
10/2/2003	12:00:09	9.5	71.41	5.066	0.037	30.07	0.03	902.00	
10/2/2003	12:00:10	10	71.41	5.072	0.031	30.08	0.05	601.67	
10/2/2003	12:00:10	10.6	71.41	5.083	0.020	30.08	0.05	601.67	
10/2/2003	12:00:11	11.3	71.41	5.081	0.022	30.10	0.07	451.50	
10/2/2003	12:00:11	11.9	71.39	5.089	0.014	30.10	0.07	451.50	
10/2/2003	12:00:12	12.6	71.39	5.087	0.016	30.12	0.08	361.40	
10/2/2003	12:00:13	13.4	71.39	5.08	0.023	30.13	0.10	301.33	
10/2/2003	12:00:14	14.2	71.39	5.097	0.006	30.15	0.12	258.43	
10/2/2003	12:00:15	15	71.39	5.093	0.010	30.17	0.13	226.25	
10/2/2003	12:00:15	15.9	71.39	5.089	0.014	30.17	0.13	226.25	
10/2/2003	12:00:16	16.8	71.39	5.089	0.014	30.18	0.15	201.22	
10/2/2003	12:00:17	17.8	71.39	5.089	0.014	30.20	0.17	181.20	
10/2/2003	12:00:18	18.9	71.39	5.089	0.014	30.22	0.18	164.82	
10/2/2003	12:00:20	20	71.39	5.089	0.014	30.25	0.22	139.62	
10/2/2003	12:00:21	21.2	71.39	5.089	0.014	30.27	0.23	129.71	
10/2/2003	12:00:22	22.4	71.39	5.089	0.014	30.28	0.25	121.13	
10/2/2003	12:00:23	23.8	71.39	5.089	0.014	30.30	0.27	113.63	
10/2/2003	12:00:25	25.2	71.39	5.091	0.012	30.33	0.30	101.11	
10/2/2003	12:00:26	26.7	71.39	5.091	0.012	30.35	0.32	95.84	
10/2/2003	12:00:28	28.2	71.41	5.091	0.012	30.38	0.35	86.81	
10/2/2003	12:00:29	29.8	71.41	5.093	0.010	30.40	0.37	82.91	
10/2/2003	12:00:31	31.5	71.41	5.093	0.010	30.43	0.40	76.08	
10/2/2003	12:00:33	33.3	71.41	5.093	0.010	30.47	0.43	70.31	
10/2/2003	12:00:35	35.2	71.41	5.095	0.008	30.50	0.47	65.36	
10/2/2003	12:00:37	37.3	71.44	5.093	0.010	30.53	0.50	61.07	
10/2/2003	12:00:39	39.5	71.44	5.093	0.010	30.57	0.53	57.31	
10/2/2003	12:00:41	41.8	71.44	5.095	0.008	30.60	0.57	54.00	
10/2/2003	12:00:44	44.3	71.44	5.095	0.008	30.65	0.62	49.70	
10/2/2003	12:00:46	46.9	71.44	5.093	0.010	30.68	0.65	47.21	
10/2/2003	12:00:49	49.7	71.46	5.093	0.010	30.73	0.70	43.90	
10/2/2003	12:00:52	52.6	71.46	5.093	0.010	30.78	0.75	41.04	
10/2/2003	12:00:55	55.7	71.46	5.093	0.010	30.83	0.80	38.54	
10/2/2003	12:00:59	59	71.46	5.093	0.010	30.90	0.87	35.65	
10/2/2003	12:01:02	62.5	71.48	5.094	0.009	30.95	0.92	33.76	
10/2/2003	12:01:06	66.2	71.48	5.096	0.007	31.02	0.98	31.54	
10/2/2003	12:01:10	70.1	71.48	5.096	0.007	31.08	1.05	29.60	
10/2/2003	12:01:14	74.3	71.48	5.098	0.005	31.15	1.12	27.90	
10/2/2003	12:01:18	78.7	71.5	5.096	0.007	31.22	1.18	26.38	
10/2/2003	12:01:23	83.4	71.5	5.096	0.007	31.30	1.27	24.71	

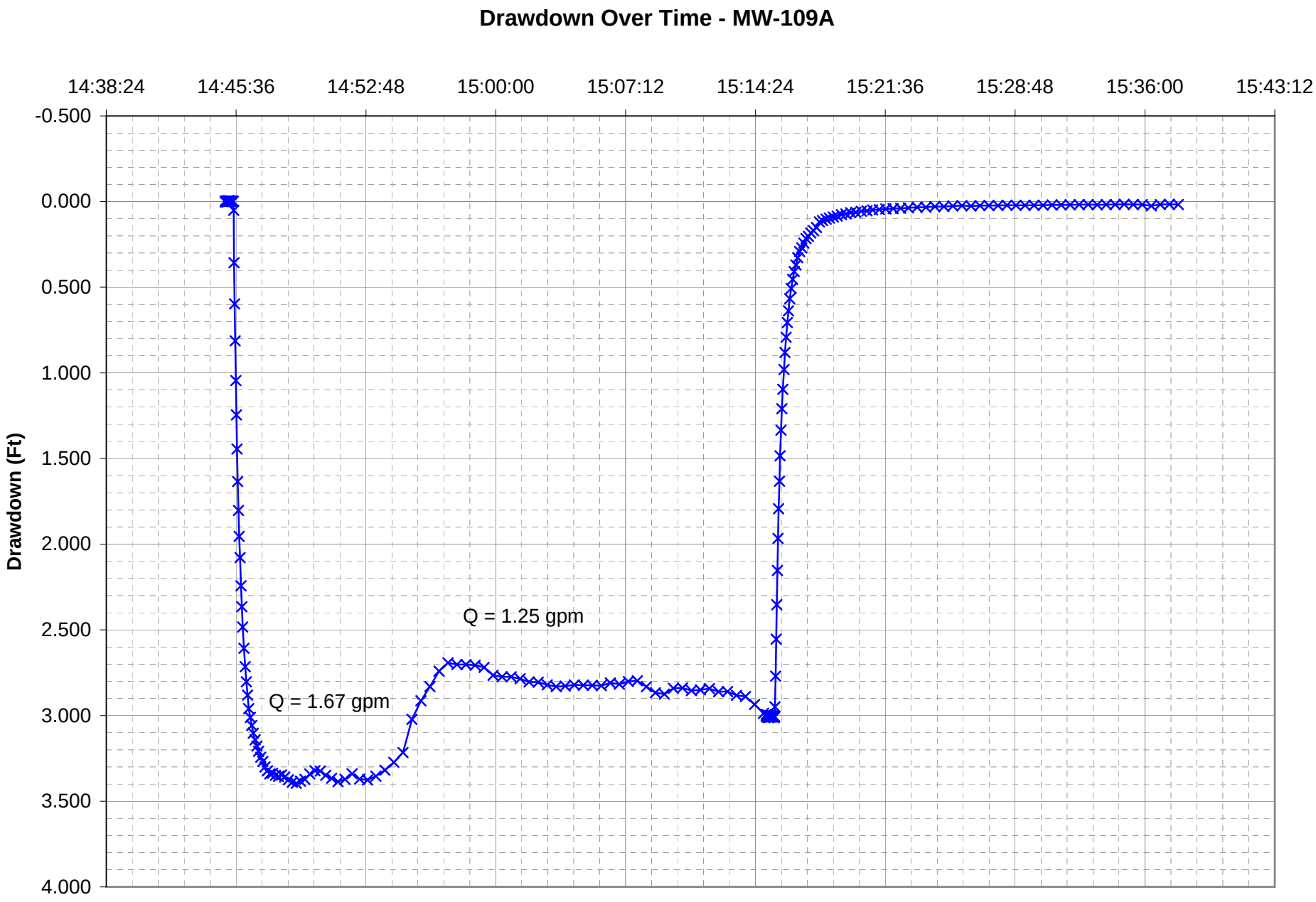
Well No. **MW-109AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/2/2003	12:01:28	88.4	71.5	5.096	0.007	31.38	1.35	23.25	
10/2/2003	12:01:33	93.7	71.5	5.096	0.007	31.47	1.43	21.95	
10/2/2003	12:01:39	99.3	71.5	5.096	0.007	31.57	1.53	20.59	
10/2/2003	12:01:45	105.2	71.5	5.1	0.003	31.67	1.63	19.39	
10/2/2003	12:01:51	111.5	71.5	5.098	0.005	31.77	1.73	18.33	
10/2/2003	12:01:58	118.1	71.5	5.096	0.007	31.88	1.85	17.23	
10/2/2003	12:02:05	125.1	71.53	5.096	0.007	32.00	1.97	16.27	
10/2/2003	12:02:12	132.6	71.53	5.098	0.005	32.12	2.08	15.42	
10/2/2003	12:02:20	140.5	71.53	5.1	0.003	32.25	2.22	14.55	
10/2/2003	12:02:28	148.9	71.53	5.098	0.005	32.38	2.35	13.78	
10/2/2003	12:02:37	157.8	71.53	5.094	0.009	32.53	2.50	13.01	
10/2/2003	12:02:47	167.2	71.53	5.096	0.007	32.70	2.67	12.26	
10/2/2003	12:02:57	177.2	71.53	5.098	0.005	32.87	2.83	11.60	
10/2/2003	12:03:07	187.8	71.53	5.096	0.007	33.03	3.00	11.01	
10/2/2003	12:03:19	199	71.53	5.096	0.007	33.23	3.20	10.39	
10/2/2003	12:03:30	210.9	71.53	5.1	0.003	33.42	3.38	9.88	
10/2/2003	12:03:43	223.5	71.53	5.098	0.005	33.63	3.60	9.34	
10/2/2003	12:03:56	236.8	71.53	5.098	0.005	33.85	3.82	8.87	
10/2/2003	12:04:10	250.9	71.53	5.1	0.003	34.08	4.05	8.42	
10/2/2003	12:04:25	265.8	71.53	5.098	0.005	34.33	4.30	7.98	
10/2/2003	12:04:41	281.6	71.53	5.1	0.003	34.60	4.57	7.58	
10/2/2003	12:04:58	298.4	71.53	5.098	0.005	34.88	4.85	7.19	
10/2/2003	12:05:16	316.2	71.53	5.1	0.003	35.18	5.15	6.83	
10/2/2003	12:05:35	335	71.53	5.098	0.005	35.50	5.47	6.49	
10/2/2003	12:05:54	354.9	71.5	5.1	0.003	35.82	5.78	6.19	
10/2/2003	12:06:16	376	71.5	5.098	0.005	36.18	6.15	5.88	
10/2/2003	12:06:38	398.4	71.5	5.1	0.003	36.55	6.52	5.61	
10/2/2003	12:07:02	422.1	71.5	5.102	0.001	36.95	6.92	5.34	
10/2/2003	12:07:27	447.2	71.5	5.1	0.003	37.37	7.33	5.10	
10/2/2003	12:07:53	473.8	71.5	5.1	0.003	37.80	7.77	4.87	
10/2/2003	12:08:22	502	71.48	5.1	0.003	38.28	8.25	4.64	
10/2/2003	12:08:51	531.9	71.48	5.1	0.003	38.77	8.73	4.44	
10/2/2003	12:09:21	561.9	71.46	5.102	0.001	39.27	9.23	4.25	
10/2/2003	12:09:51	591.9	71.46	5.101	0.002	39.77	9.73	4.09	
10/2/2003	12:10:21	621.9	71.46	5.099	0.004	40.27	10.23	3.93	
10/2/2003	12:10:51	651.9	71.44	5.099	0.004	40.77	10.73	3.80	
10/2/2003	12:11:21	681.9	71.41	5.099	0.004	41.27	11.23	3.67	
10/2/2003	12:11:51	711.9	71.39	5.101	0.002	41.77	11.73	3.56	
10/2/2003	12:12:21	741.9	71.37	5.103	0.000	42.27	12.23	3.46	
10/2/2003	12:12:51	771.9	71.37	5.103	0.000	42.77	12.73	3.36	
10/2/2003	12:13:21	801.9	71.34	5.102	0.001	43.27	13.23	3.27	
10/2/2003	12:13:51	831.9	71.32	5.1	0.003	43.77	13.73	3.19	
10/2/2003	12:14:21	861.9	71.3	5.1	0.003	44.27	14.23	3.11	
10/2/2003	12:14:51	891.9	71.3	5.1	0.003	44.77	14.73	3.04	
10/2/2003	12:15:21	921.9	71.28	5.102	0.001	45.27	15.23	2.97	
10/2/2003	12:15:51	951.9	71.28	5.102	0.001	45.77	15.73	2.91	
10/2/2003	12:16:21	981.9	71.25	5.103	0.000	46.27	16.23	2.85	
10/2/2003	12:16:51	1011.9	71.23	5.103	0.000	46.77	16.73	2.79	
10/2/2003	12:17:21	1041.9	71.23	5.101	0.002	47.27	17.23	2.74	
10/2/2003	12:17:51	1071.9	71.23	5.101	0.002	47.77	17.73	2.69	
10/2/2003	12:18:21	1101.9	71.21	5.103	0.000	48.27	18.23	2.65	
10/2/2003	12:18:51	1131.9	71.21	5.107	-0.004	48.77	18.73	2.60	
10/2/2003	12:19:21	1161.9	71.21	5.103	0.000	49.27	19.23	2.56	
10/2/2003	12:19:51	1191.9	71.19	5.109	-0.006	49.77	19.73	2.52	
10/2/2003	12:20:21	1221.9	71.19	5.103	0.000	50.27	20.23	2.48	
10/2/2003	12:20:51	1251.9	71.19	5.103	0.000	50.77	20.73	2.45	
10/2/2003	12:21:00								DTW = 13.51 at 12:21

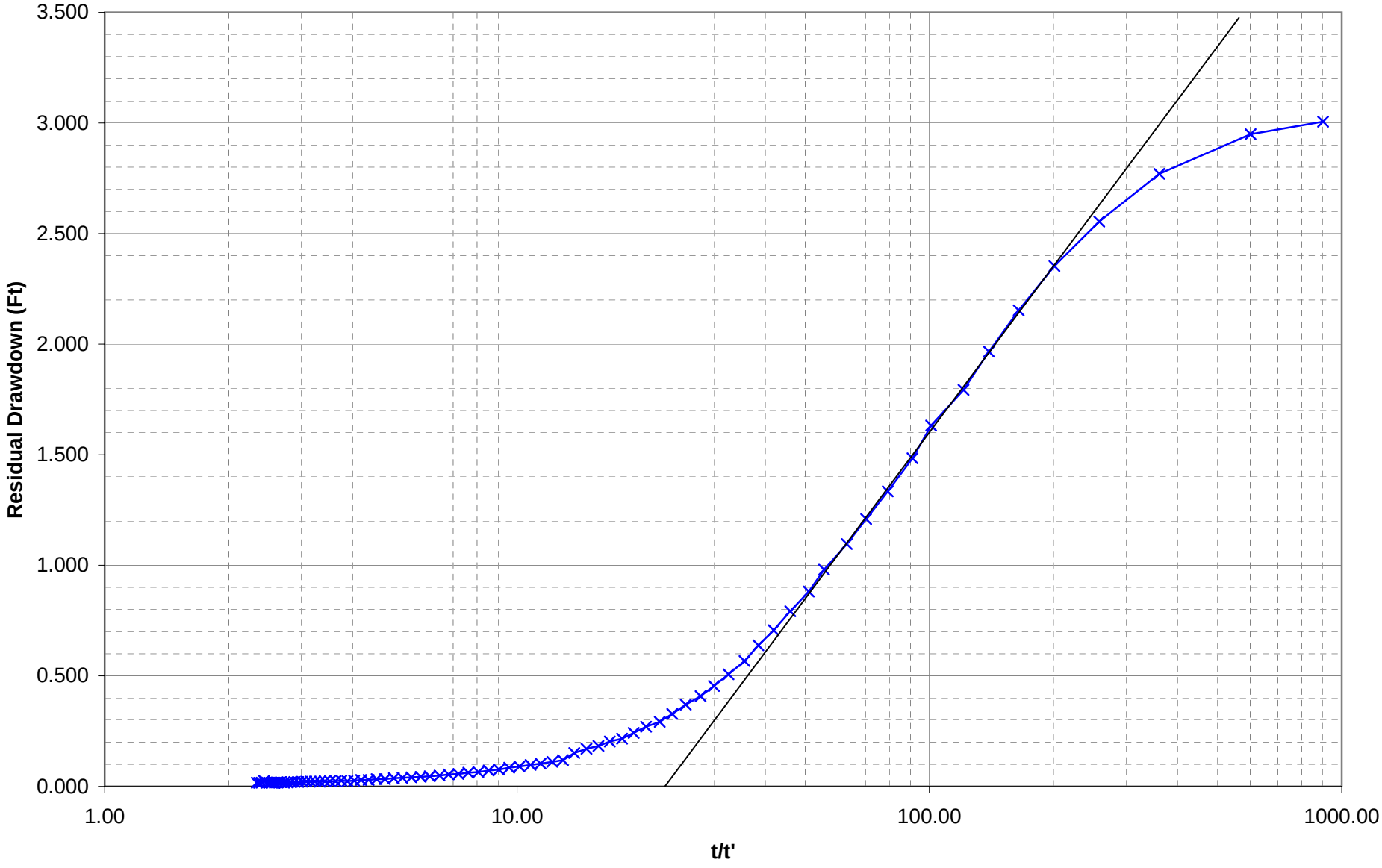
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-109A**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/2/2003	14:45:00			
Test end date and time	10/2/2003	15:37:51			
Period of pumping	30	minutes			
Static depth to water	13.65	feet below top of casing			
Starting transducer depth	5.042	feet below static water level			
Total well depth	88.7	feet below top of casing			
Depth to top of screen	78.7	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.43	gpm, or	275	cfd	
Average drawdown [s]	3.00	ft			
Specific capacity [Q/s]	0.48	gpm/ft			
Residual drawdown over one log cycle [Δs]			2.50	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			20.2	cfd/ft	
Hydraulic conductivity [K = T/b]			2.0	fpd, or	7.1E-04 cm/sec


Drawdown Over Time - MW-109A
14:38:24
14:45:36
14:52:48
15:00:00
15:07:12
15:14:24
15:21:36
15:28:48
15:36:00
15:43:12
-0.500
0.000
0.500
1.000
1.500
2.000
2.500
3.000
3.500
4.000
Drawdown (Ft)
Q = 1.25 gpm
Q = 1.67 gpm

Recovery Plot - MW-109A



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-109A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/2/2003	13:49:00								DTW = 13.65 at 13:49
10/2/2003	14:30:00								DTW = 13.66 at 14:30
10/2/2003	14:45:00	0	70.96	5.045	-0.003				Start Test 1
10/2/2003	14:45:00	0.3	70.98	5.042	0.000				
10/2/2003	14:45:00	0.6	70.98	5.042	0.000				
10/2/2003	14:45:00	0.9	71.01	5.042	0.000				
10/2/2003	14:45:01	1.2	71.01	5.042	0.000				
10/2/2003	14:45:01	1.5	71.01	5.042	0.000				
10/2/2003	14:45:01	1.8	71.01	5.042	0.000				
10/2/2003	14:45:02	2.1	71.01	5.042	0.000				
10/2/2003	14:45:02	2.4	71.03	5.042	0.000				
10/2/2003	14:45:02	2.7	71.03	5.042	0.000				
10/2/2003	14:45:03	3	71.03	5.042	0.000				
10/2/2003	14:45:03	3.3	71.03	5.042	0.000				
10/2/2003	14:45:03	3.6	71.03	5.042	0.000				
10/2/2003	14:45:03	3.9	71.03	5.042	0.000				
10/2/2003	14:45:04	4.2	71.03	5.042	0.000				
10/2/2003	14:45:04	4.5	71.03	5.042	0.000				
10/2/2003	14:45:04	4.8	71.03	5.042	0.000				
10/2/2003	14:45:05	5.1	71.03	5.042	0.000				
10/2/2003	14:45:05	5.4	71.05	5.042	0.000				
10/2/2003	14:45:05	5.7	71.05	5.042	0.000				
10/2/2003	14:45:06	6	71.05	5.042	0.000				
10/2/2003	14:45:06	6.4	71.05	5.042	0.000				
10/2/2003	14:45:06	6.7	71.05	5.042	0.000				
10/2/2003	14:45:07	7.1	71.05	5.042	0.000				
10/2/2003	14:45:07	7.5	71.05	5.042	0.000				
10/2/2003	14:45:07	8	71.05	5.042	0.000				
10/2/2003	14:45:08	8.4	71.05	5.042	0.000				
10/2/2003	14:45:08	8.9	71.05	5.042	0.000				
10/2/2003	14:45:09	9.5	71.05	5.044	-0.002				
10/2/2003	14:45:10	10	71.05	5.046	-0.004				
10/2/2003	14:45:10	10.6	71.03	5.046	-0.004				
10/2/2003	14:45:11	11.3	71.03	5.046	-0.004				
10/2/2003	14:45:11	11.9	71.03	5.046	-0.004				
10/2/2003	14:45:12	12.6	71.03	5.046	-0.004				
10/2/2003	14:45:13	13.4	71.03	5.044	-0.002				
10/2/2003	14:45:14	14.2	71.03	5.044	-0.002				
10/2/2003	14:45:15	15	71.03	5.044	-0.002				
10/2/2003	14:45:15	15.9	71.03	5.044	-0.002				
10/2/2003	14:45:16	16.8	71.03	5.044	-0.002				
10/2/2003	14:45:17	17.8	71.01	5.046	-0.004				
10/2/2003	14:45:18	18.9	71.01	5.044	-0.002				
10/2/2003	14:45:20	20	71.01	5.044	-0.002				
10/2/2003	14:45:21	21.2	71.01	5.044	-0.002				
10/2/2003	14:45:22	22.4	71.01	5.044	-0.002				
10/2/2003	14:45:23	23.8	71.01	5.042	0.000				
10/2/2003	14:45:25	25.2	71.01	5.042	0.000				
10/2/2003	14:45:26	26.7	71.01	5.044	-0.002	0.00			Pump Start
10/2/2003	14:45:28	28.2	71.01	4.991	0.051	0.03			
10/2/2003	14:45:29	29.8	71.01	4.685	0.357	0.05			
10/2/2003	14:45:31	31.5	71.01	4.445	0.597	0.08			
10/2/2003	14:45:33	33.3	71.01	4.229	0.813	0.12			
10/2/2003	14:45:35	35.2	71.01	3.997	1.045	0.15			
10/2/2003	14:45:37	37.3	71.01	3.797	1.245	0.18			
10/2/2003	14:45:39	39.5	71.01	3.598	1.444	0.22			
10/2/2003	14:45:41	41.8	71.01	3.408	1.634	0.25			
10/2/2003	14:45:44	44.3	71.01	3.239	1.803	0.30			
10/2/2003	14:45:46	46.9	71.01	3.088	1.954	0.33			
10/2/2003	14:45:49	49.7	70.98	2.964	2.078	0.38			
10/2/2003	14:45:52	52.6	70.98	2.799	2.243	0.43			
10/2/2003	14:45:55	55.7	70.98	2.677	2.365	0.48			
10/2/2003	14:45:58	59	70.98	2.559	2.483	0.53			
10/2/2003	14:46:02	62.5	70.98	2.435	2.607	0.60			1.66 gpm flow rate
10/2/2003	14:46:06	66.2	70.98	2.327	2.715	0.67			

Well No. **MW-109A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/2/2003	14:46:10	70.1	70.96	2.239	2.803	0.73			
10/2/2003	14:46:14	74.3	70.96	2.161	2.881	0.80			
10/2/2003	14:46:18	78.7	70.96	2.082	2.960	0.87			
10/2/2003	14:46:23	83.4	70.96	2.031	3.011	0.95			
10/2/2003	14:46:28	88.4	70.96	1.984	3.058	1.03			
10/2/2003	14:46:33	93.7	70.94	1.939	3.103	1.12			
10/2/2003	14:46:39	99.3	70.94	1.9	3.142	1.22			
10/2/2003	14:46:45	105.2	70.94	1.864	3.178	1.32			
10/2/2003	14:46:51	111.5	70.94	1.833	3.209	1.42			
10/2/2003	14:46:58	118.1	70.94	1.799	3.243	1.53			
10/2/2003	14:47:05	125.1	70.94	1.774	3.268	1.65			
10/2/2003	14:47:12	132.6	70.94	1.742	3.300	1.77			
10/2/2003	14:47:20	140.5	70.94	1.719	3.323	1.90			
10/2/2003	14:47:28	148.9	70.94	1.701	3.341	2.03			
10/2/2003	14:47:37	157.8	70.94	1.705	3.337	2.18			
10/2/2003	14:47:47	167.2	70.96	1.693	3.349	2.35			
10/2/2003	14:47:57	177.2	70.96	1.687	3.355	2.52			
10/2/2003	14:48:07	187.8	70.96	1.695	3.347	2.68			
10/2/2003	14:48:18	199	70.96	1.683	3.359	2.87			
10/2/2003	14:48:30	210.9	70.96	1.667	3.375	3.07			
10/2/2003	14:48:43	223.5	70.98	1.653	3.389	3.28			
10/2/2003	14:48:56	236.8	70.98	1.646	3.396	3.50			
10/2/2003	14:49:10	250.9	70.98	1.659	3.383	3.73			
10/2/2003	14:49:25	265.8	70.98	1.669	3.373	3.98			
10/2/2003	14:49:41	281.6	70.98	1.701	3.341	4.25			
10/2/2003	14:49:58	298.4	70.98	1.72	3.322	4.53			
10/2/2003	14:50:16	316.2	70.98	1.718	3.324	4.83			1.65 gpm flow rate
10/2/2003	14:50:34	335	70.96	1.693	3.349	5.13			
10/2/2003	14:50:54	354.9	70.94	1.676	3.366	5.47			
10/2/2003	14:51:15	376	70.94	1.656	3.386	5.82			1.28 gpm flow rate
10/2/2003	14:51:38	398.4	70.89	1.67	3.372	6.20			
10/2/2003	14:52:02	422.1	70.82	1.702	3.340	6.60			
10/2/2003	14:52:27	447.2	70.76	1.671	3.371	7.02			
10/2/2003	14:52:53	473.8	70.69	1.666	3.376	7.45			
10/2/2003	14:53:21	502	70.62	1.688	3.354	7.92			
10/2/2003	14:53:51	531.9	70.49	1.723	3.319	8.42			
10/2/2003	14:54:21	561.9	70.37	1.769	3.273	8.92			
10/2/2003	14:54:51	591.9	70.21	1.826	3.216	9.42			
10/2/2003	14:55:21	621.9	70.08	2.02	3.022	9.92			
10/2/2003	14:55:51	651.9	69.88	2.128	2.914	10.42			
10/2/2003	14:56:21	681.9	69.65	2.211	2.831	10.92			
10/2/2003	14:56:51	711.9	69.45	2.301	2.741	11.42			
10/2/2003	14:57:21	741.9	69.24	2.35	2.692	11.92			1.25 gpm flow rate
10/2/2003	14:57:51	771.9	69.04	2.34	2.702	12.42			
10/2/2003	14:58:21	801.9	68.86	2.34	2.702	12.92			
10/2/2003	14:58:51	831.9	68.72	2.336	2.706	13.42			
10/2/2003	14:59:21	861.9	68.59	2.323	2.719	13.92			
10/2/2003	14:59:51	891.9	68.5	2.277	2.765	14.42			
10/2/2003	15:00:21	921.9	68.41	2.268	2.774	14.92			
10/2/2003	15:00:51	951.9	68.36	2.268	2.774	15.42			
10/2/2003	15:01:21	981.9	68.29	2.257	2.785	15.92			
10/2/2003	15:01:51	1011.9	68.25	2.238	2.804	16.42			
10/2/2003	15:02:21	1041.9	68.18	2.237	2.805	16.92			1.43 gpm flow rate
10/2/2003	15:02:51	1071.9	68.16	2.221	2.821	17.42			
10/2/2003	15:03:21	1101.9	68.11	2.21	2.832	17.92			
10/2/2003	15:03:51	1131.9	68.07	2.214	2.828	18.42			
10/2/2003	15:04:21	1161.9	68.02	2.221	2.821	18.92			
10/2/2003	15:04:51	1191.9	67.98	2.219	2.823	19.42			
10/2/2003	15:05:21	1221.9	67.93	2.218	2.824	19.92			
10/2/2003	15:05:51	1251.9	67.91	2.216	2.826	20.42			
10/2/2003	15:06:21	1281.9	67.86	2.232	2.810	20.92			
10/2/2003	15:06:51	1311.9	67.82	2.225	2.817	21.42			
10/2/2003	15:07:21	1341.9	67.77	2.241	2.801	21.92			
10/2/2003	15:07:51	1371.9	67.73	2.245	2.797	22.42			
10/2/2003	15:08:21	1401.9	67.68	2.21	2.832	22.92			
10/2/2003	15:08:51	1431.9	67.66	2.175	2.867	23.42			
10/2/2003	15:09:21	1461.9	67.64	2.167	2.875	23.92			
10/2/2003	15:09:51	1491.9	67.64	2.201	2.841	24.42			
10/2/2003	15:10:21	1521.9	67.59	2.203	2.839	24.92			

Well No. **MW-109A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/2/2003	15:10:51	1551.9	67.55	2.188	2.854	25.42			
10/2/2003	15:11:21	1581.9	67.5	2.192	2.850	25.92			
10/2/2003	15:11:51	1611.9	67.46	2.199	2.843	26.42			
10/2/2003	15:12:21	1641.9	67.41	2.181	2.861	26.92			
10/2/2003	15:12:51	1671.9	67.39	2.182	2.860	27.42			
10/2/2003	15:13:21	1701.9	67.34	2.16	2.882	27.92			
10/2/2003	15:13:51	1731.9	67.32	2.153	2.889	28.42			
10/2/2003	15:14:21	1761.9	67.32	2.107	2.935	28.92			
10/2/2003	15:14:51	1791.9	67.3	2.055	2.987	29.42			
10/2/2003	15:15:00	0	67.3	2.049	2.993	29.57			Start Test 2
10/2/2003	15:15:00	0.3	67.32	2.043	2.999	29.57			
10/2/2003	15:15:00	0.6	67.32	2.043	2.999	29.57			
10/2/2003	15:15:00	0.9	67.34	2.04	3.002	29.57			
10/2/2003	15:15:01	1.2	67.34	2.042	3.000	29.58			
10/2/2003	15:15:01	1.5	67.34	2.038	3.004	29.58			
10/2/2003	15:15:01	1.8	67.37	2.04	3.002	29.58			
10/2/2003	15:15:02	2.1	67.37	2.042	3.000	29.60			
10/2/2003	15:15:02	2.4	67.37	2.036	3.006	29.60			
10/2/2003	15:15:02	2.7	67.37	2.036	3.006	29.60			
10/2/2003	15:15:03	3	67.37	2.04	3.002	29.62			
10/2/2003	15:15:03	3.3	67.37	2.038	3.004	29.62			
10/2/2003	15:15:03	3.6	67.37	2.04	3.002	29.62			
10/2/2003	15:15:03	3.9	67.37	2.034	3.008	29.62			
10/2/2003	15:15:04	4.2	67.37	2.038	3.004	29.63			
10/2/2003	15:15:04	4.5	67.37	2.04	3.002	29.63			
10/2/2003	15:15:04	4.8	67.37	2.038	3.004	29.63			
10/2/2003	15:15:05	5.1	67.37	2.044	2.998	29.65			
10/2/2003	15:15:05	5.4	67.37	2.04	3.002	29.65			
10/2/2003	15:15:05	5.7	67.39	2.036	3.006	29.65			
10/2/2003	15:15:06	6	67.39	2.04	3.002	29.67			
10/2/2003	15:15:06	6.4	67.39	2.04	3.002	29.67			
10/2/2003	15:15:06	6.7	67.39	2.034	3.008	29.67			
10/2/2003	15:15:07	7.1	67.39	2.042	3.000	29.68			
10/2/2003	15:15:07	7.5	67.39	2.036	3.006	29.68			
10/2/2003	15:15:08	8	67.39	2.036	3.006	29.70			
10/2/2003	15:15:08	8.4	67.39	2.03	3.012	29.70			
10/2/2003	15:15:08	8.9	67.39	2.036	3.006	29.70			
10/2/2003	15:15:09	9.5	67.39	2.032	3.010	29.72			
10/2/2003	15:15:10	10	67.39	2.04	3.002	29.73			
10/2/2003	15:15:10	10.6	67.39	2.036	3.006	29.73			
10/2/2003	15:15:11	11.3	67.39	2.036	3.006	29.75			
10/2/2003	15:15:11	11.9	67.39	2.038	3.004	29.75			
10/2/2003	15:15:12	12.6	67.37	2.038	3.004	29.77			
10/2/2003	15:15:13	13.4	67.37	2.038	3.004	29.78			
10/2/2003	15:15:14	14.2	67.37	2.042	3.000	29.80			
10/2/2003	15:15:15	15	67.37	2.034	3.008	29.82			
10/2/2003	15:15:15	15.9	67.37	2.042	3.000	29.82			
10/2/2003	15:15:16	16.8	67.37	2.042	3.000	29.83			
10/2/2003	15:15:17	17.8	67.37	2.038	3.004	29.85			
10/2/2003	15:15:18	18.9	67.37	2.034	3.008	29.87			
10/2/2003	15:15:20	20	67.37	2.04	3.002	29.90			
10/2/2003	15:15:21	21.2	67.37	2.038	3.004	29.92			
10/2/2003	15:15:22	22.4	67.37	2.04	3.002	29.93			
10/2/2003	15:15:23	23.8	67.37	2.038	3.004	29.95			
10/2/2003	15:15:25	25.2	67.37	2.032	3.010	29.98			
10/2/2003	15:15:26	26.7	67.37	2.03	3.012	30.00	0.00		Pump Stop
10/2/2003	15:15:28	28.2	67.37	2.036	3.006	30.03	0.03	901.00	
10/2/2003	15:15:29	29.8	67.37	2.093	2.949	30.05	0.05	601.00	
10/2/2003	15:15:31	31.5	67.37	2.272	2.770	30.08	0.08	361.00	
10/2/2003	15:15:33	33.3	67.37	2.488	2.554	30.12	0.12	258.14	
10/2/2003	15:15:35	35.2	67.37	2.689	2.353	30.15	0.15	201.00	
10/2/2003	15:15:37	37.3	67.37	2.889	2.153	30.18	0.18	164.64	
10/2/2003	15:15:39	39.5	67.34	3.076	1.966	30.22	0.22	139.46	
10/2/2003	15:15:41	41.8	67.34	3.249	1.793	30.25	0.25	121.00	
10/2/2003	15:15:44	44.3	67.32	3.41	1.632	30.30	0.30	101.00	
10/2/2003	15:15:46	46.9	67.28	3.558	1.484	30.33	0.33	91.00	
10/2/2003	15:15:49	49.7	67.21	3.708	1.334	30.38	0.38	79.26	
10/2/2003	15:15:52	52.6	67.12	3.833	1.209	30.43	0.43	70.23	
10/2/2003	15:15:55	55.7	66.96	3.946	1.096	30.48	0.48	63.07	

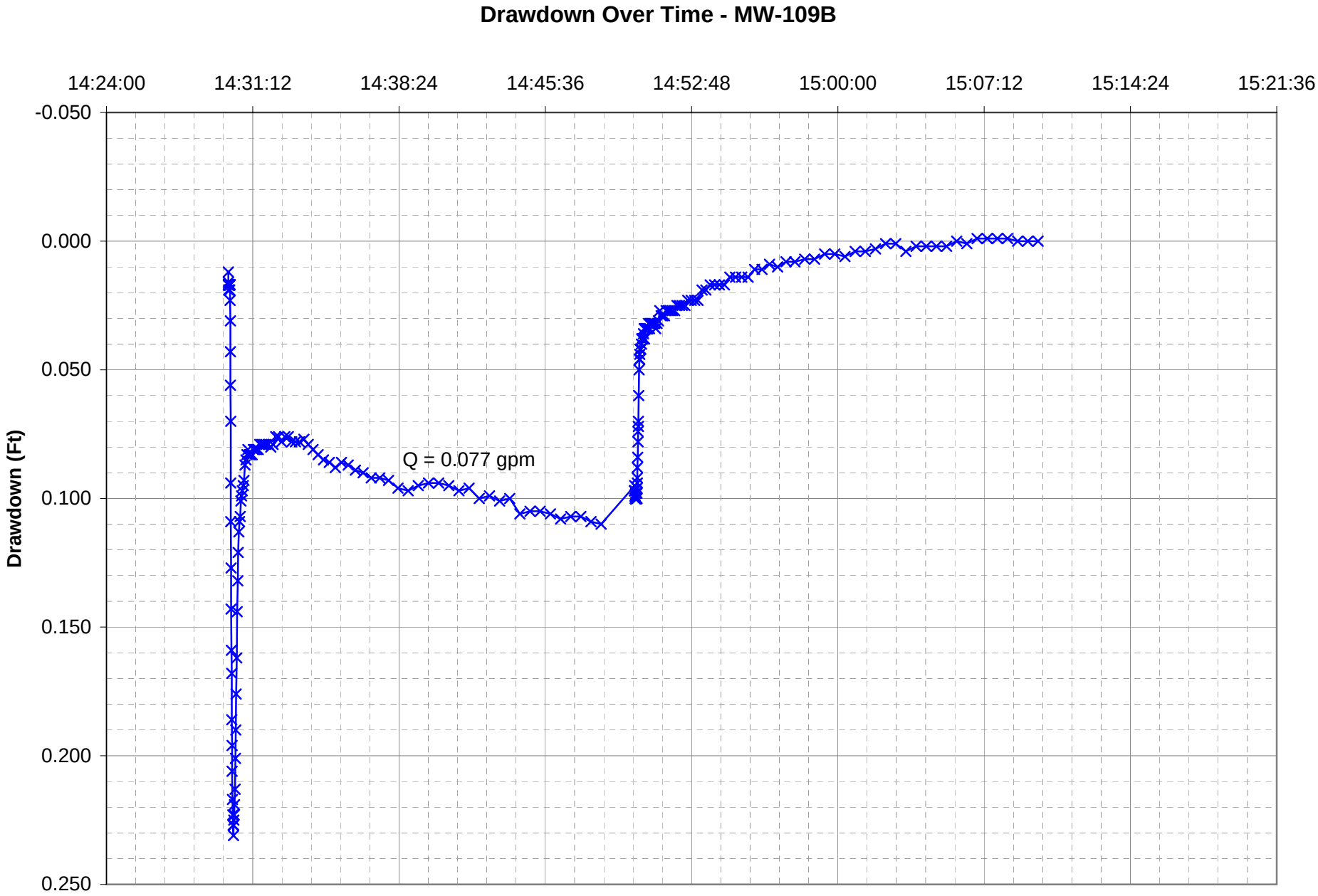
Well No. **MW-109A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/2/2003	15:15:59	59	66.78	4.062	0.980	30.55	0.55	55.55	
10/2/2003	15:16:02	62.5	66.53	4.161	0.881	30.60	0.60	51.00	
10/2/2003	15:16:06	66.2	66.26	4.25	0.792	30.67	0.67	46.00	
10/2/2003	15:16:10	70.1	65.9	4.336	0.706	30.73	0.73	41.91	
10/2/2003	15:16:14	74.3	65.51	4.404	0.638	30.80	0.80	38.50	
10/2/2003	15:16:18	78.7	65.11	4.475	0.567	30.87	0.87	35.62	
10/2/2003	15:16:23	83.4	64.68	4.535	0.507	30.95	0.95	32.58	
10/2/2003	15:16:28	88.4	64.2	4.588	0.454	31.03	1.03	30.03	
10/2/2003	15:16:33	93.7	63.73	4.634	0.408	31.12	1.12	27.87	
10/2/2003	15:16:39	99.3	63.25	4.672	0.370	31.22	1.22	25.66	
10/2/2003	15:16:45	105.2	62.8	4.714	0.328	31.32	1.32	23.78	
10/2/2003	15:16:51	111.5	62.32	4.75	0.292	31.42	1.42	22.18	
10/2/2003	15:16:58	118.1	61.89	4.772	0.270	31.53	1.53	20.57	
10/2/2003	15:17:05	125.1	61.46	4.8	0.242	31.65	1.65	19.18	
10/2/2003	15:17:12	132.6	61.03	4.826	0.216	31.77	1.77	17.98	
10/2/2003	15:17:20	140.5	60.62	4.839	0.203	31.90	1.90	16.79	
10/2/2003	15:17:28	148.9	60.26	4.859	0.183	32.03	2.03	15.75	
10/2/2003	15:17:37	157.8	59.9	4.872	0.170	32.18	2.18	14.74	
10/2/2003	15:17:47	167.2	59.61	4.891	0.151	32.35	2.35	13.77	
10/2/2003	15:17:57	177.2	59.31	4.923	0.119	32.52	2.52	12.92	
10/2/2003	15:18:07	187.8	59.09	4.931	0.111	32.68	2.68	12.18	
10/2/2003	15:18:19	199	58.86	4.939	0.103	32.88	2.88	11.40	
10/2/2003	15:18:30	210.9	58.68	4.945	0.097	33.07	3.07	10.78	
10/2/2003	15:18:43	223.5	58.54	4.952	0.090	33.28	3.28	10.14	
10/2/2003	15:18:56	236.8	58.43	4.957	0.085	33.50	3.50	9.57	
10/2/2003	15:19:10	250.9	58.34	4.966	0.076	33.73	3.73	9.04	
10/2/2003	15:19:25	265.8	58.29	4.97	0.072	33.98	3.98	8.53	
10/2/2003	15:19:41	281.6	58.25	4.977	0.065	34.25	4.25	8.06	
10/2/2003	15:19:58	298.4	58.27	4.98	0.062	34.53	4.53	7.62	
10/2/2003	15:20:16	316.2	58.29	4.986	0.056	34.83	4.83	7.21	
10/2/2003	15:20:35	335	58.34	4.988	0.054	35.15	5.15	6.83	
10/2/2003	15:20:54	354.9	58.41	4.993	0.049	35.47	5.47	6.49	
10/2/2003	15:21:16	376	58.5	4.996	0.046	35.83	5.83	6.14	
10/2/2003	15:21:38	398.4	58.61	4.999	0.043	36.20	6.20	5.84	
10/2/2003	15:22:02	422.1	58.77	5.001	0.041	36.60	6.60	5.55	
10/2/2003	15:22:27	447.2	58.95	5.003	0.039	37.02	7.02	5.28	
10/2/2003	15:22:53	473.8	59.13	5.005	0.037	37.45	7.45	5.03	
10/2/2003	15:23:22	502	59.31	5.009	0.033	37.93	7.93	4.78	
10/2/2003	15:23:51	531.9	59.52	5.009	0.033	38.42	8.42	4.56	
10/2/2003	15:24:21	561.9	59.74	5.013	0.029	38.92	8.92	4.36	
10/2/2003	15:24:51	591.9	59.92	5.013	0.029	39.42	9.42	4.19	
10/2/2003	15:25:21	621.9	60.08	5.016	0.026	39.92	9.92	4.03	
10/2/2003	15:25:51	651.9	60.26	5.018	0.024	40.42	10.42	3.88	
10/2/2003	15:26:21	681.9	60.44	5.016	0.026	40.92	10.92	3.75	
10/2/2003	15:26:51	711.9	60.6	5.018	0.024	41.42	11.42	3.63	
10/2/2003	15:27:21	741.9	60.78	5.019	0.023	41.92	11.92	3.52	
10/2/2003	15:27:51	771.9	60.96	5.019	0.023	42.42	12.42	3.42	
10/2/2003	15:28:21	801.9	61.12	5.021	0.021	42.92	12.92	3.32	
10/2/2003	15:28:51	831.9	61.28	5.02	0.022	43.42	13.42	3.24	
10/2/2003	15:29:21	861.9	61.44	5.02	0.022	43.92	13.92	3.16	
10/2/2003	15:29:51	891.9	61.6	5.02	0.022	44.42	14.42	3.08	
10/2/2003	15:30:21	921.9	61.73	5.021	0.021	44.92	14.92	3.01	
10/2/2003	15:30:51	951.9	61.87	5.022	0.020	45.42	15.42	2.95	
10/2/2003	15:31:21	981.9	62.01	5.022	0.020	45.92	15.92	2.88	
10/2/2003	15:31:51	1011.9	62.14	5.023	0.019	46.42	16.42	2.83	
10/2/2003	15:32:21	1041.9	62.25	5.024	0.018	46.92	16.92	2.77	
10/2/2003	15:32:51	1071.9	62.39	5.025	0.017	47.42	17.42	2.72	
10/2/2003	15:33:21	1101.9	62.5	5.023	0.019	47.92	17.92	2.67	
10/2/2003	15:33:51	1131.9	62.64	5.024	0.018	48.42	18.42	2.63	
10/2/2003	15:34:21	1161.9	62.75	5.025	0.017	48.92	18.92	2.59	
10/2/2003	15:34:51	1191.9	62.87	5.026	0.016	49.42	19.42	2.55	
10/2/2003	15:35:21	1221.9	62.98	5.025	0.017	49.92	19.92	2.51	
10/2/2003	15:35:51	1251.9	63.09	5.024	0.018	50.42	20.42	2.47	
10/2/2003	15:36:21	1281.9	63.2	5.017	0.025	50.92	20.92	2.43	DTW = 13.69 at 15:26
10/2/2003	15:36:51	1311.9	63.3	5.025	0.017	51.42	21.42	2.40	
10/2/2003	15:37:21	1341.9	63.41	5.026	0.016	51.92	21.92	2.37	
10/2/2003	15:37:51	1371.9	63.52	5.025	0.017	52.42	22.42	2.34	

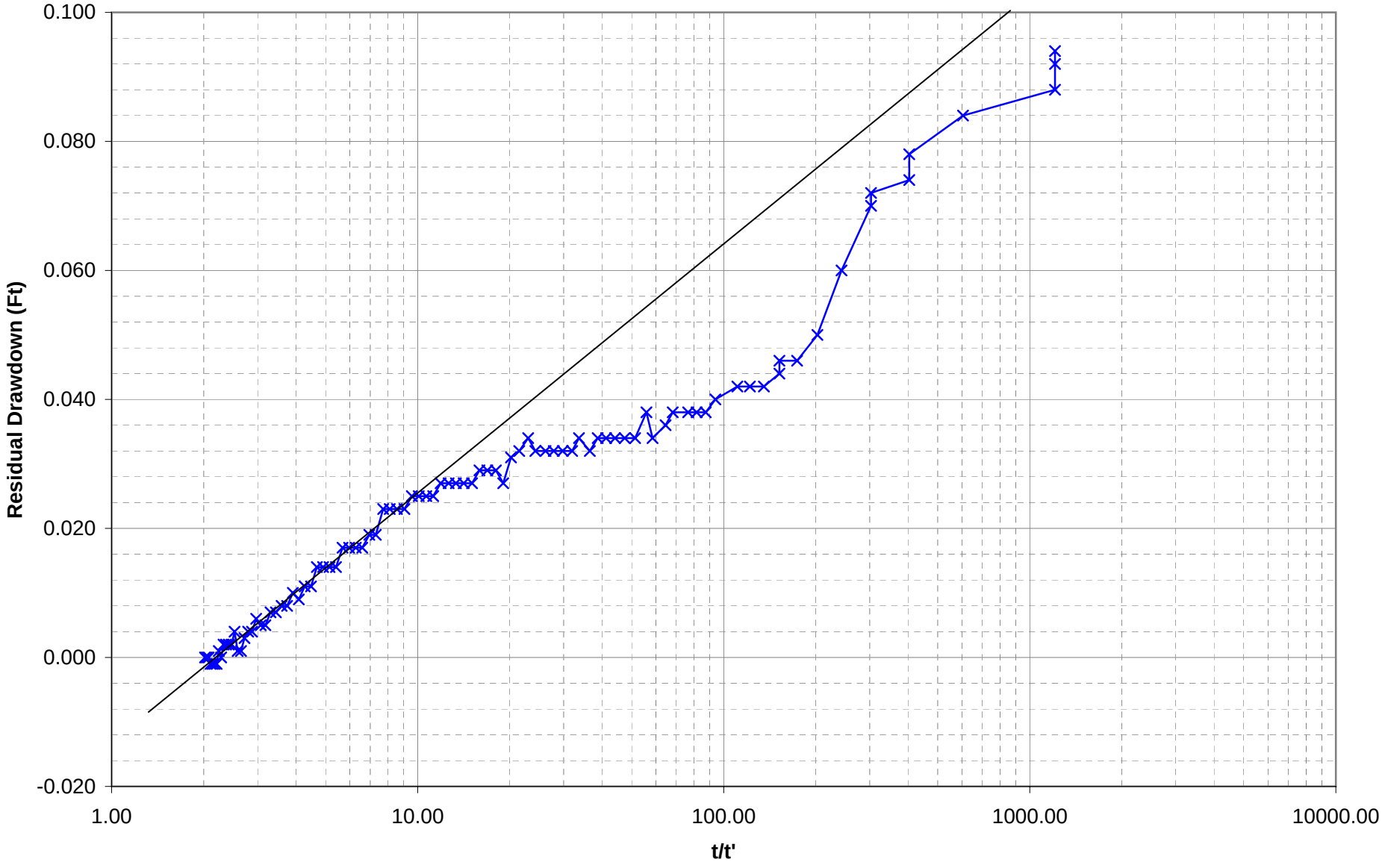
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-109B**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/8/2003	14:30:00			
Test end date and time	10/8/2003	15:09:51			
Period of pumping	20	minutes			
Static depth to water	14.61	feet below top of casing			
Starting transducer depth	3.35	feet below static water level			
Total well depth	149.1	feet below top of casing			
Depth to top of screen	139.1	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	0.077	gpm, or	15	cfd	
Average drawdown [s]	0.10	ft			
Specific capacity [Q/s]	0.81	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.038	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			71.4	cfd/ft	
Hydraulic conductivity [K = T/b]			7.1	fpd, or	2.5E-03 cm/sec


Drawdown Over Time - MW-109B
14:24:00
14:31:12
14:38:24
14:45:36
14:52:48
15:00:00
15:07:12
15:14:24
15:21:36
-0.050
0.000
0.050
0.100
0.150
0.200
0.250
Drawdown (Ft)
Q = 0.077 gpm

Recovery Plot - MW-109B



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-109B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	14:27:00								DTW = 14.60 at 14:27
10/8/2003	14:28:00								DTW = 14.61 at 14:28
10/8/2003	14:29:59								Pump Start
10/8/2003	14:30:00	0	69.54	3.338	0.012	0.02			Start Test 1
10/8/2003	14:30:00	0.3	69.54	3.334	0.016	0.02			
10/8/2003	14:30:00	0.6	69.56	3.333	0.017	0.02			
10/8/2003	14:30:00	0.9	69.56	3.333	0.017	0.02			
10/8/2003	14:30:01	1.2	69.56	3.333	0.017	0.03			
10/8/2003	14:30:01	1.5	69.58	3.333	0.017	0.03			
10/8/2003	14:30:01	1.8	69.58	3.331	0.019	0.03			
10/8/2003	14:30:02	2.1	69.58	3.333	0.017	0.05			
10/8/2003	14:30:02	2.4	69.58	3.333	0.017	0.05			
10/8/2003	14:30:02	2.7	69.58	3.331	0.019	0.05			
10/8/2003	14:30:03	3	69.58	3.333	0.017	0.07			
10/8/2003	14:30:03	3.3	69.6	3.333	0.017	0.07			
10/8/2003	14:30:03	3.6	69.6	3.333	0.017	0.07			
10/8/2003	14:30:03	3.9	69.6	3.333	0.017	0.07			
10/8/2003	14:30:04	4.2	69.6	3.333	0.017	0.08			
10/8/2003	14:30:04	4.5	69.6	3.333	0.017	0.08			
10/8/2003	14:30:04	4.8	69.6	3.331	0.019	0.08			
10/8/2003	14:30:05	5.1	69.6	3.333	0.017	0.10			
10/8/2003	14:30:05	5.4	69.6	3.333	0.017	0.10			
10/8/2003	14:30:05	5.7	69.6	3.327	0.023	0.10			
10/8/2003	14:30:06	6	69.6	3.319	0.031	0.12			
10/8/2003	14:30:06	6.4	69.6	3.307	0.043	0.12			
10/8/2003	14:30:06	6.7	69.6	3.294	0.056	0.12			
10/8/2003	14:30:07	7.1	69.6	3.28	0.070	0.13			
10/8/2003	14:30:07	7.5	69.6	3.256	0.094	0.13			
10/8/2003	14:30:07	8	69.6	3.241	0.109	0.13			
10/8/2003	14:30:08	8.4	69.6	3.223	0.127	0.15			
10/8/2003	14:30:08	8.9	69.63	3.207	0.143	0.15			
10/8/2003	14:30:09	9.5	69.63	3.191	0.159	0.17			
10/8/2003	14:30:10	10	69.6	3.182	0.168	0.18			
10/8/2003	14:30:10	10.6	69.6	3.164	0.186	0.18			
10/8/2003	14:30:11	11.3	69.6	3.154	0.196	0.20			
10/8/2003	14:30:11	11.9	69.6	3.144	0.206	0.20			
10/8/2003	14:30:12	12.6	69.6	3.133	0.217	0.22			
10/8/2003	14:30:13	13.4	69.58	3.127	0.223	0.23			
10/8/2003	14:30:14	14.2	69.58	3.123	0.227	0.25			
10/8/2003	14:30:15	15	69.58	3.119	0.231	0.27			
10/8/2003	14:30:15	15.9	69.58	3.123	0.227	0.27			
10/8/2003	14:30:16	16.8	69.58	3.125	0.225	0.28			
10/8/2003	14:30:17	17.8	69.58	3.127	0.223	0.30			
10/8/2003	14:30:18	18.9	69.58	3.131	0.219	0.32			
10/8/2003	14:30:20	20	69.58	3.137	0.213	0.35			
10/8/2003	14:30:21	21.2	69.58	3.149	0.201	0.37			
10/8/2003	14:30:22	22.4	69.58	3.16	0.190	0.38			
10/8/2003	14:30:23	23.8	69.58	3.174	0.176	0.40			
10/8/2003	14:30:25	25.2	69.58	3.188	0.162	0.43			
10/8/2003	14:30:26	26.7	69.58	3.206	0.144	0.45			Pump Start
10/8/2003	14:30:28	28.2	69.56	3.218	0.132	0.48			
10/8/2003	14:30:29	29.8	69.58	3.229	0.121	0.50			
10/8/2003	14:30:31	31.5	69.58	3.237	0.113	0.53			
10/8/2003	14:30:33	33.3	69.56	3.241	0.109	0.57			
10/8/2003	14:30:35	35.2	69.56	3.243	0.107	0.60			
10/8/2003	14:30:37	37.3	69.56	3.249	0.101	0.63			
10/8/2003	14:30:39	39.5	69.56	3.251	0.099	0.67			
10/8/2003	14:30:41	41.8	69.56	3.253	0.097	0.70			
10/8/2003	14:30:44	44.3	69.56	3.255	0.095	0.75			
10/8/2003	14:30:46	46.9	69.56	3.257	0.093	0.78			
10/8/2003	14:30:49	49.7	69.56	3.263	0.087	0.83			
10/8/2003	14:30:52	52.6	69.56	3.265	0.085	0.88			
10/8/2003	14:30:55	55.7	69.56	3.267	0.083	0.93			
10/8/2003	14:30:58	59	69.56	3.269	0.081	0.98			
10/8/2003	14:31:02	62.5	69.54	3.267	0.083	1.05			

Well No. **MW-109B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	14:31:06	66.2	69.54	3.267	0.083	1.12			
10/8/2003	14:31:10	70.1	69.54	3.267	0.083	1.18			
10/8/2003	14:31:14	74.3	69.54	3.269	0.081	1.25			
10/8/2003	14:31:18	78.7	69.54	3.269	0.081	1.32			
10/8/2003	14:31:23	83.4	69.51	3.269	0.081	1.40			
10/8/2003	14:31:28	88.4	69.51	3.269	0.081	1.48			
10/8/2003	14:31:33	93.7	69.51	3.271	0.079	1.57			
10/8/2003	14:31:39	99.3	69.51	3.271	0.079	1.67			
10/8/2003	14:31:45	105.2	69.49	3.271	0.079	1.77			
10/8/2003	14:31:51	111.5	69.49	3.271	0.079	1.87			
10/8/2003	14:31:58	118.1	69.49	3.271	0.079	1.98			
10/8/2003	14:32:05	125.1	69.47	3.27	0.080	2.10			
10/8/2003	14:32:12	132.6	69.47	3.271	0.079	2.22			
10/8/2003	14:32:20	140.5	69.45	3.274	0.076	2.35			
10/8/2003	14:32:28	148.9	69.45	3.274	0.076	2.48			
10/8/2003	14:32:37	157.8	69.45	3.272	0.078	2.63			
10/8/2003	14:32:47	167.2	69.42	3.274	0.076	2.80			
10/8/2003	14:32:57	177.2	69.42	3.274	0.076	2.97			
10/8/2003	14:33:07	187.8	69.4	3.272	0.078	3.13			0.085 gpm flow rate
10/8/2003	14:33:18	199	69.38	3.272	0.078	3.32			
10/8/2003	14:33:30	210.9	69.38	3.272	0.078	3.52			
10/8/2003	14:33:43	223.5	69.36	3.273	0.077	3.73			
10/8/2003	14:33:56	236.8	69.33	3.271	0.079	3.95			
10/8/2003	14:34:10	250.9	69.31	3.269	0.081	4.18			
10/8/2003	14:34:25	265.8	69.31	3.267	0.083	4.43			
10/8/2003	14:34:41	281.6	69.29	3.265	0.085	4.70			
10/8/2003	14:34:58	298.4	69.24	3.264	0.086	4.98			
10/8/2003	14:35:16	316.2	69.22	3.262	0.088	5.28			
10/8/2003	14:35:34	335	69.2	3.264	0.086	5.58			
10/8/2003	14:35:54	354.9	69.15	3.263	0.087	5.92			
10/8/2003	14:36:15	376	69.13	3.261	0.089	6.27			
10/8/2003	14:36:38	398.4	69.08	3.26	0.090	6.65			
10/8/2003	14:37:02	422.1	69.04	3.258	0.092	7.05			
10/8/2003	14:37:27	447.2	68.99	3.258	0.092	7.47			
10/8/2003	14:37:53	473.8	68.93	3.257	0.093	7.90			
10/8/2003	14:38:21	502	68.86	3.254	0.096	8.37			0.073 gpm flow rate
10/8/2003	14:38:51	531.9	68.79	3.253	0.097	8.87			
10/8/2003	14:39:21	561.9	68.75	3.255	0.095	9.37			
10/8/2003	14:39:51	591.9	68.68	3.256	0.094	9.87			
10/8/2003	14:40:21	621.9	68.63	3.256	0.094	10.37			
10/8/2003	14:40:51	651.9	68.59	3.255	0.095	10.87			
10/8/2003	14:41:21	681.9	68.52	3.253	0.097	11.37			
10/8/2003	14:41:51	711.9	68.47	3.254	0.096	11.87			
10/8/2003	14:42:21	741.9	68.43	3.25	0.100	12.37			
10/8/2003	14:42:51	771.9	68.38	3.251	0.099	12.87			
10/8/2003	14:43:21	801.9	68.34	3.249	0.101	13.37			0.075 gpm flow rate
10/8/2003	14:43:51	831.9	68.27	3.25	0.100	13.87			
10/8/2003	14:44:21	861.9	68.23	3.244	0.106	14.37			
10/8/2003	14:44:51	891.9	68.18	3.245	0.105	14.87			
10/8/2003	14:45:21	921.9	68.14	3.245	0.105	15.37			
10/8/2003	14:45:51	951.9	68.09	3.244	0.106	15.87			
10/8/2003	14:46:21	981.9	68.04	3.242	0.108	16.37			
10/8/2003	14:46:51	1011.9	68	3.243	0.107	16.87			
10/8/2003	14:47:21	1041.9	67.95	3.243	0.107	17.37			
10/8/2003	14:47:51	1071.9	67.91	3.241	0.109	17.87			
10/8/2003	14:48:21	1101.9	67.86	3.24	0.110	18.37			0.073 gpm flow rate
10/8/2003	14:50:00	0	67.73	3.255	0.095	20.02			Start Test 2
10/8/2003	14:50:00	0.3	67.75	3.253	0.097	20.02			
10/8/2003	14:50:00	0.6	67.77	3.253	0.097	20.02			
10/8/2003	14:50:00	0.9	67.77	3.253	0.097	20.02			
10/8/2003	14:50:01	1.2	67.77	3.251	0.099	20.03			
10/8/2003	14:50:01	1.5	67.77	3.251	0.099	20.03			
10/8/2003	14:50:01	1.8	67.77	3.251	0.099	20.03			
10/8/2003	14:50:02	2.1	67.8	3.25	0.100	20.05			
10/8/2003	14:50:02	2.4	67.8	3.25	0.100	20.05			
10/8/2003	14:50:02	2.7	67.8	3.25	0.100	20.05			
10/8/2003	14:50:03	3	67.8	3.252	0.098	20.07			
10/8/2003	14:50:03	3.3	67.8	3.25	0.100	20.07			
10/8/2003	14:50:03	3.6	67.8	3.25	0.100	20.07			

Well No. **MW-109B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	14:50:03	3.9	67.8	3.25	0.100	20.07			
10/8/2003	14:50:04	4.2	67.8	3.25	0.100	20.08			
10/8/2003	14:50:04	4.5	67.8	3.252	0.098	20.08			
10/8/2003	14:50:04	4.8	67.8	3.252	0.098	20.08			
10/8/2003	14:50:05	5.1	67.8	3.252	0.098	20.10			
10/8/2003	14:50:05	5.4	67.8	3.25	0.100	20.10			
10/8/2003	14:50:05	5.7	67.8	3.252	0.098	20.10			
10/8/2003	14:50:06	6	67.8	3.252	0.098	20.12			
10/8/2003	14:50:06	6.4	67.8	3.25	0.100	20.12			
10/8/2003	14:50:06	6.7	67.82	3.252	0.098	20.12			
10/8/2003	14:50:07	7.1	67.82	3.25	0.100	20.13	0.00		Pump Stop
10/8/2003	14:50:07	7.5	67.82	3.254	0.096	20.13	0.00		
10/8/2003	14:50:08	8	67.82	3.256	0.094	20.15	0.02	1209.00	
10/8/2003	14:50:08	8.4	67.82	3.258	0.092	20.15	0.02	1209.00	
10/8/2003	14:50:08	8.9	67.82	3.262	0.088	20.15	0.02	1209.00	
10/8/2003	14:50:09	9.5	67.82	3.266	0.084	20.17	0.03	605.00	
10/8/2003	14:50:10	10	67.8	3.272	0.078	20.18	0.05	403.67	
10/8/2003	14:50:10	10.6	67.8	3.276	0.074	20.18	0.05	403.67	
10/8/2003	14:50:11	11.3	67.8	3.278	0.072	20.20	0.07	303.00	
10/8/2003	14:50:11	11.9	67.8	3.28	0.070	20.20	0.07	303.00	
10/8/2003	14:50:12	12.6	67.77	3.29	0.060	20.22	0.08	242.60	
10/8/2003	14:50:13	13.4	67.77	3.3	0.050	20.23	0.10	202.33	
10/8/2003	14:50:14	14.2	67.77	3.304	0.046	20.25	0.12	173.57	
10/8/2003	14:50:15	15	67.77	3.304	0.046	20.27	0.13	152.00	
10/8/2003	14:50:15	15.9	67.77	3.306	0.044	20.27	0.13	152.00	
10/8/2003	14:50:16	16.8	67.77	3.308	0.042	20.28	0.15	135.22	
10/8/2003	14:50:17	17.8	67.77	3.308	0.042	20.30	0.17	121.80	
10/8/2003	14:50:18	18.9	67.77	3.308	0.042	20.32	0.18	110.82	
10/8/2003	14:50:20	20	67.77	3.31	0.040	20.35	0.22	93.92	
10/8/2003	14:50:21	21.2	67.75	3.312	0.038	20.37	0.23	87.29	
10/8/2003	14:50:22	22.4	67.75	3.312	0.038	20.38	0.25	81.53	
10/8/2003	14:50:23	23.8	67.75	3.312	0.038	20.40	0.27	76.50	
10/8/2003	14:50:25	25.2	67.75	3.312	0.038	20.43	0.30	68.11	
10/8/2003	14:50:26	26.7	67.75	3.314	0.036	20.45	0.32	64.58	
10/8/2003	14:50:28	28.2	67.75	3.316	0.034	20.48	0.35	58.52	
10/8/2003	14:50:29	29.8	67.75	3.312	0.038	20.50	0.37	55.91	
10/8/2003	14:50:31	31.5	67.75	3.316	0.034	20.53	0.40	51.33	
10/8/2003	14:50:33	33.3	67.73	3.316	0.034	20.57	0.43	47.46	
10/8/2003	14:50:35	35.2	67.73	3.316	0.034	20.60	0.47	44.14	
10/8/2003	14:50:37	37.3	67.73	3.316	0.034	20.63	0.50	41.27	
10/8/2003	14:50:39	39.5	67.73	3.316	0.034	20.67	0.53	38.75	
10/8/2003	14:50:41	41.8	67.73	3.318	0.032	20.70	0.57	36.53	
10/8/2003	14:50:44	44.3	67.73	3.316	0.034	20.75	0.62	33.65	
10/8/2003	14:50:46	46.9	67.71	3.318	0.032	20.78	0.65	31.97	
10/8/2003	14:50:49	49.7	67.71	3.318	0.032	20.83	0.70	29.76	
10/8/2003	14:50:52	52.6	67.71	3.318	0.032	20.88	0.75	27.84	
10/8/2003	14:50:55	55.7	67.71	3.318	0.032	20.93	0.80	26.17	
10/8/2003	14:50:59	59	67.68	3.318	0.032	21.00	0.87	24.23	
10/8/2003	14:51:02	62.5	67.68	3.316	0.034	21.05	0.92	22.96	
10/8/2003	14:51:06	66.2	67.68	3.318	0.032	21.12	0.98	21.47	
10/8/2003	14:51:10	70.1	67.66	3.319	0.031	21.18	1.05	20.17	
10/8/2003	14:51:14	74.3	67.66	3.323	0.027	21.25	1.12	19.03	
10/8/2003	14:51:18	78.7	67.66	3.321	0.029	21.32	1.18	18.01	
10/8/2003	14:51:23	83.4	67.64	3.321	0.029	21.40	1.27	16.89	
10/8/2003	14:51:28	88.4	67.64	3.321	0.029	21.48	1.35	15.91	
10/8/2003	14:51:33	93.7	67.64	3.323	0.027	21.57	1.43	15.05	
10/8/2003	14:51:39	99.3	67.64	3.323	0.027	21.67	1.53	14.13	
10/8/2003	14:51:45	105.2	67.62	3.323	0.027	21.77	1.63	13.33	
10/8/2003	14:51:51	111.5	67.62	3.323	0.027	21.87	1.73	12.62	
10/8/2003	14:51:58	118.1	67.62	3.323	0.027	21.98	1.85	11.88	
10/8/2003	14:52:05	125.1	67.62	3.325	0.025	22.10	1.97	11.24	
10/8/2003	14:52:12	132.6	67.59	3.325	0.025	22.22	2.08	10.66	
10/8/2003	14:52:20	140.5	67.59	3.325	0.025	22.35	2.22	10.08	
10/8/2003	14:52:28	148.9	67.59	3.325	0.025	22.48	2.35	9.57	
10/8/2003	14:52:37	157.8	67.59	3.327	0.023	22.63	2.50	9.05	
10/8/2003	14:52:47	167.2	67.59	3.327	0.023	22.80	2.67	8.55	
10/8/2003	14:52:57	177.2	67.59	3.327	0.023	22.97	2.83	8.11	
10/8/2003	14:53:07	187.8	67.59	3.327	0.023	23.13	3.00	7.71	
10/8/2003	14:53:19	199	67.59	3.331	0.019	23.33	3.20	7.29	

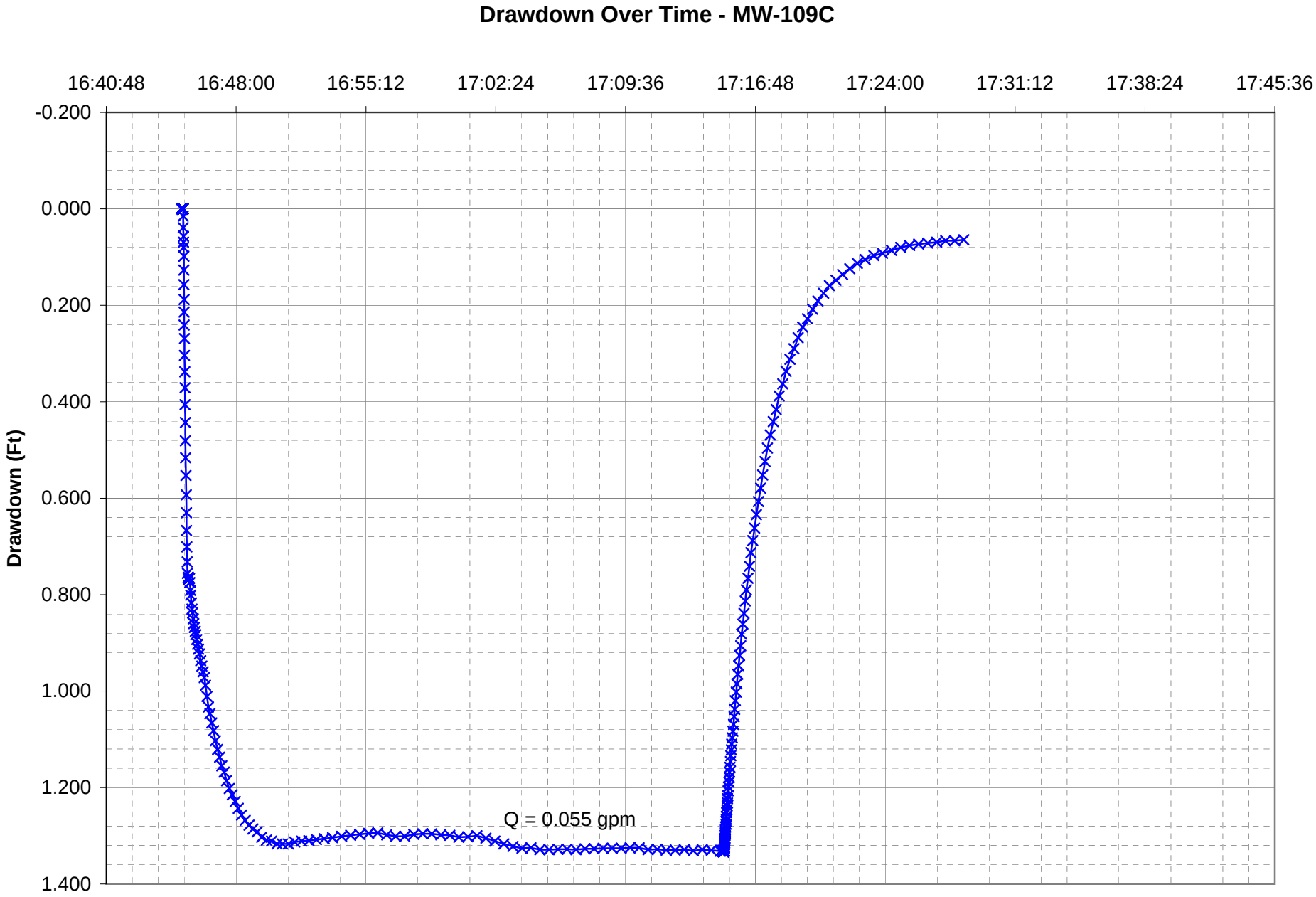
Well No. **MW-109B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/8/2003	14:53:30	210.9	67.62	3.331	0.019	23.52	3.38	6.95	
10/8/2003	14:53:43	223.5	67.62	3.333	0.017	23.73	3.60	6.59	
10/8/2003	14:53:56	236.8	67.62	3.333	0.017	23.95	3.82	6.28	
10/8/2003	14:54:10	250.9	67.64	3.333	0.017	24.18	4.05	5.97	
10/8/2003	14:54:25	265.8	67.64	3.333	0.017	24.43	4.30	5.68	
10/8/2003	14:54:41	281.6	67.66	3.336	0.014	24.70	4.57	5.41	
10/8/2003	14:54:58	298.4	67.68	3.336	0.014	24.98	4.85	5.15	
10/8/2003	14:55:16	316.2	67.71	3.336	0.014	25.28	5.15	4.91	
10/8/2003	14:55:35	335	67.73	3.336	0.014	25.60	5.47	4.68	
10/8/2003	14:55:54	354.9	67.75	3.339	0.011	25.92	5.78	4.48	
10/8/2003	14:56:16	376	67.77	3.339	0.011	26.28	6.15	4.27	
10/8/2003	14:56:38	398.4	67.82	3.341	0.009	26.65	6.52	4.09	
10/8/2003	14:57:02	422.1	67.84	3.34	0.010	27.05	6.92	3.91	
10/8/2003	14:57:27	447.2	67.86	3.342	0.008	27.47	7.33	3.75	
10/8/2003	14:57:53	473.8	67.89	3.342	0.008	27.90	7.77	3.59	
10/8/2003	14:58:22	502	67.93	3.343	0.007	28.38	8.25	3.44	
10/8/2003	14:58:51	531.9	67.98	3.343	0.007	28.87	8.73	3.31	
10/8/2003	14:59:21	561.9	68	3.345	0.005	29.37	9.23	3.18	
10/8/2003	14:59:51	591.9	68.02	3.345	0.005	29.87	9.73	3.07	
10/8/2003	15:00:21	621.9	68.07	3.344	0.006	30.37	10.23	2.97	
10/8/2003	15:00:51	651.9	68.09	3.346	0.004	30.87	10.73	2.88	
10/8/2003	15:01:21	681.9	68.11	3.346	0.004	31.37	11.23	2.79	
10/8/2003	15:01:51	711.9	68.14	3.347	0.003	31.87	11.73	2.72	
10/8/2003	15:02:21	741.9	68.16	3.349	0.001	32.37	12.23	2.65	
10/8/2003	15:02:51	771.9	68.2	3.349	0.001	32.87	12.73	2.58	
10/8/2003	15:03:21	801.9	68.23	3.346	0.004	33.37	13.23	2.52	
10/8/2003	15:03:51	831.9	68.25	3.348	0.002	33.87	13.73	2.47	
10/8/2003	15:04:21	861.9	68.27	3.348	0.002	34.37	14.23	2.41	
10/8/2003	15:04:51	891.9	68.29	3.348	0.002	34.87	14.73	2.37	
10/8/2003	15:05:21	921.9	68.29	3.348	0.002	35.37	15.23	2.32	
10/8/2003	15:05:51	951.9	68.32	3.35	0.000	35.87	15.73	2.28	
10/8/2003	15:06:21	981.9	68.34	3.349	0.001	36.37	16.23	2.24	
10/8/2003	15:06:51	1011.9	68.36	3.351	-0.001	36.87	16.73	2.20	
10/8/2003	15:07:21	1041.9	68.38	3.351	-0.001	37.37	17.23	2.17	
10/8/2003	15:07:51	1071.9	68.41	3.351	-0.001	37.87	17.73	2.14	
10/8/2003	15:08:21	1101.9	68.41	3.351	-0.001	38.37	18.23	2.10	
10/8/2003	15:08:51	1131.9	68.43	3.35	0.000	38.87	18.73	2.07	
10/8/2003	15:09:21	1161.9	68.45	3.35	0.000	39.37	19.23	2.05	
10/8/2003	15:09:51	1191.9	68.45	3.35	0.000	39.87	19.73	2.02	
10/8/2003	15:15:00								DTW = 14.61 at 15:15

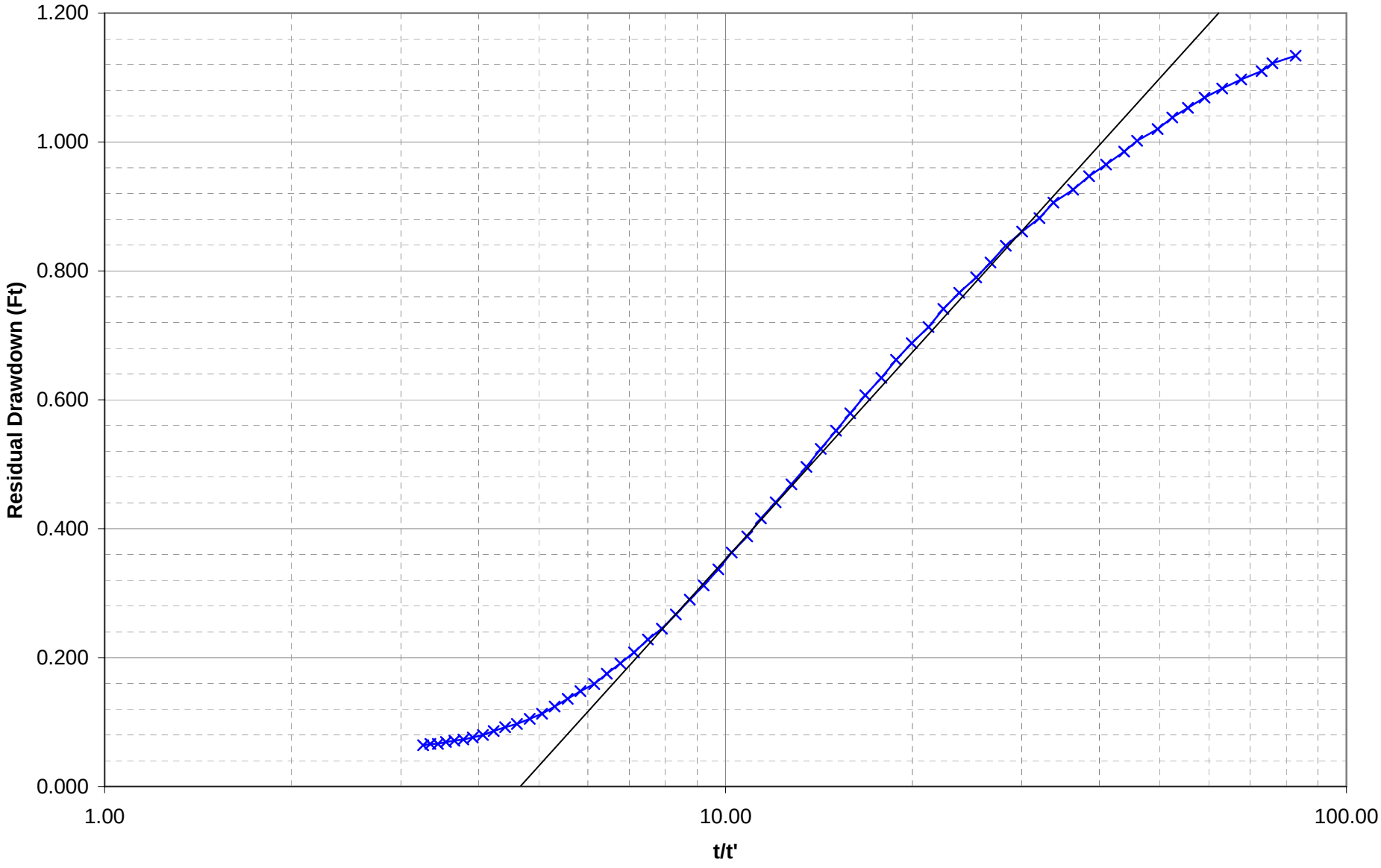
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-109C**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/6/2003	16:45:00			
Test end date and time	10/6/2003	17:28:21			
Period of pumping	30	minutes			
Static depth to water	14.51	feet below top of casing			
Starting transducer depth	7.028	feet below static water level			
Total well depth	180.6	feet below top of casing			
Depth to top of screen	160.6	feet below top of casing			
Height of interval tested [b]	20.0	feet			
Average pumping rate [Q]	0.055	gpm, or	11	cfd	
Average drawdown [s]	1.32	ft			
Specific capacity [Q/s]	0.042	gpm/ft			
Residual drawdown over one log cycle [Δs]			1.08	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			1.8	cfd/ft	
Hydraulic conductivity [K = T/b]			0.09	fpd, or	3.2E-05 cm/sec


Drawdown Over Time - MW-109C
16:40:48
16:48:00
16:55:12
17:02:24
17:09:36
17:16:48
17:24:00
17:31:12
17:38:24
17:45:36
-0.200
0.000
0.200
0.400
0.600
0.800
1.000
1.200
1.400
Drawdown (Ft)
Q = 0.055 gpm

Recovery Plot - MW-109C



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-109C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	16:25:00								DTW = 14.51 at 16:25
10/6/2003	16:45:00	0	67.5	7.029	-0.001				Start Test 1
10/6/2003	16:45:00	0.3	67.52	7.029	-0.001				
10/6/2003	16:45:00	0.6	67.52	7.029	-0.001				
10/6/2003	16:45:00	0.9	67.55	7.027	0.001				
10/6/2003	16:45:01	1.2	67.55	7.029	-0.001				
10/6/2003	16:45:01	1.5	67.55	7.029	-0.001				
10/6/2003	16:45:01	1.8	67.57	7.028	0.000				
10/6/2003	16:45:02	2.1	67.57	7.028	0.000				
10/6/2003	16:45:02	2.4	67.57	7.028	0.000				
10/6/2003	16:45:02	2.7	67.57	7.028	0.000				
10/6/2003	16:45:03	3	67.57	7.028	0.000				
10/6/2003	16:45:03	3.3	67.57	7.028	0.000				
10/6/2003	16:45:03	3.6	67.57	7.028	0.000				
10/6/2003	16:45:03	3.9	67.57	7.028	0.000				
10/6/2003	16:45:04	4.2	67.59	7.028	0.000	0.00			Pump Start
10/6/2003	16:45:04	4.5	67.57	7.013	0.015	0.00			
10/6/2003	16:45:04	4.8	67.59	6.989	0.039	0.00			
10/6/2003	16:45:05	5.1	67.59	6.971	0.057	0.02			
10/6/2003	16:45:05	5.4	67.59	6.959	0.069	0.02			
10/6/2003	16:45:05	5.7	67.59	6.948	0.080	0.02			
10/6/2003	16:45:06	6	67.59	6.93	0.098	0.03			
10/6/2003	16:45:06	6.4	67.59	6.901	0.127	0.03			
10/6/2003	16:45:06	6.7	67.59	6.871	0.157	0.03			
10/6/2003	16:45:07	7.1	67.59	6.84	0.188	0.05			
10/6/2003	16:45:07	7.5	67.59	6.814	0.214	0.05			
10/6/2003	16:45:07	8	67.59	6.787	0.241	0.05			
10/6/2003	16:45:08	8.4	67.59	6.759	0.269	0.07			
10/6/2003	16:45:08	8.9	67.59	6.724	0.304	0.07			
10/6/2003	16:45:09	9.5	67.59	6.69	0.338	0.08			
10/6/2003	16:45:10	10	67.59	6.657	0.371	0.10			
10/6/2003	16:45:10	10.6	67.57	6.622	0.406	0.10			
10/6/2003	16:45:11	11.3	67.57	6.585	0.443	0.12			
10/6/2003	16:45:11	11.9	67.57	6.547	0.481	0.12			
10/6/2003	16:45:12	12.6	67.57	6.512	0.516	0.13			
10/6/2003	16:45:13	13.4	67.57	6.475	0.553	0.15			
10/6/2003	16:45:14	14.2	67.57	6.435	0.593	0.17			
10/6/2003	16:45:15	15	67.57	6.398	0.630	0.18			
10/6/2003	16:45:15	15.9	67.57	6.361	0.667	0.18			
10/6/2003	16:45:16	16.8	67.57	6.327	0.701	0.20			
10/6/2003	16:45:17	17.8	67.57	6.296	0.732	0.22			
10/6/2003	16:45:18	18.9	67.57	6.272	0.756	0.23			
10/6/2003	16:45:20	20	67.55	6.263	0.765	0.27			
10/6/2003	16:45:21	21.2	67.57	6.264	0.764	0.28			
10/6/2003	16:45:22	22.4	67.57	6.26	0.768	0.30			
10/6/2003	16:45:23	23.8	67.55	6.261	0.767	0.32			
10/6/2003	16:45:25	25.2	67.57	6.262	0.766	0.35			
10/6/2003	16:45:26	26.7	67.57	6.253	0.775	0.37			
10/6/2003	16:45:28	28.2	67.57	6.237	0.791	0.40			
10/6/2003	16:45:29	29.8	67.55	6.227	0.801	0.42			
10/6/2003	16:45:31	31.5	67.57	6.211	0.817	0.45			
10/6/2003	16:45:33	33.3	67.57	6.198	0.830	0.48			
10/6/2003	16:45:35	35.2	67.57	6.19	0.838	0.52			
10/6/2003	16:45:37	37.3	67.57	6.178	0.850	0.55			
10/6/2003	16:45:39	39.5	67.55	6.168	0.860	0.58			
10/6/2003	16:45:41	41.8	67.55	6.16	0.868	0.62			
10/6/2003	16:45:44	44.3	67.57	6.152	0.876	0.67			
10/6/2003	16:45:46	46.9	67.57	6.145	0.883	0.70			
10/6/2003	16:45:49	49.7	67.57	6.135	0.893	0.75			
10/6/2003	16:45:52	52.6	67.57	6.125	0.903	0.80			
10/6/2003	16:45:55	55.7	67.57	6.115	0.913	0.85			
10/6/2003	16:45:58	59	67.57	6.105	0.923	0.90			
10/6/2003	16:46:02	62.5	67.57	6.091	0.937	0.97			
10/6/2003	16:46:06	66.2	67.57	6.08	0.948	1.03			
10/6/2003	16:46:10	70.1	67.57	6.068	0.960	1.10			

Well No. **MW-109C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	16:46:14	74.3	67.57	6.056	0.972	1.17			
10/6/2003	16:46:18	78.7	67.57	6.04	0.988	1.23			
10/6/2003	16:46:23	83.4	67.57	6.017	1.011	1.32			
10/6/2003	16:46:28	88.4	67.57	5.995	1.033	1.40			
10/6/2003	16:46:33	93.7	67.57	5.981	1.047	1.48			
10/6/2003	16:46:39	99.3	67.57	5.962	1.066	1.58			
10/6/2003	16:46:45	105.2	67.57	5.946	1.082	1.68			
10/6/2003	16:46:51	111.5	67.57	5.925	1.103	1.78			
10/6/2003	16:46:58	118.1	67.57	5.907	1.121	1.90			
10/6/2003	16:47:05	125.1	67.57	5.891	1.137	2.02			
10/6/2003	16:47:12	132.6	67.57	5.873	1.155	2.13			
10/6/2003	16:47:20	140.5	67.57	5.86	1.168	2.27			
10/6/2003	16:47:28	148.9	67.57	5.842	1.186	2.40			
10/6/2003	16:47:37	157.8	67.57	5.826	1.202	2.55			
10/6/2003	16:47:47	167.2	67.57	5.813	1.215	2.72			
10/6/2003	16:47:57	177.2	67.57	5.799	1.229	2.88			
10/6/2003	16:48:07	187.8	67.57	5.785	1.243	3.05			
10/6/2003	16:48:18	199	67.57	5.771	1.257	3.23			
10/6/2003	16:48:30	210.9	67.55	5.76	1.268	3.43			
10/6/2003	16:48:43	223.5	67.55	5.75	1.278	3.65			
10/6/2003	16:48:56	236.8	67.55	5.742	1.286	3.87			
10/6/2003	16:49:10	250.9	67.55	5.736	1.292	4.10			
10/6/2003	16:49:25	265.8	67.52	5.725	1.303	4.35			
10/6/2003	16:49:41	281.6	67.52	5.719	1.309	4.62			
10/6/2003	16:49:58	298.4	67.52	5.717	1.311	4.90			
10/6/2003	16:50:16	316.2	67.5	5.711	1.317	5.20			
10/6/2003	16:50:34	335	67.5	5.711	1.317	5.50			
10/6/2003	16:50:54	354.9	67.48	5.711	1.317	5.83			
10/6/2003	16:51:15	376	67.46	5.715	1.313	6.18			
10/6/2003	16:51:38	398.4	67.46	5.717	1.311	6.57			
10/6/2003	16:52:02	422.1	67.43	5.718	1.310	6.97			0.053 gpm flow rate
10/6/2003	16:52:27	447.2	67.41	5.72	1.308	7.38			
10/6/2003	16:52:53	473.8	67.39	5.722	1.306	7.82			
10/6/2003	16:53:21	502	67.37	5.724	1.304	8.28			
10/6/2003	16:53:51	531.9	67.32	5.727	1.301	8.78			
10/6/2003	16:54:21	561.9	67.3	5.729	1.299	9.28			
10/6/2003	16:54:51	591.9	67.25	5.731	1.297	9.78			
10/6/2003	16:55:21	621.9	67.23	5.733	1.295	10.28			
10/6/2003	16:55:51	651.9	67.21	5.734	1.294	10.78			
10/6/2003	16:56:21	681.9	67.16	5.73	1.298	11.28			
10/6/2003	16:56:51	711.9	67.12	5.727	1.301	11.78			
10/6/2003	16:57:21	741.9	67.07	5.727	1.301	12.28			0.054 gpm flow rate
10/6/2003	16:57:51	771.9	67.05	5.731	1.297	12.78			
10/6/2003	16:58:21	801.9	67	5.732	1.296	13.28			
10/6/2003	16:58:51	831.9	66.96	5.732	1.296	13.78			
10/6/2003	16:59:21	861.9	66.94	5.73	1.298	14.28			
10/6/2003	16:59:51	891.9	66.89	5.729	1.299	14.78			
10/6/2003	17:00:21	921.9	66.85	5.725	1.303	15.28			
10/6/2003	17:00:51	951.9	66.82	5.726	1.302	15.78			
10/6/2003	17:01:21	981.9	66.78	5.728	1.300	16.28			
10/6/2003	17:01:51	1011.9	66.73	5.723	1.305	16.78			
10/6/2003	17:02:21	1041.9	66.71	5.717	1.311	17.28			
10/6/2003	17:02:51	1071.9	66.67	5.711	1.317	17.78			
10/6/2003	17:03:21	1101.9	66.62	5.706	1.322	18.28			0.058 gpm flow rate
10/6/2003	17:03:51	1131.9	66.6	5.702	1.326	18.78			
10/6/2003	17:04:21	1161.9	66.55	5.703	1.325	19.28			
10/6/2003	17:04:51	1191.9	66.53	5.699	1.329	19.78			
10/6/2003	17:05:21	1221.9	66.48	5.699	1.329	20.28			
10/6/2003	17:05:51	1251.9	66.44	5.7	1.328	20.78			
10/6/2003	17:06:21	1281.9	66.42	5.7	1.328	21.28			
10/6/2003	17:06:51	1311.9	66.37	5.699	1.329	21.78			
10/6/2003	17:07:21	1341.9	66.33	5.701	1.327	22.28			
10/6/2003	17:07:51	1371.9	66.3	5.701	1.327	22.78			
10/6/2003	17:08:21	1401.9	66.26	5.702	1.326	23.28			
10/6/2003	17:08:51	1431.9	66.24	5.702	1.326	23.78			
10/6/2003	17:09:21	1461.9	66.21	5.702	1.326	24.28			
10/6/2003	17:09:51	1491.9	66.17	5.703	1.325	24.78			
10/6/2003	17:10:21	1521.9	66.12	5.703	1.325	25.28			0.055 gpm flow rate
10/6/2003	17:10:51	1551.9	66.1	5.699	1.329	25.78			

Well No. **MW-109C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	17:11:21	1581.9	66.05	5.7	1.328	26.28			
10/6/2003	17:11:51	1611.9	66.03	5.698	1.330	26.78			
10/6/2003	17:12:21	1641.9	65.99	5.698	1.330	27.28			
10/6/2003	17:12:51	1671.9	65.96	5.699	1.329	27.78			
10/6/2003	17:13:21	1701.9	65.92	5.697	1.331	28.28			
10/6/2003	17:13:51	1731.9	65.9	5.699	1.329	28.78			
10/6/2003	17:14:21	1761.9	65.87	5.698	1.330	29.28			
10/6/2003	17:14:51	1791.9	65.85	5.696	1.332	29.78			
10/6/2003	17:15:00	0	65.83	5.698	1.330	29.93			Start Test 2
10/6/2003	17:15:00	0.3	65.85	5.696	1.332	29.93			
10/6/2003	17:15:00	0.6	65.87	5.696	1.332	29.93			
10/6/2003	17:15:00	0.9	65.9	5.695	1.333	29.93			
10/6/2003	17:15:01	1.2	65.9	5.695	1.333	29.95			
10/6/2003	17:15:01	1.5	65.9	5.695	1.333	29.95			
10/6/2003	17:15:01	1.8	65.9	5.695	1.333	29.95			
10/6/2003	17:15:02	2.1	65.9	5.695	1.333	29.97			
10/6/2003	17:15:02	2.4	65.9	5.695	1.333	29.97			
10/6/2003	17:15:02	2.7	65.92	5.695	1.333	29.97			
10/6/2003	17:15:03	3	65.92	5.695	1.333	29.98			
10/6/2003	17:15:03	3.3	65.92	5.695	1.333	29.98			
10/6/2003	17:15:03	3.6	65.92	5.695	1.333	29.98			
10/6/2003	17:15:03	3.9	65.92	5.697	1.331	29.98			
10/6/2003	17:15:04	4.2	65.92	5.697	1.331	30.00			
10/6/2003	17:15:04	4.5	65.92	5.697	1.331	30.00	0.00		Pump Stop
10/6/2003	17:15:04	4.8	65.92	5.701	1.327	30.00	0.00		
10/6/2003	17:15:05	5.1	65.92	5.703	1.325	30.02	0.02	1801.00	
10/6/2003	17:15:05	5.4	65.92	5.705	1.323	30.02	0.02	1801.00	
10/6/2003	17:15:05	5.7	65.92	5.709	1.319	30.02	0.02	1801.00	
10/6/2003	17:15:06	6	65.92	5.713	1.315	30.03	0.03	901.00	
10/6/2003	17:15:06	6.4	65.92	5.717	1.311	30.03	0.03	901.00	
10/6/2003	17:15:06	6.7	65.92	5.719	1.309	30.03	0.03	901.00	
10/6/2003	17:15:07	7.1	65.92	5.723	1.305	30.05	0.05	601.00	
10/6/2003	17:15:07	7.5	65.92	5.729	1.299	30.05	0.05	601.00	
10/6/2003	17:15:08	8	65.92	5.733	1.295	30.07	0.07	451.00	
10/6/2003	17:15:08	8.4	65.92	5.736	1.292	30.07	0.07	451.00	
10/6/2003	17:15:08	8.9	65.92	5.74	1.288	30.07	0.07	451.00	
10/6/2003	17:15:09	9.5	65.92	5.746	1.282	30.08	0.08	361.00	
10/6/2003	17:15:10	10	65.92	5.752	1.276	30.10	0.10	301.00	
10/6/2003	17:15:10	10.6	65.92	5.758	1.270	30.10	0.10	301.00	
10/6/2003	17:15:11	11.3	65.92	5.762	1.266	30.12	0.12	258.14	
10/6/2003	17:15:11	11.9	65.9	5.768	1.260	30.12	0.12	258.14	
10/6/2003	17:15:12	12.6	65.9	5.776	1.252	30.13	0.13	226.00	
10/6/2003	17:15:13	13.4	65.9	5.782	1.246	30.15	0.15	201.00	
10/6/2003	17:15:14	14.2	65.9	5.79	1.238	30.17	0.17	181.00	
10/6/2003	17:15:15	15	65.9	5.796	1.232	30.18	0.18	164.64	
10/6/2003	17:15:15	15.9	65.9	5.805	1.223	30.18	0.18	164.64	
10/6/2003	17:15:16	16.8	65.9	5.811	1.217	30.20	0.20	151.00	
10/6/2003	17:15:17	17.8	65.9	5.821	1.207	30.22	0.22	139.46	
10/6/2003	17:15:18	18.9	65.9	5.829	1.199	30.23	0.23	129.57	
10/6/2003	17:15:20	20	65.9	5.839	1.189	30.27	0.27	113.50	
10/6/2003	17:15:21	21.2	65.9	5.849	1.179	30.28	0.28	106.88	
10/6/2003	17:15:22	22.4	65.9	5.86	1.168	30.30	0.30	101.00	
10/6/2003	17:15:23	23.8	65.9	5.87	1.158	30.32	0.32	95.74	
10/6/2003	17:15:25	25.2	65.87	5.882	1.146	30.35	0.35	86.71	
10/6/2003	17:15:26	26.7	65.87	5.894	1.134	30.37	0.37	82.82	
10/6/2003	17:15:28	28.2	65.87	5.906	1.122	30.40	0.40	76.00	
10/6/2003	17:15:29	29.8	65.87	5.918	1.110	30.42	0.42	73.00	
10/6/2003	17:15:31	31.5	65.87	5.931	1.097	30.45	0.45	67.67	
10/6/2003	17:15:33	33.3	65.87	5.945	1.083	30.48	0.48	63.07	
10/6/2003	17:15:35	35.2	65.87	5.959	1.069	30.52	0.52	59.06	
10/6/2003	17:15:37	37.3	65.87	5.975	1.053	30.55	0.55	55.55	
10/6/2003	17:15:39	39.5	65.87	5.99	1.038	30.58	0.58	52.43	
10/6/2003	17:15:41	41.8	65.87	6.008	1.020	30.62	0.62	49.65	
10/6/2003	17:15:44	44.3	65.87	6.026	1.002	30.67	0.67	46.00	
10/6/2003	17:15:46	46.9	65.87	6.043	0.985	30.70	0.70	43.86	
10/6/2003	17:15:49	49.7	65.87	6.063	0.965	30.75	0.75	41.00	
10/6/2003	17:15:52	52.6	65.87	6.081	0.947	30.80	0.80	38.50	
10/6/2003	17:15:55	55.7	65.87	6.102	0.926	30.85	0.85	36.29	
10/6/2003	17:15:59	59	65.87	6.122	0.906	30.92	0.92	33.73	

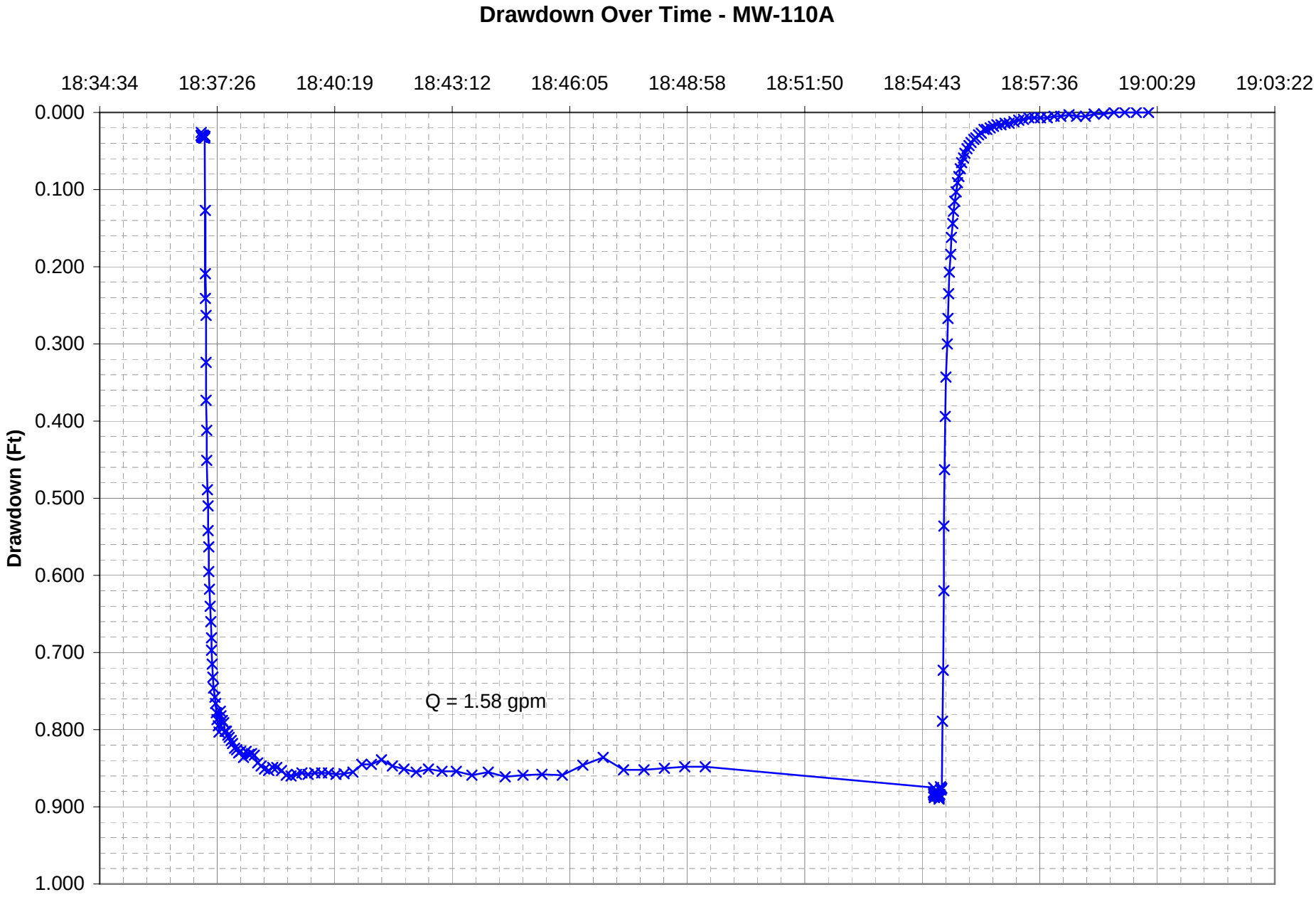
Well No. **MW-109C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	17:16:02	62.5	65.85	6.146	0.882	30.97	0.97	32.03	
10/6/2003	17:16:06	66.2	65.85	6.167	0.861	31.03	1.03	30.03	
10/6/2003	17:16:10	70.1	65.85	6.189	0.839	31.10	1.10	28.27	
10/6/2003	17:16:14	74.3	65.85	6.215	0.813	31.17	1.17	26.71	
10/6/2003	17:16:18	78.7	65.85	6.238	0.790	31.23	1.23	25.32	
10/6/2003	17:16:23	83.4	65.83	6.262	0.766	31.32	1.32	23.78	
10/6/2003	17:16:28	88.4	65.83	6.287	0.741	31.40	1.40	22.43	
10/6/2003	17:16:33	93.7	65.83	6.315	0.713	31.48	1.48	21.22	
10/6/2003	17:16:39	99.3	65.83	6.34	0.688	31.58	1.58	19.95	
10/6/2003	17:16:45	105.2	65.81	6.366	0.662	31.68	1.68	18.82	
10/6/2003	17:16:51	111.5	65.81	6.394	0.634	31.78	1.78	17.82	
10/6/2003	17:16:58	118.1	65.81	6.421	0.607	31.90	1.90	16.79	
10/6/2003	17:17:05	125.1	65.78	6.449	0.579	32.02	2.02	15.88	
10/6/2003	17:17:12	132.6	65.78	6.476	0.552	32.13	2.13	15.06	
10/6/2003	17:17:20	140.5	65.78	6.504	0.524	32.27	2.27	14.24	
10/6/2003	17:17:28	148.9	65.76	6.532	0.496	32.40	2.40	13.50	
10/6/2003	17:17:37	157.8	65.76	6.559	0.469	32.55	2.55	12.76	
10/6/2003	17:17:47	167.2	65.76	6.587	0.441	32.72	2.72	12.04	
10/6/2003	17:17:57	177.2	65.76	6.612	0.416	32.88	2.88	11.40	
10/6/2003	17:18:07	187.8	65.76	6.64	0.388	33.05	3.05	10.84	
10/6/2003	17:18:19	199	65.76	6.665	0.363	33.25	3.25	10.23	
10/6/2003	17:18:30	210.9	65.76	6.691	0.337	33.43	3.43	9.74	
10/6/2003	17:18:43	223.5	65.76	6.716	0.312	33.65	3.65	9.22	
10/6/2003	17:18:56	236.8	65.78	6.738	0.290	33.87	3.87	8.76	
10/6/2003	17:19:10	250.9	65.78	6.761	0.267	34.10	4.10	8.32	
10/6/2003	17:19:25	265.8	65.78	6.783	0.245	34.35	4.35	7.90	
10/6/2003	17:19:41	281.6	65.81	6.8	0.228	34.62	4.62	7.50	
10/6/2003	17:19:58	298.4	65.81	6.82	0.208	34.90	4.90	7.12	
10/6/2003	17:20:16	316.2	65.83	6.837	0.191	35.20	5.20	6.77	
10/6/2003	17:20:35	335	65.83	6.853	0.175	35.52	5.52	6.44	
10/6/2003	17:20:54	354.9	65.85	6.869	0.159	35.83	5.83	6.14	
10/6/2003	17:21:16	376	65.85	6.88	0.148	36.20	6.20	5.84	
10/6/2003	17:21:38	398.4	65.87	6.892	0.136	36.57	6.57	5.57	
10/6/2003	17:22:02	422.1	65.9	6.904	0.124	36.97	6.97	5.31	
10/6/2003	17:22:27	447.2	65.9	6.915	0.113	37.38	7.38	5.06	
10/6/2003	17:22:53	473.8	65.92	6.923	0.105	37.82	7.82	4.84	
10/6/2003	17:23:22	502	65.94	6.931	0.097	38.30	8.30	4.61	
10/6/2003	17:23:51	531.9	65.96	6.936	0.092	38.78	8.78	4.42	
10/6/2003	17:24:21	561.9	65.99	6.942	0.086	39.28	9.28	4.23	
10/6/2003	17:24:51	591.9	65.99	6.948	0.080	39.78	9.78	4.07	
10/6/2003	17:25:21	621.9	66.01	6.952	0.076	40.28	10.28	3.92	
10/6/2003	17:25:51	651.9	66.03	6.955	0.073	40.78	10.78	3.78	
10/6/2003	17:26:21	681.9	66.05	6.957	0.071	41.28	11.28	3.66	
10/6/2003	17:26:51	711.9	66.08	6.959	0.069	41.78	11.78	3.55	
10/6/2003	17:27:21	741.9	66.1	6.962	0.066	42.28	12.28	3.44	
10/6/2003	17:27:51	771.9	66.12	6.962	0.066	42.78	12.78	3.35	
10/6/2003	17:28:21	801.9	66.15	6.964	0.064	43.28	13.28	3.26	
10/6/2003	17:38:00								DTW = 14.55 at 17:38

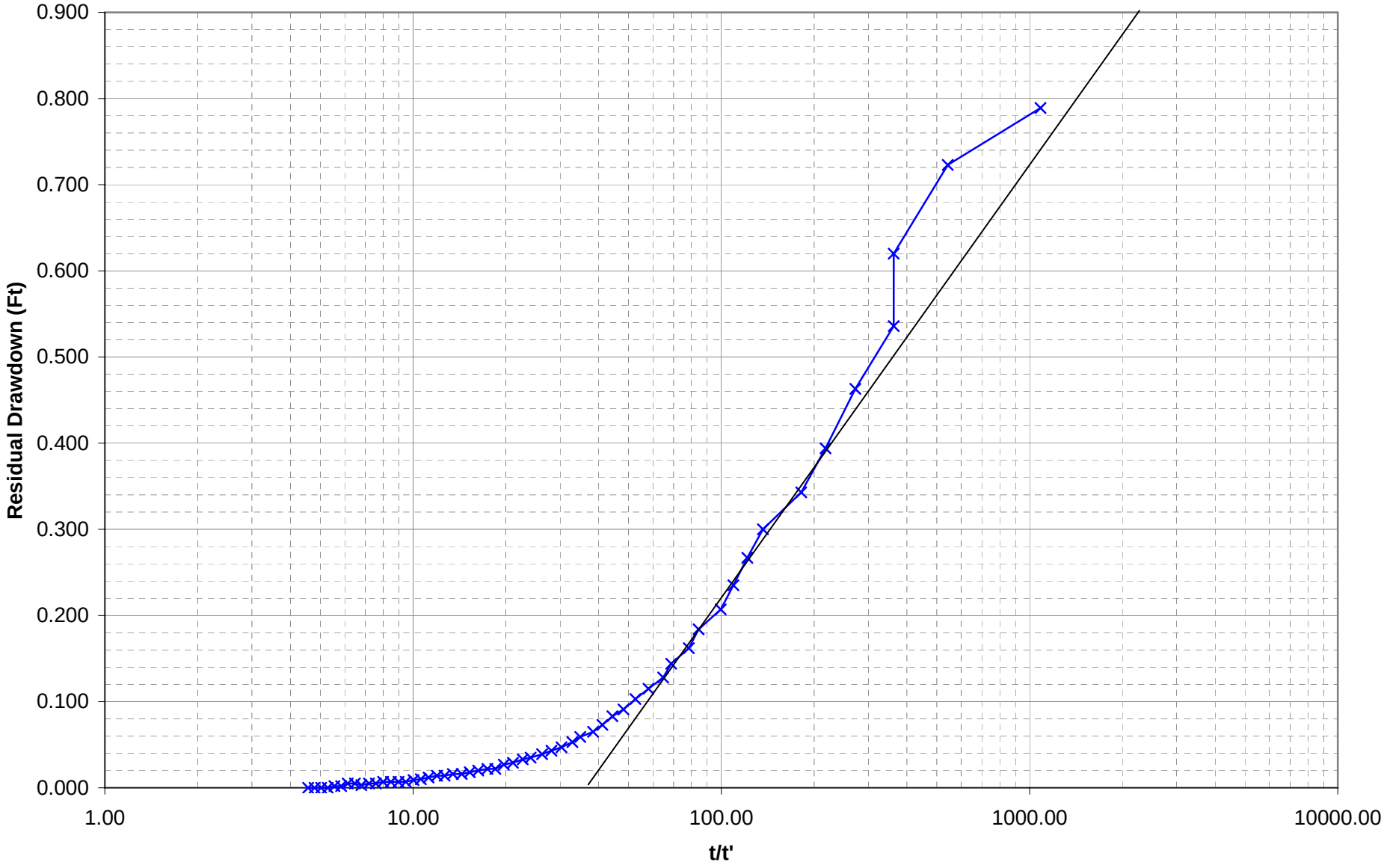
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-110A**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/7/2003	18:37:03			
Test end date and time	10/7/2003	19:00:16			
Period of pumping	18	minutes			
Static depth to water	12.30	feet below top of casing			
Startiing transducer depth	2.748	feet below static water level			
Total well depth	18.6	feet below top of casing			
Depth to top of screen	8.6	feet below top of casing			
Height of interval tested [b]	6.3	feet			
Average pumping rate [Q]	1.58	gpm, or	304	cfd	
Average drawdown [s]	0.86	ft			
Specific capacity [Q/s]	1.84	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.50	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			111.3	cfd/ft	
Hydraulic conductivity [K = T/b]			17.7	fpd, or	6.2E-03 cm/sec


Drawdown Over Time - MW-110A
18:34:34
18:37:26
18:40:19
18:43:12
18:46:05
18:48:58
18:51:50
18:54:43
18:57:36
19:00:29
19:03:22
0.000
0.100
0.200
0.300
0.400
0.500
0.600
0.700
0.800
0.900
1.000
Drawdown (Ft)
Q = 1.58 gpm

Recovery Plot - MW-110A



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-110A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	18:02:00								DTW = 12.32 at 18:02
10/7/2003	18:19:00								DTW = 12.32 at 18:19
10/7/2003	18:37:03	0	55.98	2.722	0.026				Start Test 1
10/7/2003	18:37:03	0.3	56.01	2.718	0.030				
10/7/2003	18:37:03	0.6	56.01	2.718	0.030				
10/7/2003	18:37:03	0.9	56.03	2.718	0.030				
10/7/2003	18:37:04	1.2	56.03	2.718	0.030				
10/7/2003	18:37:04	1.5	56.03	2.716	0.032				
10/7/2003	18:37:04	1.8	56.03	2.716	0.032				
10/7/2003	18:37:05	2.1	56.05	2.716	0.032				
10/7/2003	18:37:05	2.4	56.05	2.716	0.032				
10/7/2003	18:37:05	2.7	56.05	2.718	0.030				
10/7/2003	18:37:06	3	56.05	2.716	0.032				
10/7/2003	18:37:06	3.3	56.05	2.718	0.030				
10/7/2003	18:37:06	3.6	56.05	2.718	0.030				
10/7/2003	18:37:06	3.9	56.05	2.718	0.030				
10/7/2003	18:37:07	4.2	56.05	2.716	0.032				
10/7/2003	18:37:07	4.5	56.07	2.715	0.033				
10/7/2003	18:37:07	4.8	56.07	2.715	0.033				
10/7/2003	18:37:08	5.1	56.07	2.717	0.031				
10/7/2003	18:37:08	5.4	56.07	2.717	0.031				
10/7/2003	18:37:08	5.7	56.07	2.715	0.033	0.00			Pump Start
10/7/2003	18:37:09	6	56.07	2.507	0.241	0.02			
10/7/2003	18:37:09	6.4	56.07	2.621	0.127	0.02			
10/7/2003	18:37:09	6.7	56.07	2.539	0.209	0.02			
10/7/2003	18:37:10	7.1	56.07	2.485	0.263	0.03			
10/7/2003	18:37:10	7.5	56.07	2.424	0.324	0.03			
10/7/2003	18:37:10	8	56.07	2.375	0.373	0.03			
10/7/2003	18:37:11	8.4	56.07	2.336	0.412	0.05			
10/7/2003	18:37:11	8.9	56.07	2.297	0.451	0.05			
10/7/2003	18:37:12	9.5	56.07	2.259	0.489	0.07			
10/7/2003	18:37:13	10	56.07	2.238	0.510	0.08			
10/7/2003	18:37:13	10.6	56.07	2.206	0.542	0.08			
10/7/2003	18:37:14	11.3	56.07	2.185	0.563	0.10			
10/7/2003	18:37:14	11.9	56.07	2.153	0.595	0.10			
10/7/2003	18:37:15	12.6	56.07	2.13	0.618	0.12			
10/7/2003	18:37:16	13.4	56.05	2.108	0.640	0.13			
10/7/2003	18:37:17	14.2	56.05	2.088	0.660	0.15			
10/7/2003	18:37:18	15	56.05	2.067	0.681	0.17			
10/7/2003	18:37:18	15.9	56.05	2.051	0.697	0.17			
10/7/2003	18:37:19	16.8	56.05	2.033	0.715	0.18			
10/7/2003	18:37:20	17.8	56.05	2.016	0.732	0.20			
10/7/2003	18:37:21	18.9	56.05	2.002	0.746	0.22			
10/7/2003	18:37:23	20	56.05	1.99	0.758	0.25			
10/7/2003	18:37:24	21.2	56.05	1.982	0.766	0.27			
10/7/2003	18:37:25	22.4	56.05	1.97	0.778	0.28			
10/7/2003	18:37:26	23.8	56.05	1.961	0.787	0.30			
10/7/2003	18:37:28	25.2	56.05	1.953	0.795	0.33			
10/7/2003	18:37:29	26.7	56.05	1.945	0.803	0.35			
10/7/2003	18:37:31	28.2	56.07	1.972	0.776	0.38			
10/7/2003	18:37:32	29.8	56.07	1.966	0.782	0.40			
10/7/2003	18:37:34	31.5	56.07	1.96	0.788	0.43			
10/7/2003	18:37:36	33.3	56.07	1.957	0.791	0.47			
10/7/2003	18:37:38	35.2	56.1	1.946	0.802	0.50			
10/7/2003	18:37:40	37.3	56.1	1.946	0.802	0.53			
10/7/2003	18:37:42	39.5	56.1	1.941	0.807	0.57			
10/7/2003	18:37:44	41.8	56.12	1.938	0.810	0.60			
10/7/2003	18:37:47	44.3	56.12	1.934	0.814	0.65			
10/7/2003	18:37:49	46.9	56.14	1.93	0.818	0.68			
10/7/2003	18:37:52	49.7	56.14	1.924	0.824	0.73			
10/7/2003	18:37:55	52.6	56.16	1.922	0.826	0.78			
10/7/2003	18:37:58	55.7	56.16	1.918	0.830	0.83			
10/7/2003	18:38:01	59	56.19	1.92	0.828	0.88			
10/7/2003	18:38:05	62.5	56.21	1.912	0.836	0.95			
10/7/2003	18:38:09	66.2	56.23	1.92	0.828	1.02			

Well No. **MW-110A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	18:38:13	70.1	56.23	1.916	0.832	1.08			
10/7/2003	18:38:17	74.3	56.26	1.917	0.831	1.15			
10/7/2003	18:38:21	78.7	56.28	1.915	0.833	1.22			
10/7/2003	18:38:26	83.4	56.3	1.905	0.843	1.30			
10/7/2003	18:38:31	88.4	56.3	1.901	0.847	1.38			
10/7/2003	18:38:36	93.7	56.32	1.897	0.851	1.47			
10/7/2003	18:38:42	99.3	56.32	1.895	0.853	1.57			
10/7/2003	18:38:48	105.2	56.35	1.899	0.849	1.67			
10/7/2003	18:38:54	111.5	56.37	1.899	0.849	1.77			
10/7/2003	18:39:01	118.1	56.37	1.895	0.853	1.88			1.54 gpm flow rate
10/7/2003	18:39:08	125.1	56.39	1.889	0.859	2.00			
10/7/2003	18:39:15	132.6	56.41	1.888	0.860	2.12			
10/7/2003	18:39:23	140.5	56.41	1.89	0.858	2.25			
10/7/2003	18:39:31	148.9	56.44	1.892	0.856	2.38			
10/7/2003	18:39:40	157.8	56.44	1.89	0.858	2.53			
10/7/2003	18:39:50	167.2	56.46	1.892	0.856	2.70			
10/7/2003	18:40:00	177.2	56.46	1.892	0.856	2.87			
10/7/2003	18:40:10	187.8	56.48	1.892	0.856	3.03			
10/7/2003	18:40:21	199	56.48	1.89	0.858	3.22			
10/7/2003	18:40:33	210.9	56.5	1.891	0.857	3.42			
10/7/2003	18:40:46	223.5	56.53	1.893	0.855	3.63			
10/7/2003	18:40:59	236.8	56.53	1.903	0.845	3.85			
10/7/2003	18:41:13	250.9	56.53	1.903	0.845	4.08			
10/7/2003	18:41:28	265.8	56.53	1.909	0.839	4.33			
10/7/2003	18:41:44	281.6	56.55	1.901	0.847	4.60			
10/7/2003	18:42:01	298.4	56.57	1.897	0.851	4.88			
10/7/2003	18:42:19	316.2	56.57	1.893	0.855	5.18			
10/7/2003	18:42:37	335	56.57	1.897	0.851	5.48			
10/7/2003	18:42:57	354.9	56.59	1.894	0.854	5.82			
10/7/2003	18:43:18	376	56.59	1.894	0.854	6.17			1.62 gpm flow rate
10/7/2003	18:43:41	398.4	56.59	1.889	0.859	6.55			
10/7/2003	18:44:05	422.1	56.59	1.893	0.855	6.95			
10/7/2003	18:44:30	447.2	56.59	1.887	0.861	7.37			
10/7/2003	18:44:56	473.8	56.59	1.889	0.859	7.80			
10/7/2003	18:45:24	502	56.62	1.89	0.858	8.27			
10/7/2003	18:45:54	531.9	56.59	1.889	0.859	8.77			
10/7/2003	18:46:24	561.9	56.59	1.902	0.846	9.27			
10/7/2003	18:46:54	591.9	56.59	1.912	0.836	9.77			
10/7/2003	18:47:24	621.9	56.59	1.896	0.852	10.27			
10/7/2003	18:47:54	651.9	56.59	1.896	0.852	10.77			
10/7/2003	18:48:24	681.9	56.59	1.898	0.850	11.27			
10/7/2003	18:48:54	711.9	56.62	1.9	0.848	11.77			
10/7/2003	18:49:24	741.9	56.62	1.9	0.848	12.27			1.58 gpm flow rate at 18:52
10/7/2003	18:55:00	0	56.62	1.873	0.875	17.87			Start Test 2
10/7/2003	18:55:00	0.3	56.64	1.867	0.881	17.87			
10/7/2003	18:55:00	0.6	56.66	1.864	0.884	17.87			
10/7/2003	18:55:00	0.9	56.66	1.866	0.882	17.87			
10/7/2003	18:55:01	1.2	56.66	1.866	0.882	17.88			
10/7/2003	18:55:01	1.5	56.66	1.86	0.888	17.88			
10/7/2003	18:55:01	1.8	56.69	1.862	0.886	17.88			
10/7/2003	18:55:02	2.1	56.69	1.866	0.882	17.90			
10/7/2003	18:55:02	2.4	56.69	1.862	0.886	17.90			
10/7/2003	18:55:02	2.7	56.69	1.862	0.886	17.90			
10/7/2003	18:55:03	3	56.69	1.862	0.886	17.92			
10/7/2003	18:55:03	3.3	56.69	1.862	0.886	17.92			
10/7/2003	18:55:03	3.6	56.69	1.864	0.884	17.92			
10/7/2003	18:55:03	3.9	56.69	1.868	0.880	17.92			
10/7/2003	18:55:04	4.2	56.69	1.866	0.882	17.93			
10/7/2003	18:55:04	4.5	56.69	1.862	0.886	17.93			
10/7/2003	18:55:04	4.8	56.69	1.866	0.882	17.93			
10/7/2003	18:55:05	5.1	56.71	1.866	0.882	17.95			
10/7/2003	18:55:05	5.4	56.71	1.866	0.882	17.95			
10/7/2003	18:55:05	5.7	56.71	1.864	0.884	17.95			
10/7/2003	18:55:06	6	56.71	1.866	0.882	17.97			
10/7/2003	18:55:06	6.4	56.71	1.866	0.882	17.97			
10/7/2003	18:55:06	6.7	56.71	1.862	0.886	17.97			
10/7/2003	18:55:07	7.1	56.71	1.862	0.886	17.98			
10/7/2003	18:55:07	7.5	56.71	1.862	0.886	17.98			
10/7/2003	18:55:08	8	56.71	1.862	0.886	18.00			

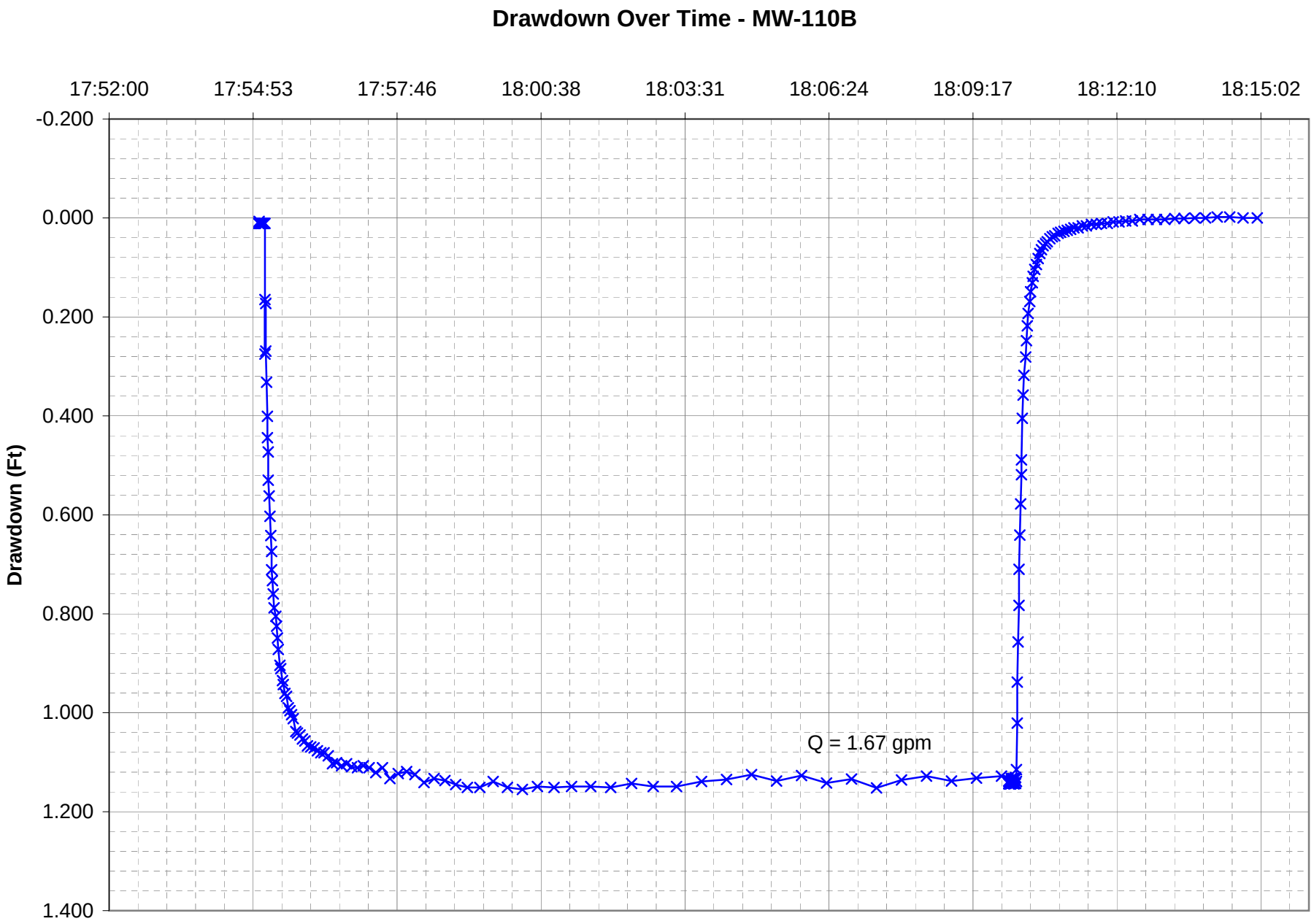
Well No. **MW-110A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	18:55:08	8.4	56.71	1.858	0.890	18.00			
10/7/2003	18:55:08	8.9	56.71	1.86	0.888	18.00			
10/7/2003	18:55:09	9.5	56.71	1.864	0.884	18.02			
10/7/2003	18:55:10	10	56.71	1.87	0.878	18.03			
10/7/2003	18:55:10	10.6	56.71	1.874	0.874	18.03			
10/7/2003	18:55:11	11.3	56.71	1.872	0.876	18.05			
10/7/2003	18:55:11	11.9	56.69	1.87	0.878	18.05			
10/7/2003	18:55:12	12.6	56.69	1.872	0.876	18.07	0.00		Pump Stop
10/7/2003	18:55:13	13.4	56.69	1.959	0.789	18.08	0.02	1085.00	
10/7/2003	18:55:14	14.2	56.69	2.025	0.723	18.10	0.03	543.00	
10/7/2003	18:55:15	15	56.69	2.128	0.620	18.12	0.05	362.33	
10/7/2003	18:55:15	15.9	56.69	2.212	0.536	18.12	0.05	362.33	
10/7/2003	18:55:16	16.8	56.69	2.285	0.463	18.13	0.07	272.00	
10/7/2003	18:55:17	17.8	56.69	2.354	0.394	18.15	0.08	217.80	
10/7/2003	18:55:18	18.9	56.69	2.405	0.343	18.17	0.10	181.67	
10/7/2003	18:55:20	20	56.66	2.448	0.300	18.20	0.13	136.50	
10/7/2003	18:55:21	21.2	56.69	2.481	0.267	18.22	0.15	121.44	
10/7/2003	18:55:22	22.4	56.66	2.513	0.235	18.23	0.17	109.40	
10/7/2003	18:55:23	23.8	56.66	2.541	0.207	18.25	0.18	99.55	
10/7/2003	18:55:25	25.2	56.66	2.564	0.184	18.28	0.22	84.38	
10/7/2003	18:55:26	26.7	56.66	2.586	0.162	18.30	0.23	78.43	
10/7/2003	18:55:28	28.2	56.66	2.604	0.144	18.33	0.27	68.75	
10/7/2003	18:55:29	29.8	56.64	2.62	0.128	18.35	0.28	64.76	
10/7/2003	18:55:31	31.5	56.64	2.633	0.115	18.38	0.32	58.05	
10/7/2003	18:55:33	33.3	56.64	2.645	0.103	18.42	0.35	52.62	
10/7/2003	18:55:35	35.2	56.62	2.657	0.091	18.45	0.38	48.13	
10/7/2003	18:55:37	37.3	56.62	2.665	0.083	18.48	0.42	44.36	
10/7/2003	18:55:39	39.5	56.59	2.675	0.073	18.52	0.45	41.15	
10/7/2003	18:55:41	41.8	56.59	2.683	0.065	18.55	0.48	38.38	
10/7/2003	18:55:44	44.3	56.59	2.689	0.059	18.60	0.53	34.88	
10/7/2003	18:55:46	46.9	56.57	2.695	0.053	18.63	0.57	32.88	
10/7/2003	18:55:49	49.7	56.55	2.701	0.047	18.68	0.62	30.30	
10/7/2003	18:55:52	52.6	56.55	2.705	0.043	18.73	0.67	28.10	
10/7/2003	18:55:55	55.7	56.53	2.709	0.039	18.78	0.72	26.21	
10/7/2003	18:55:59	59	56.53	2.713	0.035	18.85	0.78	24.06	
10/7/2003	18:56:02	62.5	56.5	2.715	0.033	18.90	0.83	22.68	
10/7/2003	18:56:06	66.2	56.48	2.719	0.029	18.97	0.90	21.07	
10/7/2003	18:56:10	70.1	56.48	2.721	0.027	19.03	0.97	19.69	
10/7/2003	18:56:14	74.3	56.46	2.726	0.022	19.10	1.03	18.48	
10/7/2003	18:56:18	78.7	56.44	2.726	0.022	19.17	1.10	17.42	
10/7/2003	18:56:23	83.4	56.44	2.728	0.020	19.25	1.18	16.27	
10/7/2003	18:56:28	88.4	56.41	2.73	0.018	19.33	1.27	15.26	
10/7/2003	18:56:33	93.7	56.41	2.732	0.016	19.42	1.35	14.38	
10/7/2003	18:56:39	99.3	56.39	2.732	0.016	19.52	1.45	13.46	
10/7/2003	18:56:45	105.2	56.37	2.734	0.014	19.62	1.55	12.66	
10/7/2003	18:56:51	111.5	56.37	2.734	0.014	19.72	1.65	11.95	
10/7/2003	18:56:58	118.1	56.35	2.736	0.012	19.83	1.77	11.23	
10/7/2003	18:57:05	125.1	56.35	2.738	0.010	19.95	1.88	10.59	
10/7/2003	18:57:12	132.6	56.32	2.739	0.009	20.07	2.00	10.03	
10/7/2003	18:57:20	140.5	56.3	2.741	0.007	20.20	2.13	9.47	
10/7/2003	18:57:28	148.9	56.3	2.741	0.007	20.33	2.27	8.97	
10/7/2003	18:57:37	157.8	56.3	2.741	0.007	20.48	2.42	8.48	
10/7/2003	18:57:47	167.2	56.28	2.741	0.007	20.65	2.58	7.99	
10/7/2003	18:57:57	177.2	56.28	2.743	0.005	20.82	2.75	7.57	
10/7/2003	18:58:07	187.8	56.26	2.743	0.005	20.98	2.92	7.19	
10/7/2003	18:58:19	199	56.26	2.745	0.003	21.18	3.12	6.80	
10/7/2003	18:58:30	210.9	56.23	2.743	0.005	21.37	3.30	6.47	
10/7/2003	18:58:43	223.5	56.23	2.743	0.005	21.58	3.52	6.14	
10/7/2003	18:58:56	236.8	56.21	2.746	0.002	21.80	3.73	5.84	
10/7/2003	18:59:10	250.9	56.21	2.746	0.002	22.03	3.97	5.55	
10/7/2003	18:59:25	265.8	56.21	2.748	0.000	22.28	4.22	5.28	
10/7/2003	18:59:41	281.6	56.19	2.748	0.000	22.55	4.48	5.03	
10/7/2003	18:59:58	298.4	56.19	2.748	0.000	22.83	4.77	4.79	
10/7/2003	19:00:16	316.2	56.19	2.748	0.000	23.13	5.07	4.57	DTW = 12.30 at 19:00

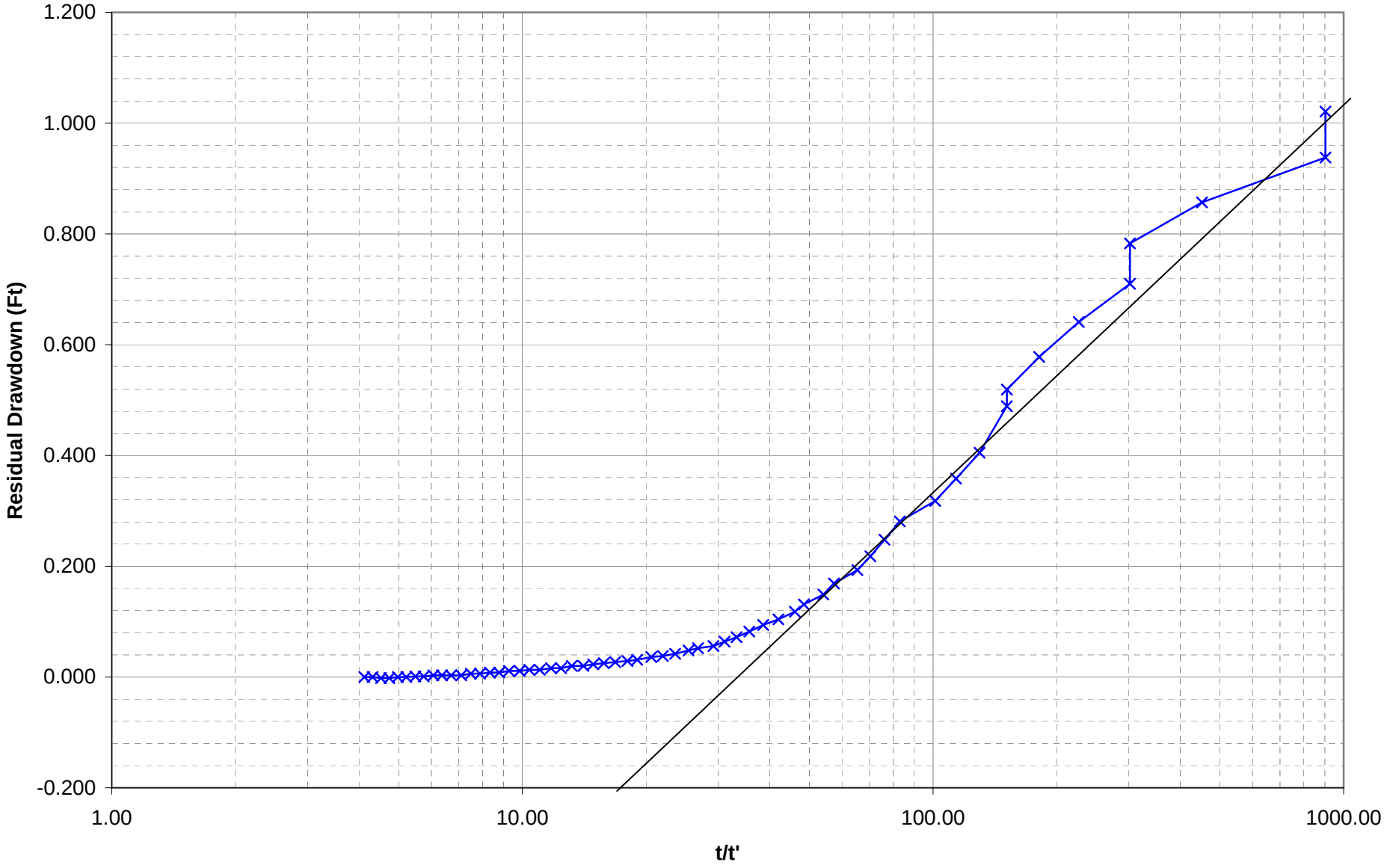
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-110B**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/7/2003	17:55:00			
Test end date and time	10/7/2003	18:14:58			
Period of pumping	15	minutes			
Static depth to water	13.17	feet below top of casing			
Startiing transducer depth	4.312	feet below static water level			
Total well depth	66.0	feet below top of casing			
Depth to top of screen	56.0	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.67	gpm, or	321	cfd	
Average drawdown [s]	1.15	ft			
Specific capacity [Q/s]	1.45	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.70	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			84.1	cfd/ft	
Hydraulic conductivity [K = T/b]			8.4	fpd, or	3.0E-03 cm/sec


Drawdown Over Time - MW-110B
17:52:00
17:54:53
17:57:46
18:00:38
18:03:31
18:06:24
18:09:17
18:12:10
18:15:02
-0.200
0.000
0.200
0.400
0.600
0.800
1.000
1.200
1.400
Drawdown (Ft)
Q = 1.67 gpm

Recovery Plot - MW-110B



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-110B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	17:41:00								DTW = 13.17 at 17:41
10/7/2003	17:55:00	0	55.92	4.305	0.007				Start Test 1
10/7/2003	17:55:00	0.3	55.94	4.301	0.011				
10/7/2003	17:55:00	0.6	55.96	4.301	0.011				
10/7/2003	17:55:00	0.9	55.96	4.301	0.011				
10/7/2003	17:55:01	1.2	55.96	4.301	0.011				
10/7/2003	17:55:01	1.5	55.96	4.301	0.011				
10/7/2003	17:55:01	1.8	55.96	4.301	0.011				
10/7/2003	17:55:02	2.1	55.98	4.301	0.011				
10/7/2003	17:55:02	2.4	55.98	4.301	0.011				
10/7/2003	17:55:02	2.7	55.98	4.301	0.011				
10/7/2003	17:55:03	3	55.98	4.301	0.011				
10/7/2003	17:55:03	3.3	55.98	4.301	0.011				
10/7/2003	17:55:03	3.6	55.98	4.301	0.011				
10/7/2003	17:55:03	3.9	55.98	4.301	0.011				
10/7/2003	17:55:04	4.2	55.98	4.301	0.011				
10/7/2003	17:55:04	4.5	55.98	4.301	0.011				
10/7/2003	17:55:04	4.8	55.98	4.301	0.011				
10/7/2003	17:55:05	5.1	56.01	4.301	0.011				
10/7/2003	17:55:05	5.4	56.01	4.301	0.011				
10/7/2003	17:55:05	5.7	56.01	4.301	0.011				
10/7/2003	17:55:06	6	56.01	4.301	0.011				
10/7/2003	17:55:06	6.4	56.01	4.301	0.011				
10/7/2003	17:55:06	6.7	56.01	4.301	0.011				
10/7/2003	17:55:07	7.1	56.01	4.301	0.011	0.00			Pump Start
10/7/2003	17:55:07	7.5	56.01	4.037	0.275	0.00			
10/7/2003	17:55:07	8	56.01	4.147	0.165	0.00			
10/7/2003	17:55:08	8.4	56.01	4.139	0.173	0.02			
10/7/2003	17:55:08	8.9	56.01	4.043	0.269	0.02			
10/7/2003	17:55:09	9.5	56.01	3.98	0.332	0.03			
10/7/2003	17:55:10	10	56.01	3.911	0.401	0.05			
10/7/2003	17:55:10	10.6	55.98	3.868	0.444	0.05			
10/7/2003	17:55:11	11.3	55.98	3.839	0.473	0.07			
10/7/2003	17:55:11	11.9	55.98	3.782	0.530	0.07			
10/7/2003	17:55:12	12.6	55.98	3.75	0.562	0.08			
10/7/2003	17:55:13	13.4	55.98	3.709	0.603	0.10			
10/7/2003	17:55:14	14.2	55.98	3.67	0.642	0.12			
10/7/2003	17:55:15	15	55.98	3.638	0.674	0.13			
10/7/2003	17:55:15	15.9	55.98	3.601	0.711	0.13			
10/7/2003	17:55:16	16.8	55.98	3.579	0.733	0.15			
10/7/2003	17:55:17	17.8	55.98	3.552	0.760	0.17			
10/7/2003	17:55:18	18.9	55.98	3.524	0.788	0.18			
10/7/2003	17:55:20	20	55.96	3.507	0.805	0.22			
10/7/2003	17:55:21	21.2	55.96	3.487	0.825	0.23			
10/7/2003	17:55:22	22.4	55.98	3.463	0.849	0.25			
10/7/2003	17:55:23	23.8	55.98	3.44	0.872	0.27			
10/7/2003	17:55:25	25.2	55.98	3.408	0.904	0.30			
10/7/2003	17:55:26	26.7	55.98	3.401	0.911	0.32			
10/7/2003	17:55:28	28.2	55.98	3.377	0.935	0.35			
10/7/2003	17:55:29	29.8	55.98	3.369	0.943	0.37			
10/7/2003	17:55:31	31.5	55.98	3.351	0.961	0.40			
10/7/2003	17:55:33	33.3	55.98	3.345	0.967	0.43			
10/7/2003	17:55:35	35.2	55.98	3.322	0.990	0.47			
10/7/2003	17:55:37	37.3	55.98	3.316	0.996	0.50			
10/7/2003	17:55:39	39.5	56.01	3.308	1.004	0.53			
10/7/2003	17:55:41	41.8	56.01	3.3	1.012	0.57			
10/7/2003	17:55:44	44.3	56.01	3.274	1.038	0.62			
10/7/2003	17:55:46	46.9	56.01	3.271	1.041	0.65			
10/7/2003	17:55:49	49.7	56.01	3.267	1.045	0.70			
10/7/2003	17:55:52	52.6	56.01	3.259	1.053	0.75			
10/7/2003	17:55:55	55.7	56.03	3.255	1.057	0.80			
10/7/2003	17:55:58	59	56.03	3.245	1.067	0.85			
10/7/2003	17:56:02	62.5	56.03	3.243	1.069	0.92			
10/7/2003	17:56:06	66.2	56.03	3.241	1.071	0.98			
10/7/2003	17:56:10	70.1	56.05	3.235	1.077	1.05			

Well No. **MW-110B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	17:56:14	74.3	56.05	3.231	1.081	1.12			
10/7/2003	17:56:18	78.7	56.05	3.231	1.081	1.18			
10/7/2003	17:56:23	83.4	56.05	3.225	1.087	1.27			
10/7/2003	17:56:28	88.4	56.07	3.209	1.103	1.35			
10/7/2003	17:56:33	93.7	56.07	3.211	1.101	1.43			
10/7/2003	17:56:39	99.3	56.07	3.205	1.107	1.53			
10/7/2003	17:56:45	105.2	56.07	3.209	1.103	1.63			
10/7/2003	17:56:51	111.5	56.1	3.203	1.109	1.73			
10/7/2003	17:56:58	118.1	56.1	3.201	1.111	1.85			
10/7/2003	17:57:05	125.1	56.1	3.205	1.107	1.97			
10/7/2003	17:57:12	132.6	56.1	3.201	1.111	2.08			
10/7/2003	17:57:20	140.5	56.1	3.191	1.121	2.22			
10/7/2003	17:57:28	148.9	56.12	3.201	1.111	2.35			
10/7/2003	17:57:37	157.8	56.12	3.179	1.133	2.50			
10/7/2003	17:57:47	167.2	56.12	3.189	1.123	2.67			
10/7/2003	17:57:57	177.2	56.12	3.193	1.119	2.83			
10/7/2003	17:58:07	187.8	56.14	3.187	1.125	3.00			1.67 gpm flow rate
10/7/2003	17:58:18	199	56.14	3.171	1.141	3.18			
10/7/2003	17:58:30	210.9	56.14	3.179	1.133	3.38			
10/7/2003	17:58:43	223.5	56.14	3.175	1.137	3.60			
10/7/2003	17:58:56	236.8	56.14	3.167	1.145	3.82			
10/7/2003	17:59:10	250.9	56.14	3.161	1.151	4.05			
10/7/2003	17:59:25	265.8	56.16	3.161	1.151	4.30			
10/7/2003	17:59:41	281.6	56.14	3.173	1.139	4.57			
10/7/2003	17:59:58	298.4	56.14	3.161	1.151	4.85			
10/7/2003	18:00:16	316.2	56.14	3.157	1.155	5.15			1.67 gpm flow rate
10/7/2003	18:00:34	335	56.14	3.163	1.149	5.45			
10/7/2003	18:00:54	354.9	56.14	3.161	1.151	5.78			
10/7/2003	18:01:15	376	56.14	3.163	1.149	6.13			
10/7/2003	18:01:38	398.4	56.14	3.163	1.149	6.52			
10/7/2003	18:02:02	422.1	56.14	3.161	1.151	6.92			
10/7/2003	18:02:27	447.2	56.12	3.169	1.143	7.33			
10/7/2003	18:02:53	473.8	56.12	3.163	1.149	7.77			
10/7/2003	18:03:21	502	56.12	3.163	1.149	8.23			
10/7/2003	18:03:51	531.9	56.1	3.173	1.139	8.73			
10/7/2003	18:04:21	561.9	56.1	3.177	1.135	9.23			1.67 gpm flow rate
10/7/2003	18:04:51	591.9	56.07	3.187	1.125	9.73			
10/7/2003	18:05:21	621.9	56.07	3.174	1.138	10.23			
10/7/2003	18:05:51	651.9	56.07	3.185	1.127	10.73			
10/7/2003	18:06:21	681.9	56.07	3.17	1.142	11.23			
10/7/2003	18:06:51	711.9	56.05	3.178	1.134	11.73			
10/7/2003	18:07:21	741.9	56.05	3.16	1.152	12.23			
10/7/2003	18:07:51	771.9	56.03	3.176	1.136	12.73			
10/7/2003	18:08:21	801.9	56.03	3.184	1.128	13.23			1.62 gpm flow rate
10/7/2003	18:08:51	831.9	56.03	3.174	1.138	13.73			
10/7/2003	18:09:21	861.9	56.01	3.18	1.132	14.23			
10/7/2003	18:09:51	891.9	56.01	3.184	1.128	14.73			
10/7/2003	18:10:00	0	56.01	3.174	1.138	14.88			Start Test 2
10/7/2003	18:10:00	0.3	56.03	3.17	1.142	14.88			
10/7/2003	18:10:00	0.6	56.03	3.168	1.144	14.88			
10/7/2003	18:10:00	0.9	56.03	3.174	1.138	14.88			
10/7/2003	18:10:01	1.2	56.05	3.174	1.138	14.90			
10/7/2003	18:10:01	1.5	56.05	3.168	1.144	14.90			
10/7/2003	18:10:01	1.8	56.05	3.168	1.144	14.90			
10/7/2003	18:10:02	2.1	56.05	3.168	1.144	14.92			
10/7/2003	18:10:02	2.4	56.07	3.17	1.142	14.92			
10/7/2003	18:10:02	2.7	56.07	3.172	1.140	14.92			
10/7/2003	18:10:03	3	56.07	3.179	1.133	14.93			
10/7/2003	18:10:03	3.3	56.07	3.17	1.142	14.93			
10/7/2003	18:10:03	3.6	56.07	3.176	1.136	14.93			
10/7/2003	18:10:03	3.9	56.07	3.172	1.140	14.93			
10/7/2003	18:10:04	4.2	56.07	3.17	1.142	14.95			
10/7/2003	18:10:04	4.5	56.07	3.174	1.138	14.95			
10/7/2003	18:10:04	4.8	56.07	3.174	1.138	14.95			
10/7/2003	18:10:05	5.1	56.07	3.179	1.133	14.97			
10/7/2003	18:10:05	5.4	56.07	3.176	1.136	14.97			
10/7/2003	18:10:05	5.7	56.07	3.17	1.142	14.97			
10/7/2003	18:10:06	6	56.07	3.168	1.144	14.98			
10/7/2003	18:10:06	6.4	56.07	3.17	1.142	14.98			

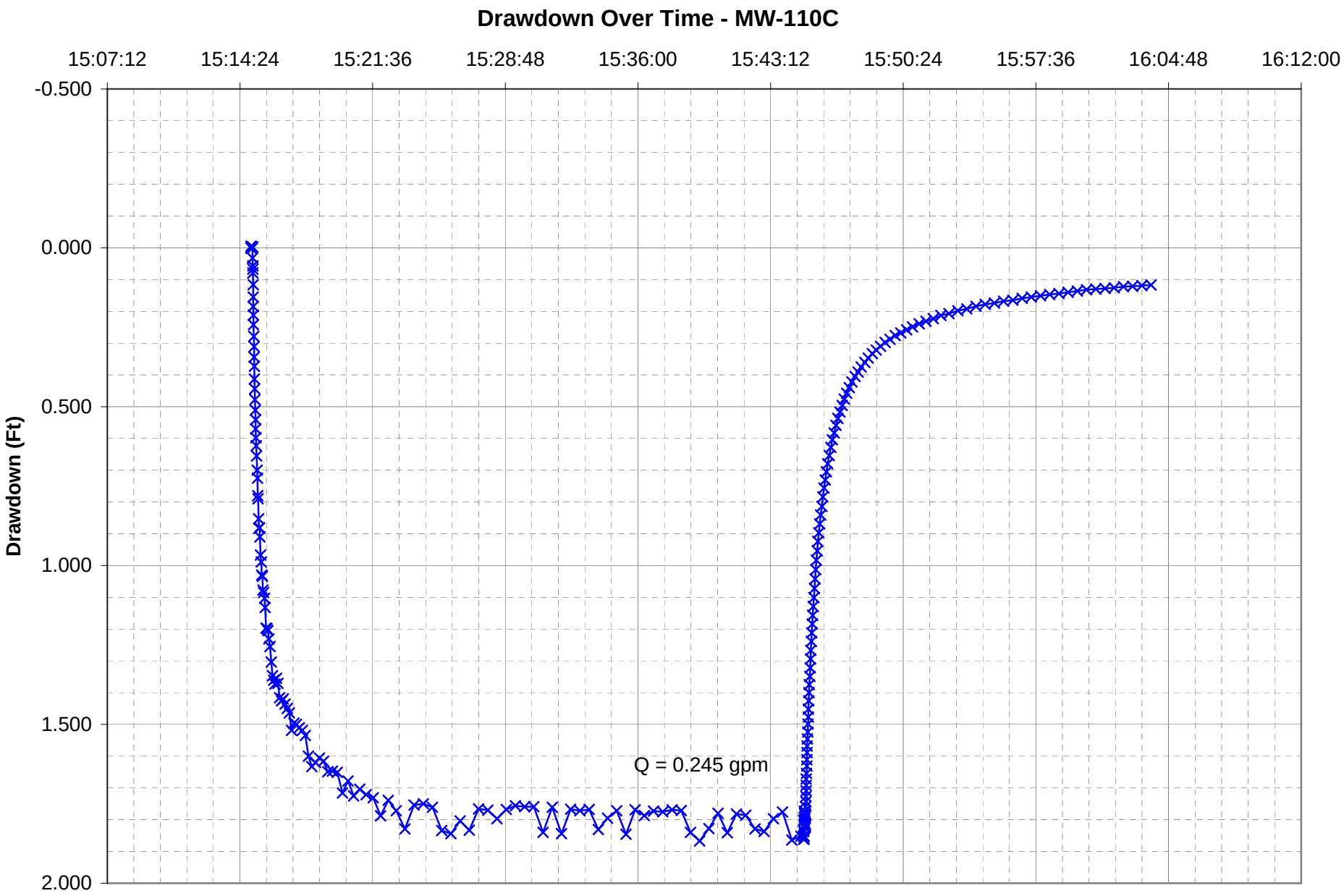
Well No. **MW-110B**

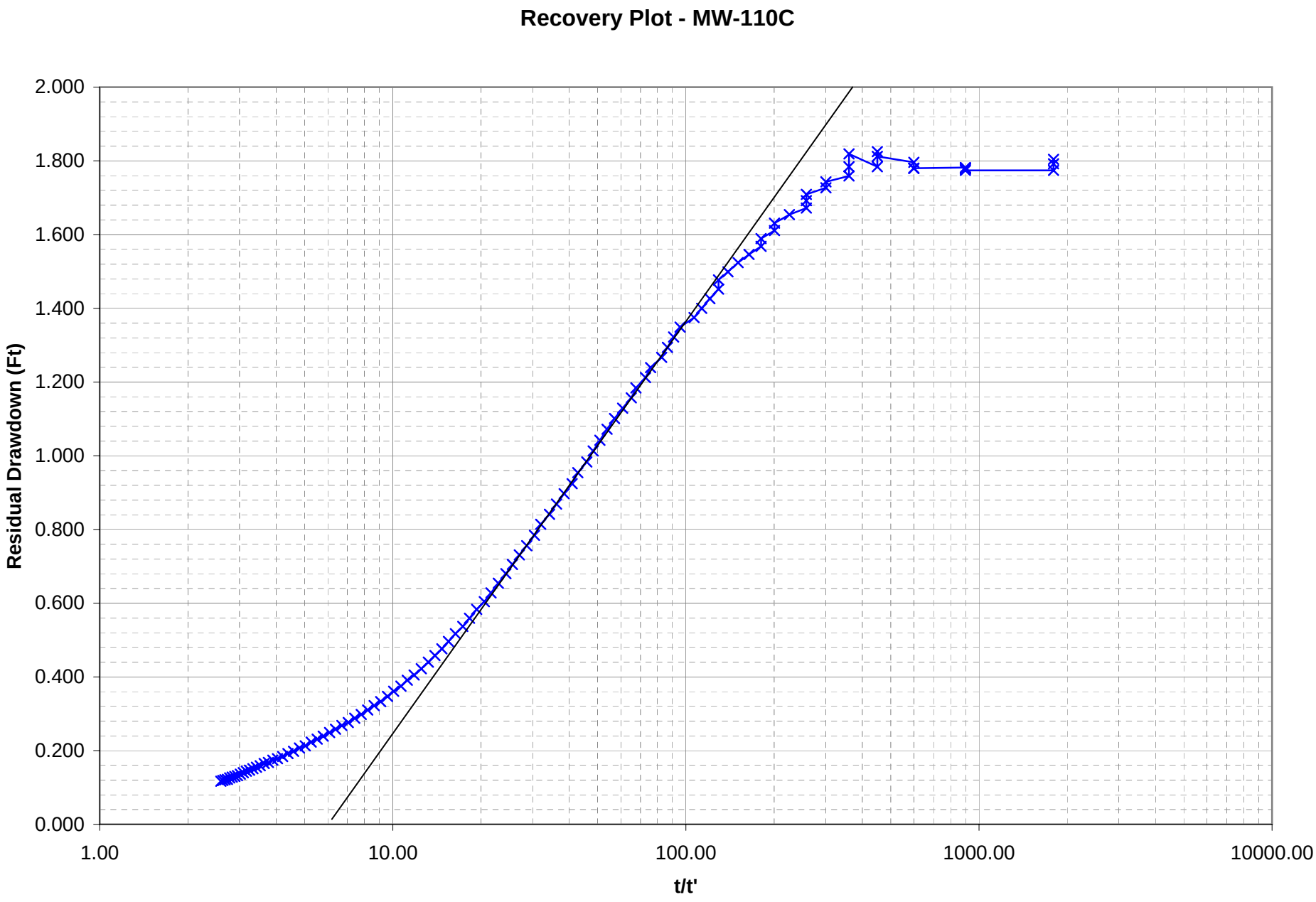
Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	18:10:06	6.7	56.07	3.176	1.136	14.98			
10/7/2003	18:10:07	7.1	56.1	3.177	1.135	15.00			
10/7/2003	18:10:07	7.5	56.1	3.179	1.133	15.00			
10/7/2003	18:10:08	8	56.1	3.181	1.131	15.02			
10/7/2003	18:10:08	8.4	56.1	3.169	1.143	15.02			
10/7/2003	18:10:09	8.9	56.1	3.173	1.139	15.03	0.00		Pump Stop
10/7/2003	18:10:09	9.5	56.1	3.197	1.115	15.03	0.00		
10/7/2003	18:10:10	10	56.1	3.291	1.021	15.05	0.02	903.00	
10/7/2003	18:10:10	10.6	56.07	3.374	0.938	15.05	0.02	903.00	
10/7/2003	18:10:11	11.3	56.07	3.455	0.857	15.07	0.03	452.00	
10/7/2003	18:10:12	11.9	56.07	3.529	0.783	15.08	0.05	301.67	
10/7/2003	18:10:12	12.6	56.07	3.602	0.710	15.08	0.05	301.67	
10/7/2003	18:10:13	13.4	56.07	3.671	0.641	15.10	0.07	226.50	
10/7/2003	18:10:14	14.2	56.07	3.734	0.578	15.12	0.08	181.40	
10/7/2003	18:10:15	15	56.05	3.793	0.519	15.13	0.10	151.33	
10/7/2003	18:10:15	15.9	56.05	3.823	0.489	15.13	0.10	151.33	
10/7/2003	18:10:16	16.8	56.05	3.907	0.405	15.15	0.12	129.86	
10/7/2003	18:10:17	17.8	56.05	3.954	0.358	15.17	0.13	113.75	
10/7/2003	18:10:18	18.9	56.05	3.994	0.318	15.18	0.15	101.22	
10/7/2003	18:10:20	20	56.05	4.031	0.281	15.22	0.18	83.00	
10/7/2003	18:10:21	21.2	56.05	4.064	0.248	15.23	0.20	76.17	
10/7/2003	18:10:22	22.4	56.05	4.094	0.218	15.25	0.22	70.38	
10/7/2003	18:10:23	23.8	56.05	4.119	0.193	15.27	0.23	65.43	
10/7/2003	18:10:25	25.2	56.05	4.143	0.169	15.30	0.27	57.38	
10/7/2003	18:10:26	26.7	56.03	4.163	0.149	15.32	0.28	54.06	
10/7/2003	18:10:28	28.2	56.03	4.181	0.131	15.35	0.32	48.47	
10/7/2003	18:10:29	29.8	56.03	4.194	0.118	15.37	0.33	46.10	
10/7/2003	18:10:31	31.5	56.03	4.208	0.104	15.40	0.37	42.00	
10/7/2003	18:10:33	33.3	56.03	4.218	0.094	15.43	0.40	38.58	
10/7/2003	18:10:35	35.2	56.03	4.23	0.082	15.47	0.43	35.69	
10/7/2003	18:10:37	37.3	56.01	4.24	0.072	15.50	0.47	33.21	
10/7/2003	18:10:39	39.5	55.98	4.248	0.064	15.53	0.50	31.07	
10/7/2003	18:10:41	41.8	55.98	4.256	0.056	15.57	0.53	29.19	
10/7/2003	18:10:44	44.3	55.96	4.26	0.052	15.62	0.58	26.77	
10/7/2003	18:10:46	46.9	55.94	4.264	0.048	15.65	0.62	25.38	
10/7/2003	18:10:49	49.7	55.92	4.27	0.042	15.70	0.67	23.55	
10/7/2003	18:10:52	52.6	55.92	4.274	0.038	15.75	0.72	21.98	
10/7/2003	18:10:55	55.7	55.87	4.276	0.036	15.80	0.77	20.61	
10/7/2003	18:10:59	59	55.85	4.281	0.031	15.87	0.83	19.04	
10/7/2003	18:11:02	62.5	55.82	4.283	0.029	15.92	0.88	18.02	
10/7/2003	18:11:06	66.2	55.8	4.285	0.027	15.98	0.95	16.82	
10/7/2003	18:11:10	70.1	55.78	4.287	0.025	16.05	1.02	15.79	
10/7/2003	18:11:14	74.3	55.76	4.289	0.023	16.12	1.08	14.88	
10/7/2003	18:11:18	78.7	55.73	4.292	0.020	16.18	1.15	14.07	
10/7/2003	18:11:23	83.4	55.69	4.292	0.020	16.27	1.23	13.19	
10/7/2003	18:11:28	88.4	55.67	4.296	0.016	16.35	1.32	12.42	
10/7/2003	18:11:33	93.7	55.64	4.296	0.016	16.43	1.40	11.74	
10/7/2003	18:11:39	99.3	55.6	4.299	0.013	16.53	1.50	11.02	
10/7/2003	18:11:45	105.2	55.58	4.299	0.013	16.63	1.60	10.40	
10/7/2003	18:11:51	111.5	55.55	4.301	0.011	16.73	1.70	9.84	
10/7/2003	18:11:58	118.1	55.53	4.301	0.011	16.85	1.82	9.28	
10/7/2003	18:12:05	125.1	55.51	4.304	0.008	16.97	1.93	8.78	
10/7/2003	18:12:12	132.6	55.46	4.304	0.008	17.08	2.05	8.33	
10/7/2003	18:12:20	140.5	55.44	4.306	0.006	17.22	2.18	7.89	
10/7/2003	18:12:28	148.9	55.42	4.306	0.006	17.35	2.32	7.49	
10/7/2003	18:12:37	157.8	55.39	4.309	0.003	17.50	2.47	7.09	
10/7/2003	18:12:47	167.2	55.37	4.309	0.003	17.67	2.63	6.71	
10/7/2003	18:12:57	177.2	55.37	4.309	0.003	17.83	2.80	6.37	
10/7/2003	18:13:07	187.8	55.35	4.309	0.003	18.00	2.97	6.07	
10/7/2003	18:13:19	199	55.33	4.311	0.001	18.20	3.17	5.75	
10/7/2003	18:13:30	210.9	55.3	4.311	0.001	18.38	3.35	5.49	
10/7/2003	18:13:43	223.5	55.28	4.312	0.000	18.60	3.57	5.21	
10/7/2003	18:13:56	236.8	55.28	4.312	0.000	18.82	3.78	4.97	
10/7/2003	18:14:10	250.9	55.26	4.314	-0.002	19.05	4.02	4.74	
10/7/2003	18:14:25	265.8	55.26	4.314	-0.002	19.30	4.27	4.52	
10/7/2003	18:14:41	281.6	55.24	4.312	0.000	19.57	4.53	4.32	
10/7/2003	18:14:58	298.4	55.24	4.312	0.000	19.85	4.82	4.12	
10/7/2003	18:26:00								DTW = 13.17 at 18:26

Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-110C**

Equipment:	In-Situ Inc. MiniTroll Pro				
Test start date and time	10/6/2003 15:15:00				
Test end date and time	10/6/2003 16:03:51				
Period of pumping	30	minutes			
Static depth to water	12.66	feet below top of casing			
Starting transducer depth	5.50	feet below static water level			
Total well depth	98.1	feet below top of casing			
Depth to top of screen	78.1	feet below top of casing			
Height of interval tested [b]	20.0	feet			
Average pumping rate [Q]	0.245	gpm, or	47	cfd	
Average drawdown [s]	1.80	ft			
Specific capacity [Q/s]	0.14	gpm/ft			
Residual drawdown over one log cycle [Δs]			1.10	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			7.8	cfd/ft	
Hydraulic conductivity [K = T/b]			0.39	fpd, or	1.4E-04 cm/sec


Drawdown Over Time - MW-110C
15:07:12
15:14:24
15:21:36
15:28:48
15:36:00
15:43:12
15:50:24
15:57:36
16:04:48
16:12:00
-0.500
0.000
0.500
1.000
1.500
2.000
Drawdown (Ft)
Q = 0.245 gpm


Recovery Plot - MW-110C
Residual Drawdown (Ft)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
1.00
10.00
100.00
1000.00
10000.00
t/t'

Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-110C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	14:42:00								DTW = 12.66 at 14:42
10/6/2003	15:15:00	0	56.53	5.552	-0.005				Start Test 1
10/6/2003	15:15:00	0.3	56.55	5.547	0.000				
10/6/2003	15:15:00	0.6	56.57	5.547	0.000				
10/6/2003	15:15:00	0.9	56.57	5.547	0.000				
10/6/2003	15:15:01	1.2	56.57	5.547	0.000				
10/6/2003	15:15:01	1.5	56.57	5.547	0.000				
10/6/2003	15:15:01	1.8	56.59	5.547	0.000				
10/6/2003	15:15:02	2.1	56.59	5.547	0.000				
10/6/2003	15:15:02	2.4	56.59	5.547	0.000				
10/6/2003	15:15:02	2.7	56.59	5.549	-0.002				
10/6/2003	15:15:03	3	56.59	5.549	-0.002				
10/6/2003	15:15:03	3.3	56.59	5.547	0.000				
10/6/2003	15:15:03	3.6	56.59	5.549	-0.002				
10/6/2003	15:15:03	3.9	56.59	5.549	-0.002				
10/6/2003	15:15:04	4.2	56.62	5.549	-0.002				
10/6/2003	15:15:04	4.5	56.62	5.547	0.000				
10/6/2003	15:15:04	4.8	56.62	5.547	0.000				
10/6/2003	15:15:05	5.1	56.62	5.549	-0.002				
10/6/2003	15:15:05	5.4	56.62	5.549	-0.002	0.00			Pump Start
10/6/2003	15:15:05	5.7	56.62	5.515	0.032	0.00			
10/6/2003	15:15:06	6	56.62	5.49	0.057	0.02			
10/6/2003	15:15:06	6.4	56.62	5.48	0.067	0.02			
10/6/2003	15:15:06	6.7	56.62	5.468	0.079	0.02			
10/6/2003	15:15:07	7.1	56.62	5.431	0.116	0.03			
10/6/2003	15:15:07	7.5	56.62	5.392	0.155	0.03			
10/6/2003	15:15:07	8	56.62	5.362	0.185	0.03			
10/6/2003	15:15:08	8.4	56.62	5.335	0.212	0.05			
10/6/2003	15:15:08	8.9	56.62	5.305	0.242	0.05			
10/6/2003	15:15:09	9.5	56.62	5.268	0.279	0.07			
10/6/2003	15:15:10	10	56.62	5.236	0.311	0.08			
10/6/2003	15:15:10	10.6	56.62	5.203	0.344	0.08			
10/6/2003	15:15:11	11.3	56.59	5.174	0.373	0.10			
10/6/2003	15:15:11	11.9	56.59	5.134	0.413	0.10			
10/6/2003	15:15:12	12.6	56.59	5.103	0.444	0.12			
10/6/2003	15:15:13	13.4	56.59	5.069	0.478	0.13			
10/6/2003	15:15:14	14.2	56.59	5.036	0.511	0.15			
10/6/2003	15:15:15	15	56.59	5.006	0.541	0.17			
10/6/2003	15:15:15	15.9	56.59	4.977	0.570	0.17			
10/6/2003	15:15:16	16.8	56.59	4.949	0.598	0.18			
10/6/2003	15:15:17	17.8	56.59	4.924	0.623	0.20			
10/6/2003	15:15:18	18.9	56.59	4.892	0.655	0.22			
10/6/2003	15:15:20	20	56.59	4.847	0.700	0.25			
10/6/2003	15:15:21	21.2	56.59	4.822	0.725	0.27			
10/6/2003	15:15:22	22.4	56.59	4.767	0.780	0.28			
10/6/2003	15:15:23	23.8	56.59	4.757	0.790	0.30			
10/6/2003	15:15:25	25.2	56.59	4.694	0.853	0.33			
10/6/2003	15:15:26	26.7	56.59	4.664	0.883	0.35			
10/6/2003	15:15:28	28.2	56.59	4.666	0.881	0.38			
10/6/2003	15:15:29	29.8	56.59	4.637	0.910	0.40			
10/6/2003	15:15:31	31.5	56.59	4.58	0.967	0.43			
10/6/2003	15:15:33	33.3	56.59	4.558	0.989	0.47			
10/6/2003	15:15:35	35.2	56.59	4.517	1.030	0.50			
10/6/2003	15:15:37	37.3	56.59	4.513	1.034	0.53			
10/6/2003	15:15:39	39.5	56.59	4.47	1.077	0.57			
10/6/2003	15:15:41	41.8	56.62	4.462	1.085	0.60			
10/6/2003	15:15:44	44.3	56.62	4.444	1.103	0.65			
10/6/2003	15:15:46	46.9	56.62	4.415	1.132	0.68			
10/6/2003	15:15:49	49.7	56.62	4.35	1.197	0.73			
10/6/2003	15:15:52	52.6	56.64	4.348	1.199	0.78			
10/6/2003	15:15:55	55.7	56.64	4.342	1.205	0.83			
10/6/2003	15:15:58	59	56.64	4.316	1.231	0.88			
10/6/2003	15:16:02	62.5	56.66	4.292	1.255	0.95			
10/6/2003	15:16:06	66.2	56.66	4.243	1.304	1.02			
10/6/2003	15:16:10	70.1	56.66	4.2	1.347	1.08			
10/6/2003	15:16:14	74.3	56.66	4.186	1.361	1.15			
10/6/2003	15:16:18	78.7	56.69	4.174	1.373	1.22			

Well No. **MW-110C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	15:16:23	83.4	56.69	4.192	1.355	1.30			
10/6/2003	15:16:28	88.4	56.71	4.176	1.371	1.38			
10/6/2003	15:16:33	93.7	56.71	4.131	1.416	1.47			
10/6/2003	15:16:39	99.3	56.71	4.121	1.426	1.57			
10/6/2003	15:16:45	105.2	56.73	4.127	1.420	1.67			
10/6/2003	15:16:51	111.5	56.73	4.111	1.436	1.77			
10/6/2003	15:16:58	118.1	56.73	4.097	1.450	1.88			
10/6/2003	15:17:05	125.1	56.75	4.083	1.464	2.00			0.244 gpm flow rate
10/6/2003	15:17:12	132.6	56.75	4.028	1.519	2.12			
10/6/2003	15:17:20	140.5	56.78	4.051	1.496	2.25			
10/6/2003	15:17:28	148.9	56.78	4.047	1.500	2.38			
10/6/2003	15:17:37	157.8	56.78	4.036	1.511	2.53			
10/6/2003	15:17:47	167.2	56.78	4.028	1.519	2.70			
10/6/2003	15:17:57	177.2	56.78	4.012	1.535	2.87			
10/6/2003	15:18:07	187.8	56.78	3.947	1.600	3.03			
10/6/2003	15:18:18	199	56.8	3.914	1.633	3.22			
10/6/2003	15:18:30	210.9	56.8	3.927	1.620	3.42			
10/6/2003	15:18:43	223.5	56.8	3.941	1.606	3.63			
10/6/2003	15:18:56	236.8	56.8	3.931	1.616	3.85			
10/6/2003	15:19:10	250.9	56.8	3.898	1.649	4.08			
10/6/2003	15:19:25	265.8	56.78	3.9	1.647	4.33			
10/6/2003	15:19:41	281.6	56.78	3.896	1.651	4.60			
10/6/2003	15:19:58	298.4	56.78	3.831	1.716	4.88			
10/6/2003	15:20:16	316.2	56.78	3.869	1.678	5.18			0.259 gpm flow rate
10/6/2003	15:20:34	335	56.75	3.822	1.725	5.48			
10/6/2003	15:20:54	354.9	56.75	3.843	1.704	5.82			
10/6/2003	15:21:15	376	56.73	3.826	1.721	6.17			
10/6/2003	15:21:38	398.4	56.73	3.816	1.731	6.55			
10/6/2003	15:22:02	422.1	56.71	3.759	1.788	6.95			
10/6/2003	15:22:27	447.2	56.71	3.808	1.739	7.37			
10/6/2003	15:22:53	473.8	56.69	3.775	1.772	7.80			
10/6/2003	15:23:21	502	56.66	3.718	1.829	8.27			
10/6/2003	15:23:51	531.9	56.64	3.793	1.754	8.77			
10/6/2003	15:24:21	561.9	56.62	3.797	1.750	9.27			
10/6/2003	15:24:51	591.9	56.62	3.786	1.761	9.77			
10/6/2003	15:25:21	621.9	56.59	3.713	1.834	10.27			
10/6/2003	15:25:51	651.9	56.57	3.703	1.844	10.77			
10/6/2003	15:26:21	681.9	56.55	3.743	1.804	11.27			
10/6/2003	15:26:51	711.9	56.53	3.714	1.833	11.77			
10/6/2003	15:27:21	741.9	56.5	3.781	1.766	12.27			0.244 gpm flow rate
10/6/2003	15:27:51	771.9	56.5	3.777	1.770	12.77			
10/6/2003	15:28:21	801.9	56.48	3.75	1.797	13.27			
10/6/2003	15:28:51	831.9	56.46	3.779	1.768	13.77			
10/6/2003	15:29:21	861.9	56.44	3.791	1.756	14.27			
10/6/2003	15:29:51	891.9	56.41	3.788	1.759	14.77			
10/6/2003	15:30:21	921.9	56.41	3.788	1.759	15.27			
10/6/2003	15:30:51	951.9	56.39	3.707	1.840	15.77			
10/6/2003	15:31:21	981.9	56.37	3.786	1.761	16.27			
10/6/2003	15:31:51	1011.9	56.37	3.703	1.844	16.77			
10/6/2003	15:32:21	1041.9	56.35	3.78	1.767	17.27			
10/6/2003	15:32:51	1071.9	56.32	3.775	1.772	17.77			
10/6/2003	15:33:21	1101.9	56.3	3.779	1.768	18.27			0.238 gpm flow rate
10/6/2003	15:33:51	1131.9	56.3	3.716	1.831	18.77			
10/6/2003	15:34:21	1161.9	56.28	3.752	1.795	19.27			
10/6/2003	15:34:51	1191.9	56.28	3.775	1.772	19.77			
10/6/2003	15:35:21	1221.9	56.26	3.701	1.846	20.27			
10/6/2003	15:35:51	1251.9	56.23	3.778	1.769	20.77			
10/6/2003	15:36:21	1281.9	56.23	3.76	1.787	21.27			
10/6/2003	15:36:51	1311.9	56.21	3.774	1.773	21.77			
10/6/2003	15:37:21	1341.9	56.21	3.772	1.775	22.27			
10/6/2003	15:37:51	1371.9	56.19	3.778	1.769	22.77			
10/6/2003	15:38:21	1401.9	56.16	3.776	1.771	23.27			0.238 gpm flow rate
10/6/2003	15:38:51	1431.9	56.16	3.707	1.840	23.77			
10/6/2003	15:39:21	1461.9	56.14	3.68	1.867	24.27			
10/6/2003	15:39:51	1491.9	56.14	3.719	1.828	24.77			
10/6/2003	15:40:21	1521.9	56.12	3.767	1.780	25.27			
10/6/2003	15:40:51	1551.9	56.12	3.706	1.841	25.77			
10/6/2003	15:41:21	1581.9	56.1	3.765	1.782	26.27			
10/6/2003	15:41:51	1611.9	56.1	3.761	1.786	26.77			
10/6/2003	15:42:21	1641.9	56.07	3.718	1.829	27.27			
10/6/2003	15:42:51	1671.9	56.07	3.71	1.837	27.77			

Well No. **MW-110C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	15:43:21	1701.9	56.05	3.75	1.797	28.27			
10/6/2003	15:43:51	1731.9	56.05	3.771	1.776	28.77			
10/6/2003	15:44:21	1761.9	56.05	3.683	1.864	29.27			
10/6/2003	15:44:51	1791.9	56.03	3.695	1.852	29.77			
10/6/2003	15:45:00	0	56.03	3.746	1.801	29.92			Start Test 2
10/6/2003	15:45:00	0.3	56.05	3.71	1.837	29.92			
10/6/2003	15:45:00	0.6	56.05	3.695	1.852	29.92			
10/6/2003	15:45:00	0.9	56.07	3.685	1.862	29.92			
10/6/2003	15:45:01	1.2	56.07	3.687	1.860	29.93			
10/6/2003	15:45:01	1.5	56.07	3.695	1.852	29.93	0.00		Pump Stop
10/6/2003	15:45:01	1.8	56.07	3.73	1.817	29.93	0.00		
10/6/2003	15:45:02	2.1	56.1	3.743	1.804	29.95	0.02	1797.00	
10/6/2003	15:45:02	2.4	56.1	3.755	1.792	29.95	0.02	1797.00	
10/6/2003	15:45:02	2.7	56.1	3.773	1.774	29.95	0.02	1797.00	
10/6/2003	15:45:03	3	56.1	3.773	1.774	29.97	0.03	899.00	
10/6/2003	15:45:03	3.3	56.1	3.769	1.778	29.97	0.03	899.00	
10/6/2003	15:45:03	3.6	56.1	3.767	1.780	29.97	0.03	899.00	
10/6/2003	15:45:03	3.9	56.1	3.765	1.782	29.97	0.03	899.00	
10/6/2003	15:45:04	4.2	56.1	3.767	1.780	29.98	0.05	599.67	
10/6/2003	15:45:04	4.5	56.1	3.767	1.780	29.98	0.05	599.67	
10/6/2003	15:45:04	4.8	56.12	3.751	1.796	29.98	0.05	599.67	
10/6/2003	15:45:05	5.1	56.12	3.735	1.812	30.00	0.07	450.00	
10/6/2003	15:45:05	5.4	56.12	3.722	1.825	30.00	0.07	450.00	
10/6/2003	15:45:05	5.7	56.12	3.763	1.784	30.00	0.07	450.00	
10/6/2003	15:45:06	6	56.12	3.728	1.819	30.02	0.08	360.20	
10/6/2003	15:45:06	6.4	56.12	3.763	1.784	30.02	0.08	360.20	
10/6/2003	15:45:06	6.7	56.12	3.788	1.759	30.02	0.08	360.20	
10/6/2003	15:45:07	7.1	56.12	3.804	1.743	30.03	0.10	300.33	
10/6/2003	15:45:07	7.5	56.12	3.82	1.727	30.03	0.10	300.33	
10/6/2003	15:45:08	8	56.12	3.838	1.709	30.05	0.12	257.57	
10/6/2003	15:45:08	8.4	56.12	3.855	1.692	30.05	0.12	257.57	
10/6/2003	15:45:08	8.9	56.12	3.875	1.672	30.05	0.12	257.57	
10/6/2003	15:45:09	9.5	56.12	3.893	1.654	30.07	0.13	225.50	
10/6/2003	15:45:10	10	56.12	3.916	1.631	30.08	0.15	200.56	
10/6/2003	15:45:10	10.6	56.1	3.936	1.611	30.08	0.15	200.56	
10/6/2003	15:45:11	11.3	56.1	3.958	1.589	30.10	0.17	180.60	
10/6/2003	15:45:11	11.9	56.1	3.979	1.568	30.10	0.17	180.60	
10/6/2003	15:45:12	12.6	56.1	4.001	1.546	30.12	0.18	164.27	
10/6/2003	15:45:13	13.4	56.1	4.023	1.524	30.13	0.20	150.67	
10/6/2003	15:45:14	14.2	56.1	4.048	1.499	30.15	0.22	139.15	
10/6/2003	15:45:15	15	56.1	4.07	1.477	30.17	0.23	129.29	
10/6/2003	15:45:15	15.9	56.1	4.095	1.452	30.17	0.23	129.29	
10/6/2003	15:45:16	16.8	56.1	4.121	1.426	30.18	0.25	120.73	
10/6/2003	15:45:17	17.8	56.07	4.147	1.400	30.20	0.27	113.25	
10/6/2003	15:45:18	18.9	56.07	4.172	1.375	30.22	0.28	106.65	
10/6/2003	15:45:20	20	56.07	4.198	1.349	30.25	0.32	95.53	
10/6/2003	15:45:21	21.2	56.07	4.225	1.322	30.27	0.33	90.80	
10/6/2003	15:45:22	22.4	56.07	4.253	1.294	30.28	0.35	86.52	
10/6/2003	15:45:23	23.8	56.07	4.28	1.267	30.30	0.37	82.64	
10/6/2003	15:45:25	25.2	56.07	4.308	1.239	30.33	0.40	75.83	
10/6/2003	15:45:26	26.7	56.07	4.335	1.212	30.35	0.42	72.84	
10/6/2003	15:45:28	28.2	56.07	4.363	1.184	30.38	0.45	67.52	
10/6/2003	15:45:29	29.8	56.07	4.39	1.157	30.40	0.47	65.14	
10/6/2003	15:45:31	31.5	56.07	4.418	1.129	30.43	0.50	60.87	
10/6/2003	15:45:33	33.3	56.05	4.446	1.101	30.47	0.53	57.12	
10/6/2003	15:45:35	35.2	56.05	4.475	1.072	30.50	0.57	53.82	
10/6/2003	15:45:37	37.3	56.05	4.505	1.042	30.53	0.60	50.89	
10/6/2003	15:45:39	39.5	56.05	4.534	1.013	30.57	0.63	48.26	
10/6/2003	15:45:41	41.8	56.05	4.564	0.983	30.60	0.67	45.90	
10/6/2003	15:45:44	44.3	56.03	4.593	0.954	30.65	0.72	42.77	
10/6/2003	15:45:46	46.9	56.03	4.623	0.924	30.68	0.75	40.91	
10/6/2003	15:45:49	49.7	56.03	4.65	0.897	30.73	0.80	38.42	
10/6/2003	15:45:52	52.6	56.01	4.678	0.869	30.78	0.85	36.22	
10/6/2003	15:45:55	55.7	56.01	4.706	0.841	30.83	0.90	34.26	
10/6/2003	15:45:59	59	55.98	4.733	0.814	30.90	0.97	31.97	
10/6/2003	15:46:02	62.5	55.98	4.763	0.784	30.95	1.02	30.44	
10/6/2003	15:46:06	66.2	55.96	4.791	0.756	31.02	1.08	28.63	
10/6/2003	15:46:10	70.1	55.96	4.816	0.731	31.08	1.15	27.03	
10/6/2003	15:46:14	74.3	55.94	4.842	0.705	31.15	1.22	25.60	
10/6/2003	15:46:18	78.7	55.94	4.867	0.680	31.22	1.28	24.32	
10/6/2003	15:46:23	83.4	55.92	4.893	0.654	31.30	1.37	22.90	

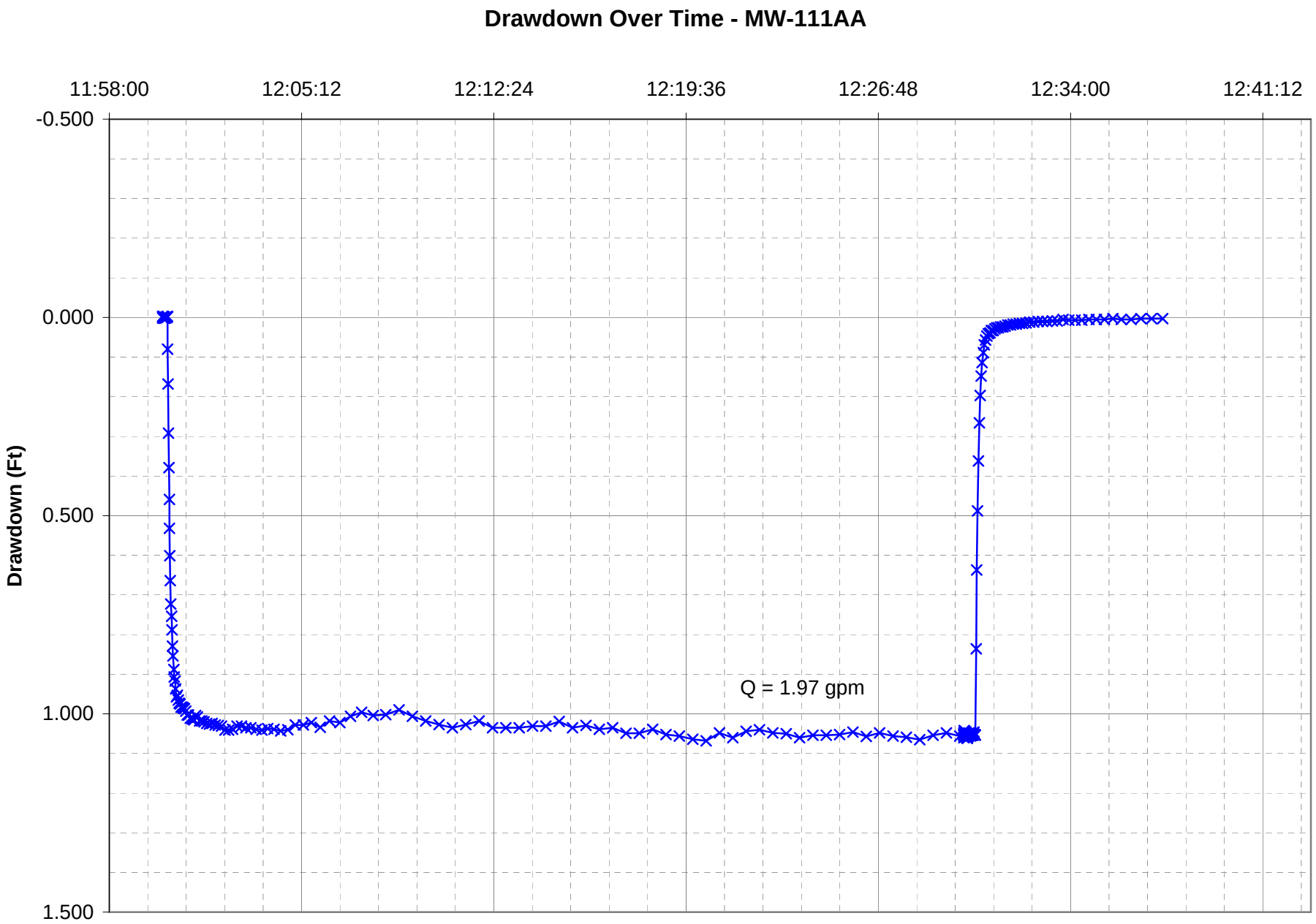
Well No. **MW-110C**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	15:46:28	88.4	55.92	4.919	0.628	31.38	1.45	21.64	
10/6/2003	15:46:33	93.7	55.89	4.943	0.604	31.47	1.53	20.52	
10/6/2003	15:46:39	99.3	55.87	4.964	0.583	31.57	1.63	19.33	
10/6/2003	15:46:45	105.2	55.87	4.988	0.559	31.67	1.73	18.27	
10/6/2003	15:46:51	111.5	55.85	5.01	0.537	31.77	1.83	17.33	
10/6/2003	15:46:58	118.1	55.85	5.03	0.517	31.88	1.95	16.35	
10/6/2003	15:47:05	125.1	55.82	5.051	0.496	32.00	2.07	15.48	
10/6/2003	15:47:12	132.6	55.82	5.071	0.476	32.12	2.18	14.71	
10/6/2003	15:47:20	140.5	55.8	5.089	0.458	32.25	2.32	13.92	
10/6/2003	15:47:28	148.9	55.78	5.107	0.440	32.38	2.45	13.22	
10/6/2003	15:47:37	157.8	55.78	5.125	0.422	32.53	2.60	12.51	
10/6/2003	15:47:47	167.2	55.76	5.142	0.405	32.70	2.77	11.82	
10/6/2003	15:47:57	177.2	55.76	5.156	0.391	32.87	2.93	11.20	
10/6/2003	15:48:07	187.8	55.76	5.172	0.375	33.03	3.10	10.66	
10/6/2003	15:48:19	199	55.73	5.186	0.361	33.23	3.30	10.07	
10/6/2003	15:48:30	210.9	55.73	5.2	0.347	33.42	3.48	9.59	
10/6/2003	15:48:43	223.5	55.71	5.214	0.333	33.63	3.70	9.09	
10/6/2003	15:48:56	236.8	55.71	5.225	0.322	33.85	3.92	8.64	
10/6/2003	15:49:10	250.9	55.71	5.237	0.310	34.08	4.15	8.21	
10/6/2003	15:49:25	265.8	55.71	5.249	0.298	34.33	4.40	7.80	
10/6/2003	15:49:41	281.6	55.69	5.259	0.288	34.60	4.67	7.41	
10/6/2003	15:49:58	298.4	55.69	5.271	0.276	34.88	4.95	7.05	
10/6/2003	15:50:16	316.2	55.69	5.279	0.268	35.18	5.25	6.70	
10/6/2003	15:50:35	335	55.69	5.289	0.258	35.50	5.57	6.38	
10/6/2003	15:50:54	354.9	55.69	5.298	0.249	35.82	5.88	6.09	
10/6/2003	15:51:16	376	55.69	5.308	0.239	36.18	6.25	5.79	
10/6/2003	15:51:38	398.4	55.69	5.316	0.231	36.55	6.62	5.52	
10/6/2003	15:52:02	422.1	55.69	5.324	0.223	36.95	7.02	5.27	
10/6/2003	15:52:27	447.2	55.69	5.334	0.213	37.37	7.43	5.03	
10/6/2003	15:52:53	473.8	55.69	5.34	0.207	37.80	7.87	4.81	
10/6/2003	15:53:22	502	55.71	5.349	0.198	38.28	8.35	4.58	
10/6/2003	15:53:51	531.9	55.71	5.355	0.192	38.77	8.83	4.39	
10/6/2003	15:54:21	561.9	55.71	5.363	0.184	39.27	9.33	4.21	
10/6/2003	15:54:51	591.9	55.73	5.369	0.178	39.77	9.83	4.04	
10/6/2003	15:55:21	621.9	55.73	5.373	0.174	40.27	10.33	3.90	
10/6/2003	15:55:51	651.9	55.73	5.379	0.168	40.77	10.83	3.76	
10/6/2003	15:56:21	681.9	55.73	5.382	0.165	41.27	11.33	3.64	
10/6/2003	15:56:51	711.9	55.76	5.388	0.159	41.77	11.83	3.53	
10/6/2003	15:57:21	741.9	55.76	5.392	0.155	42.27	12.33	3.43	
10/6/2003	15:57:51	771.9	55.78	5.396	0.151	42.77	12.83	3.33	
10/6/2003	15:58:21	801.9	55.78	5.4	0.147	43.27	13.33	3.24	
10/6/2003	15:58:51	831.9	55.8	5.403	0.144	43.77	13.83	3.16	
10/6/2003	15:59:21	861.9	55.8	5.407	0.140	44.27	14.33	3.09	
10/6/2003	15:59:51	891.9	55.8	5.411	0.136	44.77	14.83	3.02	
10/6/2003	16:00:21	921.9	55.82	5.415	0.132	45.27	15.33	2.95	
10/6/2003	16:00:51	951.9	55.82	5.417	0.130	45.77	15.83	2.89	
10/6/2003	16:01:21	981.9	55.85	5.419	0.128	46.27	16.33	2.83	
10/6/2003	16:01:51	1011.9	55.85	5.421	0.126	46.77	16.83	2.78	
10/6/2003	16:02:21	1041.9	55.85	5.425	0.122	47.27	17.33	2.73	
10/6/2003	16:02:51	1071.9	55.87	5.426	0.121	47.77	17.83	2.68	
10/6/2003	16:03:21	1101.9	55.87	5.428	0.119	48.27	18.33	2.63	
10/6/2003	16:03:51	1131.9	55.89	5.43	0.117	48.77	18.83	2.59	
10/6/2003	16:10:00								DTW = 12.71 at 16:10

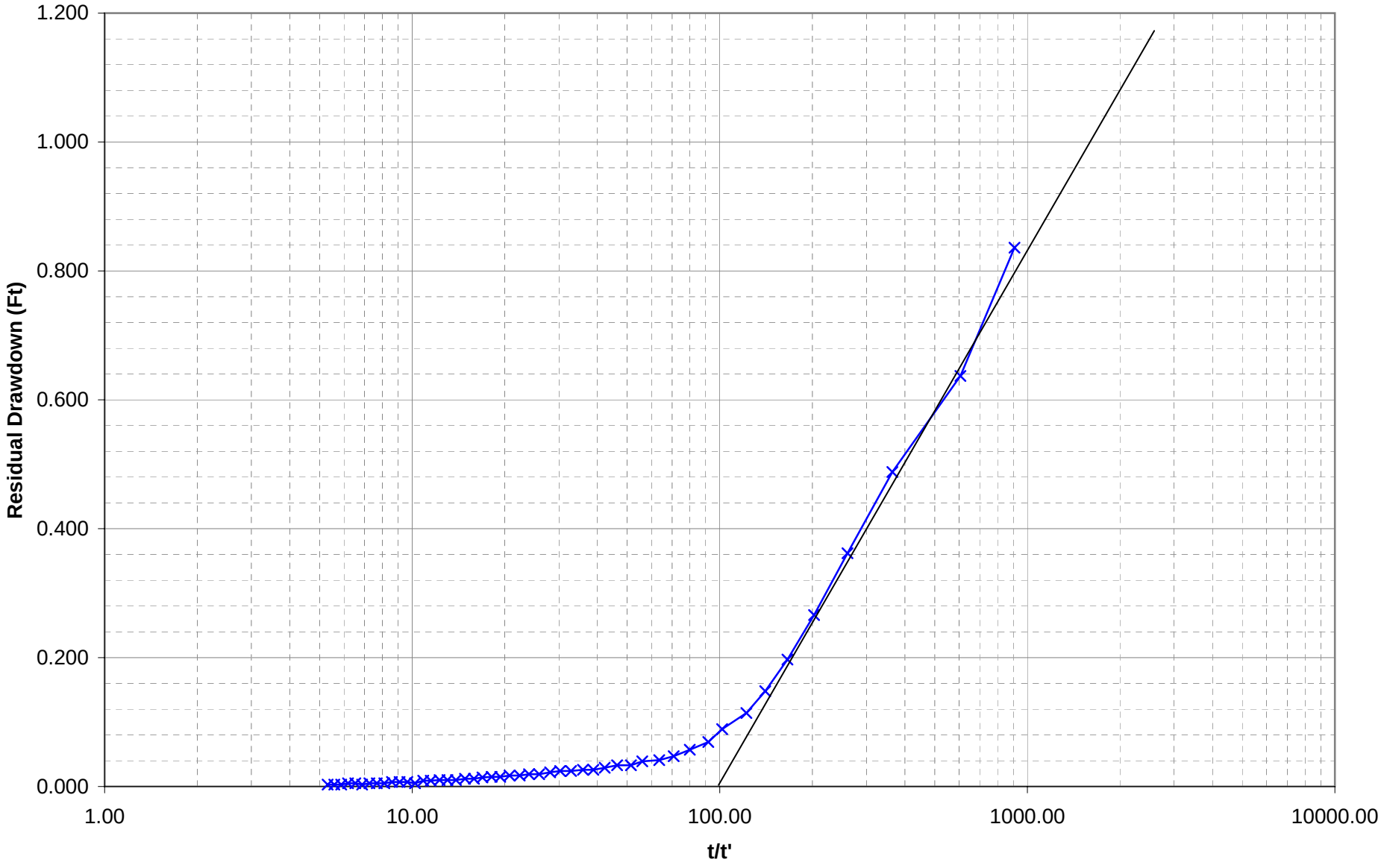
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-111AA**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/3/2003	12:00:00			
Test end date and time	10/3/2003	12:37:27			
Period of pumping	30	minutes			
Static depth to water	10.56	feet below top of casing			
Starting transducer depth	5.064	feet below static water level			
Total well depth	27.0	feet below top of casing			
Depth to top of screen	17.0	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.97	gpm, or	379	cfd	
Average drawdown [s]	1.05	ft			
Specific capacity [Q/s]	1.88	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.84	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			82.6	cfd/ft	
Hydraulic conductivity [K = T/b]			8.3	fpd, or	2.9E-03 cm/sec


Drawdown Over Time - MW-111AA
11:58:00
12:05:12
12:12:24
12:19:36
12:26:48
12:34:00
12:41:12
-0.500
0.000
0.500
1.000
1.500
Drawdown (Ft)
Q = 1.97 gpm

Recovery Plot - MW-111AA



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-111AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/3/2003	10:40:00								DTW = 10.63 at 10:40
10/3/2003	10:48:00								DTW = 10.53 at 10:48
10/3/2003	11:50:00								DTW = 10.56 at 11:50
10/3/2003	12:00:00	0	60.24	5.067	-0.003				Start Test 1
10/3/2003	12:00:00	0.3	60.26	5.065	-0.001				
10/3/2003	12:00:00	0.6	60.29	5.063	0.001				
10/3/2003	12:00:00	0.9	60.29	5.065	-0.001				
10/3/2003	12:00:01	1.2	60.29	5.063	0.001				
10/3/2003	12:00:01	1.5	60.31	5.063	0.001				
10/3/2003	12:00:01	1.8	60.31	5.065	-0.001				
10/3/2003	12:00:02	2.1	60.31	5.065	-0.001				
10/3/2003	12:00:02	2.4	60.31	5.065	-0.001				
10/3/2003	12:00:02	2.7	60.31	5.065	-0.001				
10/3/2003	12:00:03	3	60.31	5.065	-0.001				
10/3/2003	12:00:03	3.3	60.33	5.064	0.000				
10/3/2003	12:00:03	3.6	60.33	5.064	0.000				
10/3/2003	12:00:03	3.9	60.33	5.064	0.000				
10/3/2003	12:00:04	4.2	60.33	5.064	0.000				
10/3/2003	12:00:04	4.5	60.33	5.062	0.002				
10/3/2003	12:00:04	4.8	60.33	5.064	0.000				
10/3/2003	12:00:05	5.1	60.33	5.064	0.000				
10/3/2003	12:00:05	5.4	60.33	5.064	0.000				
10/3/2003	12:00:05	5.7	60.33	5.064	0.000				
10/3/2003	12:00:06	6	60.33	5.064	0.000				
10/3/2003	12:00:06	6.4	60.33	5.064	0.000				
10/3/2003	12:00:06	6.7	60.33	5.064	0.000				
10/3/2003	12:00:07	7.1	60.33	5.064	0.000				
10/3/2003	12:00:07	7.5	60.33	5.064	0.000				
10/3/2003	12:00:07	8	60.33	5.064	0.000				
10/3/2003	12:00:08	8.4	60.35	5.064	0.000				
10/3/2003	12:00:08	8.9	60.33	5.064	0.000				
10/3/2003	12:00:09	9.5	60.35	5.064	0.000				
10/3/2003	12:00:10	10	60.33	5.066	-0.002				
10/3/2003	12:00:10	10.6	60.33	5.066	-0.002				
10/3/2003	12:00:11	11.3	60.33	5.066	-0.002	0.00			Pump Start
10/3/2003	12:00:11	11.9	60.33	4.984	0.080	0.00			
10/3/2003	12:00:12	12.6	60.31	4.896	0.168	0.02			
10/3/2003	12:00:13	13.4	60.31	4.772	0.292	0.03			
10/3/2003	12:00:14	14.2	60.31	4.685	0.379	0.05			
10/3/2003	12:00:15	15	60.31	4.605	0.459	0.07			
10/3/2003	12:00:15	15.9	60.31	4.532	0.532	0.07			
10/3/2003	12:00:16	16.8	60.31	4.463	0.601	0.08			
10/3/2003	12:00:17	17.8	60.31	4.4	0.664	0.10			
10/3/2003	12:00:18	18.9	60.31	4.341	0.723	0.12			
10/3/2003	12:00:20	20	60.31	4.31	0.754	0.15			
10/3/2003	12:00:21	21.2	60.31	4.276	0.788	0.17			
10/3/2003	12:00:22	22.4	60.31	4.235	0.829	0.18			
10/3/2003	12:00:23	23.8	60.31	4.21	0.854	0.20			
10/3/2003	12:00:25	25.2	60.31	4.176	0.888	0.23			
10/3/2003	12:00:26	26.7	60.31	4.157	0.907	0.25			
10/3/2003	12:00:28	28.2	60.33	4.147	0.917	0.28			
10/3/2003	12:00:29	29.8	60.33	4.127	0.937	0.30			
10/3/2003	12:00:31	31.5	60.33	4.107	0.957	0.33			
10/3/2003	12:00:33	33.3	60.33	4.111	0.953	0.37			
10/3/2003	12:00:35	35.2	60.35	4.099	0.965	0.40			
10/3/2003	12:00:37	37.3	60.35	4.091	0.973	0.43			
10/3/2003	12:00:39	39.5	60.38	4.089	0.975	0.47			
10/3/2003	12:00:41	41.8	60.38	4.081	0.983	0.50			
10/3/2003	12:00:44	44.3	60.38	4.081	0.983	0.55			
10/3/2003	12:00:46	46.9	60.4	4.079	0.985	0.58			
10/3/2003	12:00:49	49.7	60.42	4.077	0.987	0.63			
10/3/2003	12:00:52	52.6	60.42	4.071	0.993	0.68			
10/3/2003	12:00:55	55.7	60.44	4.061	1.003	0.73			
10/3/2003	12:00:58	59	60.44	4.061	1.003	0.78			
10/3/2003	12:01:02	62.5	60.47	4.053	1.011	0.85			

Well No. **MW-111AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/3/2003	12:01:06	66.2	60.47	4.051	1.013	0.92			
10/3/2003	12:01:10	70.1	60.49	4.049	1.015	0.98			
10/3/2003	12:01:14	74.3	60.51	4.06	1.004	1.05			
10/3/2003	12:01:18	78.7	60.51	4.056	1.008	1.12			
10/3/2003	12:01:23	83.4	60.53	4.046	1.018	1.20			
10/3/2003	12:01:28	88.4	60.56	4.046	1.018	1.28			
10/3/2003	12:01:33	93.7	60.56	4.044	1.020	1.37			
10/3/2003	12:01:39	99.3	60.58	4.04	1.024	1.47			
10/3/2003	12:01:45	105.2	60.58	4.038	1.026	1.57			
10/3/2003	12:01:51	111.5	60.6	4.04	1.024	1.67			
10/3/2003	12:01:58	118.1	60.62	4.036	1.028	1.78			
10/3/2003	12:02:05	125.1	60.65	4.035	1.029	1.90			2.0 gpm flow rate
10/3/2003	12:02:12	132.6	60.65	4.033	1.031	2.02			
10/3/2003	12:02:20	140.5	60.67	4.023	1.041	2.15			
10/3/2003	12:02:28	148.9	60.67	4.023	1.041	2.28			
10/3/2003	12:02:37	157.8	60.69	4.025	1.039	2.43			
10/3/2003	12:02:47	167.2	60.69	4.033	1.031	2.60			
10/3/2003	12:02:57	177.2	60.69	4.033	1.031	2.77			
10/3/2003	12:03:07	187.8	60.72	4.029	1.035	2.93			
10/3/2003	12:03:18	199	60.72	4.029	1.035	3.12			
10/3/2003	12:03:30	210.9	60.74	4.025	1.039	3.32			
10/3/2003	12:03:43	223.5	60.74	4.023	1.041	3.53			
10/3/2003	12:03:56	236.8	60.74	4.027	1.037	3.75			
10/3/2003	12:04:10	250.9	60.74	4.025	1.039	3.98			
10/3/2003	12:04:25	265.8	60.74	4.021	1.043	4.23			
10/3/2003	12:04:41	281.6	60.76	4.024	1.040	4.50			
10/3/2003	12:04:58	298.4	60.76	4.036	1.028	4.78			
10/3/2003	12:05:16	316.2	60.76	4.036	1.028	5.08			
10/3/2003	12:05:34	335	60.76	4.042	1.022	5.38			
10/3/2003	12:05:54	354.9	60.76	4.03	1.034	5.72			
10/3/2003	12:06:15	376	60.76	4.046	1.018	6.07			
10/3/2003	12:06:38	398.4	60.76	4.042	1.022	6.45			
10/3/2003	12:07:02	422.1	60.76	4.058	1.006	6.85			
10/3/2003	12:07:27	447.2	60.74	4.068	0.996	7.27			
10/3/2003	12:07:53	473.8	60.74	4.06	1.004	7.70			
10/3/2003	12:08:21	502	60.74	4.062	1.002	8.17			
10/3/2003	12:08:51	531.9	60.74	4.074	0.990	8.67			
10/3/2003	12:09:21	561.9	60.74	4.058	1.006	9.17			
10/3/2003	12:09:51	591.9	60.72	4.046	1.018	9.67			
10/3/2003	12:10:21	621.9	60.72	4.037	1.027	10.17			
10/3/2003	12:10:51	651.9	60.72	4.029	1.035	10.67			
10/3/2003	12:11:21	681.9	60.72	4.037	1.027	11.17			1.94 gpm flow rate
10/3/2003	12:11:51	711.9	60.72	4.046	1.018	11.67			
10/3/2003	12:12:21	741.9	60.72	4.029	1.035	12.17			
10/3/2003	12:12:51	771.9	60.69	4.029	1.035	12.67			
10/3/2003	12:13:21	801.9	60.72	4.029	1.035	13.17			
10/3/2003	12:13:51	831.9	60.69	4.033	1.031	13.67			
10/3/2003	12:14:21	861.9	60.69	4.033	1.031	14.17			
10/3/2003	12:14:51	891.9	60.69	4.045	1.019	14.67			
10/3/2003	12:15:21	921.9	60.69	4.029	1.035	15.17			
10/3/2003	12:15:51	951.9	60.67	4.035	1.029	15.67			
10/3/2003	12:16:21	981.9	60.67	4.025	1.039	16.17			
10/3/2003	12:16:51	1011.9	60.67	4.029	1.035	16.67			
10/3/2003	12:17:21	1041.9	60.67	4.015	1.049	17.17			
10/3/2003	12:17:51	1071.9	60.67	4.015	1.049	17.67			
10/3/2003	12:18:21	1101.9	60.67	4.025	1.039	18.17			
10/3/2003	12:18:51	1131.9	60.67	4.012	1.052	18.67			
10/3/2003	12:19:21	1161.9	60.67	4.008	1.056	19.17			
10/3/2003	12:19:51	1191.9	60.67	4	1.064	19.67			
10/3/2003	12:20:21	1221.9	60.65	3.996	1.068	20.17			
10/3/2003	12:20:51	1251.9	60.65	4.016	1.048	20.67			
10/3/2003	12:21:21	1281.9	60.65	4.004	1.060	21.17			
10/3/2003	12:21:51	1311.9	60.62	4.02	1.044	21.67			
10/3/2003	12:22:21	1341.9	60.62	4.024	1.040	22.17			
10/3/2003	12:22:51	1371.9	60.62	4.016	1.048	22.67			
10/3/2003	12:23:21	1401.9	60.6	4.014	1.050	23.17			
10/3/2003	12:23:51	1431.9	60.6	4.004	1.060	23.67			
10/3/2003	12:24:21	1461.9	60.6	4.01	1.054	24.17			
10/3/2003	12:24:51	1491.9	60.6	4.01	1.054	24.67			

Well No. **MW-111AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/3/2003	12:25:21	1521.9	60.58	4.012	1.052	25.17			
10/3/2003	12:25:51	1551.9	60.58	4.018	1.046	25.67			
10/3/2003	12:26:21	1581.9	60.58	4.007	1.057	26.17			
10/3/2003	12:26:51	1611.9	60.58	4.016	1.048	26.67			
10/3/2003	12:27:21	1641.9	60.58	4.008	1.056	27.17			
10/3/2003	12:27:51	1671.9	60.58	4.005	1.059	27.67			
10/3/2003	12:28:21	1701.9	60.58	3.999	1.065	28.17			
10/3/2003	12:28:51	1731.9	60.58	4.01	1.054	28.67			
10/3/2003	12:29:21	1761.9	60.58	4.016	1.048	29.17			
10/3/2003	12:29:51	1791.9	60.58	4.008	1.056	29.67			
10/3/2003	12:30:00	0	60.58	4.016	1.048	29.82			Start Test 2
10/3/2003	12:30:00	0.3	60.58	4.012	1.052	29.82			
10/3/2003	12:30:00	0.6	60.6	4.01	1.054	29.82			
10/3/2003	12:30:00	0.9	60.6	4.004	1.060	29.82			
10/3/2003	12:30:01	1.2	60.62	4.022	1.042	29.83			
10/3/2003	12:30:01	1.5	60.62	4.006	1.058	29.83			
10/3/2003	12:30:01	1.8	60.62	4.008	1.056	29.83			
10/3/2003	12:30:02	2.1	60.62	4.016	1.048	29.85			
10/3/2003	12:30:02	2.4	60.65	4.014	1.050	29.85			
10/3/2003	12:30:02	2.7	60.65	4.02	1.044	29.85			
10/3/2003	12:30:03	3	60.65	4.006	1.058	29.87			
10/3/2003	12:30:03	3.3	60.65	4.016	1.048	29.87			
10/3/2003	12:30:03	3.6	60.65	4.01	1.054	29.87			
10/3/2003	12:30:03	3.9	60.65	4.012	1.052	29.87			
10/3/2003	12:30:04	4.2	60.65	4.006	1.058	29.88			
10/3/2003	12:30:04	4.5	60.65	4.006	1.058	29.88			
10/3/2003	12:30:04	4.8	60.65	4.012	1.052	29.88			
10/3/2003	12:30:05	5.1	60.65	4.018	1.046	29.90			
10/3/2003	12:30:05	5.4	60.65	4.01	1.054	29.90			
10/3/2003	12:30:05	5.7	60.65	4.008	1.056	29.90			
10/3/2003	12:30:06	6	60.65	4.008	1.056	29.92			
10/3/2003	12:30:06	6.4	60.65	4.01	1.054	29.92			
10/3/2003	12:30:06	6.7	60.65	4.012	1.052	29.92			
10/3/2003	12:30:07	7.1	60.65	4.004	1.060	29.93			
10/3/2003	12:30:07	7.5	60.65	4.014	1.050	29.93			
10/3/2003	12:30:08	8	60.67	4.004	1.060	29.95			
10/3/2003	12:30:08	8.4	60.67	4.002	1.062	29.95			
10/3/2003	12:30:08	8.9	60.67	4.006	1.058	29.95			
10/3/2003	12:30:09	9.5	60.67	4.006	1.058	29.97			
10/3/2003	12:30:10	10	60.65	4.008	1.056	29.98			
10/3/2003	12:30:10	10.6	60.65	4.014	1.050	29.98			
10/3/2003	12:30:11	11.3	60.65	4.01	1.054	30.00			
10/3/2003	12:30:11	11.9	60.65	4.01	1.054	30.00			
10/3/2003	12:30:12	12.6	60.65	4.016	1.048	30.02			
10/3/2003	12:30:13	13.4	60.65	4.012	1.052	30.03			
10/3/2003	12:30:14	14.2	60.65	4.01	1.054	30.05			
10/3/2003	12:30:15	15	60.65	4.014	1.050	30.07			
10/3/2003	12:30:15	15.9	60.62	4.008	1.056	30.07			
10/3/2003	12:30:16	16.8	60.62	4.012	1.052	30.08			
10/3/2003	12:30:17	17.8	60.62	4.012	1.052	30.10			
10/3/2003	12:30:18	18.9	60.62	4.01	1.054	30.12			
10/3/2003	12:30:20	20	60.62	4.016	1.048	30.15			
10/3/2003	12:30:21	21.2	60.62	4.01	1.054	30.17			
10/3/2003	12:30:22	22.4	60.62	4.012	1.052	30.18			
10/3/2003	12:30:23	23.8	60.62	4.018	1.046	30.20			
10/3/2003	12:30:25	25.2	60.62	4.012	1.052	30.23			
10/3/2003	12:30:26	26.7	60.62	4.01	1.054	30.25	0.00		Pump Stop
10/3/2003	12:30:28	28.2	60.62	4.228	0.836	30.28	0.03	908.50	
10/3/2003	12:30:29	29.8	60.62	4.427	0.637	30.30	0.05	606.00	
10/3/2003	12:30:31	31.5	60.62	4.576	0.488	30.33	0.08	364.00	
10/3/2003	12:30:33	33.3	60.62	4.702	0.362	30.37	0.12	260.29	
10/3/2003	12:30:35	35.2	60.62	4.798	0.266	30.40	0.15	202.67	
10/3/2003	12:30:37	37.3	60.6	4.867	0.197	30.43	0.18	166.00	
10/3/2003	12:30:39	39.5	60.6	4.916	0.148	30.47	0.22	140.62	
10/3/2003	12:30:41	41.8	60.6	4.95	0.114	30.50	0.25	122.00	
10/3/2003	12:30:44	44.3	60.6	4.975	0.089	30.55	0.30	101.83	
10/3/2003	12:30:46	46.9	60.58	4.995	0.069	30.58	0.33	91.75	
10/3/2003	12:30:49	49.7	60.56	5.007	0.057	30.63	0.38	79.91	
10/3/2003	12:30:52	52.6	60.56	5.017	0.047	30.68	0.43	70.81	

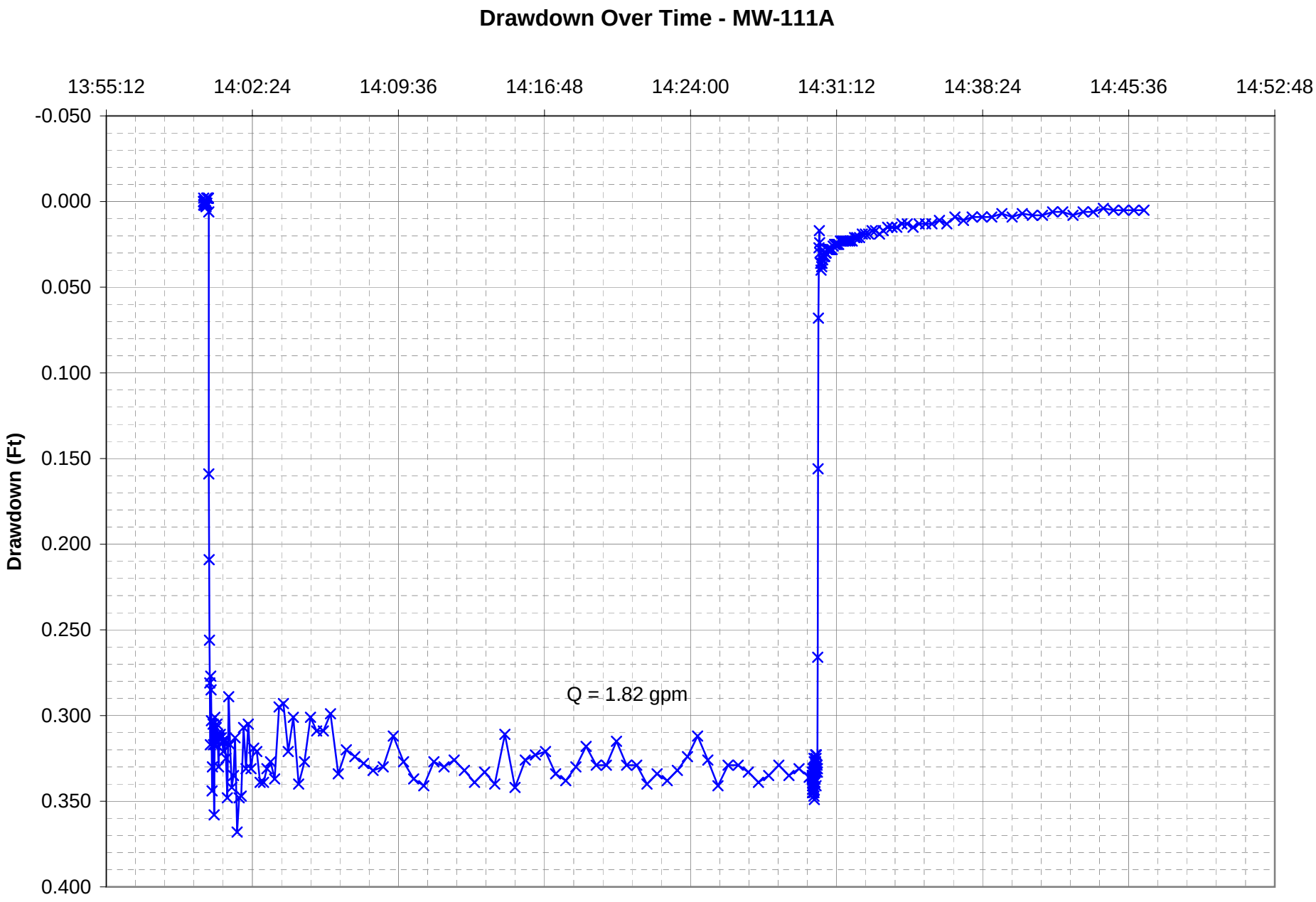
Well No. **MW-111AA**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/3/2003	12:30:55	55.7	60.53	5.023	0.041	30.73	0.48	63.59	
10/3/2003	12:30:59	59	60.53	5.025	0.039	30.80	0.55	56.00	
10/3/2003	12:31:02	62.5	60.51	5.031	0.033	30.85	0.60	51.42	
10/3/2003	12:31:06	66.2	60.49	5.031	0.033	30.92	0.67	46.38	
10/3/2003	12:31:10	70.1	60.47	5.035	0.029	30.98	0.73	42.25	
10/3/2003	12:31:14	74.3	60.44	5.038	0.026	31.05	0.80	38.81	
10/3/2003	12:31:18	78.7	60.42	5.038	0.026	31.12	0.87	35.90	
10/3/2003	12:31:23	83.4	60.4	5.04	0.024	31.20	0.95	32.84	
10/3/2003	12:31:28	88.4	60.38	5.04	0.024	31.28	1.03	30.27	
10/3/2003	12:31:33	93.7	60.35	5.042	0.022	31.37	1.12	28.09	
10/3/2003	12:31:39	99.3	60.33	5.045	0.019	31.47	1.22	25.86	
10/3/2003	12:31:45	105.2	60.33	5.045	0.019	31.57	1.32	23.97	
10/3/2003	12:31:51	111.5	60.31	5.047	0.017	31.67	1.42	22.35	
10/3/2003	12:31:58	118.1	60.29	5.047	0.017	31.78	1.53	20.73	
10/3/2003	12:32:05	125.1	60.26	5.049	0.015	31.90	1.65	19.33	
10/3/2003	12:32:12	132.6	60.24	5.049	0.015	32.02	1.77	18.12	
10/3/2003	12:32:20	140.5	60.22	5.05	0.014	32.15	1.90	16.92	
10/3/2003	12:32:28	148.9	60.19	5.052	0.012	32.28	2.03	15.88	
10/3/2003	12:32:37	157.8	60.17	5.052	0.012	32.43	2.18	14.85	
10/3/2003	12:32:47	167.2	60.17	5.054	0.010	32.60	2.35	13.87	
10/3/2003	12:32:57	177.2	60.15	5.054	0.010	32.77	2.52	13.02	
10/3/2003	12:33:07	187.8	60.15	5.054	0.010	32.93	2.68	12.27	
10/3/2003	12:33:19	199	60.13	5.055	0.009	33.13	2.88	11.49	
10/3/2003	12:33:30	210.9	60.13	5.055	0.009	33.32	3.07	10.86	
10/3/2003	12:33:43	223.5	60.1	5.059	0.005	33.53	3.28	10.21	
10/3/2003	12:33:56	236.8	60.1	5.057	0.007	33.75	3.50	9.64	
10/3/2003	12:34:10	250.9	60.1	5.057	0.007	33.98	3.73	9.10	
10/3/2003	12:34:25	265.8	60.08	5.057	0.007	34.23	3.98	8.59	
10/3/2003	12:34:41	281.6	60.08	5.059	0.005	34.50	4.25	8.12	
10/3/2003	12:34:58	298.4	60.08	5.059	0.005	34.78	4.53	7.67	
10/3/2003	12:35:16	316.2	60.08	5.059	0.005	35.08	4.83	7.26	
10/3/2003	12:35:35	335	60.06	5.061	0.003	35.40	5.15	6.87	
10/3/2003	12:35:54	354.9	60.08	5.059	0.005	35.72	5.47	6.53	
10/3/2003	12:36:16	376	60.06	5.059	0.005	36.08	5.83	6.19	
10/3/2003	12:36:38	398.4	60.06	5.061	0.003	36.45	6.20	5.88	
10/3/2003	12:37:02	422.1	60.06	5.061	0.003	36.85	6.60	5.58	
10/3/2003	12:37:27	447.2	60.06	5.061	0.003	37.27	7.02	5.31	
10/3/2003	12:51:00								DTW = 10.56 at 10:51

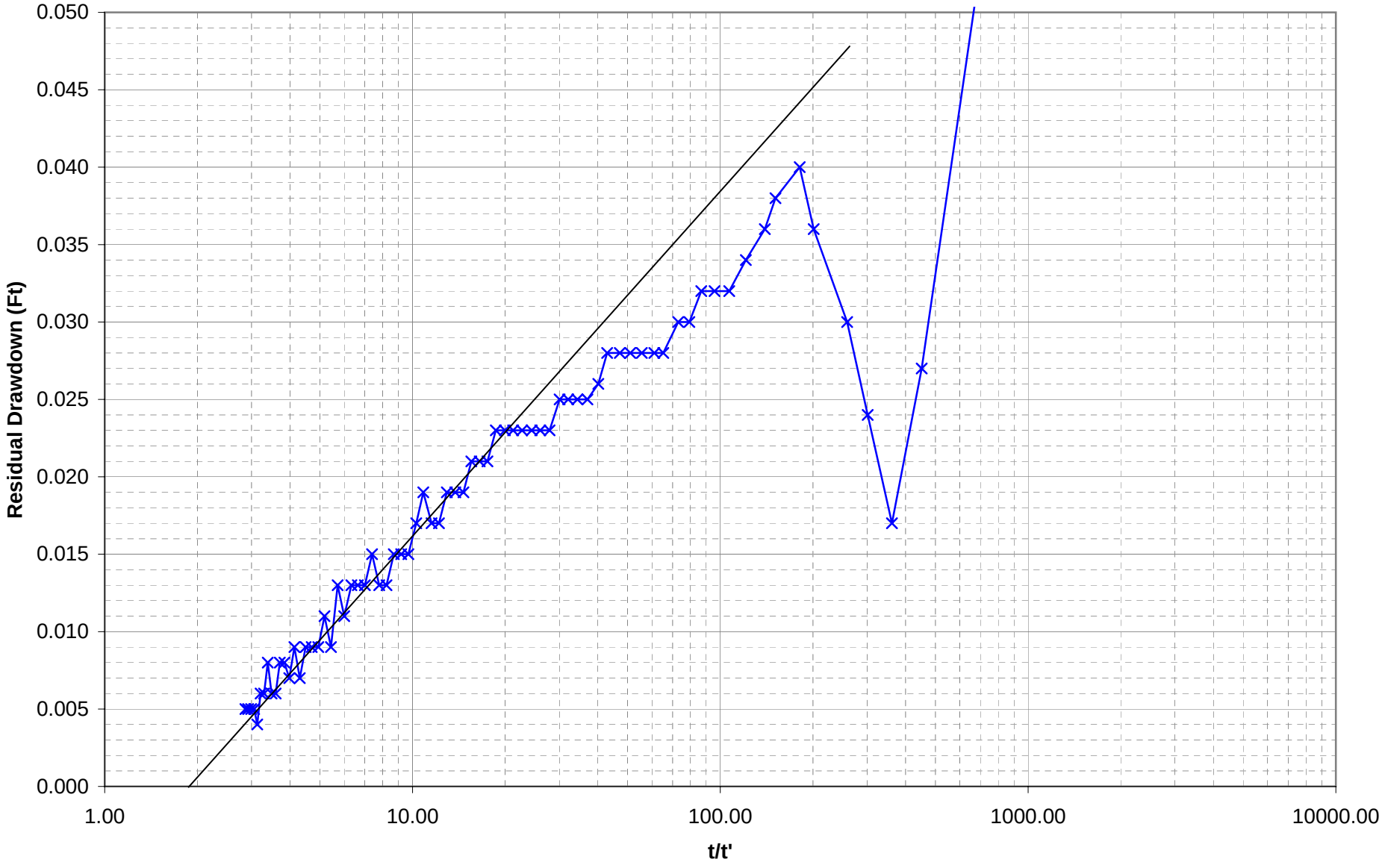
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **MW-111A**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/3/2003	14:00:00			
Test end date and time	10/3/2003	14:46:21			
Period of pumping	30	minutes			
Static depth to water	10.15	feet below top of casing			
Startiing transducer depth	4.996	feet below static water level			
Total well depth	74.7	feet below top of casing			
Depth to top of screen	64.7	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.82	gpm, or	350	cfd	
Average drawdown [s]	0.33	ft			
Specific capacity [Q/s]	5.52	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.02	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			2914.5	cfd/ft	
Hydraulic conductivity [K = T/b]			291.5	fpd, or	1.0E-01 cm/sec


Drawdown Over Time - MW-111A
13:55:12
14:02:24
14:09:36
14:16:48
14:24:00
14:31:12
14:38:24
14:45:36
14:52:48
-0.050
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
Drawdown (Ft)
Q = 1.82 gpm

Recovery Plot - MW-111A



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **MW-111A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/3/2003	13:30:00								DTW = 10.18 at 13:30
10/3/2003	14:00:00								DTW = 10.15 at 14:00
10/3/2003	14:00:00	0	60.04	4.998	-0.002				Start Test 1
10/3/2003	14:00:00	0.3	60.06	4.996	0.000				
10/3/2003	14:00:00	0.6	60.08	4.994	0.002				
10/3/2003	14:00:00	0.9	60.08	4.996	0.000				
10/3/2003	14:00:01	1.2	60.1	4.996	0.000				
10/3/2003	14:00:01	1.5	60.1	4.994	0.002				
10/3/2003	14:00:01	1.8	60.1	4.994	0.002				
10/3/2003	14:00:02	2.1	60.1	4.994	0.002				
10/3/2003	14:00:02	2.4	60.13	4.996	0.000				
10/3/2003	14:00:02	2.7	60.13	4.996	0.000				
10/3/2003	14:00:03	3	60.13	4.996	0.000				
10/3/2003	14:00:03	3.3	60.13	4.994	0.002				
10/3/2003	14:00:03	3.6	60.13	4.996	0.000				
10/3/2003	14:00:03	3.9	60.13	4.994	0.002				
10/3/2003	14:00:04	4.2	60.13	4.996	0.000				
10/3/2003	14:00:04	4.5	60.13	4.996	0.000				
10/3/2003	14:00:04	4.8	60.13	4.996	0.000				
10/3/2003	14:00:05	5.1	60.13	4.996	0.000				
10/3/2003	14:00:05	5.4	60.13	4.996	0.000				
10/3/2003	14:00:05	5.7	60.13	4.996	0.000				
10/3/2003	14:00:06	6	60.13	4.996	0.000				
10/3/2003	14:00:06	6.4	60.13	4.994	0.002				
10/3/2003	14:00:06	6.7	60.15	4.995	0.001				
10/3/2003	14:00:07	7.1	60.15	4.995	0.001				
10/3/2003	14:00:07	7.5	60.15	4.993	0.003				
10/3/2003	14:00:07	8	60.15	4.995	0.001				
10/3/2003	14:00:08	8.4	60.15	4.995	0.001				
10/3/2003	14:00:08	8.9	60.15	4.995	0.001				
10/3/2003	14:00:09	9.5	60.15	4.995	0.001				
10/3/2003	14:00:10	10	60.13	4.998	-0.002				
10/3/2003	14:00:10	10.6	60.13	4.998	-0.002				
10/3/2003	14:00:11	11.3	60.13	4.998	-0.002				
10/3/2003	14:00:11	11.9	60.13	4.998	-0.002				
10/3/2003	14:00:12	12.6	60.13	4.998	-0.002				
10/3/2003	14:00:13	13.4	60.1	4.998	-0.002				
10/3/2003	14:00:14	14.2	60.13	4.998	-0.002				
10/3/2003	14:00:15	15	60.1	4.99	0.006	0.00			Pump Start
10/3/2003	14:00:15	15.9	60.1	4.837	0.159	0.00			
10/3/2003	14:00:16	16.8	60.1	4.787	0.209	0.02			
10/3/2003	14:00:17	17.8	60.1	4.74	0.256	0.03			
10/3/2003	14:00:18	18.9	60.1	4.715	0.281	0.05			
10/3/2003	14:00:20	20	60.1	4.679	0.317	0.08			
10/3/2003	14:00:21	21.2	60.1	4.719	0.277	0.10			
10/3/2003	14:00:22	22.4	60.1	4.711	0.285	0.12			
10/3/2003	14:00:23	23.8	60.1	4.693	0.303	0.13			
10/3/2003	14:00:25	25.2	60.1	4.652	0.344	0.17			
10/3/2003	14:00:26	26.7	60.1	4.666	0.330	0.18			
10/3/2003	14:00:28	28.2	60.1	4.691	0.305	0.22			
10/3/2003	14:00:29	29.8	60.1	4.679	0.317	0.23			
10/3/2003	14:00:31	31.5	60.1	4.638	0.358	0.27			
10/3/2003	14:00:33	33.3	60.1	4.695	0.301	0.30			
10/3/2003	14:00:35	35.2	60.1	4.679	0.317	0.33			
10/3/2003	14:00:37	37.3	60.1	4.689	0.307	0.37			
10/3/2003	14:00:39	39.5	60.1	4.691	0.305	0.40			
10/3/2003	14:00:41	41.8	60.1	4.685	0.311	0.43			
10/3/2003	14:00:44	44.3	60.1	4.666	0.330	0.48			
10/3/2003	14:00:46	46.9	60.1	4.683	0.313	0.52			
10/3/2003	14:00:49	49.7	60.1	4.685	0.311	0.57			
10/3/2003	14:00:52	52.6	60.1	4.683	0.313	0.62			
10/3/2003	14:00:55	55.7	60.13	4.681	0.315	0.67			
10/3/2003	14:00:58	59	60.13	4.675	0.321	0.72			
10/3/2003	14:01:02	62.5	60.13	4.681	0.315	0.78			1.94 gpm flow rate
10/3/2003	14:01:06	66.2	60.13	4.671	0.325	0.85			

Well No. **MW-111A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/3/2003	14:01:10	70.1	60.13	4.648	0.348	0.92			
10/3/2003	14:01:14	74.3	60.13	4.707	0.289	0.98			
10/3/2003	14:01:18	78.7	60.13	4.679	0.317	1.05			
10/3/2003	14:01:23	83.4	60.13	4.654	0.342	1.13			
10/3/2003	14:01:28	88.4	60.13	4.661	0.335	1.22			
10/3/2003	14:01:33	93.7	60.13	4.683	0.313	1.30			
10/3/2003	14:01:39	99.3	60.13	4.628	0.368	1.40			
10/3/2003	14:01:45	105.2	60.13	4.648	0.348	1.50			
10/3/2003	14:01:51	111.5	60.15	4.649	0.347	1.60			
10/3/2003	14:01:58	118.1	60.15	4.689	0.307	1.72			
10/3/2003	14:02:05	125.1	60.15	4.665	0.331	1.83			
10/3/2003	14:02:12	132.6	60.15	4.691	0.305	1.95			
10/3/2003	14:02:20	140.5	60.15	4.665	0.331	2.08			
10/3/2003	14:02:28	148.9	60.15	4.677	0.319	2.22			
10/3/2003	14:02:37	157.8	60.15	4.675	0.321	2.37			
10/3/2003	14:02:47	167.2	60.15	4.657	0.339	2.53			
10/3/2003	14:02:57	177.2	60.15	4.657	0.339	2.70			
10/3/2003	14:03:07	187.8	60.15	4.665	0.331	2.87			
10/3/2003	14:03:18	199	60.15	4.669	0.327	3.05			
10/3/2003	14:03:30	210.9	60.15	4.659	0.337	3.25			
10/3/2003	14:03:43	223.5	60.15	4.701	0.295	3.47			
10/3/2003	14:03:56	236.8	60.13	4.703	0.293	3.68			
10/3/2003	14:04:10	250.9	60.13	4.675	0.321	3.92			
10/3/2003	14:04:25	265.8	60.15	4.695	0.301	4.17			
10/3/2003	14:04:41	281.6	60.13	4.656	0.340	4.43			
10/3/2003	14:04:58	298.4	60.13	4.669	0.327	4.72			
10/3/2003	14:05:16	316.2	60.13	4.695	0.301	5.02			
10/3/2003	14:05:34	335	60.13	4.687	0.309	5.32			
10/3/2003	14:05:54	354.9	60.1	4.687	0.309	5.65			
10/3/2003	14:06:15	376	60.1	4.697	0.299	6.00			
10/3/2003	14:06:38	398.4	60.08	4.662	0.334	6.38			
10/3/2003	14:07:02	422.1	60.08	4.676	0.320	6.78			
10/3/2003	14:07:27	447.2	60.08	4.672	0.324	7.20			
10/3/2003	14:07:53	473.8	60.06	4.668	0.328	7.63			
10/3/2003	14:08:21	502	60.04	4.664	0.332	8.10			1.82 gpm flow rate
10/3/2003	14:08:51	531.9	60.04	4.666	0.330	8.60			
10/3/2003	14:09:21	561.9	60.01	4.684	0.312	9.10			
10/3/2003	14:09:51	591.9	59.99	4.669	0.327	9.60			
10/3/2003	14:10:21	621.9	59.97	4.659	0.337	10.10			
10/3/2003	14:10:51	651.9	59.95	4.655	0.341	10.60			
10/3/2003	14:11:21	681.9	59.92	4.669	0.327	11.10			
10/3/2003	14:11:51	711.9	59.9	4.666	0.330	11.60			
10/3/2003	14:12:21	741.9	59.88	4.67	0.326	12.10			1.82 gpm flow rate
10/3/2003	14:12:51	771.9	59.83	4.664	0.332	12.60			
10/3/2003	14:13:21	801.9	59.81	4.657	0.339	13.10			
10/3/2003	14:13:51	831.9	59.76	4.663	0.333	13.60			
10/3/2003	14:14:21	861.9	59.72	4.656	0.340	14.10			
10/3/2003	14:14:51	891.9	59.7	4.685	0.311	14.60			
10/3/2003	14:15:21	921.9	59.65	4.654	0.342	15.10			
10/3/2003	14:15:51	951.9	59.63	4.67	0.326	15.60			
10/3/2003	14:16:21	981.9	59.58	4.673	0.323	16.10			1.82 gpm flow rate
10/3/2003	14:16:51	1011.9	59.56	4.675	0.321	16.60			
10/3/2003	14:17:21	1041.9	59.52	4.662	0.334	17.10			
10/3/2003	14:17:51	1071.9	59.49	4.658	0.338	17.60			
10/3/2003	14:18:21	1101.9	59.45	4.666	0.330	18.10			
10/3/2003	14:18:51	1131.9	59.43	4.678	0.318	18.60			
10/3/2003	14:19:21	1161.9	59.4	4.667	0.329	19.10			
10/3/2003	14:19:51	1191.9	59.38	4.667	0.329	19.60			
10/3/2003	14:20:21	1221.9	59.36	4.681	0.315	20.10			1.82 gpm flow rate
10/3/2003	14:20:51	1251.9	59.33	4.667	0.329	20.60			
10/3/2003	14:21:21	1281.9	59.33	4.667	0.329	21.10			
10/3/2003	14:21:51	1311.9	59.31	4.656	0.340	21.60			
10/3/2003	14:22:21	1341.9	59.29	4.662	0.334	22.10			
10/3/2003	14:22:51	1371.9	59.27	4.658	0.338	22.60			
10/3/2003	14:23:21	1401.9	59.27	4.664	0.332	23.10			
10/3/2003	14:23:51	1431.9	59.24	4.672	0.324	23.60			
10/3/2003	14:24:21	1461.9	59.22	4.684	0.312	24.10			
10/3/2003	14:24:51	1491.9	59.22	4.67	0.326	24.60			
10/3/2003	14:25:21	1521.9	59.2	4.655	0.341	25.10			

Well No. **MW-111A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/3/2003	14:25:51	1551.9	59.2	4.667	0.329	25.60			
10/3/2003	14:26:21	1581.9	59.18	4.667	0.329	26.10			
10/3/2003	14:26:51	1611.9	59.18	4.663	0.333	26.60			
10/3/2003	14:27:21	1641.9	59.15	4.657	0.339	27.10			
10/3/2003	14:27:51	1671.9	59.15	4.661	0.335	27.60			
10/3/2003	14:28:21	1701.9	59.15	4.667	0.329	28.10			
10/3/2003	14:28:51	1731.9	59.13	4.661	0.335	28.60			
10/3/2003	14:29:21	1761.9	59.13	4.665	0.331	29.10			
10/3/2003	14:29:51	1791.9	59.11	4.66	0.336	29.60			
10/3/2003	14:30:00	0	59.11	4.66	0.336	29.75			Start Test 2
10/3/2003	14:30:00	0.3	59.13	4.663	0.333	29.75			
10/3/2003	14:30:00	0.6	59.15	4.661	0.335	29.75			
10/3/2003	14:30:00	0.9	59.15	4.659	0.337	29.75			
10/3/2003	14:30:01	1.2	59.18	4.653	0.343	29.77			
10/3/2003	14:30:01	1.5	59.18	4.655	0.341	29.77			
10/3/2003	14:30:01	1.8	59.18	4.651	0.345	29.77			
10/3/2003	14:30:02	2.1	59.18	4.655	0.341	29.78			
10/3/2003	14:30:02	2.4	59.18	4.661	0.335	29.78			
10/3/2003	14:30:02	2.7	59.18	4.651	0.345	29.78			
10/3/2003	14:30:03	3	59.18	4.657	0.339	29.80			
10/3/2003	14:30:03	3.3	59.2	4.657	0.339	29.80			
10/3/2003	14:30:03	3.6	59.2	4.665	0.331	29.80			
10/3/2003	14:30:03	3.9	59.2	4.665	0.331	29.80			
10/3/2003	14:30:04	4.2	59.2	4.653	0.343	29.82			
10/3/2003	14:30:04	4.5	59.2	4.659	0.337	29.82			
10/3/2003	14:30:04	4.8	59.2	4.663	0.333	29.82			
10/3/2003	14:30:05	5.1	59.2	4.671	0.325	29.83			
10/3/2003	14:30:05	5.4	59.2	4.651	0.345	29.83			
10/3/2003	14:30:05	5.7	59.2	4.649	0.347	29.83			
10/3/2003	14:30:06	6	59.2	4.659	0.337	29.85			
10/3/2003	14:30:06	6.4	59.2	4.647	0.349	29.85			
10/3/2003	14:30:06	6.7	59.2	4.669	0.327	29.85			
10/3/2003	14:30:07	7.1	59.2	4.665	0.331	29.87			
10/3/2003	14:30:07	7.5	59.2	4.659	0.337	29.87			
10/3/2003	14:30:08	8	59.2	4.663	0.333	29.88			
10/3/2003	14:30:08	8.4	59.2	4.657	0.339	29.88			
10/3/2003	14:30:08	8.9	59.2	4.659	0.337	29.88			
10/3/2003	14:30:09	9.5	59.2	4.665	0.331	29.90			
10/3/2003	14:30:10	10	59.2	4.669	0.327	29.92			
10/3/2003	14:30:10	10.6	59.2	4.673	0.323	29.92			
10/3/2003	14:30:11	11.3	59.2	4.671	0.325	29.93			
10/3/2003	14:30:11	11.9	59.2	4.655	0.341	29.93			
10/3/2003	14:30:12	12.6	59.18	4.673	0.323	29.95			
10/3/2003	14:30:13	13.4	59.18	4.663	0.333	29.97			
10/3/2003	14:30:14	14.2	59.18	4.667	0.329	29.98			
10/3/2003	14:30:15	15	59.18	4.663	0.333	30.00			
10/3/2003	14:30:15	15.9	59.18	4.665	0.331	30.00			
10/3/2003	14:30:16	16.8	59.18	4.73	0.266	30.02	0.00		Pump Stop
10/3/2003	14:30:17	17.8	59.18	4.84	0.156	30.03	0.02	1802.00	
10/3/2003	14:30:18	18.9	59.18	4.928	0.068	30.05	0.03	901.50	
10/3/2003	14:30:20	20	59.18	4.969	0.027	30.08	0.07	451.25	
10/3/2003	14:30:21	21.2	59.18	4.979	0.017	30.10	0.08	361.20	
10/3/2003	14:30:22	22.4	59.15	4.972	0.024	30.12	0.10	301.17	
10/3/2003	14:30:23	23.8	59.15	4.966	0.030	30.13	0.12	258.29	
10/3/2003	14:30:25	25.2	59.15	4.96	0.036	30.17	0.15	201.11	
10/3/2003	14:30:26	26.7	59.15	4.956	0.040	30.18	0.17	181.10	
10/3/2003	14:30:28	28.2	59.15	4.958	0.038	30.22	0.20	151.08	
10/3/2003	14:30:29	29.8	59.15	4.96	0.036	30.23	0.22	139.54	
10/3/2003	14:30:31	31.5	59.15	4.962	0.034	30.27	0.25	121.07	
10/3/2003	14:30:33	33.3	59.15	4.964	0.032	30.30	0.28	106.94	
10/3/2003	14:30:35	35.2	59.13	4.964	0.032	30.33	0.32	95.79	
10/3/2003	14:30:37	37.3	59.13	4.964	0.032	30.37	0.35	86.76	
10/3/2003	14:30:39	39.5	59.13	4.966	0.030	30.40	0.38	79.30	
10/3/2003	14:30:41	41.8	59.13	4.966	0.030	30.43	0.42	73.04	
10/3/2003	14:30:44	44.3	59.13	4.968	0.028	30.48	0.47	65.32	
10/3/2003	14:30:46	46.9	59.11	4.968	0.028	30.52	0.50	61.03	
10/3/2003	14:30:49	49.7	59.11	4.968	0.028	30.57	0.55	55.58	
10/3/2003	14:30:52	52.6	59.11	4.968	0.028	30.62	0.60	51.03	
10/3/2003	14:30:55	55.7	59.09	4.968	0.028	30.67	0.65	47.18	

Well No. **MW-111A**

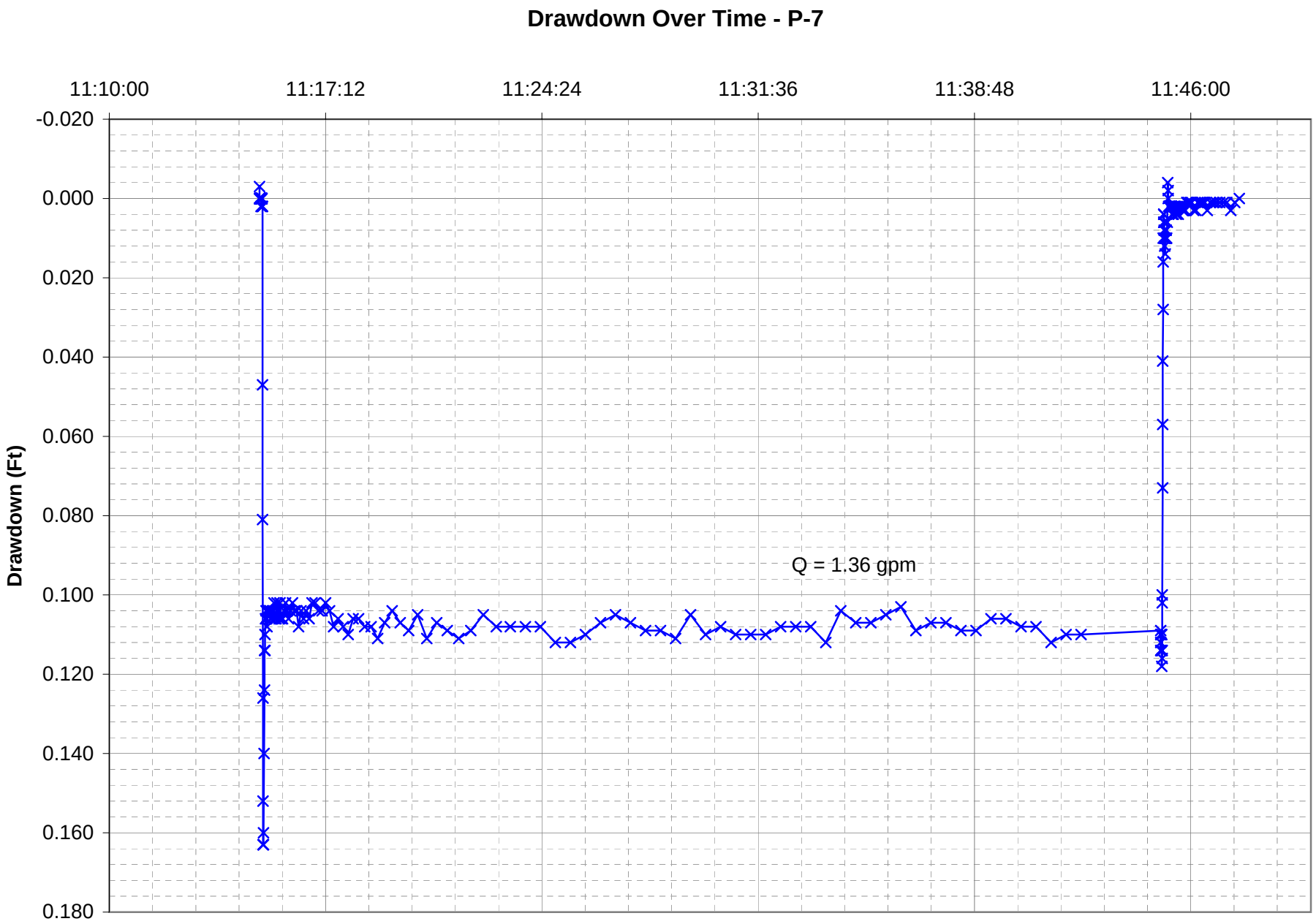
Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/3/2003	14:30:59	59	59.09	4.968	0.028	30.73	0.72	42.88	
10/3/2003	14:31:02	62.5	59.09	4.97	0.026	30.78	0.77	40.15	
10/3/2003	14:31:06	66.2	59.06	4.971	0.025	30.85	0.83	37.02	
10/3/2003	14:31:10	70.1	59.06	4.971	0.025	30.92	0.90	34.35	
10/3/2003	14:31:14	74.3	59.06	4.971	0.025	30.98	0.97	32.05	
10/3/2003	14:31:18	78.7	59.04	4.971	0.025	31.05	1.03	30.05	
10/3/2003	14:31:23	83.4	59.04	4.973	0.023	31.13	1.12	27.88	
10/3/2003	14:31:28	88.4	59.04	4.973	0.023	31.22	1.20	26.01	
10/3/2003	14:31:33	93.7	59.04	4.973	0.023	31.30	1.28	24.39	
10/3/2003	14:31:39	99.3	59.02	4.973	0.023	31.40	1.38	22.70	
10/3/2003	14:31:45	105.2	59.02	4.973	0.023	31.50	1.48	21.24	
10/3/2003	14:31:51	111.5	59	4.973	0.023	31.60	1.58	19.96	
10/3/2003	14:31:58	118.1	59	4.973	0.023	31.72	1.70	18.66	
10/3/2003	14:32:05	125.1	59	4.975	0.021	31.83	1.82	17.52	
10/3/2003	14:32:12	132.6	59	4.975	0.021	31.95	1.93	16.53	
10/3/2003	14:32:20	140.5	59	4.975	0.021	32.08	2.07	15.52	
10/3/2003	14:32:28	148.9	58.97	4.977	0.019	32.22	2.20	14.64	
10/3/2003	14:32:37	157.8	58.97	4.977	0.019	32.37	2.35	13.77	
10/3/2003	14:32:47	167.2	58.97	4.977	0.019	32.53	2.52	12.93	
10/3/2003	14:32:57	177.2	58.97	4.979	0.017	32.70	2.68	12.19	
10/3/2003	14:33:07	187.8	58.97	4.979	0.017	32.87	2.85	11.53	
10/3/2003	14:33:19	199	58.97	4.977	0.019	33.07	3.05	10.84	
10/3/2003	14:33:30	210.9	58.97	4.979	0.017	33.25	3.23	10.28	
10/3/2003	14:33:43	223.5	59	4.981	0.015	33.47	3.45	9.70	
10/3/2003	14:33:56	236.8	59	4.981	0.015	33.68	3.67	9.19	
10/3/2003	14:34:10	250.9	59	4.981	0.015	33.92	3.90	8.70	
10/3/2003	14:34:25	265.8	59	4.983	0.013	34.17	4.15	8.23	
10/3/2003	14:34:41	281.6	59	4.983	0.013	34.43	4.42	7.80	
10/3/2003	14:34:58	298.4	59	4.981	0.015	34.72	4.70	7.39	
10/3/2003	14:35:16	316.2	59	4.983	0.013	35.02	5.00	7.00	
10/3/2003	14:35:35	335	59	4.983	0.013	35.33	5.32	6.65	
10/3/2003	14:35:54	354.9	59	4.983	0.013	35.65	5.63	6.33	
10/3/2003	14:36:16	376	59	4.985	0.011	36.02	6.00	6.00	
10/3/2003	14:36:38	398.4	59	4.983	0.013	36.38	6.37	5.71	
10/3/2003	14:37:02	422.1	59	4.987	0.009	36.78	6.77	5.44	
10/3/2003	14:37:27	447.2	59.02	4.985	0.011	37.20	7.18	5.18	
10/3/2003	14:37:53	473.8	59.02	4.987	0.009	37.63	7.62	4.94	
10/3/2003	14:38:22	502	59.02	4.987	0.009	38.12	8.10	4.71	
10/3/2003	14:38:51	531.9	59.02	4.987	0.009	38.60	8.58	4.50	
10/3/2003	14:39:21	561.9	59.04	4.989	0.007	39.10	9.08	4.30	
10/3/2003	14:39:51	591.9	59.04	4.987	0.009	39.60	9.58	4.13	
10/3/2003	14:40:21	621.9	59.04	4.989	0.007	40.10	10.08	3.98	
10/3/2003	14:40:51	651.9	59.06	4.988	0.008	40.60	10.58	3.84	
10/3/2003	14:41:21	681.9	59.06	4.988	0.008	41.10	11.08	3.71	
10/3/2003	14:41:51	711.9	59.09	4.99	0.006	41.60	11.58	3.59	
10/3/2003	14:42:21	741.9	59.09	4.99	0.006	42.10	12.08	3.48	
10/3/2003	14:42:51	771.9	59.11	4.988	0.008	42.60	12.58	3.39	
10/3/2003	14:43:21	801.9	59.11	4.99	0.006	43.10	13.08	3.29	
10/3/2003	14:43:51	831.9	59.13	4.99	0.006	43.60	13.58	3.21	
10/3/2003	14:44:21	861.9	59.13	4.992	0.004	44.10	14.08	3.13	
10/3/2003	14:44:51	891.9	59.15	4.991	0.005	44.60	14.58	3.06	
10/3/2003	14:45:21	921.9	59.15	4.991	0.005	45.10	15.08	2.99	
10/3/2003	14:45:51	951.9	59.18	4.991	0.005	45.60	15.58	2.93	
10/3/2003	14:46:21	981.9	59.18	4.991	0.005	46.10	16.08	2.87	

DTW = 10.16 at 14:50

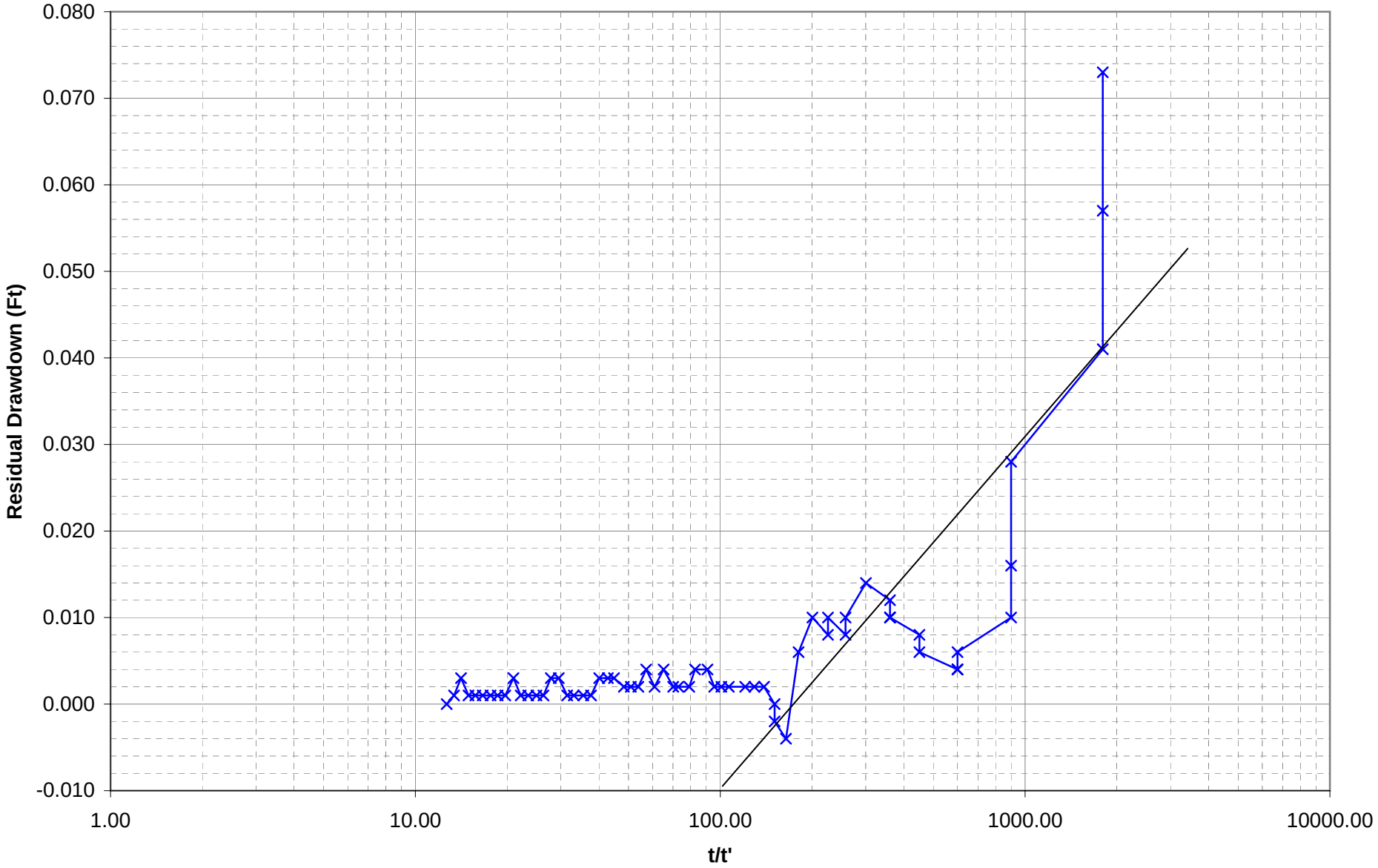
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **P-7**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/4/2003	11:15:00			
Test end date and time	10/4/2003	11:47:37			
Period of pumping	30	minutes			
Static depth to water	15.12	feet below top of casing			
Startiing transducer depth	5.013	feet below static water level			
Total well depth	39.6	feet below top of casing			
Depth to top of screen	29.6	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.36	gpm, or	262	cfd	
Average drawdown [s]	0.11	ft			
Specific capacity [Q/s]	12.4	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.032	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			1,497	cfd/ft	
Hydraulic conductivity [K = T/b]			149.7	fpd, or	5.3E-02 cm/sec


Drawdown Over Time - P-7
11:10:00
11:17:12
11:24:24
11:31:36
11:38:48
11:46:00
-0.020
0.000
0.020
0.040
0.060
0.080
0.100
0.120
0.140
0.160
0.180
Drawdown (Ft)
Q = 1.36 gpm

Recovery Plot - P-7



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **P-7**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/4/2003	11:00:00								DTW = 15.12 at 11:00
10/4/2003	11:15:00	0	55.26	5.016	-0.003				Start Test 1
10/4/2003	11:15:00	0.3	55.28	5.013	0.000				
10/4/2003	11:15:00	0.6	55.3	5.013	0.000				
10/4/2003	11:15:00	0.9	55.3	5.013	0.000				
10/4/2003	11:15:01	1.2	55.33	5.013	0.000				
10/4/2003	11:15:01	1.5	55.33	5.013	0.000				
10/4/2003	11:15:01	1.8	55.33	5.013	0.000				
10/4/2003	11:15:02	2.1	55.33	5.013	0.000				
10/4/2003	11:15:02	2.4	55.33	5.013	0.000				
10/4/2003	11:15:02	2.7	55.35	5.013	0.000				
10/4/2003	11:15:03	3	55.35	5.013	0.000				
10/4/2003	11:15:03	3.3	55.35	5.011	0.002				
10/4/2003	11:15:03	3.6	55.35	5.013	0.000				
10/4/2003	11:15:03	3.9	55.35	5.013	0.000				
10/4/2003	11:15:04	4.2	55.35	5.013	0.000				
10/4/2003	11:15:04	4.5	55.35	5.013	0.000				
10/4/2003	11:15:04	4.8	55.35	5.013	0.000				
10/4/2003	11:15:05	5.1	55.35	5.013	0.000				
10/4/2003	11:15:05	5.4	55.35	5.011	0.002				
10/4/2003	11:15:05	5.7	55.35	5.013	0.000				
10/4/2003	11:15:06	6	55.35	5.011	0.002	0.00			Pump Start
10/4/2003	11:15:06	6.4	55.35	4.966	0.047	0.00			
10/4/2003	11:15:06	6.7	55.35	4.932	0.081	0.00			
10/4/2003	11:15:07	7.1	55.35	4.887	0.126	0.02			
10/4/2003	11:15:07	7.5	55.37	4.861	0.152	0.02			
10/4/2003	11:15:07	8	55.35	4.85	0.163	0.02			
10/4/2003	11:15:08	8.4	55.35	4.85	0.163	0.03			
10/4/2003	11:15:08	8.9	55.37	4.853	0.160	0.03			
10/4/2003	11:15:09	9.5	55.37	4.873	0.140	0.05			
10/4/2003	11:15:10	10	55.35	4.889	0.124	0.07			
10/4/2003	11:15:10	10.6	55.35	4.899	0.114	0.07			
10/4/2003	11:15:11	11.3	55.35	4.899	0.114	0.08			
10/4/2003	11:15:11	11.9	55.35	4.903	0.110	0.08			
10/4/2003	11:15:12	12.6	55.35	4.907	0.106	0.10			
10/4/2003	11:15:13	13.4	55.33	4.909	0.104	0.12			
10/4/2003	11:15:14	14.2	55.35	4.907	0.106	0.13			
10/4/2003	11:15:15	15	55.33	4.909	0.104	0.15			
10/4/2003	11:15:15	15.9	55.33	4.905	0.108	0.15			
10/4/2003	11:15:16	16.8	55.33	4.909	0.104	0.17			
10/4/2003	11:15:17	17.8	55.33	4.909	0.104	0.18			
10/4/2003	11:15:18	18.9	55.33	4.909	0.104	0.20			
10/4/2003	11:15:20	20	55.33	4.909	0.104	0.23			
10/4/2003	11:15:21	21.2	55.33	4.909	0.104	0.25			
10/4/2003	11:15:22	22.4	55.33	4.907	0.106	0.27			
10/4/2003	11:15:23	23.8	55.33	4.907	0.106	0.28			
10/4/2003	11:15:25	25.2	55.33	4.907	0.106	0.32			
10/4/2003	11:15:26	26.7	55.33	4.909	0.104	0.33			
10/4/2003	11:15:28	28.2	55.33	4.909	0.104	0.37			
10/4/2003	11:15:29	29.8	55.33	4.911	0.102	0.38			
10/4/2003	11:15:31	31.5	55.33	4.907	0.106	0.42			
10/4/2003	11:15:33	33.3	55.33	4.907	0.106	0.45			
10/4/2003	11:15:35	35.2	55.33	4.911	0.102	0.48			
10/4/2003	11:15:37	37.3	55.33	4.909	0.104	0.52			
10/4/2003	11:15:39	39.5	55.33	4.907	0.106	0.55			
10/4/2003	11:15:41	41.8	55.33	4.911	0.102	0.58			
10/4/2003	11:15:44	44.3	55.33	4.907	0.106	0.63			
10/4/2003	11:15:46	46.9	55.33	4.907	0.106	0.67			
10/4/2003	11:15:49	49.7	55.33	4.909	0.104	0.72			
10/4/2003	11:15:52	52.6	55.33	4.911	0.102	0.77			
10/4/2003	11:15:55	55.7	55.33	4.909	0.104	0.82			
10/4/2003	11:15:58	59	55.33	4.907	0.106	0.87			
10/4/2003	11:16:02	62.5	55.33	4.909	0.104	0.93			
10/4/2003	11:16:06	66.2	55.33	4.911	0.102	1.00			
10/4/2003	11:16:10	70.1	55.33	4.909	0.104	1.07			

Well No. **P-7**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/4/2003	11:16:14	74.3	55.33	4.909	0.104	1.13			
10/4/2003	11:16:18	78.7	55.3	4.905	0.108	1.20			
10/4/2003	11:16:23	83.4	55.3	4.909	0.104	1.28			
10/4/2003	11:16:28	88.4	55.3	4.907	0.106	1.37			
10/4/2003	11:16:33	93.7	55.3	4.909	0.104	1.45			
10/4/2003	11:16:39	99.3	55.3	4.907	0.106	1.55			
10/4/2003	11:16:45	105.2	55.3	4.911	0.102	1.65			
10/4/2003	11:16:51	111.5	55.3	4.911	0.102	1.75			
10/4/2003	11:16:58	118.1	55.3	4.909	0.104	1.87			
10/4/2003	11:17:05	125.1	55.3	4.909	0.104	1.98			1.36 gpm flow rate
10/4/2003	11:17:12	132.6	55.3	4.911	0.102	2.10			
10/4/2003	11:17:20	140.5	55.3	4.909	0.104	2.23			
10/4/2003	11:17:28	148.9	55.3	4.905	0.108	2.37			
10/4/2003	11:17:37	157.8	55.3	4.907	0.106	2.52			
10/4/2003	11:17:47	167.2	55.28	4.905	0.108	2.68			
10/4/2003	11:17:57	177.2	55.28	4.903	0.110	2.85			
10/4/2003	11:18:07	187.8	55.28	4.907	0.106	3.02			
10/4/2003	11:18:18	199	55.28	4.907	0.106	3.20			
10/4/2003	11:18:30	210.9	55.28	4.905	0.108	3.40			
10/4/2003	11:18:43	223.5	55.28	4.905	0.108	3.62			
10/4/2003	11:18:56	236.8	55.26	4.902	0.111	3.83			
10/4/2003	11:19:10	250.9	55.26	4.906	0.107	4.07			
10/4/2003	11:19:25	265.8	55.26	4.909	0.104	4.32			
10/4/2003	11:19:41	281.6	55.24	4.906	0.107	4.58			
10/4/2003	11:19:58	298.4	55.24	4.904	0.109	4.87			
10/4/2003	11:20:16	316.2	55.24	4.908	0.105	5.17			
10/4/2003	11:20:34	335	55.21	4.902	0.111	5.47			
10/4/2003	11:20:54	354.9	55.21	4.906	0.107	5.80			
10/4/2003	11:21:15	376	55.21	4.904	0.109	6.15			
10/4/2003	11:21:38	398.4	55.19	4.902	0.111	6.53			
10/4/2003	11:22:02	422.1	55.19	4.904	0.109	6.93			
10/4/2003	11:22:27	447.2	55.17	4.908	0.105	7.35			
10/4/2003	11:22:53	473.8	55.15	4.905	0.108	7.78			
10/4/2003	11:23:21	502	55.15	4.905	0.108	8.25			1.36 gpm flow rate
10/4/2003	11:23:51	531.9	55.12	4.905	0.108	8.75			
10/4/2003	11:24:21	561.9	55.12	4.905	0.108	9.25			
10/4/2003	11:24:51	591.9	55.1	4.901	0.112	9.75			
10/4/2003	11:25:21	621.9	55.08	4.901	0.112	10.25			
10/4/2003	11:25:51	651.9	55.08	4.903	0.110	10.75			
10/4/2003	11:26:21	681.9	55.05	4.906	0.107	11.25			
10/4/2003	11:26:51	711.9	55.03	4.908	0.105	11.75			
10/4/2003	11:27:21	741.9	55.01	4.906	0.107	12.25			
10/4/2003	11:27:51	771.9	55.01	4.904	0.109	12.75			
10/4/2003	11:28:21	801.9	54.99	4.904	0.109	13.25			
10/4/2003	11:28:51	831.9	54.99	4.902	0.111	13.75			
10/4/2003	11:29:21	861.9	54.96	4.908	0.105	14.25			
10/4/2003	11:29:51	891.9	54.94	4.903	0.110	14.75			
10/4/2003	11:30:21	921.9	54.94	4.905	0.108	15.25			
10/4/2003	11:30:51	951.9	54.94	4.903	0.110	15.75			
10/4/2003	11:31:21	981.9	54.92	4.903	0.110	16.25			
10/4/2003	11:31:51	1011.9	54.92	4.903	0.110	16.75			
10/4/2003	11:32:21	1041.9	54.9	4.905	0.108	17.25			
10/4/2003	11:32:51	1071.9	54.87	4.905	0.108	17.75			
10/4/2003	11:33:21	1101.9	54.87	4.905	0.108	18.25			
10/4/2003	11:33:51	1131.9	54.87	4.901	0.112	18.75			
10/4/2003	11:34:21	1161.9	54.85	4.909	0.104	19.25			
10/4/2003	11:34:51	1191.9	54.83	4.906	0.107	19.75			
10/4/2003	11:35:21	1221.9	54.83	4.906	0.107	20.25			
10/4/2003	11:35:51	1251.9	54.81	4.908	0.105	20.75			
10/4/2003	11:36:21	1281.9	54.81	4.91	0.103	21.25			
10/4/2003	11:36:51	1311.9	54.78	4.904	0.109	21.75			
10/4/2003	11:37:21	1341.9	54.78	4.906	0.107	22.25			
10/4/2003	11:37:51	1371.9	54.78	4.906	0.107	22.75			
10/4/2003	11:38:21	1401.9	54.76	4.904	0.109	23.25			
10/4/2003	11:38:51	1431.9	54.76	4.904	0.109	23.75			
10/4/2003	11:39:21	1461.9	54.74	4.907	0.106	24.25			
10/4/2003	11:39:51	1491.9	54.74	4.907	0.106	24.75			
10/4/2003	11:40:21	1521.9	54.74	4.905	0.108	25.25			
10/4/2003	11:40:51	1551.9	54.71	4.905	0.108	25.75			

Well No. **P-7**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/4/2003	11:41:21	1581.9	54.71	4.901	0.112	26.25			
10/4/2003	11:41:51	1611.9	54.69	4.903	0.110	26.75			
10/4/2003	11:42:21	1641.9	54.69	4.903	0.110	27.25			
10/4/2003	11:45:00	0	54.65	4.904	0.109	29.90			Start Test 2
10/4/2003	11:45:00	0.3	54.67	4.901	0.112	29.90			
10/4/2003	11:45:00	0.6	54.69	4.899	0.114	29.90			
10/4/2003	11:45:00	0.9	54.69	4.903	0.110	29.90			
10/4/2003	11:45:01	1.2	54.69	4.903	0.110	29.92			
10/4/2003	11:45:01	1.5	54.71	4.903	0.110	29.92			
10/4/2003	11:45:01	1.8	54.71	4.899	0.114	29.92			
10/4/2003	11:45:02	2.1	54.71	4.903	0.110	29.93			
10/4/2003	11:45:02	2.4	54.71	4.895	0.118	29.93			
10/4/2003	11:45:02	2.7	54.71	4.899	0.114	29.93			
10/4/2003	11:45:03	3	54.71	4.897	0.116	29.95			
10/4/2003	11:45:03	3.3	54.74	4.899	0.114	29.95	0.00		Pump Stop
10/4/2003	11:45:03	3.6	54.74	4.913	0.100	29.95	0.00		
10/4/2003	11:45:03	3.9	54.74	4.911	0.102	29.95	0.00		
10/4/2003	11:45:04	4.2	54.74	4.94	0.073	29.97	0.02	1798.00	
10/4/2003	11:45:04	4.5	54.74	4.956	0.057	29.97	0.02	1798.00	
10/4/2003	11:45:04	4.8	54.74	4.972	0.041	29.97	0.02	1798.00	
10/4/2003	11:45:05	5.1	54.74	4.985	0.028	29.98	0.03	899.50	
10/4/2003	11:45:05	5.4	54.74	4.997	0.016	29.98	0.03	899.50	
10/4/2003	11:45:05	5.7	54.74	5.003	0.010	29.98	0.03	899.50	
10/4/2003	11:45:06	6	54.74	5.007	0.006	30.00	0.05	600.00	
10/4/2003	11:45:06	6.4	54.74	5.009	0.004	30.00	0.05	600.00	
10/4/2003	11:45:06	6.7	54.74	5.009	0.004	30.00	0.05	600.00	
10/4/2003	11:45:07	7.1	54.74	5.007	0.006	30.02	0.07	450.25	
10/4/2003	11:45:07	7.5	54.74	5.005	0.008	30.02	0.07	450.25	
10/4/2003	11:45:08	8	54.74	5.003	0.010	30.03	0.08	360.40	
10/4/2003	11:45:08	8.4	54.74	5.003	0.010	30.03	0.08	360.40	
10/4/2003	11:45:08	8.9	54.74	5.001	0.012	30.03	0.08	360.40	
10/4/2003	11:45:09	9.5	54.76	4.999	0.014	30.05	0.10	300.50	
10/4/2003	11:45:10	10	54.74	5.003	0.010	30.07	0.12	257.71	
10/4/2003	11:45:10	10.6	54.74	5.005	0.008	30.07	0.12	257.71	
10/4/2003	11:45:11	11.3	54.71	5.003	0.010	30.08	0.13	225.63	
10/4/2003	11:45:11	11.9	54.74	5.005	0.008	30.08	0.13	225.63	
10/4/2003	11:45:12	12.6	54.71	5.003	0.010	30.10	0.15	200.67	
10/4/2003	11:45:13	13.4	54.71	5.007	0.006	30.12	0.17	180.70	
10/4/2003	11:45:14	14.2	54.71	5.017	-0.004	30.13	0.18	164.36	
10/4/2003	11:45:15	15	54.71	5.015	-0.002	30.15	0.20	150.75	
10/4/2003	11:45:15	15.9	54.71	5.013	0.000	30.15	0.20	150.75	
10/4/2003	11:45:16	16.8	54.71	5.011	0.002	30.17	0.22	139.23	
10/4/2003	11:45:17	17.8	54.71	5.011	0.002	30.18	0.23	129.36	
10/4/2003	11:45:18	18.9	54.71	5.011	0.002	30.20	0.25	120.80	
10/4/2003	11:45:20	20	54.71	5.011	0.002	30.23	0.28	106.71	
10/4/2003	11:45:21	21.2	54.71	5.011	0.002	30.25	0.30	100.83	
10/4/2003	11:45:22	22.4	54.71	5.011	0.002	30.27	0.32	95.58	
10/4/2003	11:45:23	23.8	54.69	5.009	0.004	30.28	0.33	90.85	
10/4/2003	11:45:25	25.2	54.71	5.009	0.004	30.32	0.37	82.68	
10/4/2003	11:45:26	26.7	54.71	5.011	0.002	30.33	0.38	79.13	
10/4/2003	11:45:28	28.2	54.69	5.011	0.002	30.37	0.42	72.88	
10/4/2003	11:45:29	29.8	54.69	5.011	0.002	30.38	0.43	70.12	
10/4/2003	11:45:31	31.5	54.69	5.009	0.004	30.42	0.47	65.18	
10/4/2003	11:45:33	33.3	54.69	5.011	0.002	30.45	0.50	60.90	
10/4/2003	11:45:35	35.2	54.69	5.009	0.004	30.48	0.53	57.16	
10/4/2003	11:45:37	37.3	54.69	5.011	0.002	30.52	0.57	53.85	
10/4/2003	11:45:39	39.5	54.69	5.011	0.002	30.55	0.60	50.92	
10/4/2003	11:45:41	41.8	54.69	5.011	0.002	30.58	0.63	48.29	
10/4/2003	11:45:44	44.3	54.67	5.01	0.003	30.63	0.68	44.83	
10/4/2003	11:45:46	46.9	54.67	5.01	0.003	30.67	0.72	42.79	
10/4/2003	11:45:49	49.7	54.67	5.01	0.003	30.72	0.77	40.07	
10/4/2003	11:45:52	52.6	54.67	5.012	0.001	30.77	0.82	37.67	
10/4/2003	11:45:55	55.7	54.65	5.012	0.001	30.82	0.87	35.56	
10/4/2003	11:45:59	59	54.65	5.012	0.001	30.88	0.93	33.09	
10/4/2003	11:46:02	62.5	54.65	5.012	0.001	30.93	0.98	31.46	
10/4/2003	11:46:06	66.2	54.65	5.01	0.003	31.00	1.05	29.52	
10/4/2003	11:46:10	70.1	54.65	5.01	0.003	31.07	1.12	27.82	
10/4/2003	11:46:14	74.3	54.65	5.012	0.001	31.13	1.18	26.31	
10/4/2003	11:46:18	78.7	54.62	5.012	0.001	31.20	1.25	24.96	

Well No. **P-7**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/4/2003	11:46:23	83.4	54.62	5.012	0.001	31.28	1.33	23.46	
10/4/2003	11:46:28	88.4	54.62	5.012	0.001	31.37	1.42	22.14	
10/4/2003	11:46:33	93.7	54.62	5.01	0.003	31.45	1.50	20.97	
10/4/2003	11:46:39	99.3	54.6	5.012	0.001	31.55	1.60	19.72	
10/4/2003	11:46:45	105.2	54.6	5.012	0.001	31.65	1.70	18.62	
10/4/2003	11:46:51	111.5	54.6	5.012	0.001	31.75	1.80	17.64	
10/4/2003	11:46:58	118.1	54.58	5.012	0.001	31.87	1.92	16.63	
10/4/2003	11:47:05	125.1	54.58	5.012	0.001	31.98	2.03	15.73	
10/4/2003	11:47:12	132.6	54.58	5.012	0.001	32.10	2.15	14.93	
10/4/2003	11:47:20	140.5	54.58	5.01	0.003	32.23	2.28	14.12	
10/4/2003	11:47:28	148.9	54.58	5.012	0.001	32.37	2.42	13.39	
10/4/2003	11:47:37	157.8	54.56	5.013	0.000	32.52	2.57	12.67	
10/4/2003	12:05:00								DTW = 15.12 at 12:05

Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

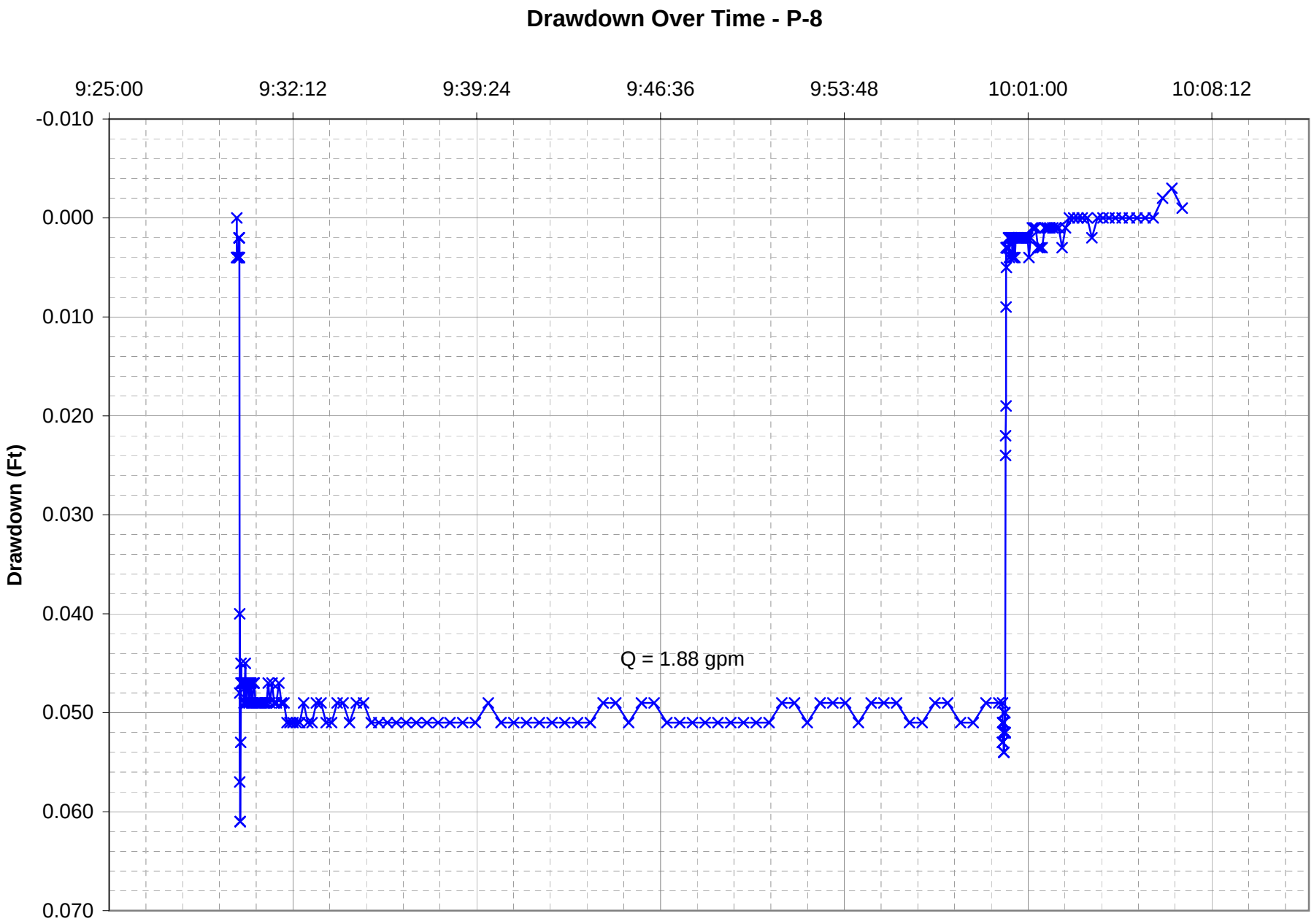
Well No. **P-8**

Equipment:	In-Situ Inc.	MiniTroll Pro
Test start date and time	10/4/2003	9:30:00
Test end date and time	10/4/2003	10:07:02
Period of pumping	30	minutes

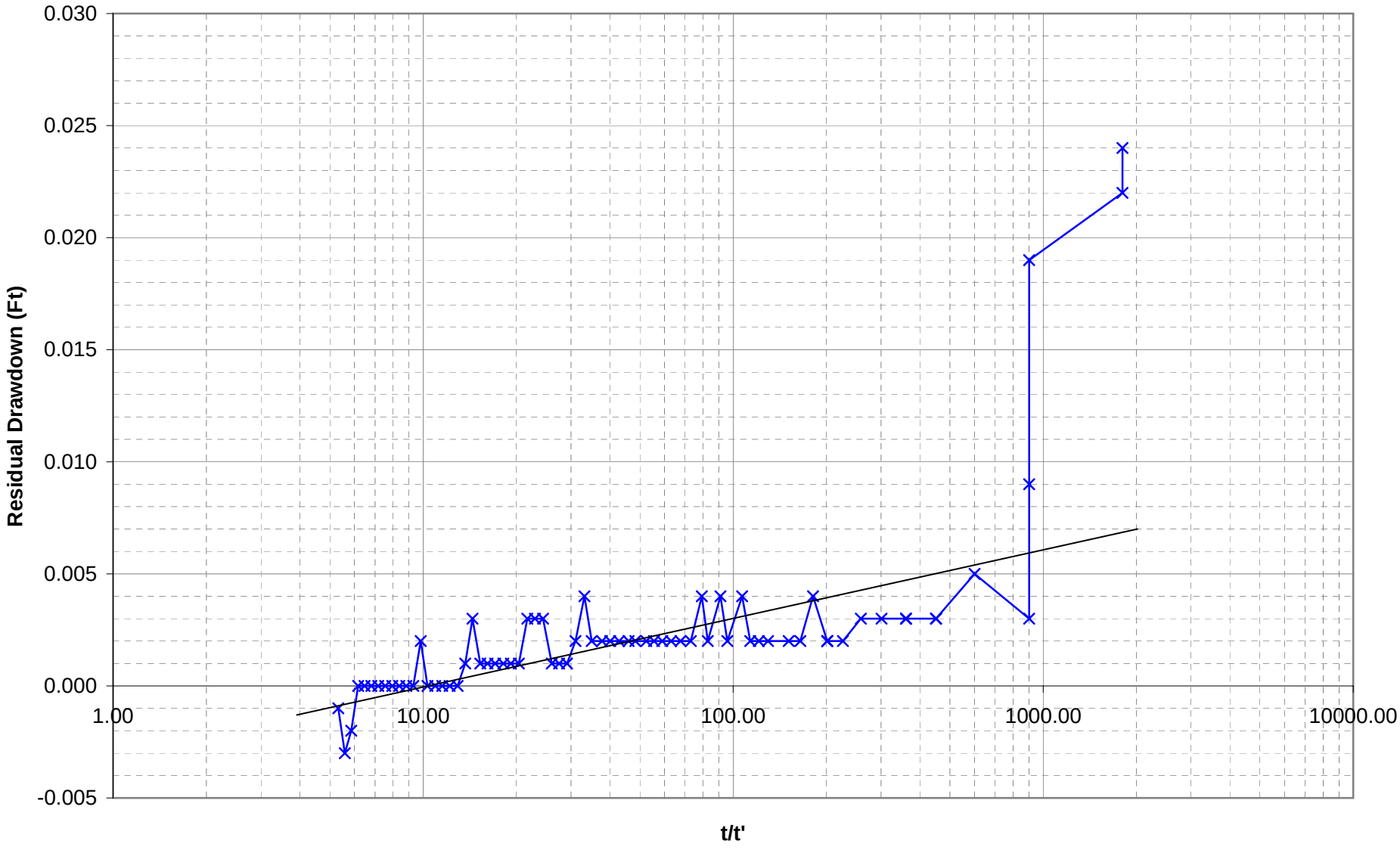
Static depth to water	7.64	feet below top of casing
Startiing transducer depth	5.010	feet below static water level
Total well depth	21.8	feet below top of casing
Depth to top of screen	11.8	feet below top of casing
Height of interval tested [b]	10.0	feet

Average pumping rate [Q]	1.88	gpm, or	362	cfd
Average drawdown [s]	0.050	ft		
Specific capacity [Q/s]	37.6	gpm/ft		

Residual drawdown over one log cycle [Δs]	0.003	feet		
Transmissivity [T = (2.3Q)/(4*π*Δs)]	22,078	cfd/ft		
Hydraulic conductivity [K = T/b]	2207.8	fpd, or	7.8E-01	cm/sec


Drawdown Over Time - P-8
9:25:00
9:32:12
9:39:24
9:46:36
9:53:48
10:01:00
10:08:12
-0.010
0.000
0.010
0.020
0.030
0.040
0.050
0.060
0.070
Drawdown (Ft)
Q = 1.88 gpm

Recovery Plot - P-8



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **P-8**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/4/2003	9:00:00								DTW = 7.63 at 9:00
10/4/2003	9:20:00								DTW = 7.64 at 9:20
10/4/2003	9:30:00	0	59.61	5.01	0.000				Start Test 1
10/4/2003	9:30:00	0.3	59.63	5.006	0.004				
10/4/2003	9:30:00	0.6	59.65	5.006	0.004				
10/4/2003	9:30:00	0.9	59.65	5.006	0.004				
10/4/2003	9:30:01	1.2	59.65	5.006	0.004				
10/4/2003	9:30:01	1.5	59.65	5.006	0.004				
10/4/2003	9:30:01	1.8	59.67	5.006	0.004				
10/4/2003	9:30:02	2.1	59.67	5.006	0.004				
10/4/2003	9:30:02	2.4	59.67	5.006	0.004				
10/4/2003	9:30:02	2.7	59.67	5.006	0.004				
10/4/2003	9:30:03	3	59.67	5.006	0.004				
10/4/2003	9:30:03	3.3	59.67	5.006	0.004				
10/4/2003	9:30:03	3.6	59.67	5.006	0.004				
10/4/2003	9:30:03	3.9	59.67	5.006	0.004				
10/4/2003	9:30:04	4.2	59.67	5.006	0.004				
10/4/2003	9:30:04	4.5	59.67	5.006	0.004				
10/4/2003	9:30:04	4.8	59.67	5.006	0.004				
10/4/2003	9:30:05	5.1	59.7	5.008	0.002				
10/4/2003	9:30:05	5.4	59.7	5.006	0.004				
10/4/2003	9:30:05	5.7	59.7	5.006	0.004				
10/4/2003	9:30:06	6	59.7	5.006	0.004				
10/4/2003	9:30:06	6.4	59.7	5.006	0.004				
10/4/2003	9:30:06	6.7	59.7	5.008	0.002	0.00			Pump Start
10/4/2003	9:30:07	7.1	59.7	4.953	0.057	0.02			
10/4/2003	9:30:07	7.5	59.7	4.97	0.040	0.02			
10/4/2003	9:30:07	8	59.7	4.962	0.048	0.02			
10/4/2003	9:30:08	8.4	59.7	4.949	0.061	0.03			
10/4/2003	9:30:08	8.9	59.7	4.949	0.061	0.03			
10/4/2003	9:30:09	9.5	59.7	4.957	0.053	0.05			
10/4/2003	9:30:10	10	59.67	4.963	0.047	0.07			
10/4/2003	9:30:10	10.6	59.67	4.965	0.045	0.07			
10/4/2003	9:30:11	11.3	59.67	4.963	0.047	0.08			
10/4/2003	9:30:11	11.9	59.67	4.963	0.047	0.08			
10/4/2003	9:30:12	12.6	59.67	4.963	0.047	0.10			
10/4/2003	9:30:13	13.4	59.67	4.963	0.047	0.12			
10/4/2003	9:30:14	14.2	59.67	4.963	0.047	0.13			
10/4/2003	9:30:15	15	59.65	4.963	0.047	0.15			
10/4/2003	9:30:15	15.9	59.65	4.963	0.047	0.15			
10/4/2003	9:30:16	16.8	59.65	4.963	0.047	0.17			
10/4/2003	9:30:17	17.8	59.65	4.961	0.049	0.18			
10/4/2003	9:30:18	18.9	59.65	4.961	0.049	0.20			
10/4/2003	9:30:20	20	59.65	4.965	0.045	0.23			
10/4/2003	9:30:21	21.2	59.65	4.963	0.047	0.25			
10/4/2003	9:30:22	22.4	59.65	4.963	0.047	0.27			
10/4/2003	9:30:23	23.8	59.65	4.961	0.049	0.28			
10/4/2003	9:30:25	25.2	59.65	4.963	0.047	0.32			
10/4/2003	9:30:26	26.7	59.65	4.963	0.047	0.33			
10/4/2003	9:30:28	28.2	59.65	4.963	0.047	0.37			
10/4/2003	9:30:29	29.8	59.65	4.961	0.049	0.38			
10/4/2003	9:30:31	31.5	59.65	4.963	0.047	0.42			
10/4/2003	9:30:33	33.3	59.65	4.963	0.047	0.45			
10/4/2003	9:30:35	35.2	59.65	4.961	0.049	0.48			
10/4/2003	9:30:37	37.3	59.65	4.961	0.049	0.52			
10/4/2003	9:30:39	39.5	59.65	4.963	0.047	0.55			
10/4/2003	9:30:41	41.8	59.65	4.963	0.047	0.58			
10/4/2003	9:30:44	44.3	59.65	4.961	0.049	0.63			
10/4/2003	9:30:46	46.9	59.65	4.961	0.049	0.67			
10/4/2003	9:30:49	49.7	59.65	4.961	0.049	0.72			
10/4/2003	9:30:52	52.6	59.65	4.961	0.049	0.77			
10/4/2003	9:30:55	55.7	59.65	4.961	0.049	0.82			
10/4/2003	9:30:58	59	59.65	4.961	0.049	0.87			
10/4/2003	9:31:02	62.5	59.65	4.961	0.049	0.93			1.85 gpm flow rate
10/4/2003	9:31:06	66.2	59.65	4.961	0.049	1.00			

Well No. **P-8**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/4/2003	9:31:10	70.1	59.65	4.961	0.049	1.07			
10/4/2003	9:31:14	74.3	59.65	4.963	0.047	1.13			
10/4/2003	9:31:18	78.7	59.65	4.961	0.049	1.20			
10/4/2003	9:31:23	83.4	59.65	4.963	0.047	1.28			
10/4/2003	9:31:28	88.4	59.65	4.961	0.049	1.37			
10/4/2003	9:31:33	93.7	59.65	4.961	0.049	1.45			
10/4/2003	9:31:39	99.3	59.65	4.963	0.047	1.55			
10/4/2003	9:31:45	105.2	59.65	4.961	0.049	1.65			
10/4/2003	9:31:51	111.5	59.65	4.961	0.049	1.75			
10/4/2003	9:31:58	118.1	59.65	4.959	0.051	1.87			
10/4/2003	9:32:05	125.1	59.65	4.959	0.051	1.98			
10/4/2003	9:32:12	132.6	59.65	4.959	0.051	2.10			
10/4/2003	9:32:20	140.5	59.63	4.959	0.051	2.23			
10/4/2003	9:32:28	148.9	59.63	4.959	0.051	2.37			
10/4/2003	9:32:37	157.8	59.63	4.961	0.049	2.52			
10/4/2003	9:32:47	167.2	59.63	4.959	0.051	2.68			
10/4/2003	9:32:57	177.2	59.63	4.959	0.051	2.85			
10/4/2003	9:33:07	187.8	59.63	4.961	0.049	3.02			
10/4/2003	9:33:18	199	59.63	4.961	0.049	3.20			
10/4/2003	9:33:30	210.9	59.63	4.959	0.051	3.40			
10/4/2003	9:33:43	223.5	59.63	4.959	0.051	3.62			
10/4/2003	9:33:56	236.8	59.63	4.961	0.049	3.83			
10/4/2003	9:34:10	250.9	59.63	4.961	0.049	4.07			
10/4/2003	9:34:25	265.8	59.63	4.959	0.051	4.32			
10/4/2003	9:34:41	281.6	59.63	4.961	0.049	4.58			
10/4/2003	9:34:58	298.4	59.63	4.961	0.049	4.87			
10/4/2003	9:35:16	316.2	59.63	4.959	0.051	5.17			
10/4/2003	9:35:34	335	59.63	4.959	0.051	5.47			
10/4/2003	9:35:54	354.9	59.63	4.959	0.051	5.80			
10/4/2003	9:36:15	376	59.63	4.959	0.051	6.15			
10/4/2003	9:36:38	398.4	59.63	4.959	0.051	6.53			
10/4/2003	9:37:02	422.1	59.63	4.959	0.051	6.93			
10/4/2003	9:37:27	447.2	59.63	4.959	0.051	7.35			
10/4/2003	9:37:53	473.8	59.63	4.959	0.051	7.78			
10/4/2003	9:38:21	502	59.63	4.959	0.051	8.25			1.88 gpm flow rate
10/4/2003	9:38:51	531.9	59.63	4.959	0.051	8.75			
10/4/2003	9:39:21	561.9	59.63	4.959	0.051	9.25			
10/4/2003	9:39:51	591.9	59.63	4.961	0.049	9.75			
10/4/2003	9:40:21	621.9	59.63	4.959	0.051	10.25			
10/4/2003	9:40:51	651.9	59.63	4.959	0.051	10.75			
10/4/2003	9:41:21	681.9	59.63	4.959	0.051	11.25			
10/4/2003	9:41:51	711.9	59.63	4.959	0.051	11.75			
10/4/2003	9:42:21	741.9	59.63	4.959	0.051	12.25			
10/4/2003	9:42:51	771.9	59.63	4.959	0.051	12.75			
10/4/2003	9:43:21	801.9	59.63	4.959	0.051	13.25			
10/4/2003	9:43:51	831.9	59.63	4.959	0.051	13.75			
10/4/2003	9:44:21	861.9	59.63	4.961	0.049	14.25			
10/4/2003	9:44:51	891.9	59.63	4.961	0.049	14.75			
10/4/2003	9:45:21	921.9	59.63	4.959	0.051	15.25			1.90 gpm flow rate
10/4/2003	9:45:51	951.9	59.63	4.961	0.049	15.75			
10/4/2003	9:46:21	981.9	59.63	4.961	0.049	16.25			
10/4/2003	9:46:51	1011.9	59.63	4.959	0.051	16.75			
10/4/2003	9:47:21	1041.9	59.63	4.959	0.051	17.25			
10/4/2003	9:47:51	1071.9	59.63	4.959	0.051	17.75			
10/4/2003	9:48:21	1101.9	59.63	4.959	0.051	18.25			
10/4/2003	9:48:51	1131.9	59.63	4.959	0.051	18.75			
10/4/2003	9:49:21	1161.9	59.63	4.959	0.051	19.25			
10/4/2003	9:49:51	1191.9	59.63	4.959	0.051	19.75			
10/4/2003	9:50:21	1221.9	59.63	4.959	0.051	20.25			1.89 gpm flow rate
10/4/2003	9:50:51	1251.9	59.63	4.959	0.051	20.75			
10/4/2003	9:51:21	1281.9	59.63	4.961	0.049	21.25			
10/4/2003	9:51:51	1311.9	59.63	4.961	0.049	21.75			
10/4/2003	9:52:21	1341.9	59.63	4.959	0.051	22.25			
10/4/2003	9:52:51	1371.9	59.63	4.961	0.049	22.75			
10/4/2003	9:53:21	1401.9	59.63	4.961	0.049	23.25			
10/4/2003	9:53:51	1431.9	59.63	4.961	0.049	23.75			
10/4/2003	9:54:21	1461.9	59.63	4.959	0.051	24.25			
10/4/2003	9:54:51	1491.9	59.63	4.961	0.049	24.75			
10/4/2003	9:55:21	1521.9	59.63	4.961	0.049	25.25			

Well No. **P-8**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/4/2003	9:55:51	1551.9	59.63	4.961	0.049	25.75			
10/4/2003	9:56:21	1581.9	59.63	4.959	0.051	26.25			
10/4/2003	9:56:51	1611.9	59.63	4.959	0.051	26.75			
10/4/2003	9:57:21	1641.9	59.65	4.961	0.049	27.25			
10/4/2003	9:57:51	1671.9	59.63	4.961	0.049	27.75			
10/4/2003	9:58:21	1701.9	59.65	4.959	0.051	28.25			
10/4/2003	9:58:51	1731.9	59.63	4.959	0.051	28.75			
10/4/2003	9:59:21	1761.9	59.65	4.961	0.049	29.25			
10/4/2003	9:59:51	1791.9	59.65	4.961	0.049	29.75			
10/4/2003	10:00:00	0	59.65	4.961	0.049	29.90			Start Test 2
10/4/2003	10:00:00	0.3	59.65	4.959	0.051	29.90			
10/4/2003	10:00:00	0.6	59.67	4.957	0.053	29.90			
10/4/2003	10:00:00	0.9	59.67	4.957	0.053	29.90			
10/4/2003	10:00:01	1.2	59.7	4.959	0.051	29.92			
10/4/2003	10:00:01	1.5	59.7	4.959	0.051	29.92			
10/4/2003	10:00:01	1.8	59.7	4.959	0.051	29.92			
10/4/2003	10:00:02	2.1	59.7	4.959	0.051	29.93			
10/4/2003	10:00:02	2.4	59.7	4.959	0.051	29.93			
10/4/2003	10:00:02	2.7	59.72	4.958	0.052	29.93			
10/4/2003	10:00:03	3	59.72	4.958	0.052	29.95			
10/4/2003	10:00:03	3.3	59.72	4.956	0.054	29.95			
10/4/2003	10:00:03	3.6	59.72	4.958	0.052	29.95			
10/4/2003	10:00:03	3.9	59.72	4.956	0.054	29.95			
10/4/2003	10:00:04	4.2	59.72	4.958	0.052	29.97			
10/4/2003	10:00:04	4.5	59.72	4.958	0.052	29.97			
10/4/2003	10:00:04	4.8	59.72	4.958	0.052	29.97			
10/4/2003	10:00:05	5.1	59.72	4.958	0.052	29.98			
10/4/2003	10:00:05	5.4	59.72	4.96	0.050	29.98			
10/4/2003	10:00:05	5.7	59.72	4.96	0.050	29.98			
10/4/2003	10:00:06	6	59.72	4.958	0.052	30.00			
10/4/2003	10:00:06	6.4	59.72	4.958	0.052	30.00			
10/4/2003	10:00:06	6.7	59.74	4.958	0.052	30.00	0.00		Pump Stop
10/4/2003	10:00:07	7.1	59.72	4.986	0.024	30.02	0.02	1801.00	
10/4/2003	10:00:07	7.5	59.72	4.988	0.022	30.02	0.02	1801.00	
10/4/2003	10:00:08	8	59.74	4.991	0.019	30.03	0.03	901.00	
10/4/2003	10:00:08	8.4	59.74	5.001	0.009	30.03	0.03	901.00	
10/4/2003	10:00:08	8.9	59.74	5.007	0.003	30.03	0.03	901.00	
10/4/2003	10:00:09	9.5	59.74	5.005	0.005	30.05	0.05	601.00	
10/4/2003	10:00:10	10	59.72	5.007	0.003	30.07	0.07	451.00	
10/4/2003	10:00:10	10.6	59.72	5.007	0.003	30.07	0.07	451.00	
10/4/2003	10:00:11	11.3	59.72	5.007	0.003	30.08	0.08	361.00	
10/4/2003	10:00:11	11.9	59.72	5.007	0.003	30.08	0.08	361.00	
10/4/2003	10:00:12	12.6	59.72	5.007	0.003	30.10	0.10	301.00	
10/4/2003	10:00:13	13.4	59.72	5.007	0.003	30.12	0.12	258.14	
10/4/2003	10:00:14	14.2	59.7	5.008	0.002	30.13	0.13	226.00	
10/4/2003	10:00:15	15	59.7	5.008	0.002	30.15	0.15	201.00	
10/4/2003	10:00:15	15.9	59.7	5.008	0.002	30.15	0.15	201.00	
10/4/2003	10:00:16	16.8	59.7	5.006	0.004	30.17	0.17	181.00	
10/4/2003	10:00:17	17.8	59.7	5.008	0.002	30.18	0.18	164.64	
10/4/2003	10:00:18	18.9	59.7	5.008	0.002	30.20	0.20	151.00	
10/4/2003	10:00:20	20	59.7	5.008	0.002	30.23	0.23	129.57	
10/4/2003	10:00:21	21.2	59.7	5.008	0.002	30.25	0.25	121.00	
10/4/2003	10:00:22	22.4	59.7	5.008	0.002	30.27	0.27	113.50	
10/4/2003	10:00:23	23.8	59.67	5.006	0.004	30.28	0.28	106.88	
10/4/2003	10:00:25	25.2	59.7	5.008	0.002	30.32	0.32	95.74	
10/4/2003	10:00:26	26.7	59.7	5.006	0.004	30.33	0.33	91.00	
10/4/2003	10:00:28	28.2	59.7	5.008	0.002	30.37	0.37	82.82	
10/4/2003	10:00:29	29.8	59.67	5.006	0.004	30.38	0.38	79.26	
10/4/2003	10:00:31	31.5	59.67	5.008	0.002	30.42	0.42	73.00	
10/4/2003	10:00:33	33.3	59.67	5.008	0.002	30.45	0.45	67.67	
10/4/2003	10:00:35	35.2	59.67	5.008	0.002	30.48	0.48	63.07	
10/4/2003	10:00:37	37.3	59.67	5.008	0.002	30.52	0.52	59.06	
10/4/2003	10:00:39	39.5	59.67	5.008	0.002	30.55	0.55	55.55	
10/4/2003	10:00:41	41.8	59.65	5.008	0.002	30.58	0.58	52.43	
10/4/2003	10:00:44	44.3	59.65	5.008	0.002	30.63	0.63	48.37	
10/4/2003	10:00:46	46.9	59.65	5.008	0.002	30.67	0.67	46.00	
10/4/2003	10:00:49	49.7	59.65	5.008	0.002	30.72	0.72	42.86	
10/4/2003	10:00:52	52.6	59.65	5.008	0.002	30.77	0.77	40.13	
10/4/2003	10:00:55	55.7	59.63	5.008	0.002	30.82	0.82	37.73	

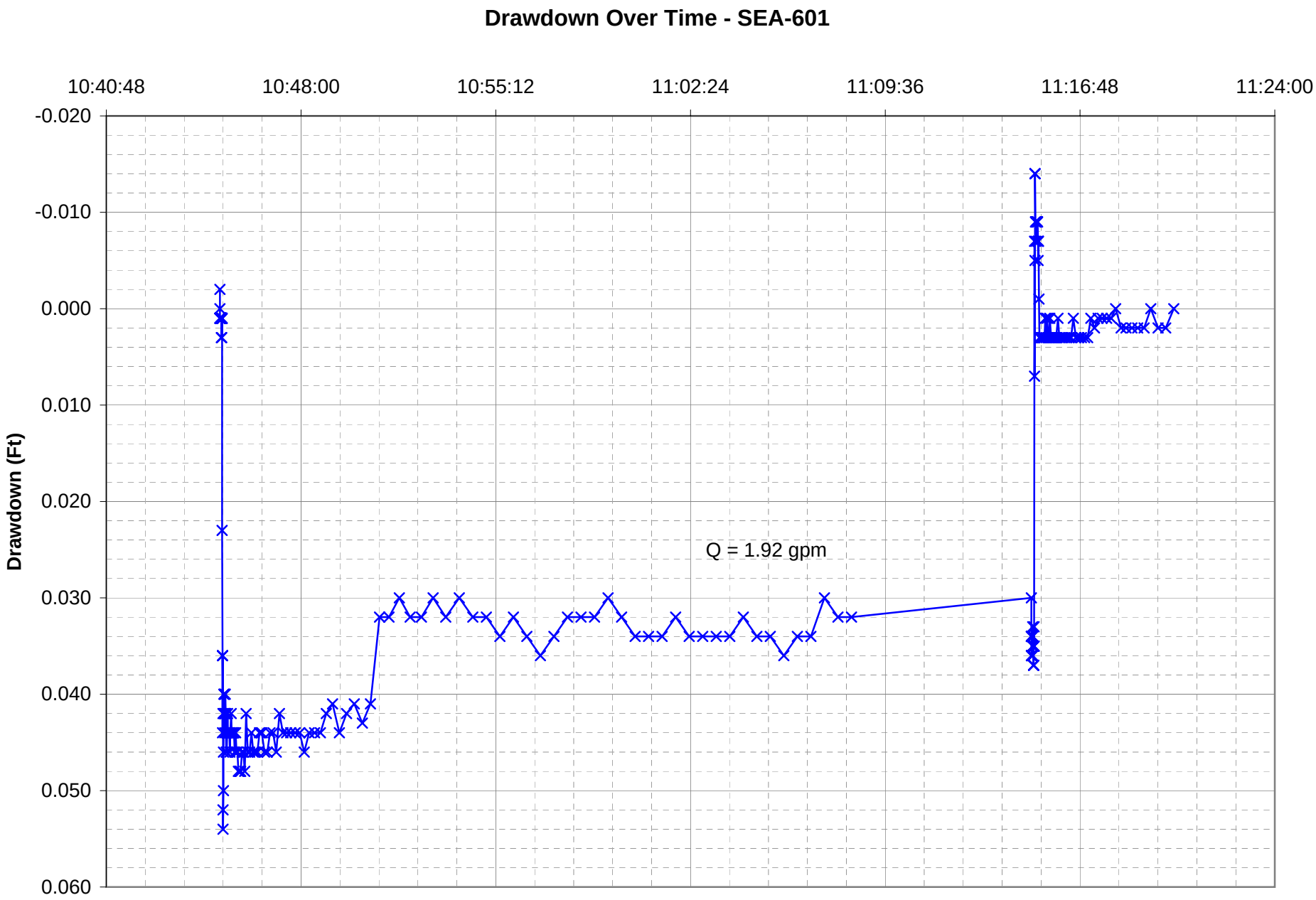
Well No. **P-8**

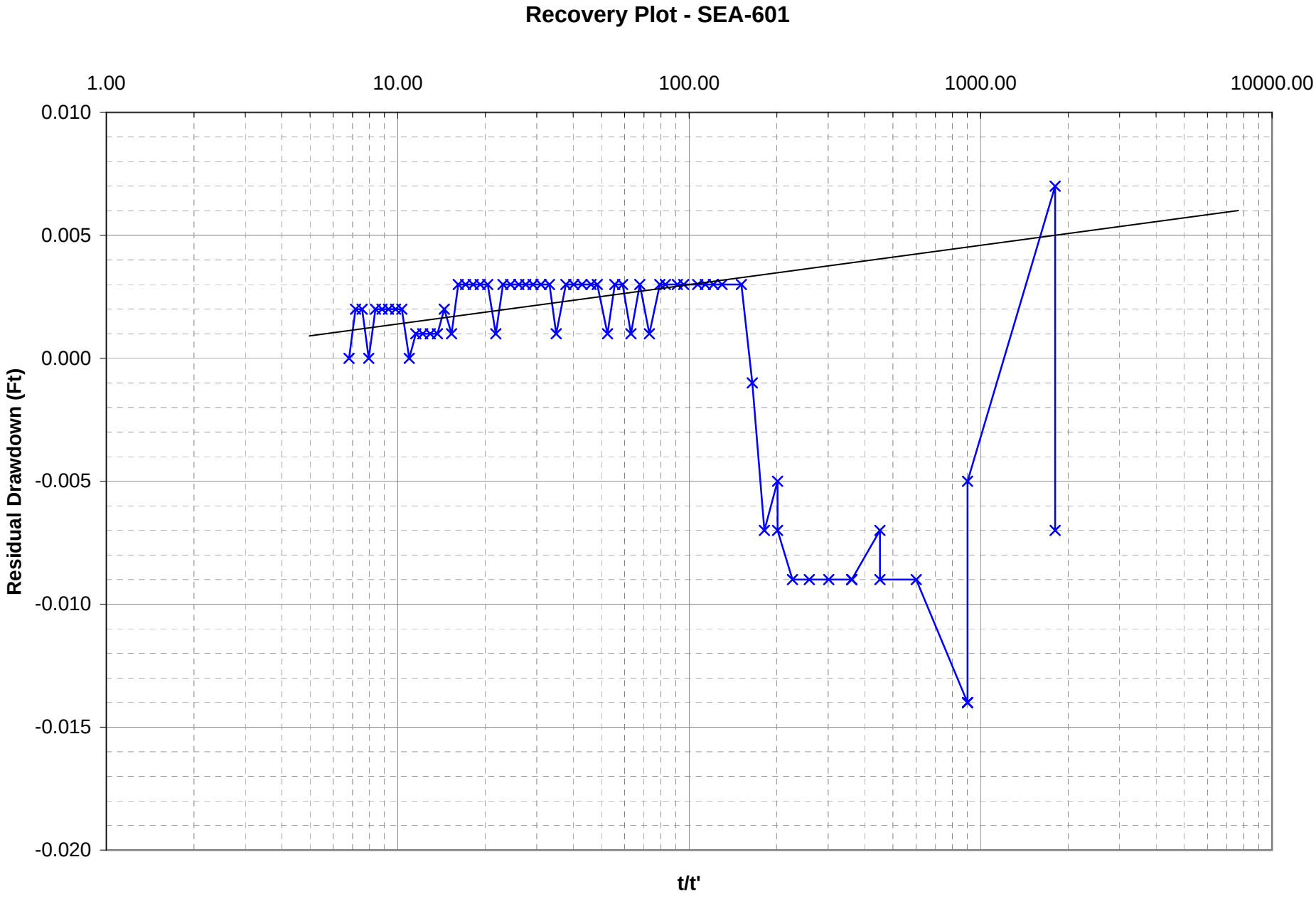
Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/4/2003	10:00:59	59	59.63	5.008	0.002	30.88	0.88	34.96	
10/4/2003	10:01:02	62.5	59.63	5.006	0.004	30.93	0.93	33.14	
10/4/2003	10:01:06	66.2	59.63	5.008	0.002	31.00	1.00	31.00	
10/4/2003	10:01:10	70.1	59.61	5.009	0.001	31.07	1.07	29.13	
10/4/2003	10:01:14	74.3	59.61	5.009	0.001	31.13	1.13	27.47	
10/4/2003	10:01:18	78.7	59.61	5.009	0.001	31.20	1.20	26.00	
10/4/2003	10:01:23	83.4	59.58	5.007	0.003	31.28	1.28	24.38	
10/4/2003	10:01:28	88.4	59.58	5.007	0.003	31.37	1.37	22.95	
10/4/2003	10:01:33	93.7	59.58	5.007	0.003	31.45	1.45	21.69	
10/4/2003	10:01:39	99.3	59.56	5.009	0.001	31.55	1.55	20.35	
10/4/2003	10:01:45	105.2	59.56	5.009	0.001	31.65	1.65	19.18	
10/4/2003	10:01:51	111.5	59.56	5.009	0.001	31.75	1.75	18.14	
10/4/2003	10:01:58	118.1	59.54	5.009	0.001	31.87	1.87	17.07	
10/4/2003	10:02:05	125.1	59.54	5.009	0.001	31.98	1.98	16.13	
10/4/2003	10:02:12	132.6	59.52	5.009	0.001	32.10	2.10	15.29	
10/4/2003	10:02:20	140.5	59.52	5.007	0.003	32.23	2.23	14.43	
10/4/2003	10:02:28	148.9	59.52	5.009	0.001	32.37	2.37	13.68	
10/4/2003	10:02:37	157.8	59.49	5.01	0.000	32.52	2.52	12.92	
10/4/2003	10:02:47	167.2	59.49	5.01	0.000	32.68	2.68	12.18	
10/4/2003	10:02:57	177.2	59.49	5.01	0.000	32.85	2.85	11.53	
10/4/2003	10:03:07	187.8	59.49	5.01	0.000	33.02	3.02	10.94	
10/4/2003	10:03:19	199	59.47	5.01	0.000	33.22	3.22	10.33	
10/4/2003	10:03:30	210.9	59.47	5.008	0.002	33.40	3.40	9.82	
10/4/2003	10:03:43	223.5	59.47	5.01	0.000	33.62	3.62	9.29	
10/4/2003	10:03:56	236.8	59.45	5.01	0.000	33.83	3.83	8.83	
10/4/2003	10:04:10	250.9	59.45	5.01	0.000	34.07	4.07	8.38	
10/4/2003	10:04:25	265.8	59.45	5.01	0.000	34.32	4.32	7.95	
10/4/2003	10:04:41	281.6	59.45	5.01	0.000	34.58	4.58	7.55	
10/4/2003	10:04:58	298.4	59.43	5.01	0.000	34.87	4.87	7.16	
10/4/2003	10:05:16	316.2	59.43	5.01	0.000	35.17	5.17	6.81	
10/4/2003	10:05:35	335	59.43	5.01	0.000	35.48	5.48	6.47	
10/4/2003	10:05:54	354.9	59.45	5.01	0.000	35.80	5.80	6.17	
10/4/2003	10:06:16	376	59.47	5.012	-0.002	36.17	6.17	5.86	
10/4/2003	10:06:38	398.4	59.52	5.013	-0.003	36.53	6.53	5.59	
10/4/2003	10:07:02	422.1	59.54	5.011	-0.001	36.93	6.93	5.33	
10/4/2003	10:20:02								DTW = 7.64 at 10:20

Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-601**

Equipment:	In-Situ Inc. MiniTroll Pro				
Test start date and time	10/6/2003 10:45:00				
Test end date and time	10/6/2003 11:20:16				
Period of pumping	30	minutes			
Static depth to water	8.66	feet below top of casing			
Starting transducer depth	5.017	feet below static water level			
Total well depth	23.5	feet below top of casing			
Depth to top of screen	13.3	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.92	gpm, or	370	cfd	
Average drawdown [s]	0.034	ft			
Specific capacity [Q/s]	56.5	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.0015	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			45,095	cfd/ft	
Hydraulic conductivity [K = T/b]			4,510	fpd, or	1.6E+00 cm/sec


Drawdown Over Time - SEA-601
10:40:48
10:48:00
10:55:12
11:02:24
11:09:36
11:16:48
11:24:00
-0.020
-0.010
0.000
0.010
0.020
0.030
0.040
0.050
0.060
Drawdown (Ft)
Q = 1.92 gpm


Recovery Plot - SEA-601
1.00
10.00
100.00
1000.00
10000.00
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
Residual Drawdown (Ft)
t/t'

Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-601**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	10:05:00								DTW = 8.66 at 10:05
10/6/2003	10:20:00								DTW = 8.67 at 10:20
10/6/2003	10:45:00	0	53.92	5.019	-0.002				Start Test 1
10/6/2003	10:45:00	0.3	53.94	5.017	0.000				
10/6/2003	10:45:00	0.6	53.97	5.016	0.001				
10/6/2003	10:45:00	0.9	53.97	5.016	0.001				
10/6/2003	10:45:01	1.2	53.97	5.016	0.001				
10/6/2003	10:45:01	1.5	53.99	5.016	0.001				
10/6/2003	10:45:01	1.8	53.99	5.016	0.001				
10/6/2003	10:45:02	2.1	53.99	5.016	0.001				
10/6/2003	10:45:02	2.4	53.99	5.016	0.001				
10/6/2003	10:45:02	2.7	53.99	5.016	0.001				
10/6/2003	10:45:03	3	53.99	5.016	0.001				
10/6/2003	10:45:03	3.3	53.99	5.014	0.003				
10/6/2003	10:45:03	3.6	54.01	5.016	0.001				
10/6/2003	10:45:03	3.9	54.01	5.016	0.001				
10/6/2003	10:45:04	4.2	54.01	5.016	0.001				
10/6/2003	10:45:04	4.5	54.01	5.014	0.003				
10/6/2003	10:45:04	4.8	54.01	5.016	0.001				
10/6/2003	10:45:05	5.1	54.01	5.016	0.001				
10/6/2003	10:45:05	5.4	54.01	5.016	0.001	0.00			Pump Start
10/6/2003	10:45:05	5.7	54.01	4.994	0.023	0.00			
10/6/2003	10:45:06	6	54.01	4.981	0.036	0.02			
10/6/2003	10:45:06	6.4	54.01	4.973	0.044	0.02			
10/6/2003	10:45:06	6.7	54.01	4.981	0.036	0.02			
10/6/2003	10:45:07	7.1	54.01	4.975	0.042	0.03			
10/6/2003	10:45:07	7.5	54.01	4.965	0.052	0.03			
10/6/2003	10:45:07	8	54.01	4.963	0.054	0.03			
10/6/2003	10:45:08	8.4	54.01	4.967	0.050	0.05			
10/6/2003	10:45:08	8.9	54.01	4.971	0.046	0.05			
10/6/2003	10:45:09	9.5	54.01	4.977	0.040	0.07			
10/6/2003	10:45:10	10	54.01	4.977	0.040	0.08			
10/6/2003	10:45:10	10.6	54.01	4.975	0.042	0.08			
10/6/2003	10:45:11	11.3	53.99	4.975	0.042	0.10			
10/6/2003	10:45:11	11.9	53.99	4.973	0.044	0.10			
10/6/2003	10:45:12	12.6	53.99	4.977	0.040	0.12			
10/6/2003	10:45:13	13.4	53.99	4.975	0.042	0.13			
10/6/2003	10:45:14	14.2	53.99	4.971	0.046	0.15			
10/6/2003	10:45:15	15	53.99	4.973	0.044	0.17			
10/6/2003	10:45:15	15.9	53.99	4.971	0.046	0.17			
10/6/2003	10:45:16	16.8	53.99	4.973	0.044	0.18			
10/6/2003	10:45:17	17.8	53.99	4.975	0.042	0.20			
10/6/2003	10:45:18	18.9	53.99	4.973	0.044	0.22			
10/6/2003	10:45:20	20	53.99	4.973	0.044	0.25			
10/6/2003	10:45:21	21.2	53.99	4.973	0.044	0.27			
10/6/2003	10:45:22	22.4	53.99	4.971	0.046	0.28			
10/6/2003	10:45:23	23.8	53.99	4.973	0.044	0.30			
10/6/2003	10:45:25	25.2	53.97	4.975	0.042	0.33			
10/6/2003	10:45:26	26.7	53.99	4.973	0.044	0.35			
10/6/2003	10:45:28	28.2	53.99	4.973	0.044	0.38			
10/6/2003	10:45:29	29.8	53.97	4.973	0.044	0.40			
10/6/2003	10:45:31	31.5	53.99	4.973	0.044	0.43			
10/6/2003	10:45:33	33.3	53.97	4.971	0.046	0.47			
10/6/2003	10:45:35	35.2	53.99	4.973	0.044	0.50			
10/6/2003	10:45:37	37.3	53.97	4.971	0.046	0.53			
10/6/2003	10:45:39	39.5	53.97	4.971	0.046	0.57			
10/6/2003	10:45:41	41.8	53.97	4.969	0.048	0.60			
10/6/2003	10:45:44	44.3	53.97	4.969	0.048	0.65			
10/6/2003	10:45:46	46.9	53.97	4.969	0.048	0.68			
10/6/2003	10:45:49	49.7	53.97	4.971	0.046	0.73			
10/6/2003	10:45:52	52.6	53.97	4.971	0.046	0.78			
10/6/2003	10:45:55	55.7	53.97	4.969	0.048	0.83			
10/6/2003	10:45:58	59	53.97	4.975	0.042	0.88			
10/6/2003	10:46:02	62.5	53.97	4.971	0.046	0.95			
10/6/2003	10:46:06	66.2	53.97	4.971	0.046	1.02			

Well No. **SEA-601**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	10:46:10	70.1	53.97	4.973	0.044	1.08			
10/6/2003	10:46:14	74.3	53.97	4.971	0.046	1.15			
10/6/2003	10:46:18	78.7	53.97	4.971	0.046	1.22			
10/6/2003	10:46:23	83.4	53.97	4.971	0.046	1.30			
10/6/2003	10:46:28	88.4	53.97	4.973	0.044	1.38			
10/6/2003	10:46:33	93.7	53.97	4.973	0.044	1.47			
10/6/2003	10:46:39	99.3	53.94	4.971	0.046	1.57			
10/6/2003	10:46:45	105.2	53.94	4.971	0.046	1.67			
10/6/2003	10:46:51	111.5	53.94	4.973	0.044	1.77			
10/6/2003	10:46:58	118.1	53.94	4.973	0.044	1.88			
10/6/2003	10:47:05	125.1	53.94	4.971	0.046	2.00			
10/6/2003	10:47:12	132.6	53.94	4.975	0.042	2.12			
10/6/2003	10:47:20	140.5	53.94	4.973	0.044	2.25			
10/6/2003	10:47:28	148.9	53.94	4.973	0.044	2.38			
10/6/2003	10:47:37	157.8	53.94	4.973	0.044	2.53			
10/6/2003	10:47:47	167.2	53.94	4.973	0.044	2.70			
10/6/2003	10:47:57	177.2	53.94	4.973	0.044	2.87			
10/6/2003	10:48:07	187.8	53.94	4.971	0.046	3.03			
10/6/2003	10:48:18	199	53.94	4.973	0.044	3.22			
10/6/2003	10:48:30	210.9	53.94	4.973	0.044	3.42			
10/6/2003	10:48:43	223.5	53.94	4.973	0.044	3.63			
10/6/2003	10:48:56	236.8	53.94	4.975	0.042	3.85			
10/6/2003	10:49:10	250.9	53.92	4.976	0.041	4.08			
10/6/2003	10:49:25	265.8	53.94	4.973	0.044	4.33			
10/6/2003	10:49:41	281.6	53.94	4.975	0.042	4.60			
10/6/2003	10:49:58	298.4	53.92	4.976	0.041	4.88			
10/6/2003	10:50:16	316.2	53.92	4.974	0.043	5.18			
10/6/2003	10:50:34	335	53.92	4.976	0.041	5.48			
10/6/2003	10:50:54	354.9	53.92	4.985	0.032	5.82			
10/6/2003	10:51:15	376	53.92	4.985	0.032	6.17			
10/6/2003	10:51:38	398.4	53.94	4.987	0.030	6.55			
10/6/2003	10:52:02	422.1	53.94	4.985	0.032	6.95			
10/6/2003	10:52:27	447.2	53.92	4.985	0.032	7.37			
10/6/2003	10:52:53	473.8	53.92	4.987	0.030	7.80			
10/6/2003	10:53:21	502	53.94	4.985	0.032	8.27			
10/6/2003	10:53:51	531.9	53.94	4.987	0.030	8.77			
10/6/2003	10:54:21	561.9	53.92	4.985	0.032	9.27			
10/6/2003	10:54:51	591.9	53.94	4.985	0.032	9.77			
10/6/2003	10:55:21	621.9	53.92	4.983	0.034	10.27			
10/6/2003	10:55:51	651.9	53.94	4.985	0.032	10.77			
10/6/2003	10:56:21	681.9	53.94	4.983	0.034	11.27			1.88 gpm flow rate
10/6/2003	10:56:51	711.9	53.94	4.981	0.036	11.77			
10/6/2003	10:57:21	741.9	53.94	4.983	0.034	12.27			
10/6/2003	10:57:51	771.9	53.94	4.985	0.032	12.77			
10/6/2003	10:58:21	801.9	53.94	4.985	0.032	13.27			
10/6/2003	10:58:51	831.9	53.94	4.985	0.032	13.77			
10/6/2003	10:59:21	861.9	53.94	4.987	0.030	14.27			
10/6/2003	10:59:51	891.9	53.94	4.985	0.032	14.77			
10/6/2003	11:00:21	921.9	53.94	4.983	0.034	15.27			1.92 gpm flow rate
10/6/2003	11:00:51	951.9	53.94	4.983	0.034	15.77			
10/6/2003	11:01:21	981.9	53.94	4.983	0.034	16.27			
10/6/2003	11:01:51	1011.9	53.94	4.985	0.032	16.77			
10/6/2003	11:02:21	1041.9	53.94	4.983	0.034	17.27			
10/6/2003	11:02:51	1071.9	53.94	4.983	0.034	17.77			
10/6/2003	11:03:21	1101.9	53.94	4.983	0.034	18.27			
10/6/2003	11:03:51	1131.9	53.94	4.983	0.034	18.77			
10/6/2003	11:04:21	1161.9	53.94	4.985	0.032	19.27			
10/6/2003	11:04:51	1191.9	53.94	4.983	0.034	19.77			
10/6/2003	11:05:21	1221.9	53.94	4.983	0.034	20.27			1.95 gpm flow rate
10/6/2003	11:05:51	1251.9	53.94	4.981	0.036	20.77			
10/6/2003	11:06:21	1281.9	53.94	4.983	0.034	21.27			
10/6/2003	11:06:51	1311.9	53.94	4.983	0.034	21.77			
10/6/2003	11:07:21	1341.9	53.94	4.987	0.030	22.27			
10/6/2003	11:07:51	1371.9	53.94	4.985	0.032	22.77			
10/6/2003	11:08:21	1401.9	53.94	4.985	0.032	23.27			
10/6/2003	11:15:00	0	53.94	4.987	0.030	29.92			Start Test 2
10/6/2003	11:15:00	0.3	53.97	4.983	0.034	29.92			
10/6/2003	11:15:00	0.6	53.97	4.983	0.034	29.92			
10/6/2003	11:15:00	0.9	53.99	4.981	0.036	29.92			

Well No. **SEA-601**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	11:15:01	1.2	53.99	4.981	0.036	29.93			
10/6/2003	11:15:01	1.5	54.01	4.981	0.036	29.93			
10/6/2003	11:15:01	1.8	54.01	4.983	0.034	29.93			
10/6/2003	11:15:02	2.1	54.01	4.983	0.034	29.95			
10/6/2003	11:15:02	2.4	54.01	4.983	0.034	29.95			
10/6/2003	11:15:02	2.7	54.01	4.983	0.034	29.95			
10/6/2003	11:15:03	3	54.01	4.983	0.034	29.97			
10/6/2003	11:15:03	3.3	54.01	4.981	0.036	29.97			
10/6/2003	11:15:03	3.6	54.03	4.984	0.033	29.97			
10/6/2003	11:15:03	3.9	54.03	4.982	0.035	29.97			
10/6/2003	11:15:04	4.2	54.03	4.982	0.035	29.98			
10/6/2003	11:15:04	4.5	54.03	4.982	0.035	29.98			
10/6/2003	11:15:04	4.8	54.03	4.982	0.035	29.98			
10/6/2003	11:15:05	5.1	54.03	4.98	0.037	30.00			
10/6/2003	11:15:05	5.4	54.03	4.98	0.037	30.00			
10/6/2003	11:15:05	5.7	54.03	4.98	0.037	30.00			
10/6/2003	11:15:06	6	54.03	4.984	0.033	30.02			
10/6/2003	11:15:06	6.4	54.03	4.982	0.035	30.02			
10/6/2003	11:15:06	6.7	54.03	4.982	0.035	30.02	0.00		Pump Stop
10/6/2003	11:15:07	7.1	54.03	5.024	-0.007	30.03	0.02	1802.00	
10/6/2003	11:15:07	7.5	54.03	5.01	0.007	30.03	0.02	1802.00	
10/6/2003	11:15:08	8	54.03	5.022	-0.005	30.05	0.03	901.50	
10/6/2003	11:15:08	8.4	54.03	5.031	-0.014	30.05	0.03	901.50	
10/6/2003	11:15:08	8.9	54.03	5.031	-0.014	30.05	0.03	901.50	
10/6/2003	11:15:09	9.5	54.03	5.026	-0.009	30.07	0.05	601.33	
10/6/2003	11:15:10	10	54.03	5.026	-0.009	30.08	0.07	451.25	
10/6/2003	11:15:10	10.6	54.03	5.024	-0.007	30.08	0.07	451.25	
10/6/2003	11:15:11	11.3	54.01	5.026	-0.009	30.10	0.08	361.20	
10/6/2003	11:15:11	11.9	54.01	5.026	-0.009	30.10	0.08	361.20	
10/6/2003	11:15:12	12.6	54.01	5.026	-0.009	30.12	0.10	301.17	
10/6/2003	11:15:13	13.4	54.01	5.026	-0.009	30.13	0.12	258.29	
10/6/2003	11:15:14	14.2	54.01	5.026	-0.009	30.15	0.13	226.13	
10/6/2003	11:15:15	15	54.01	5.024	-0.007	30.17	0.15	201.11	
10/6/2003	11:15:15	15.9	54.01	5.022	-0.005	30.17	0.15	201.11	
10/6/2003	11:15:16	16.8	54.01	5.024	-0.007	30.18	0.17	181.10	
10/6/2003	11:15:17	17.8	54.01	5.018	-0.001	30.20	0.18	164.73	
10/6/2003	11:15:18	18.9	54.01	5.014	0.003	30.22	0.20	151.08	
10/6/2003	11:15:20	20	54.01	5.014	0.003	30.25	0.23	129.64	
10/6/2003	11:15:21	21.2	53.99	5.014	0.003	30.27	0.25	121.07	
10/6/2003	11:15:22	22.4	54.01	5.014	0.003	30.28	0.27	113.56	
10/6/2003	11:15:23	23.8	54.01	5.014	0.003	30.30	0.28	106.94	
10/6/2003	11:15:25	25.2	53.99	5.014	0.003	30.33	0.32	95.79	
10/6/2003	11:15:26	26.7	53.99	5.014	0.003	30.35	0.33	91.05	
10/6/2003	11:15:28	28.2	53.99	5.014	0.003	30.38	0.37	82.86	
10/6/2003	11:15:29	29.8	53.99	5.014	0.003	30.40	0.38	79.30	
10/6/2003	11:15:31	31.5	53.99	5.016	0.001	30.43	0.42	73.04	
10/6/2003	11:15:33	33.3	53.99	5.014	0.003	30.47	0.45	67.70	
10/6/2003	11:15:35	35.2	53.99	5.016	0.001	30.50	0.48	63.10	
10/6/2003	11:15:37	37.3	53.99	5.014	0.003	30.53	0.52	59.10	
10/6/2003	11:15:39	39.5	53.99	5.014	0.003	30.57	0.55	55.58	
10/6/2003	11:15:41	41.8	53.99	5.016	0.001	30.60	0.58	52.46	
10/6/2003	11:15:44	44.3	53.99	5.014	0.003	30.65	0.63	48.39	
10/6/2003	11:15:46	46.9	53.99	5.014	0.003	30.68	0.67	46.03	
10/6/2003	11:15:49	49.7	53.99	5.014	0.003	30.73	0.72	42.88	
10/6/2003	11:15:52	52.6	53.99	5.014	0.003	30.78	0.77	40.15	
10/6/2003	11:15:55	55.7	53.99	5.014	0.003	30.83	0.82	37.76	
10/6/2003	11:15:59	59	53.97	5.016	0.001	30.90	0.88	34.98	
10/6/2003	11:16:02	62.5	53.99	5.014	0.003	30.95	0.93	33.16	
10/6/2003	11:16:06	66.2	53.99	5.014	0.003	31.02	1.00	31.02	
10/6/2003	11:16:10	70.1	53.97	5.014	0.003	31.08	1.07	29.14	
10/6/2003	11:16:14	74.3	53.97	5.014	0.003	31.15	1.13	27.49	
10/6/2003	11:16:18	78.7	53.97	5.014	0.003	31.22	1.20	26.01	
10/6/2003	11:16:23	83.4	53.97	5.014	0.003	31.30	1.28	24.39	
10/6/2003	11:16:28	88.4	53.97	5.014	0.003	31.38	1.37	22.96	
10/6/2003	11:16:33	93.7	53.97	5.016	0.001	31.47	1.45	21.70	
10/6/2003	11:16:39	99.3	53.97	5.014	0.003	31.57	1.55	20.37	
10/6/2003	11:16:45	105.2	53.97	5.014	0.003	31.67	1.65	19.19	
10/6/2003	11:16:51	111.5	53.97	5.014	0.003	31.77	1.75	18.15	
10/6/2003	11:16:58	118.1	53.97	5.014	0.003	31.88	1.87	17.08	

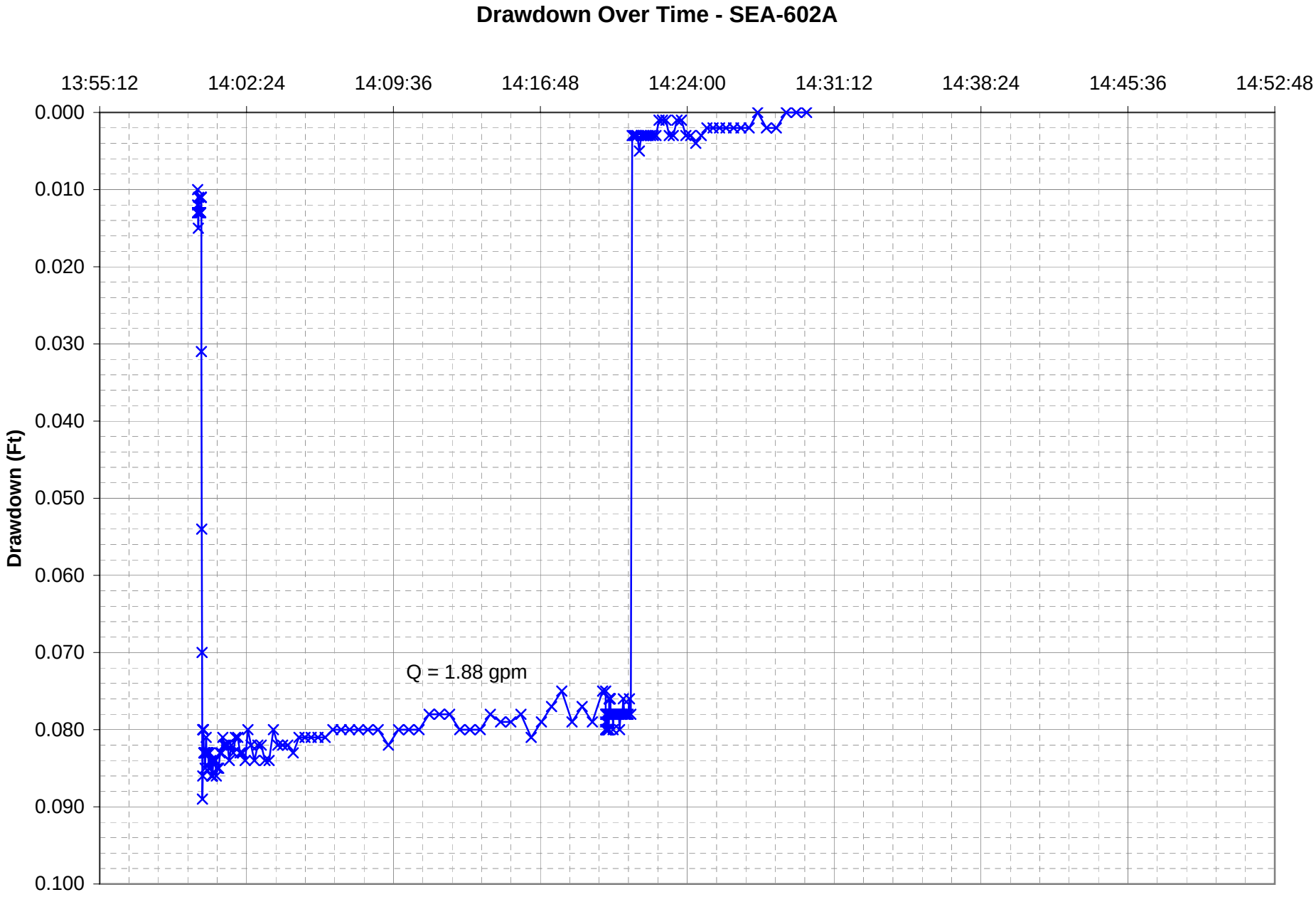
Well No. **SEA-601**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	11:17:05	125.1	53.97	5.014	0.003	32.00	1.98	16.13	
10/6/2003	11:17:12	132.6	53.97	5.016	0.001	32.12	2.10	15.29	
10/6/2003	11:17:20	140.5	53.94	5.015	0.002	32.25	2.23	14.44	
10/6/2003	11:17:28	148.9	53.97	5.016	0.001	32.38	2.37	13.68	
10/6/2003	11:17:37	157.8	53.97	5.016	0.001	32.53	2.52	12.93	
10/6/2003	11:17:47	167.2	53.97	5.016	0.001	32.70	2.68	12.19	
10/6/2003	11:17:57	177.2	53.97	5.016	0.001	32.87	2.85	11.53	
10/6/2003	11:18:07	187.8	53.94	5.017	0.000	33.03	3.02	10.95	
10/6/2003	11:18:19	199	53.94	5.015	0.002	33.23	3.22	10.33	
10/6/2003	11:18:30	210.9	53.94	5.015	0.002	33.42	3.40	9.83	
10/6/2003	11:18:43	223.5	53.94	5.015	0.002	33.63	3.62	9.30	
10/6/2003	11:18:56	236.8	53.94	5.015	0.002	33.85	3.83	8.83	
10/6/2003	11:19:10	250.9	53.94	5.015	0.002	34.08	4.07	8.38	
10/6/2003	11:19:25	265.8	53.94	5.017	0.000	34.33	4.32	7.95	
10/6/2003	11:19:41	281.6	53.94	5.015	0.002	34.60	4.58	7.55	
10/6/2003	11:19:58	298.4	53.94	5.015	0.002	34.88	4.87	7.17	
10/6/2003	11:20:16	316.2	53.94	5.017	0.000	35.18	5.17	6.81	

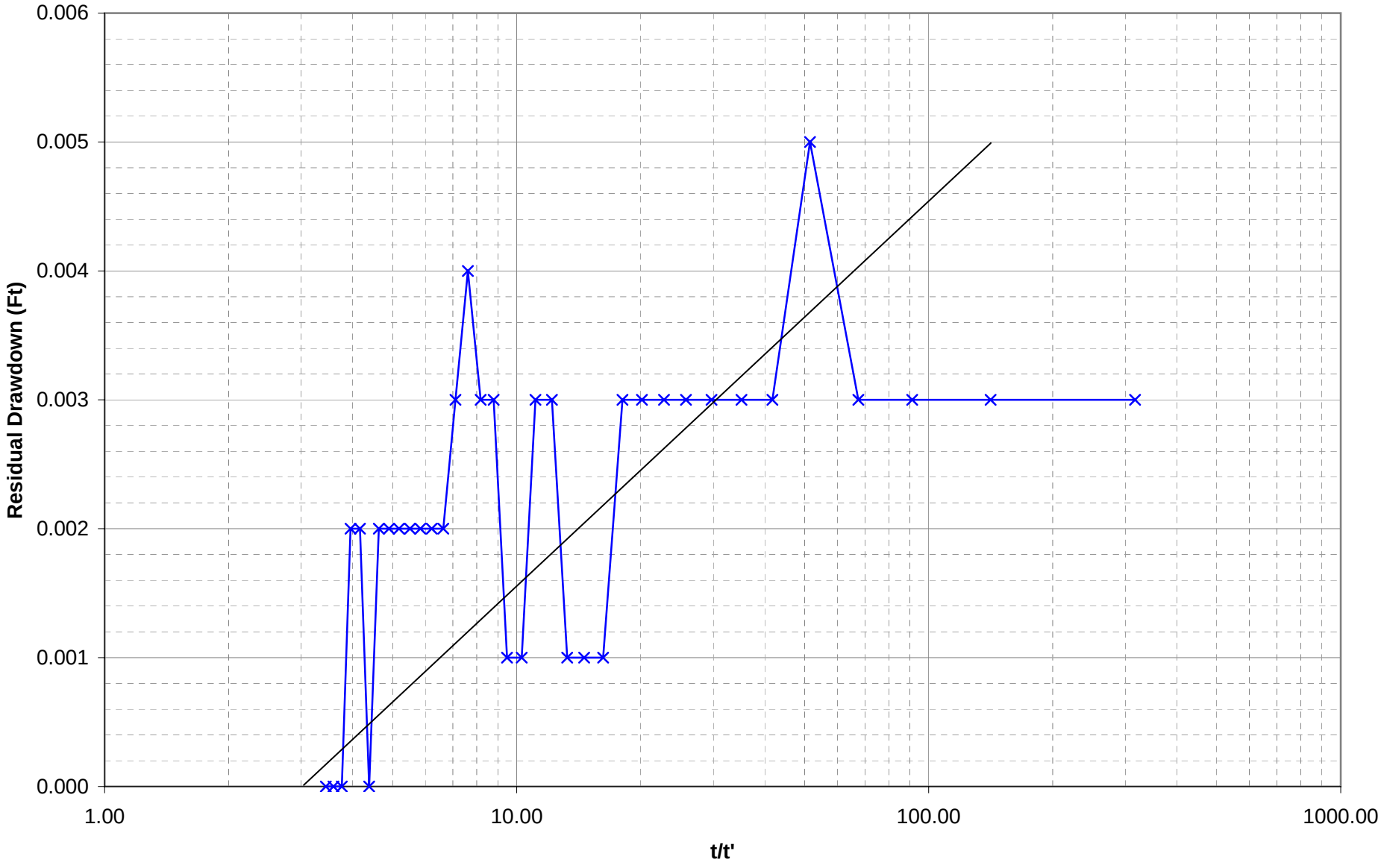
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-602A**

Equipment:	In-Situ Inc. MiniTroll Pro				
Test start date and time	10/7/2003 14:00:00				
Test end date and time	10/7/2003 14:29:51				
Period of pumping	21	minutes			
Static depth to water	7.71	feet below top of casing			
Startiing transducer depth	5.851	feet below static water level			
Total well depth	23.2	feet below top of casing			
Depth to top of screen	13.0	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.88	gpm, or	362	cfd	
Average drawdown [s]	0.08	ft			
Specific capacity [Q/s]	23.5	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.0030	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			22077.9	cfd/ft	
Hydraulic conductivity [K = T/b]			2207.8	fpd, or	7.8E-01 cm/sec


Drawdown Over Time - SEA-602A
13:55:12
14:02:24
14:09:36
14:16:48
14:24:00
14:31:12
14:38:24
14:45:36
14:52:48
0.000
0.010
0.020
0.030
0.040
0.050
0.060
0.070
0.080
0.090
0.100
Drawdown (Ft)
Q = 1.88 gpm

Recovery Plot - SEA-602A



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-602A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	13:35:00								DTW = 7.71 at 13:35
10/7/2003	14:00:00	0	58.11	5.841	0.010				Start Test 1
10/7/2003	14:00:00	0.3	58.13	5.839	0.012				
10/7/2003	14:00:00	0.6	58.16	5.838	0.013				
10/7/2003	14:00:00	0.9	58.16	5.838	0.013				
10/7/2003	14:00:01	1.2	58.18	5.838	0.013				
10/7/2003	14:00:01	1.5	58.18	5.838	0.013				
10/7/2003	14:00:01	1.8	58.18	5.838	0.013				
10/7/2003	14:00:02	2.1	58.18	5.838	0.013				
10/7/2003	14:00:02	2.4	58.18	5.836	0.015				
10/7/2003	14:00:02	2.7	58.18	5.838	0.013				
10/7/2003	14:00:03	3	58.18	5.84	0.011				
10/7/2003	14:00:03	3.3	58.18	5.838	0.013				
10/7/2003	14:00:03	3.6	58.18	5.838	0.013				
10/7/2003	14:00:03	3.9	58.2	5.838	0.013				
10/7/2003	14:00:04	4.2	58.2	5.838	0.013				
10/7/2003	14:00:04	4.5	58.2	5.838	0.013				
10/7/2003	14:00:04	4.8	58.2	5.838	0.013				
10/7/2003	14:00:05	5.1	58.2	5.838	0.013				
10/7/2003	14:00:05	5.4	58.2	5.838	0.013				
10/7/2003	14:00:05	5.7	58.2	5.838	0.013				
10/7/2003	14:00:06	6	58.2	5.838	0.013				
10/7/2003	14:00:06	6.4	58.2	5.838	0.013				
10/7/2003	14:00:06	6.7	58.2	5.838	0.013				
10/7/2003	14:00:07	7.1	58.2	5.838	0.013				
10/7/2003	14:00:07	7.5	58.2	5.838	0.013				
10/7/2003	14:00:07	8	58.2	5.838	0.013				
10/7/2003	14:00:08	8.4	58.2	5.838	0.013				
10/7/2003	14:00:08	8.9	58.2	5.838	0.013				
10/7/2003	14:00:09	9.5	58.2	5.838	0.013				
10/7/2003	14:00:10	10	58.2	5.84	0.011				
10/7/2003	14:00:10	10.6	58.18	5.84	0.011				
10/7/2003	14:00:11	11.3	58.18	5.84	0.011	0.00			Pump Start
10/7/2003	14:00:11	11.9	58.18	5.82	0.031	0.00			
10/7/2003	14:00:12	12.6	58.18	5.797	0.054	0.02			
10/7/2003	14:00:13	13.4	58.18	5.781	0.070	0.03			
10/7/2003	14:00:14	14.2	58.16	5.762	0.089	0.05			
10/7/2003	14:00:15	15	58.18	5.765	0.086	0.07			
10/7/2003	14:00:15	15.9	58.16	5.771	0.080	0.07			
10/7/2003	14:00:16	16.8	58.16	5.771	0.080	0.08			
10/7/2003	14:00:17	17.8	58.16	5.771	0.080	0.10			
10/7/2003	14:00:18	18.9	58.16	5.768	0.083	0.12			
10/7/2003	14:00:20	20	58.16	5.768	0.083	0.15			
10/7/2003	14:00:21	21.2	58.16	5.768	0.083	0.17			
10/7/2003	14:00:22	22.4	58.16	5.766	0.085	0.18			
10/7/2003	14:00:23	23.8	58.16	5.768	0.083	0.20			
10/7/2003	14:00:25	25.2	58.16	5.77	0.081	0.23			
10/7/2003	14:00:26	26.7	58.16	5.768	0.083	0.25			Pump Start
10/7/2003	14:00:28	28.2	58.16	5.768	0.083	0.28			
10/7/2003	14:00:29	29.8	58.16	5.768	0.083	0.30			
10/7/2003	14:00:31	31.5	58.16	5.768	0.083	0.33			
10/7/2003	14:00:33	33.3	58.16	5.766	0.085	0.37			
10/7/2003	14:00:35	35.2	58.16	5.768	0.083	0.40			
10/7/2003	14:00:37	37.3	58.16	5.766	0.085	0.43			
10/7/2003	14:00:39	39.5	58.18	5.767	0.084	0.47			
10/7/2003	14:00:41	41.8	58.18	5.765	0.086	0.50			
10/7/2003	14:00:44	44.3	58.18	5.765	0.086	0.55			
10/7/2003	14:00:46	46.9	58.2	5.767	0.084	0.58			
10/7/2003	14:00:49	49.7	58.2	5.767	0.084	0.63			
10/7/2003	14:00:52	52.6	58.23	5.767	0.084	0.68			
10/7/2003	14:00:55	55.7	58.25	5.765	0.086	0.73			
10/7/2003	14:00:58	59	58.27	5.766	0.085	0.78			
10/7/2003	14:01:02	62.5	58.29	5.766	0.085	0.85			
10/7/2003	14:01:06	66.2	58.29	5.768	0.083	0.92			
10/7/2003	14:01:10	70.1	58.32	5.768	0.083	0.98			

Well No. **SEA-602A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	14:01:14	74.3	58.34	5.77	0.081	1.05			
10/7/2003	14:01:18	78.7	58.36	5.769	0.082	1.12			
10/7/2003	14:01:23	83.4	58.38	5.769	0.082	1.20			
10/7/2003	14:01:28	88.4	58.41	5.769	0.082	1.28			
10/7/2003	14:01:33	93.7	58.43	5.767	0.084	1.37			
10/7/2003	14:01:39	99.3	58.45	5.769	0.082	1.47			
10/7/2003	14:01:45	105.2	58.47	5.768	0.083	1.57			
10/7/2003	14:01:51	111.5	58.5	5.77	0.081	1.67			
10/7/2003	14:01:58	118.1	58.52	5.77	0.081	1.78			
10/7/2003	14:02:05	125.1	58.54	5.768	0.083	1.90			
10/7/2003	14:02:12	132.6	58.54	5.768	0.083	2.02			
10/7/2003	14:02:20	140.5	58.56	5.767	0.084	2.15			
10/7/2003	14:02:28	148.9	58.56	5.771	0.080	2.28			
10/7/2003	14:02:37	157.8	58.59	5.769	0.082	2.43			
10/7/2003	14:02:47	167.2	58.59	5.767	0.084	2.60			
10/7/2003	14:02:57	177.2	58.61	5.769	0.082	2.77			
10/7/2003	14:03:07	187.8	58.59	5.769	0.082	2.93			
10/7/2003	14:03:18	199	58.61	5.767	0.084	3.12			
10/7/2003	14:03:30	210.9	58.61	5.767	0.084	3.32			
10/7/2003	14:03:43	223.5	58.59	5.771	0.080	3.53			
10/7/2003	14:03:56	236.8	58.59	5.769	0.082	3.75			
10/7/2003	14:04:10	250.9	58.56	5.769	0.082	3.98			1.82 gpm flow rate
10/7/2003	14:04:25	265.8	58.56	5.769	0.082	4.23			
10/7/2003	14:04:41	281.6	58.54	5.768	0.083	4.50			
10/7/2003	14:04:58	298.4	58.52	5.77	0.081	4.78			
10/7/2003	14:05:16	316.2	58.52	5.77	0.081	5.08			
10/7/2003	14:05:34	335	58.5	5.77	0.081	5.38			
10/7/2003	14:05:54	354.9	58.47	5.77	0.081	5.72			
10/7/2003	14:06:15	376	58.47	5.77	0.081	6.07			
10/7/2003	14:06:38	398.4	58.45	5.771	0.080	6.45			
10/7/2003	14:07:02	422.1	58.45	5.771	0.080	6.85			
10/7/2003	14:07:27	447.2	58.43	5.771	0.080	7.27			
10/7/2003	14:07:53	473.8	58.43	5.771	0.080	7.70			
10/7/2003	14:08:21	502	58.43	5.771	0.080	8.17			
10/7/2003	14:08:51	531.9	58.43	5.771	0.080	8.67			
10/7/2003	14:09:21	561.9	58.43	5.769	0.082	9.17			1.88 gpm flow rate
10/7/2003	14:09:51	591.9	58.43	5.771	0.080	9.67			
10/7/2003	14:10:21	621.9	58.43	5.771	0.080	10.17			
10/7/2003	14:10:51	651.9	58.43	5.771	0.080	10.67			
10/7/2003	14:11:21	681.9	58.43	5.773	0.078	11.17			1.94 gpm flow rate
10/7/2003	14:11:51	711.9	58.43	5.773	0.078	11.67			
10/7/2003	14:12:21	741.9	58.45	5.773	0.078	12.17			
10/7/2003	14:12:51	771.9	58.45	5.771	0.080	12.67			
10/7/2003	14:13:21	801.9	58.45	5.771	0.080	13.17			
10/7/2003	14:13:51	831.9	58.45	5.771	0.080	13.67			
10/7/2003	14:14:21	861.9	58.45	5.773	0.078	14.17			1.88 gpm flow rate
10/7/2003	14:14:51	891.9	58.47	5.772	0.079	14.67			
10/7/2003	14:15:21	921.9	58.47	5.772	0.079	15.17			
10/7/2003	14:15:51	951.9	58.45	5.773	0.078	15.67			
10/7/2003	14:16:21	981.9	58.47	5.77	0.081	16.17			
10/7/2003	14:16:51	1011.9	58.47	5.772	0.079	16.67			
10/7/2003	14:17:21	1041.9	58.47	5.774	0.077	17.17			
10/7/2003	14:17:51	1071.9	58.47	5.776	0.075	17.67			
10/7/2003	14:18:21	1101.9	58.5	5.772	0.079	18.17			
10/7/2003	14:18:51	1131.9	58.52	5.774	0.077	18.67			
10/7/2003	14:19:21	1161.9	58.5	5.772	0.079	19.17			
10/7/2003	14:19:51	1191.9	58.52	5.776	0.075	19.67			
10/7/2003	14:20:00	0	58.52	5.776	0.075	19.82			Start Test 2
10/7/2003	14:20:00	0.3	58.54	5.772	0.079	19.82			
10/7/2003	14:20:00	0.6	58.56	5.773	0.078	19.82			
10/7/2003	14:20:00	0.9	58.56	5.771	0.080	19.82			
10/7/2003	14:20:01	1.2	58.56	5.771	0.080	19.83			
10/7/2003	14:20:01	1.5	58.59	5.771	0.080	19.83			
10/7/2003	14:20:01	1.8	58.59	5.773	0.078	19.83			
10/7/2003	14:20:02	2.1	58.59	5.771	0.080	19.85			
10/7/2003	14:20:02	2.4	58.59	5.771	0.080	19.85			
10/7/2003	14:20:02	2.7	58.59	5.773	0.078	19.85			
10/7/2003	14:20:03	3	58.59	5.773	0.078	19.87			
10/7/2003	14:20:03	3.3	58.61	5.773	0.078	19.87			

Well No. **SEA-602A**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	14:20:03	3.6	58.61	5.771	0.080	19.87			
10/7/2003	14:20:03	3.9	58.61	5.773	0.078	19.87			
10/7/2003	14:20:04	4.2	58.61	5.773	0.078	19.88			
10/7/2003	14:20:04	4.5	58.61	5.771	0.080	19.88			
10/7/2003	14:20:04	4.8	58.61	5.773	0.078	19.88			
10/7/2003	14:20:05	5.1	58.61	5.771	0.080	19.90			
10/7/2003	14:20:05	5.4	58.61	5.771	0.080	19.90			
10/7/2003	14:20:05	5.7	58.61	5.771	0.080	19.90			
10/7/2003	14:20:06	6	58.61	5.773	0.078	19.92			
10/7/2003	14:20:06	6.4	58.61	5.773	0.078	19.92			
10/7/2003	14:20:06	6.7	58.61	5.773	0.078	19.92			
10/7/2003	14:20:07	7.1	58.61	5.771	0.080	19.93			
10/7/2003	14:20:07	7.5	58.61	5.771	0.080	19.93			
10/7/2003	14:20:08	8	58.61	5.771	0.080	19.95			
10/7/2003	14:20:08	8.4	58.63	5.771	0.080	19.95			
10/7/2003	14:20:08	8.9	58.61	5.771	0.080	19.95			
10/7/2003	14:20:09	9.5	58.63	5.771	0.080	19.97			
10/7/2003	14:20:10	10	58.61	5.773	0.078	19.98			
10/7/2003	14:20:10	10.6	58.61	5.775	0.076	19.98			
10/7/2003	14:20:11	11.3	58.59	5.775	0.076	20.00			
10/7/2003	14:20:11	11.9	58.59	5.775	0.076	20.00			
10/7/2003	14:20:12	12.6	58.59	5.773	0.078	20.02			
10/7/2003	14:20:13	13.4	58.59	5.775	0.076	20.03			
10/7/2003	14:20:14	14.2	58.59	5.775	0.076	20.05			
10/7/2003	14:20:15	15	58.59	5.773	0.078	20.07			
10/7/2003	14:20:15	15.9	58.59	5.773	0.078	20.07			
10/7/2003	14:20:16	16.8	58.59	5.773	0.078	20.08			
10/7/2003	14:20:17	17.8	58.59	5.773	0.078	20.10			
10/7/2003	14:20:18	18.9	58.59	5.773	0.078	20.12			
10/7/2003	14:20:20	20	58.59	5.773	0.078	20.15			
10/7/2003	14:20:21	21.2	58.59	5.773	0.078	20.17			
10/7/2003	14:20:22	22.4	58.59	5.771	0.080	20.18			
10/7/2003	14:20:23	23.8	58.59	5.773	0.078	20.20			
10/7/2003	14:20:25	25.2	58.59	5.773	0.078	20.23			
10/7/2003	14:20:26	26.7	58.59	5.773	0.078	20.25			
10/7/2003	14:20:28	28.2	58.59	5.773	0.078	20.28			
10/7/2003	14:20:29	29.8	58.56	5.773	0.078	20.30			
10/7/2003	14:20:31	31.5	58.59	5.773	0.078	20.33			
10/7/2003	14:20:33	33.3	58.59	5.773	0.078	20.37			
10/7/2003	14:20:35	35.2	58.59	5.773	0.078	20.40			
10/7/2003	14:20:37	37.3	58.59	5.773	0.078	20.43			
10/7/2003	14:20:39	39.5	58.59	5.773	0.078	20.47			
10/7/2003	14:20:41	41.8	58.59	5.771	0.080	20.50			
10/7/2003	14:20:44	44.3	58.56	5.773	0.078	20.55			
10/7/2003	14:20:46	46.9	58.56	5.773	0.078	20.58			
10/7/2003	14:20:49	49.7	58.56	5.773	0.078	20.63			
10/7/2003	14:20:52	52.6	58.56	5.775	0.076	20.68			
10/7/2003	14:20:55	55.7	58.56	5.773	0.078	20.73			
10/7/2003	14:20:59	59	58.56	5.773	0.078	20.80			
10/7/2003	14:21:02	62.5	58.56	5.773	0.078	20.85			
10/7/2003	14:21:06	66.2	58.56	5.773	0.078	20.92			
10/7/2003	14:21:10	70.1	58.56	5.775	0.076	20.98			
10/7/2003	14:21:14	74.3	58.56	5.773	0.078	21.05	0.00		Pump Stop
10/7/2003	14:21:18	78.7	58.56	5.848	0.003	21.12	0.07	316.75	
10/7/2003	14:21:23	83.4	58.56	5.848	0.003	21.20	0.15	141.33	
10/7/2003	14:21:28	88.4	58.56	5.848	0.003	21.28	0.23	91.21	
10/7/2003	14:21:33	93.7	58.56	5.848	0.003	21.37	0.32	67.47	
10/7/2003	14:21:39	99.3	58.56	5.846	0.005	21.47	0.42	51.52	
10/7/2003	14:21:45	105.2	58.54	5.848	0.003	21.57	0.52	41.74	
10/7/2003	14:21:51	111.5	58.54	5.848	0.003	21.67	0.62	35.14	
10/7/2003	14:21:58	118.1	58.54	5.848	0.003	21.78	0.73	29.70	
10/7/2003	14:22:05	125.1	58.54	5.848	0.003	21.90	0.85	25.76	
10/7/2003	14:22:12	132.6	58.56	5.848	0.003	22.02	0.97	22.78	
10/7/2003	14:22:20	140.5	58.54	5.848	0.003	22.15	1.10	20.14	
10/7/2003	14:22:28	148.9	58.54	5.848	0.003	22.28	1.23	18.07	
10/7/2003	14:22:37	157.8	58.54	5.85	0.001	22.43	1.38	16.22	
10/7/2003	14:22:47	167.2	58.54	5.85	0.001	22.60	1.55	14.58	
10/7/2003	14:22:57	177.2	58.54	5.85	0.001	22.77	1.72	13.26	
10/7/2003	14:23:07	187.8	58.54	5.848	0.003	22.93	1.88	12.18	

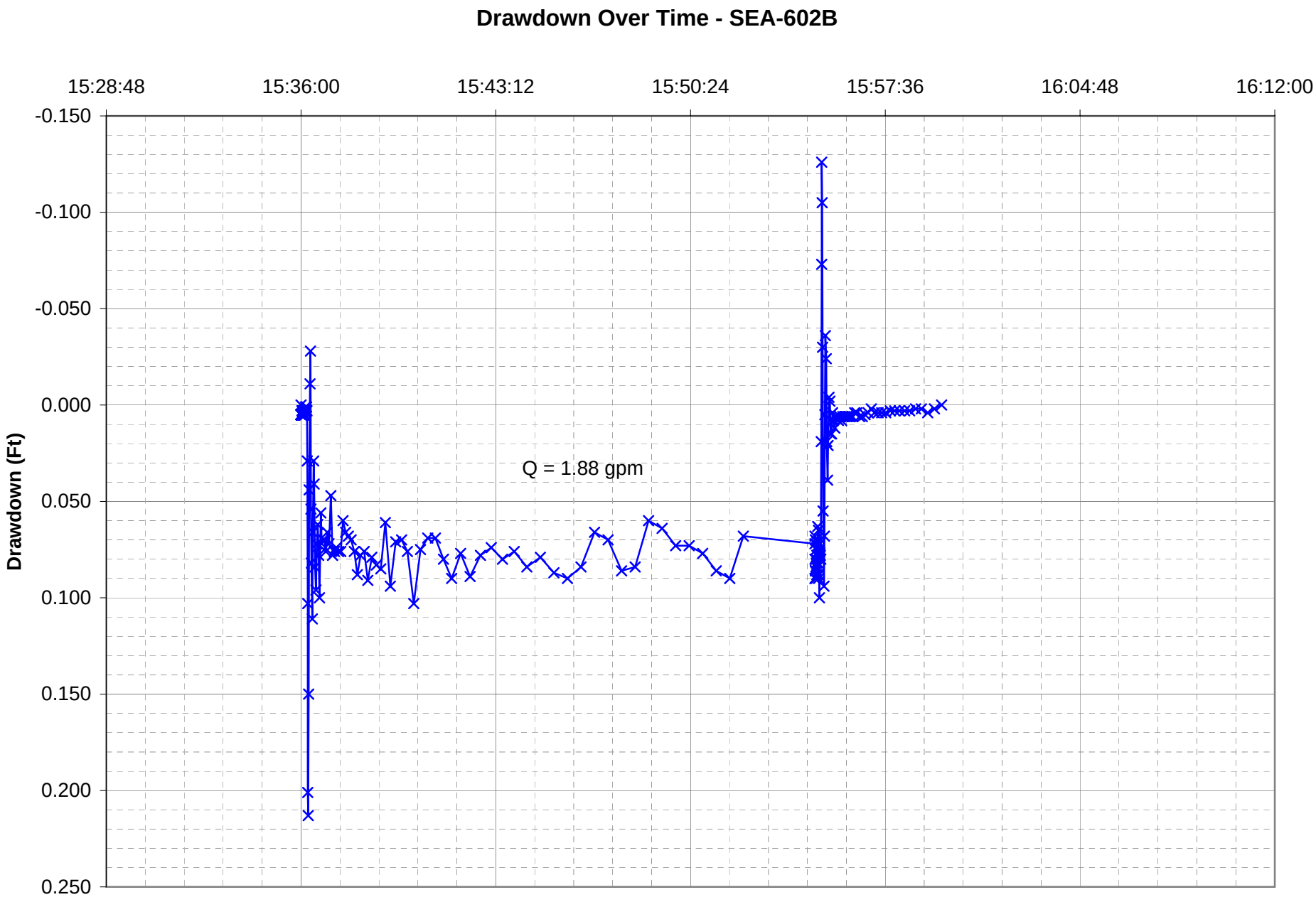
Well No. **SEA-602A**

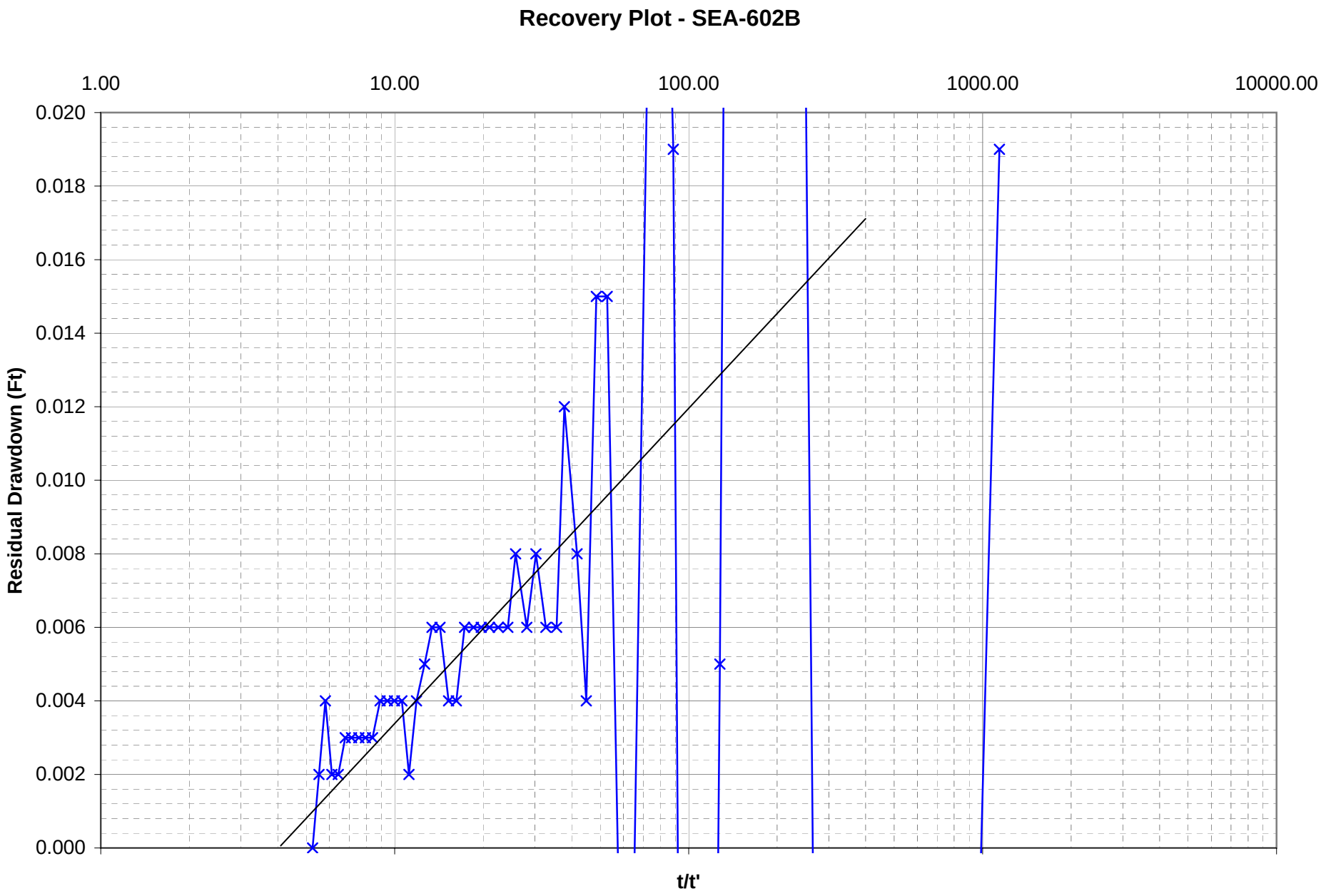
Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	14:23:19	199	58.52	5.848	0.003	23.13	2.08	11.10	
10/7/2003	14:23:30	210.9	58.52	5.85	0.001	23.32	2.27	10.29	
10/7/2003	14:23:43	223.5	58.52	5.85	0.001	23.53	2.48	9.48	
10/7/2003	14:23:56	236.8	58.52	5.848	0.003	23.75	2.70	8.80	
10/7/2003	14:24:10	250.9	58.52	5.848	0.003	23.98	2.93	8.18	
10/7/2003	14:24:25	265.8	58.52	5.847	0.004	24.23	3.18	7.61	
10/7/2003	14:24:41	281.6	58.52	5.848	0.003	24.50	3.45	7.10	
10/7/2003	14:24:58	298.4	58.5	5.849	0.002	24.78	3.73	6.64	
10/7/2003	14:25:16	316.2	58.5	5.849	0.002	25.08	4.03	6.22	
10/7/2003	14:25:35	335	58.5	5.849	0.002	25.40	4.35	5.84	
10/7/2003	14:25:54	354.9	58.5	5.849	0.002	25.72	4.67	5.51	
10/7/2003	14:26:16	376	58.47	5.849	0.002	26.08	5.03	5.18	
10/7/2003	14:26:38	398.4	58.47	5.849	0.002	26.45	5.40	4.90	
10/7/2003	14:27:02	422.1	58.47	5.849	0.002	26.85	5.80	4.63	
10/7/2003	14:27:27	447.2	58.47	5.851	0.000	27.27	6.22	4.39	
10/7/2003	14:27:53	473.8	58.47	5.849	0.002	27.70	6.65	4.17	
10/7/2003	14:28:22	502	58.47	5.849	0.002	28.18	7.13	3.95	
10/7/2003	14:28:51	531.9	58.45	5.851	0.000	28.67	7.62	3.76	
10/7/2003	14:29:21	561.9	58.45	5.851	0.000	29.17	8.12	3.59	
10/7/2003	14:29:51	591.9	58.43	5.851	0.000	29.67	8.62	3.44	
10/7/2003	14:46:00								DTW = 7.71 at 14:46

Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-602B**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/7/2003	15:36:00			
Test end date and time	10/7/2003	15:59:41			
Period of pumping	19	minutes			
Static depth to water	7.02	feet below top of casing			
Starting transducer depth	5.325	feet below static water level			
Total well depth	63.7	feet below top of casing			
Depth to top of screen	53.5	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.88	gpm, or	362	cfd	
Average drawdown [s]	0.08	ft			
Specific capacity [Q/s]	23.5	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.0087	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			7613.1	cfd/ft	
Hydraulic conductivity [K = T/b]			761.3	fpd, or	2.7E-01 cm/sec


Drawdown Over Time - SEA-602B
15:28:48
15:36:00
15:43:12
15:50:24
15:57:36
16:04:48
16:12:00
-0.150
-0.100
-0.050
0.000
0.050
0.100
0.150
0.200
0.250
Drawdown (Ft)
Q = 1.88 gpm


Recovery Plot - SEA-602B
1.00
10.00
100.00
1000.00
10000.00
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
Residual Drawdown (Ft)
t/t'

Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-602B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	14:36:00								DTW = 7.02 at 14:36
10/7/2003	14:37:00								DTW = 7.02 at 14:37
10/7/2003	15:36:00	0	58.63	5.325	0.000				Start Test 1
10/7/2003	15:36:00	0.3	58.66	5.32	0.005				
10/7/2003	15:36:00	0.6	58.68	5.32	0.005				
10/7/2003	15:36:00	0.9	58.68	5.32	0.005				
10/7/2003	15:36:01	1.2	58.68	5.32	0.005				
10/7/2003	15:36:01	1.5	58.68	5.32	0.005				
10/7/2003	15:36:01	1.8	58.7	5.32	0.005				
10/7/2003	15:36:02	2.1	58.7	5.322	0.003				
10/7/2003	15:36:02	2.4	58.7	5.32	0.005				
10/7/2003	15:36:02	2.7	58.7	5.32	0.005				
10/7/2003	15:36:03	3	58.7	5.322	0.003				
10/7/2003	15:36:03	3.3	58.7	5.32	0.005				
10/7/2003	15:36:03	3.6	58.7	5.32	0.005				
10/7/2003	15:36:03	3.9	58.7	5.32	0.005				
10/7/2003	15:36:04	4.2	58.7	5.322	0.003				
10/7/2003	15:36:04	4.5	58.72	5.32	0.005				
10/7/2003	15:36:04	4.8	58.72	5.32	0.005				
10/7/2003	15:36:05	5.1	58.72	5.32	0.005				
10/7/2003	15:36:05	5.4	58.72	5.32	0.005				
10/7/2003	15:36:05	5.7	58.72	5.32	0.005				
10/7/2003	15:36:06	6	58.72	5.32	0.005				
10/7/2003	15:36:06	6.4	58.72	5.32	0.005				
10/7/2003	15:36:06	6.7	58.72	5.322	0.003				
10/7/2003	15:36:07	7.1	58.72	5.32	0.005				
10/7/2003	15:36:07	7.5	58.72	5.322	0.003				
10/7/2003	15:36:07	8	58.72	5.322	0.003				
10/7/2003	15:36:08	8.4	58.72	5.32	0.005				
10/7/2003	15:36:08	8.9	58.72	5.32	0.005				
10/7/2003	15:36:09	9.5	58.75	5.32	0.005				
10/7/2003	15:36:10	10	58.72	5.324	0.001				
10/7/2003	15:36:10	10.6	58.72	5.322	0.003				
10/7/2003	15:36:11	11.3	58.72	5.322	0.003				
10/7/2003	15:36:11	11.9	58.7	5.324	0.001				
10/7/2003	15:36:12	12.6	58.72	5.324	0.001				
10/7/2003	15:36:13	13.4	58.7	5.322	0.003	0.00			Pump Start
10/7/2003	15:36:14	14.2	58.7	5.296	0.029	0.02			
10/7/2003	15:36:15	15	58.7	5.222	0.103	0.03			
10/7/2003	15:36:15	15.9	58.7	5.124	0.201	0.03			
10/7/2003	15:36:16	16.8	58.7	5.112	0.213	0.05			
10/7/2003	15:36:17	17.8	58.7	5.175	0.150	0.07			
10/7/2003	15:36:18	18.9	58.7	5.281	0.044	0.08			
10/7/2003	15:36:20	20	58.7	5.336	-0.011	0.12			
10/7/2003	15:36:21	21.2	58.7	5.353	-0.028	0.13			
10/7/2003	15:36:22	22.4	58.7	5.271	0.054	0.15			
10/7/2003	15:36:23	23.8	58.7	5.243	0.082	0.17			
10/7/2003	15:36:25	25.2	58.7	5.214	0.111	0.20			
10/7/2003	15:36:26	26.7	58.7	5.259	0.066	0.22			
10/7/2003	15:36:28	28.2	58.72	5.296	0.029	0.25			
10/7/2003	15:36:29	29.8	58.72	5.284	0.041	0.27			
10/7/2003	15:36:31	31.5	58.72	5.241	0.084	0.30			
10/7/2003	15:36:33	33.3	58.72	5.229	0.096	0.33			
10/7/2003	15:36:35	35.2	58.72	5.253	0.072	0.37			
10/7/2003	15:36:37	37.3	58.72	5.263	0.062	0.40			
10/7/2003	15:36:39	39.5	58.72	5.247	0.078	0.43			
10/7/2003	15:36:41	41.8	58.72	5.225	0.100	0.47			
10/7/2003	15:36:44	44.3	58.72	5.269	0.056	0.52			
10/7/2003	15:36:46	46.9	58.75	5.253	0.072	0.55			
10/7/2003	15:36:49	49.7	58.72	5.255	0.070	0.60			
10/7/2003	15:36:52	52.6	58.72	5.255	0.070	0.65			
10/7/2003	15:36:55	55.7	58.72	5.249	0.076	0.70			
10/7/2003	15:36:58	59	58.75	5.259	0.066	0.75			
10/7/2003	15:37:02	62.5	58.75	5.253	0.072	0.82			
10/7/2003	15:37:06	66.2	58.75	5.278	0.047	0.88			

Well No. **SEA-602B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	15:37:10	70.1	58.75	5.247	0.078	0.95			
10/7/2003	15:37:14	74.3	58.75	5.249	0.076	1.02			
10/7/2003	15:37:18	78.7	58.75	5.251	0.074	1.08			
10/7/2003	15:37:23	83.4	58.75	5.249	0.076	1.17			
10/7/2003	15:37:28	88.4	58.72	5.249	0.076	1.25			
10/7/2003	15:37:33	93.7	58.75	5.265	0.060	1.33			
10/7/2003	15:37:39	99.3	58.72	5.259	0.066	1.43			
10/7/2003	15:37:45	105.2	58.72	5.257	0.068	1.53			
10/7/2003	15:37:51	111.5	58.72	5.255	0.070	1.63			
10/7/2003	15:37:58	118.1	58.72	5.249	0.076	1.75			
10/7/2003	15:38:05	125.1	58.7	5.237	0.088	1.87			1.88 gpm flow rate
10/7/2003	15:38:12	132.6	58.7	5.247	0.078	1.98			
10/7/2003	15:38:20	140.5	58.7	5.249	0.076	2.12			
10/7/2003	15:38:28	148.9	58.7	5.234	0.091	2.25			
10/7/2003	15:38:37	157.8	58.68	5.246	0.079	2.40			
10/7/2003	15:38:47	167.2	58.68	5.242	0.083	2.57			
10/7/2003	15:38:57	177.2	58.66	5.24	0.085	2.73			
10/7/2003	15:39:07	187.8	58.63	5.264	0.061	2.90			
10/7/2003	15:39:18	199	58.61	5.231	0.094	3.08			
10/7/2003	15:39:30	210.9	58.59	5.254	0.071	3.28			
10/7/2003	15:39:43	223.5	58.56	5.255	0.070	3.50			
10/7/2003	15:39:56	236.8	58.52	5.249	0.076	3.72			
10/7/2003	15:40:10	250.9	58.5	5.222	0.103	3.95			
10/7/2003	15:40:25	265.8	58.45	5.25	0.075	4.20			
10/7/2003	15:40:41	281.6	58.43	5.256	0.069	4.47			
10/7/2003	15:40:58	298.4	58.38	5.256	0.069	4.75			
10/7/2003	15:41:16	316.2	58.36	5.245	0.080	5.05			
10/7/2003	15:41:34	335	58.32	5.235	0.090	5.35			
10/7/2003	15:41:54	354.9	58.27	5.248	0.077	5.68			
10/7/2003	15:42:15	376	58.23	5.236	0.089	6.03			
10/7/2003	15:42:38	398.4	58.18	5.247	0.078	6.42			
10/7/2003	15:43:02	422.1	58.16	5.251	0.074	6.82			
10/7/2003	15:43:27	447.2	58.13	5.245	0.080	7.23			
10/7/2003	15:43:53	473.8	58.13	5.249	0.076	7.67			
10/7/2003	15:44:21	502	58.11	5.241	0.084	8.13			2.00 gpm flow rate
10/7/2003	15:44:51	531.9	58.07	5.246	0.079	8.63			
10/7/2003	15:45:21	561.9	58.04	5.238	0.087	9.13			
10/7/2003	15:45:51	591.9	58	5.235	0.090	9.63			
10/7/2003	15:46:21	621.9	57.98	5.241	0.084	10.13			1.88 gpm flow rate
10/7/2003	15:46:51	651.9	57.95	5.259	0.066	10.63			
10/7/2003	15:47:21	681.9	57.93	5.255	0.070	11.13			
10/7/2003	15:47:51	711.9	57.91	5.239	0.086	11.63			
10/7/2003	15:48:21	741.9	57.91	5.241	0.084	12.13			
10/7/2003	15:48:51	771.9	57.89	5.265	0.060	12.63			
10/7/2003	15:49:21	801.9	57.86	5.261	0.064	13.13			
10/7/2003	15:49:51	831.9	57.84	5.252	0.073	13.63			
10/7/2003	15:50:21	861.9	57.8	5.252	0.073	14.13			
10/7/2003	15:50:51	891.9	57.8	5.248	0.077	14.63			
10/7/2003	15:51:21	921.9	57.77	5.239	0.086	15.13			
10/7/2003	15:51:51	951.9	57.77	5.235	0.090	15.63			
10/7/2003	15:52:21	981.9	57.75	5.257	0.068	16.13			1.88 gpm flow rate
10/7/2003	15:55:00	0	57.68	5.253	0.072	18.78			Start Test 2
10/7/2003	15:55:00	0.3	57.7	5.257	0.068	18.78			
10/7/2003	15:55:00	0.6	57.73	5.235	0.090	18.78			
10/7/2003	15:55:00	0.9	57.73	5.245	0.080	18.78			
10/7/2003	15:55:01	1.2	57.73	5.239	0.086	18.80			
10/7/2003	15:55:01	1.5	57.75	5.255	0.070	18.80			
10/7/2003	15:55:01	1.8	57.75	5.239	0.086	18.80			
10/7/2003	15:55:02	2.1	57.75	5.245	0.080	18.82			
10/7/2003	15:55:02	2.4	57.75	5.235	0.090	18.82			
10/7/2003	15:55:02	2.7	57.75	5.241	0.084	18.82			
10/7/2003	15:55:03	3	57.77	5.241	0.084	18.83			
10/7/2003	15:55:03	3.3	57.75	5.241	0.084	18.83			
10/7/2003	15:55:03	3.6	57.77	5.243	0.082	18.83			
10/7/2003	15:55:03	3.9	57.77	5.25	0.075	18.83			
10/7/2003	15:55:04	4.2	57.77	5.247	0.078	18.85			
10/7/2003	15:55:04	4.5	57.77	5.237	0.088	18.85			
10/7/2003	15:55:04	4.8	57.77	5.254	0.071	18.85			
10/7/2003	15:55:05	5.1	57.77	5.241	0.084	18.87			

Well No. **SEA-602B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	15:55:05	5.4	57.77	5.241	0.084	18.87			
10/7/2003	15:55:05	5.7	57.77	5.237	0.088	18.87			
10/7/2003	15:55:06	6	57.77	5.247	0.078	18.88			
10/7/2003	15:55:06	6.4	57.77	5.252	0.073	18.88			
10/7/2003	15:55:06	6.7	57.77	5.262	0.063	18.88			
10/7/2003	15:55:07	7.1	57.77	5.254	0.071	18.90			
10/7/2003	15:55:07	7.5	57.77	5.243	0.082	18.90			
10/7/2003	15:55:08	8	57.77	5.235	0.090	18.92			
10/7/2003	15:55:08	8.4	57.77	5.26	0.065	18.92			
10/7/2003	15:55:08	8.9	57.77	5.249	0.076	18.92			
10/7/2003	15:55:09	9.5	57.77	5.237	0.088	18.93			
10/7/2003	15:55:10	10	57.77	5.225	0.100	18.95			
10/7/2003	15:55:10	10.6	57.77	5.249	0.076	18.95			
10/7/2003	15:55:11	11.3	57.75	5.253	0.072	18.97			
10/7/2003	15:55:11	11.9	57.75	5.247	0.078	18.97			
10/7/2003	15:55:12	12.6	57.75	5.247	0.078	18.98			
10/7/2003	15:55:13	13.4	57.75	5.245	0.080	19.00	0.00		Pump Stop
10/7/2003	15:55:14	14.2	57.75	5.306	0.019	19.02	0.02	1141.00	
10/7/2003	15:55:15	15	57.75	5.398	-0.073	19.03	0.03	571.00	
10/7/2003	15:55:15	15.9	57.75	5.451	-0.126	19.03	0.03	571.00	
10/7/2003	15:55:16	16.8	57.75	5.43	-0.105	19.05	0.05	381.00	
10/7/2003	15:55:17	17.8	57.75	5.355	-0.030	19.07	0.07	286.00	
10/7/2003	15:55:18	18.9	57.75	5.27	0.055	19.08	0.08	229.00	
10/7/2003	15:55:20	20	57.75	5.231	0.094	19.12	0.12	163.86	
10/7/2003	15:55:21	21.2	57.73	5.257	0.068	19.13	0.13	143.50	
10/7/2003	15:55:22	22.4	57.75	5.32	0.005	19.15	0.15	127.67	
10/7/2003	15:55:23	23.8	57.75	5.361	-0.036	19.17	0.17	115.00	
10/7/2003	15:55:25	25.2	57.75	5.349	-0.024	19.20	0.20	96.00	
10/7/2003	15:55:26	26.7	57.75	5.306	0.019	19.22	0.22	88.69	
10/7/2003	15:55:28	28.2	57.75	5.286	0.039	19.25	0.25	77.00	
10/7/2003	15:55:29	29.8	57.75	5.304	0.021	19.27	0.27	72.25	
10/7/2003	15:55:31	31.5	57.75	5.329	-0.004	19.30	0.30	64.33	
10/7/2003	15:55:33	33.3	57.75	5.327	-0.002	19.33	0.33	58.00	
10/7/2003	15:55:35	35.2	57.75	5.31	0.015	19.37	0.37	52.82	
10/7/2003	15:55:37	37.3	57.75	5.31	0.015	19.40	0.40	48.50	
10/7/2003	15:55:39	39.5	57.75	5.321	0.004	19.43	0.43	44.85	
10/7/2003	15:55:41	41.8	57.77	5.317	0.008	19.47	0.47	41.71	
10/7/2003	15:55:44	44.3	57.77	5.313	0.012	19.52	0.52	37.77	
10/7/2003	15:55:46	46.9	57.77	5.319	0.006	19.55	0.55	35.55	
10/7/2003	15:55:49	49.7	57.77	5.319	0.006	19.60	0.60	32.67	
10/7/2003	15:55:52	52.6	57.77	5.317	0.008	19.65	0.65	30.23	
10/7/2003	15:55:55	55.7	57.77	5.319	0.006	19.70	0.70	28.14	
10/7/2003	15:55:59	59	57.77	5.317	0.008	19.77	0.77	25.78	
10/7/2003	15:56:02	62.5	57.77	5.319	0.006	19.82	0.82	24.27	
10/7/2003	15:56:06	66.2	57.77	5.319	0.006	19.88	0.88	22.51	
10/7/2003	15:56:10	70.1	57.77	5.319	0.006	19.95	0.95	21.00	
10/7/2003	15:56:14	74.3	57.77	5.319	0.006	20.02	1.02	19.69	
10/7/2003	15:56:18	78.7	57.77	5.319	0.006	20.08	1.08	18.54	
10/7/2003	15:56:23	83.4	57.77	5.319	0.006	20.17	1.17	17.29	
10/7/2003	15:56:28	88.4	57.77	5.321	0.004	20.25	1.25	16.20	
10/7/2003	15:56:33	93.7	57.77	5.321	0.004	20.33	1.33	15.25	
10/7/2003	15:56:39	99.3	57.77	5.319	0.006	20.43	1.43	14.26	
10/7/2003	15:56:45	105.2	57.77	5.319	0.006	20.53	1.53	13.39	
10/7/2003	15:56:51	111.5	57.75	5.32	0.005	20.63	1.63	12.63	
10/7/2003	15:56:58	118.1	57.75	5.321	0.004	20.75	1.75	11.86	
10/7/2003	15:57:05	125.1	57.75	5.323	0.002	20.87	1.87	11.18	
10/7/2003	15:57:12	132.6	57.75	5.321	0.004	20.98	1.98	10.58	
10/7/2003	15:57:20	140.5	57.75	5.321	0.004	21.12	2.12	9.98	
10/7/2003	15:57:28	148.9	57.75	5.321	0.004	21.25	2.25	9.44	
10/7/2003	15:57:37	157.8	57.75	5.321	0.004	21.40	2.40	8.92	
10/7/2003	15:57:47	167.2	57.73	5.322	0.003	21.57	2.57	8.40	
10/7/2003	15:57:57	177.2	57.73	5.322	0.003	21.73	2.73	7.95	
10/7/2003	15:58:07	187.8	57.73	5.322	0.003	21.90	2.90	7.55	
10/7/2003	15:58:19	199	57.73	5.322	0.003	22.10	3.10	7.13	
10/7/2003	15:58:30	210.9	57.73	5.322	0.003	22.28	3.28	6.79	
10/7/2003	15:58:43	223.5	57.75	5.323	0.002	22.50	3.50	6.43	
10/7/2003	15:58:56	236.8	57.75	5.323	0.002	22.72	3.72	6.11	
10/7/2003	15:59:10	250.9	57.75	5.321	0.004	22.95	3.95	5.81	
10/7/2003	15:59:25	265.8	57.77	5.323	0.002	23.20	4.20	5.52	

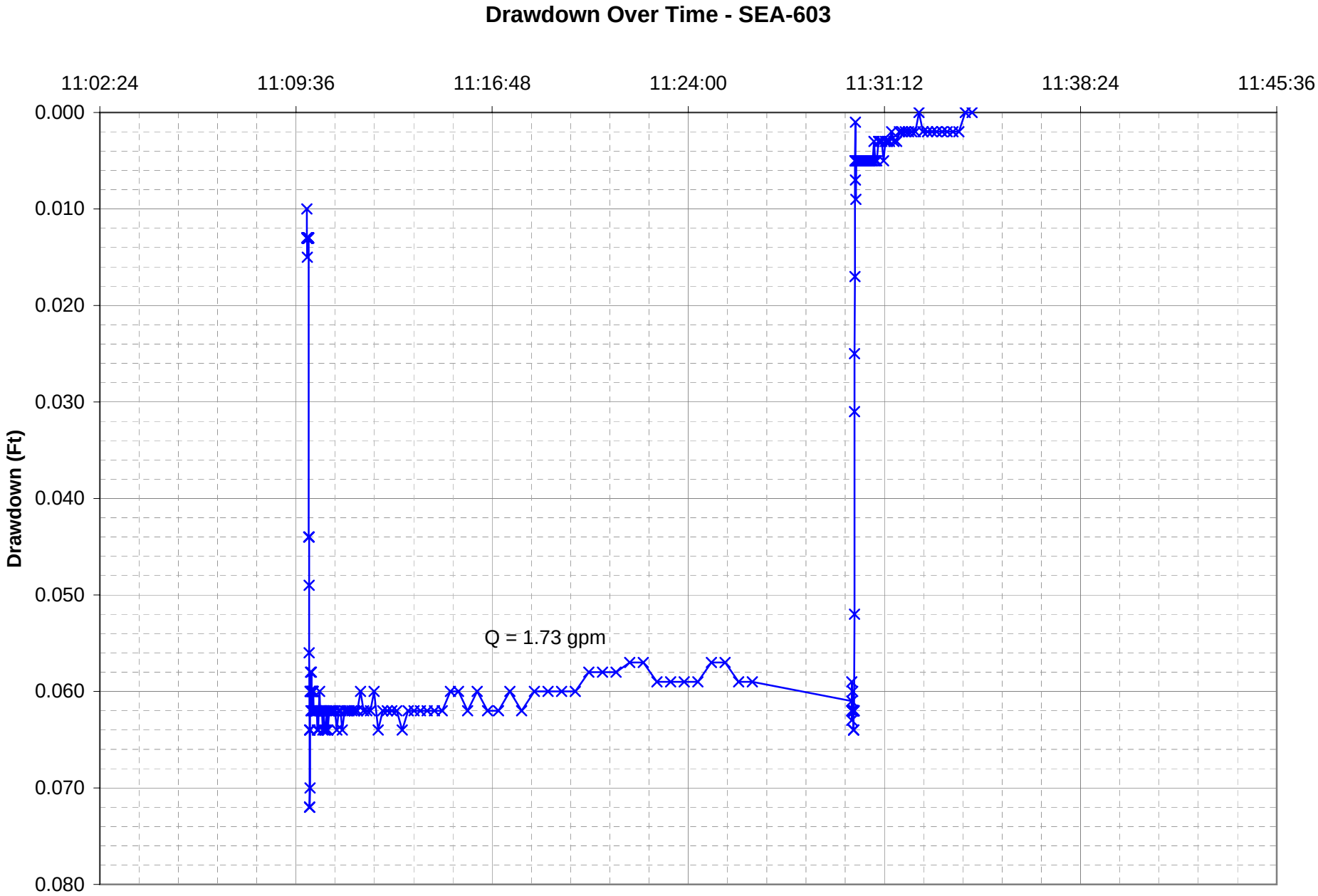
Well No. **SEA-602B**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	15:59:41	281.6	57.77	5.325	0.000	23.47	4.47	5.25	
10/7/2003	16:07:00								DTW = 7.04 at 16:07

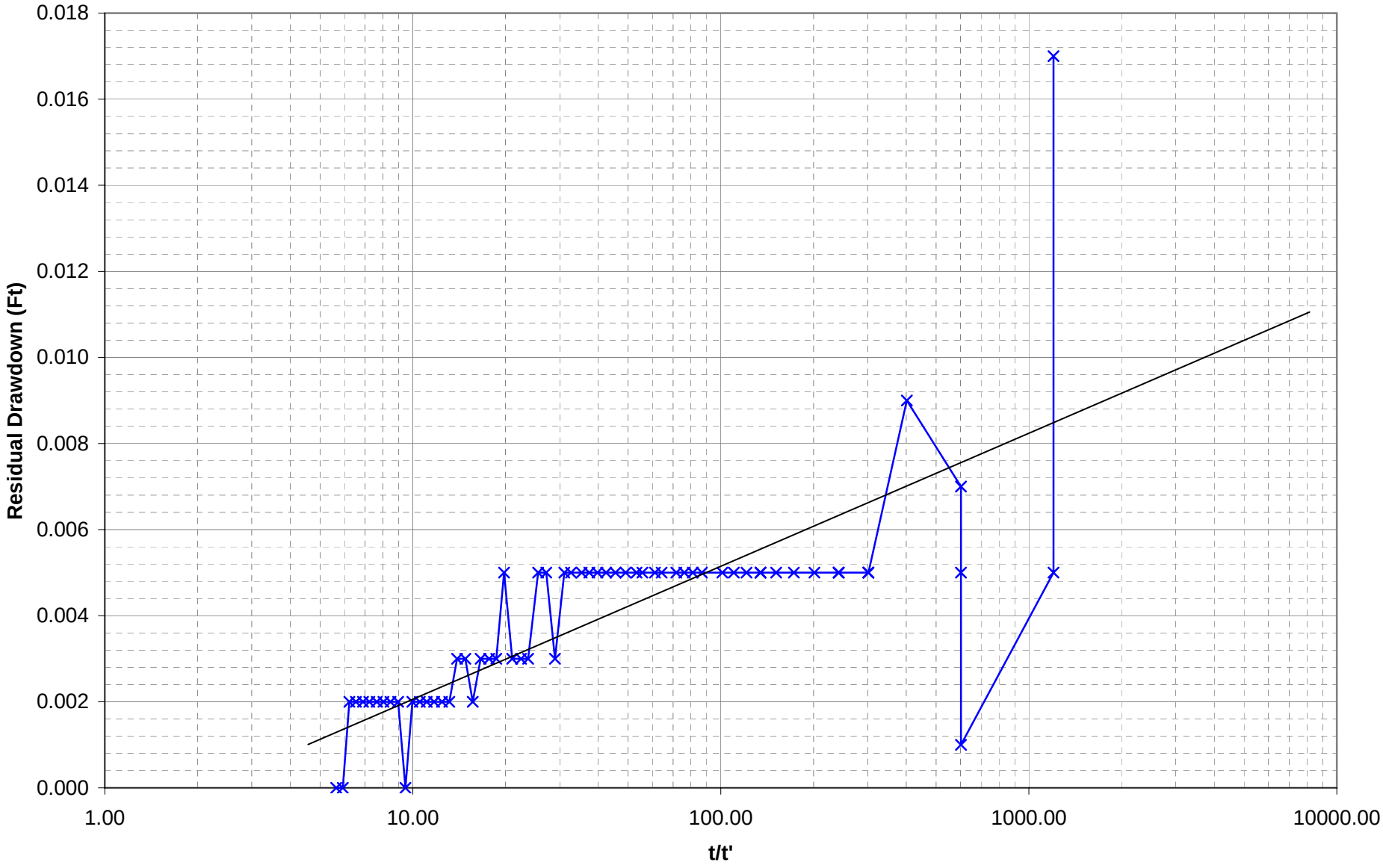
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-603**

Equipment:	In-Situ Inc. MiniTroll Pro				
Test start date and time	10/7/2003	11:10:00			
Test end date and time	10/7/2003	11:34:25			
Period of pumping	20	minutes			
Static depth to water	7.26	feet below top of casing			
Startiing transducer depth	5.26	feet below static water level			
Total well depth	20.6	feet below top of casing			
Depth to top of screen	10.4	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.73	gpm, or	333	cfd	
Average drawdown [s]	0.061	ft			
Specific capacity [Q/s]	28.4	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.0032	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			19046.6	cfd/ft	
Hydraulic conductivity [K = T/b]			1904.7	fpd, or	6.7E-01 cm/sec


Drawdown Over Time - SEA-603
11:02:24
11:09:36
11:16:48
11:24:00
11:31:12
11:38:24
11:45:36
0.000
0.010
0.020
0.030
0.040
0.050
0.060
0.070
0.080
Drawdown (Ft)
Q = 1.73 gpm

Recovery Plot - SEA-603



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-603**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	11:01:00								DTW = 7.27 at 11:01
10/7/2003	11:10:00	0	61.08	5.25	0.010				Start Test 1
10/7/2003	11:10:00	0.3	61.1	5.247	0.013				
10/7/2003	11:10:00	0.6	61.1	5.247	0.013				
10/7/2003	11:10:00	0.9	61.1	5.247	0.013				
10/7/2003	11:10:01	1.2	61.12	5.247	0.013				
10/7/2003	11:10:01	1.5	61.12	5.245	0.015				
10/7/2003	11:10:01	1.8	61.12	5.247	0.013				
10/7/2003	11:10:02	2.1	61.12	5.247	0.013				
10/7/2003	11:10:02	2.4	61.15	5.247	0.013				
10/7/2003	11:10:02	2.7	61.15	5.247	0.013				
10/7/2003	11:10:03	3	61.15	5.247	0.013				
10/7/2003	11:10:03	3.3	61.15	5.247	0.013				
10/7/2003	11:10:03	3.6	61.15	5.247	0.013				
10/7/2003	11:10:03	3.9	61.15	5.247	0.013				
10/7/2003	11:10:04	4.2	61.15	5.247	0.013				
10/7/2003	11:10:04	4.5	61.15	5.247	0.013	0.00			Pump Start
10/7/2003	11:10:04	4.8	61.15	5.216	0.044	0.00			
10/7/2003	11:10:05	5.1	61.15	5.216	0.044	0.02			
10/7/2003	11:10:05	5.4	61.17	5.211	0.049	0.02			
10/7/2003	11:10:05	5.7	61.17	5.204	0.056	0.02			
10/7/2003	11:10:06	6	61.17	5.196	0.064	0.03			
10/7/2003	11:10:06	6.4	61.17	5.188	0.072	0.03			
10/7/2003	11:10:06	6.7	61.17	5.188	0.072	0.03			
10/7/2003	11:10:07	7.1	61.17	5.19	0.070	0.05			
10/7/2003	11:10:07	7.5	61.17	5.196	0.064	0.05			
10/7/2003	11:10:07	8	61.17	5.2	0.060	0.05			
10/7/2003	11:10:08	8.4	61.17	5.202	0.058	0.07			
10/7/2003	11:10:08	8.9	61.17	5.2	0.060	0.07			
10/7/2003	11:10:09	9.5	61.17	5.198	0.062	0.08			
10/7/2003	11:10:10	10	61.17	5.202	0.058	0.10			
10/7/2003	11:10:10	10.6	61.15	5.2	0.060	0.10			
10/7/2003	11:10:11	11.3	61.15	5.2	0.060	0.12			
10/7/2003	11:10:11	11.9	61.15	5.198	0.062	0.12			
10/7/2003	11:10:12	12.6	61.15	5.2	0.060	0.13			
10/7/2003	11:10:13	13.4	61.15	5.2	0.060	0.15			
10/7/2003	11:10:14	14.2	61.15	5.2	0.060	0.17			
10/7/2003	11:10:15	15	61.15	5.198	0.062	0.18			
10/7/2003	11:10:15	15.9	61.15	5.198	0.062	0.18			
10/7/2003	11:10:16	16.8	61.15	5.198	0.062	0.20			
10/7/2003	11:10:17	17.8	61.15	5.198	0.062	0.22			
10/7/2003	11:10:18	18.9	61.15	5.198	0.062	0.23			
10/7/2003	11:10:20	20	61.15	5.198	0.062	0.27			
10/7/2003	11:10:21	21.2	61.15	5.198	0.062	0.28			
10/7/2003	11:10:22	22.4	61.15	5.198	0.062	0.30			
10/7/2003	11:10:23	23.8	61.15	5.196	0.064	0.32			
10/7/2003	11:10:25	25.2	61.15	5.196	0.064	0.35			
10/7/2003	11:10:26	26.7	61.15	5.198	0.062	0.37			Pump Start
10/7/2003	11:10:28	28.2	61.15	5.2	0.060	0.40			
10/7/2003	11:10:29	29.8	61.15	5.198	0.062	0.42			
10/7/2003	11:10:31	31.5	61.15	5.198	0.062	0.45			
10/7/2003	11:10:33	33.3	61.15	5.198	0.062	0.48			
10/7/2003	11:10:35	35.2	61.15	5.196	0.064	0.52			
10/7/2003	11:10:37	37.3	61.12	5.198	0.062	0.55			
10/7/2003	11:10:39	39.5	61.15	5.196	0.064	0.58			
10/7/2003	11:10:41	41.8	61.15	5.196	0.064	0.62			
10/7/2003	11:10:44	44.3	61.15	5.198	0.062	0.67			
10/7/2003	11:10:46	46.9	61.15	5.196	0.064	0.70			
10/7/2003	11:10:49	49.7	61.15	5.198	0.062	0.75			
10/7/2003	11:10:52	52.6	61.15	5.198	0.062	0.80			
10/7/2003	11:10:55	55.7	61.15	5.198	0.062	0.85			
10/7/2003	11:10:58	59	61.15	5.198	0.062	0.90			
10/7/2003	11:11:02	62.5	61.15	5.198	0.062	0.97			
10/7/2003	11:11:06	66.2	61.15	5.196	0.064	1.03			
10/7/2003	11:11:10	70.1	61.15	5.198	0.062	1.10			

Well No. **SEA-603**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	11:11:14	74.3	61.15	5.198	0.062	1.17			
10/7/2003	11:11:18	78.7	61.15	5.196	0.064	1.23			
10/7/2003	11:11:23	83.4	61.15	5.198	0.062	1.32			
10/7/2003	11:11:28	88.4	61.15	5.198	0.062	1.40			
10/7/2003	11:11:33	93.7	61.15	5.198	0.062	1.48			
10/7/2003	11:11:39	99.3	61.15	5.198	0.062	1.58			
10/7/2003	11:11:45	105.2	61.15	5.198	0.062	1.68			
10/7/2003	11:11:51	111.5	61.15	5.198	0.062	1.78			
10/7/2003	11:11:58	118.1	61.15	5.2	0.060	1.90			
10/7/2003	11:12:05	125.1	61.15	5.198	0.062	2.02			
10/7/2003	11:12:12	132.6	61.15	5.198	0.062	2.13			
10/7/2003	11:12:20	140.5	61.15	5.198	0.062	2.27			
10/7/2003	11:12:28	148.9	61.15	5.2	0.060	2.40			
10/7/2003	11:12:37	157.8	61.15	5.196	0.064	2.55			
10/7/2003	11:12:47	167.2	61.15	5.198	0.062	2.72			
10/7/2003	11:12:57	177.2	61.15	5.198	0.062	2.88			
10/7/2003	11:13:07	187.8	61.15	5.198	0.062	3.05			
10/7/2003	11:13:18	199	61.15	5.198	0.062	3.23			
10/7/2003	11:13:30	210.9	61.15	5.196	0.064	3.43			
10/7/2003	11:13:43	223.5	61.15	5.198	0.062	3.65			
10/7/2003	11:13:56	236.8	61.15	5.198	0.062	3.87			
10/7/2003	11:14:10	250.9	61.15	5.198	0.062	4.10			
10/7/2003	11:14:25	265.8	61.15	5.198	0.062	4.35			
10/7/2003	11:14:41	281.6	61.15	5.198	0.062	4.62			
10/7/2003	11:14:58	298.4	61.15	5.198	0.062	4.90			
10/7/2003	11:15:16	316.2	61.15	5.2	0.060	5.20			1.67 gpm flow rate
10/7/2003	11:15:34	335	61.17	5.2	0.060	5.50			
10/7/2003	11:15:54	354.9	61.17	5.198	0.062	5.83			
10/7/2003	11:16:15	376	61.17	5.2	0.060	6.18			
10/7/2003	11:16:38	398.4	61.17	5.198	0.062	6.57			
10/7/2003	11:17:02	422.1	61.15	5.198	0.062	6.97			
10/7/2003	11:17:27	447.2	61.17	5.2	0.060	7.38			
10/7/2003	11:17:53	473.8	61.17	5.198	0.062	7.82			
10/7/2003	11:18:21	502	61.17	5.2	0.060	8.28			
10/7/2003	11:18:51	531.9	61.17	5.2	0.060	8.78			
10/7/2003	11:19:21	561.9	61.17	5.2	0.060	9.28			
10/7/2003	11:19:51	591.9	61.17	5.2	0.060	9.78			
10/7/2003	11:20:21	621.9	61.17	5.202	0.058	10.28			1.71 gpm flow rate
10/7/2003	11:20:51	651.9	61.17	5.202	0.058	10.78			
10/7/2003	11:21:21	681.9	61.17	5.202	0.058	11.28			
10/7/2003	11:21:51	711.9	61.19	5.203	0.057	11.78			
10/7/2003	11:22:21	741.9	61.19	5.203	0.057	12.28			
10/7/2003	11:22:51	771.9	61.19	5.201	0.059	12.78			
10/7/2003	11:23:21	801.9	61.19	5.201	0.059	13.28			
10/7/2003	11:23:51	831.9	61.19	5.201	0.059	13.78			
10/7/2003	11:24:21	861.9	61.19	5.201	0.059	14.28			
10/7/2003	11:24:51	891.9	61.19	5.203	0.057	14.78			
10/7/2003	11:25:21	921.9	61.19	5.203	0.057	15.28			1.82 gpm flow rate
10/7/2003	11:25:51	951.9	61.19	5.201	0.059	15.78			
10/7/2003	11:26:21	981.9	61.21	5.201	0.059	16.28			
10/7/2003	11:30:00	0	61.24	5.199	0.061	19.93			Start Test 2
10/7/2003	11:30:00	0.3	61.26	5.197	0.063	19.93			
10/7/2003	11:30:00	0.6	61.26	5.201	0.059	19.93			
10/7/2003	11:30:00	0.9	61.28	5.198	0.062	19.93			
10/7/2003	11:30:01	1.2	61.28	5.198	0.062	19.95			
10/7/2003	11:30:01	1.5	61.28	5.198	0.062	19.95			
10/7/2003	11:30:01	1.8	61.28	5.198	0.062	19.95			
10/7/2003	11:30:02	2.1	61.3	5.2	0.060	19.97			
10/7/2003	11:30:02	2.4	61.3	5.198	0.062	19.97			
10/7/2003	11:30:02	2.7	61.3	5.198	0.062	19.97			
10/7/2003	11:30:03	3	61.3	5.198	0.062	19.98			
10/7/2003	11:30:03	3.3	61.3	5.198	0.062	19.98			
10/7/2003	11:30:03	3.6	61.3	5.198	0.062	19.98			
10/7/2003	11:30:03	3.9	61.3	5.198	0.062	19.98			
10/7/2003	11:30:04	4.2	61.3	5.196	0.064	20.00			
10/7/2003	11:30:04	4.5	61.33	5.196	0.064	20.00			
10/7/2003	11:30:04	4.8	61.33	5.198	0.062	20.00			
10/7/2003	11:30:05	5.1	61.33	5.198	0.062	20.02			
10/7/2003	11:30:05	5.4	61.33	5.198	0.062	20.02			

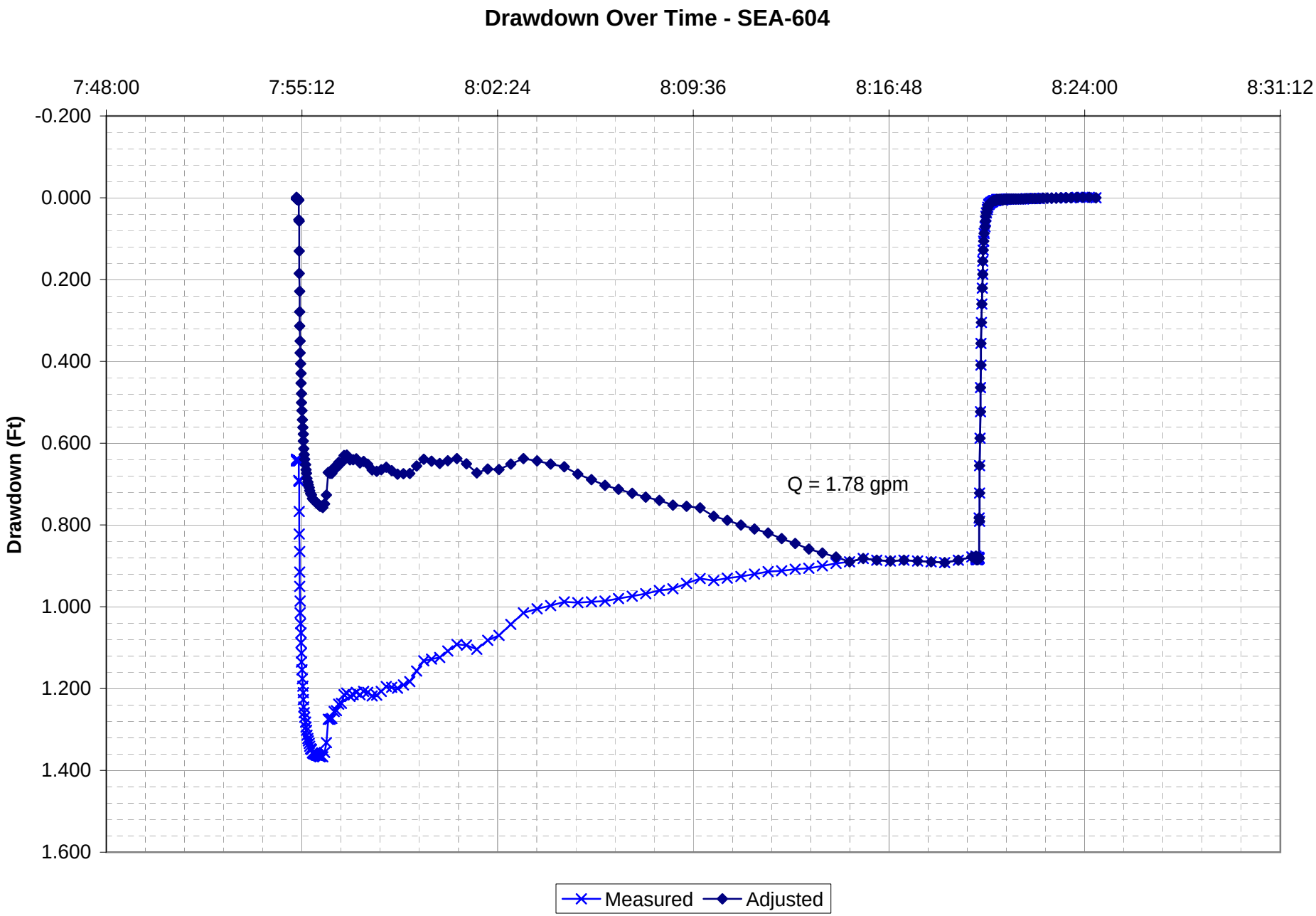
Well No. **SEA-603**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	11:30:05	5.7	61.33	5.198	0.062	20.02			
10/7/2003	11:30:06	6	61.33	5.208	0.052	20.03	0.00		Pump Stop
10/7/2003	11:30:06	6.4	61.33	5.229	0.031	20.03	0.00		
10/7/2003	11:30:06	6.7	61.33	5.235	0.025	20.03	0.00		
10/7/2003	11:30:07	7.1	61.33	5.243	0.017	20.05	0.02	1203.00	
10/7/2003	11:30:07	7.5	61.33	5.255	0.005	20.05	0.02	1203.00	
10/7/2003	11:30:08	8	61.33	5.259	0.001	20.07	0.03	602.00	
10/7/2003	11:30:08	8.4	61.33	5.255	0.005	20.07	0.03	602.00	
10/7/2003	11:30:08	8.9	61.33	5.253	0.007	20.07	0.03	602.00	
10/7/2003	11:30:09	9.5	61.33	5.251	0.009	20.08	0.05	401.67	
10/7/2003	11:30:10	10	61.33	5.255	0.005	20.10	0.07	301.50	
10/7/2003	11:30:10	10.6	61.33	5.255	0.005	20.10	0.07	301.50	
10/7/2003	11:30:11	11.3	61.3	5.255	0.005	20.12	0.08	241.40	
10/7/2003	11:30:11	11.9	61.3	5.255	0.005	20.12	0.08	241.40	
10/7/2003	11:30:12	12.6	61.3	5.255	0.005	20.13	0.10	201.33	
10/7/2003	11:30:13	13.4	61.3	5.255	0.005	20.15	0.12	172.71	
10/7/2003	11:30:14	14.2	61.3	5.255	0.005	20.17	0.13	151.25	
10/7/2003	11:30:15	15	61.3	5.255	0.005	20.18	0.15	134.56	
10/7/2003	11:30:15	15.9	61.3	5.255	0.005	20.18	0.15	134.56	
10/7/2003	11:30:16	16.8	61.3	5.255	0.005	20.20	0.17	121.20	
10/7/2003	11:30:17	17.8	61.28	5.255	0.005	20.22	0.18	110.27	
10/7/2003	11:30:18	18.9	61.3	5.255	0.005	20.23	0.20	101.17	
10/7/2003	11:30:20	20	61.28	5.255	0.005	20.27	0.23	86.86	
10/7/2003	11:30:21	21.2	61.28	5.255	0.005	20.28	0.25	81.13	
10/7/2003	11:30:22	22.4	61.28	5.255	0.005	20.30	0.27	76.13	
10/7/2003	11:30:23	23.8	61.28	5.255	0.005	20.32	0.28	71.71	
10/7/2003	11:30:25	25.2	61.28	5.255	0.005	20.35	0.32	64.26	
10/7/2003	11:30:26	26.7	61.28	5.255	0.005	20.37	0.33	61.10	
10/7/2003	11:30:28	28.2	61.28	5.255	0.005	20.40	0.37	55.64	
10/7/2003	11:30:29	29.8	61.28	5.255	0.005	20.42	0.38	53.26	
10/7/2003	11:30:31	31.5	61.3	5.255	0.005	20.45	0.42	49.08	
10/7/2003	11:30:33	33.3	61.28	5.255	0.005	20.48	0.45	45.52	
10/7/2003	11:30:35	35.2	61.28	5.255	0.005	20.52	0.48	42.45	
10/7/2003	11:30:37	37.3	61.28	5.255	0.005	20.55	0.52	39.77	
10/7/2003	11:30:39	39.5	61.28	5.255	0.005	20.58	0.55	37.42	
10/7/2003	11:30:41	41.8	61.28	5.255	0.005	20.62	0.58	35.34	
10/7/2003	11:30:44	44.3	61.28	5.255	0.005	20.67	0.63	32.63	
10/7/2003	11:30:46	46.9	61.28	5.255	0.005	20.70	0.67	31.05	
10/7/2003	11:30:49	49.7	61.28	5.257	0.003	20.75	0.72	28.95	
10/7/2003	11:30:52	52.6	61.28	5.255	0.005	20.80	0.77	27.13	
10/7/2003	11:30:55	55.7	61.28	5.255	0.005	20.85	0.82	25.53	
10/7/2003	11:30:59	59	61.28	5.257	0.003	20.92	0.88	23.68	
10/7/2003	11:31:02	62.5	61.28	5.257	0.003	20.97	0.93	22.46	
10/7/2003	11:31:06	66.2	61.28	5.257	0.003	21.03	1.00	21.03	
10/7/2003	11:31:10	70.1	61.28	5.255	0.005	21.10	1.07	19.78	
10/7/2003	11:31:14	74.3	61.28	5.257	0.003	21.17	1.13	18.68	
10/7/2003	11:31:18	78.7	61.28	5.257	0.003	21.23	1.20	17.69	
10/7/2003	11:31:23	83.4	61.28	5.257	0.003	21.32	1.28	16.61	
10/7/2003	11:31:28	88.4	61.26	5.258	0.002	21.40	1.37	15.66	
10/7/2003	11:31:33	93.7	61.28	5.257	0.003	21.48	1.45	14.82	
10/7/2003	11:31:39	99.3	61.28	5.257	0.003	21.58	1.55	13.92	
10/7/2003	11:31:45	105.2	61.26	5.258	0.002	21.68	1.65	13.14	
10/7/2003	11:31:51	111.5	61.26	5.258	0.002	21.78	1.75	12.45	
10/7/2003	11:31:58	118.1	61.26	5.258	0.002	21.90	1.87	11.73	
10/7/2003	11:32:05	125.1	61.26	5.258	0.002	22.02	1.98	11.10	
10/7/2003	11:32:12	132.6	61.26	5.258	0.002	22.13	2.10	10.54	
10/7/2003	11:32:20	140.5	61.26	5.258	0.002	22.27	2.23	9.97	
10/7/2003	11:32:28	148.9	61.26	5.26	0.000	22.40	2.37	9.46	
10/7/2003	11:32:37	157.8	61.26	5.258	0.002	22.55	2.52	8.96	
10/7/2003	11:32:47	167.2	61.26	5.258	0.002	22.72	2.68	8.47	
10/7/2003	11:32:57	177.2	61.26	5.258	0.002	22.88	2.85	8.03	
10/7/2003	11:33:07	187.8	61.26	5.258	0.002	23.05	3.02	7.64	
10/7/2003	11:33:19	199	61.26	5.258	0.002	23.25	3.22	7.23	
10/7/2003	11:33:30	210.9	61.26	5.258	0.002	23.43	3.40	6.89	
10/7/2003	11:33:43	223.5	61.26	5.258	0.002	23.65	3.62	6.54	
10/7/2003	11:33:56	236.8	61.26	5.258	0.002	23.87	3.83	6.23	
10/7/2003	11:34:10	250.9	61.26	5.26	0.000	24.10	4.07	5.93	
10/7/2003	11:34:25	265.8	61.26	5.26	0.000	24.35	4.32	5.64	
10/7/2003	11:40:00								DTW = 7.26 at 11:40

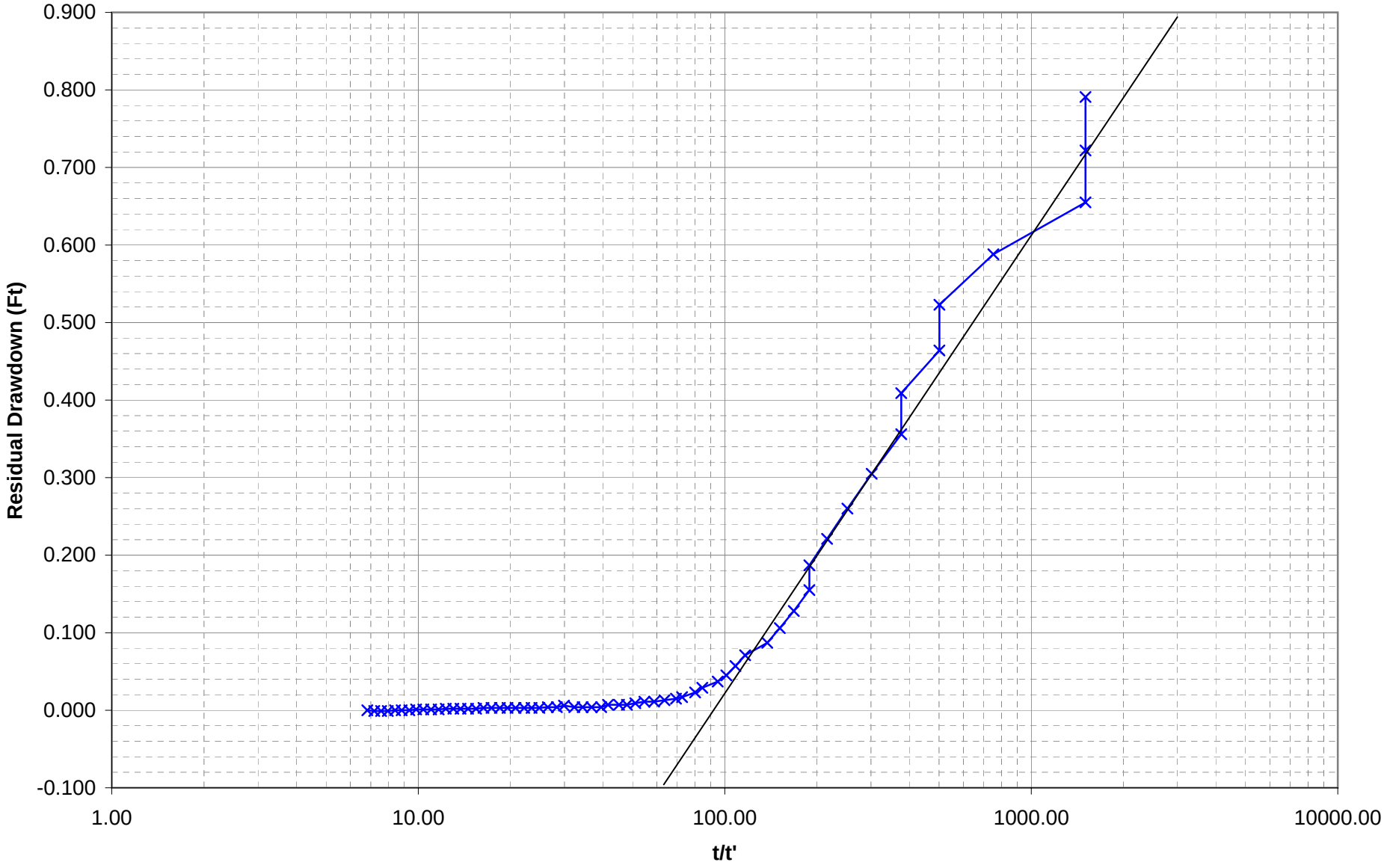
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-604**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/7/2003	7:55:00			
Test end date and time	10/7/2003	8:24:25			
Period of pumping	25	minutes			
Static depth to water	10.81	feet below top of casing			
Startiing transducer depth	3.755	feet below static water level			
Total well depth	23.2	feet below top of casing			
Depth to top of screen	13.0	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.78	gpm, or	343	cfd	
Average drawdown [s]	0.84	ft			
Specific capacity [Q/s]	2.12	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.60	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			104.5	cfd/ft	
Hydraulic conductivity [K = T/b]			10.5	fpd, or	3.7E-03 cm/sec


Drawdown Over Time - SEA-604
7:48:00
7:55:12
8:02:24
8:09:36
8:16:48
8:24:00
8:31:12
-0.200
0.000
0.200
0.400
0.600
0.800
1.000
1.200
1.400
1.600
Drawdown (Ft)
Q = 1.78 gpm
Measured
Adjusted

Recovery Plot - SEA-604



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-604**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Adjusted Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	7:35:00									DTW = 10.82 at 7:35
10/7/2003	7:55:00	0	58.72	3.116	0.639	-0.001				Start Test 1
10/7/2003	7:55:00	0.3	58.72	3.114	0.641	0.001				
10/7/2003	7:55:00	0.6	58.75	3.112	0.643	0.003				
10/7/2003	7:55:00	0.9	58.77	3.112	0.643	0.003				
10/7/2003	7:55:01	1.2	58.77	3.112	0.643	0.004				
10/7/2003	7:55:01	1.5	58.77	3.112	0.643	0.004				
10/7/2003	7:55:01	1.8	58.77	3.112	0.643	0.004				
10/7/2003	7:55:02	2.1	58.79	3.112	0.643	0.004				
10/7/2003	7:55:02	2.4	58.79	3.114	0.641	0.002				
10/7/2003	7:55:02	2.7	58.79	3.112	0.643	0.004				
10/7/2003	7:55:03	3	58.79	3.112	0.643	0.005				
10/7/2003	7:55:03	3.3	58.79	3.114	0.641	0.003				
10/7/2003	7:55:03	3.6	58.79	3.112	0.643	0.005				
10/7/2003	7:55:03	3.9	58.81	3.112	0.643	0.005				
10/7/2003	7:55:04	4.2	58.81	3.112	0.643	0.005				
10/7/2003	7:55:04	4.5	58.81	3.112	0.643	0.005				
10/7/2003	7:55:04	4.8	58.81	3.112	0.643	0.005				
10/7/2003	7:55:05	5.1	58.81	3.112	0.643	0.006				
10/7/2003	7:55:05	5.4	58.81	3.112	0.643	0.006	0.00			Pump Start
10/7/2003	7:55:05	5.7	58.81	3.064	0.691	0.054	0.00			
10/7/2003	7:55:06	6	58.81	3.061	0.694	0.057	0.02			
10/7/2003	7:55:06	6.4	58.81	2.988	0.767	0.130	0.02			
10/7/2003	7:55:06	6.7	58.81	2.933	0.822	0.185	0.02			
10/7/2003	7:55:07	7.1	58.81	2.89	0.865	0.229	0.03			
10/7/2003	7:55:07	7.5	58.81	2.84	0.915	0.279	0.03			
10/7/2003	7:55:07	8	58.81	2.805	0.950	0.314	0.03			
10/7/2003	7:55:08	8.4	58.84	2.769	0.986	0.350	0.05			
10/7/2003	7:55:08	8.9	58.84	2.74	1.015	0.379	0.05			
10/7/2003	7:55:09	9.5	58.84	2.714	1.041	0.406	0.07			
10/7/2003	7:55:10	10	58.84	2.691	1.064	0.429	0.08			
10/7/2003	7:55:10	10.6	58.81	2.667	1.088	0.453	0.08			
10/7/2003	7:55:11	11.3	58.81	2.642	1.113	0.479	0.10			
10/7/2003	7:55:11	11.9	58.81	2.62	1.135	0.501	0.10			
10/7/2003	7:55:12	12.6	58.81	2.601	1.154	0.520	0.12			
10/7/2003	7:55:13	13.4	58.81	2.579	1.176	0.543	0.13			
10/7/2003	7:55:14	14.2	58.81	2.561	1.194	0.561	0.15			
10/7/2003	7:55:15	15	58.81	2.545	1.210	0.578	0.17			
10/7/2003	7:55:15	15.9	58.81	2.528	1.227	0.595	0.17			
10/7/2003	7:55:16	16.8	58.81	2.51	1.245	0.613	0.18			
10/7/2003	7:55:17	17.8	58.81	2.496	1.259	0.628	0.20			
10/7/2003	7:55:18	18.9	58.81	2.485	1.270	0.639	0.22			
10/7/2003	7:55:20	20	58.81	2.473	1.282	0.652	0.25			
10/7/2003	7:55:21	21.2	58.81	2.461	1.294	0.665	0.27			
10/7/2003	7:55:22	22.4	58.81	2.453	1.302	0.674	0.28			
10/7/2003	7:55:23	23.8	58.84	2.441	1.314	0.686	0.30			
10/7/2003	7:55:25	25.2	58.84	2.433	1.322	0.695	0.33			
10/7/2003	7:55:26	26.7	58.84	2.427	1.328	0.702	0.35			
10/7/2003	7:55:28	28.2	58.84	2.421	1.334	0.709	0.38			
10/7/2003	7:55:29	29.8	58.84	2.414	1.341	0.716	0.40			
10/7/2003	7:55:31	31.5	58.84	2.408	1.347	0.723	0.43			
10/7/2003	7:55:33	33.3	58.84	2.406	1.349	0.726	0.47			
10/7/2003	7:55:35	35.2	58.84	2.398	1.357	0.735	0.50			
10/7/2003	7:55:37	37.3	58.86	2.396	1.359	0.738	0.53			
10/7/2003	7:55:39	39.5	58.86	2.396	1.359	0.739	0.57			
10/7/2003	7:55:41	41.8	58.86	2.394	1.361	0.742	0.60			
10/7/2003	7:55:44	44.3	58.86	2.392	1.363	0.746	0.65			
10/7/2003	7:55:46	46.9	58.86	2.392	1.363	0.747	0.68			
10/7/2003	7:55:49	49.7	58.88	2.39	1.365	0.751	0.73			
10/7/2003	7:55:52	52.6	58.88	2.388	1.367	0.754	0.78			
10/7/2003	7:55:55	55.7	58.88	2.39	1.365	0.754	0.83			
10/7/2003	7:55:58	59	58.88	2.388	1.367	0.757	0.88			
10/7/2003	7:56:02	62.5	58.9	2.399	1.356	0.748	0.95			1.76 gpm flow rate
10/7/2003	7:56:06	66.2	58.9	2.423	1.332	0.727	1.02			
10/7/2003	7:56:10	70.1	58.9	2.48	1.275	0.672	1.08			
10/7/2003	7:56:14	74.3	58.9	2.48	1.275	0.674	1.15			
10/7/2003	7:56:18	78.7	58.9	2.482	1.273	0.674	1.22			
10/7/2003	7:56:23	83.4	58.93	2.499	1.256	0.660	1.30			
10/7/2003	7:56:28	88.4	58.93	2.501	1.254	0.660	1.38			

Well No. **SEA-604**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Adjusted Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	7:56:33	93.7	58.93	2.517	1.238	0.647	1.47			
10/7/2003	7:56:39	99.3	58.93	2.519	1.236	0.648	1.57			
10/7/2003	7:56:45	105.2	58.93	2.54	1.215	0.630	1.67			
10/7/2003	7:56:51	111.5	58.93	2.544	1.211	0.629	1.77			
10/7/2003	7:56:58	118.1	58.95	2.536	1.219	0.641	1.88			
10/7/2003	7:57:05	125.1	58.95	2.54	1.215	0.641	2.00			
10/7/2003	7:57:12	132.6	58.93	2.546	1.209	0.638	2.12			
10/7/2003	7:57:20	140.5	58.95	2.54	1.215	0.648	2.25			
10/7/2003	7:57:28	148.9	58.93	2.548	1.207	0.645	2.38			
10/7/2003	7:57:37	157.8	58.93	2.546	1.209	0.651	2.53			
10/7/2003	7:57:47	167.2	58.93	2.537	1.218	0.666	2.70			
10/7/2003	7:57:57	177.2	58.93	2.539	1.216	0.669	2.87			
10/7/2003	7:58:07	187.8	58.93	2.548	1.207	0.665	3.03			
10/7/2003	7:58:18	199	58.93	2.56	1.195	0.659	3.22			
10/7/2003	7:58:30	210.9	58.93	2.558	1.197	0.667	3.42			
10/7/2003	7:58:43	223.5	58.93	2.556	1.199	0.676	3.63			
10/7/2003	7:58:56	236.8	58.93	2.564	1.191	0.675	3.85			
10/7/2003	7:59:10	250.9	58.9	2.572	1.183	0.674	4.08			
10/7/2003	7:59:25	265.8	58.9	2.598	1.157	0.656	4.33			
10/7/2003	7:59:41	281.6	58.9	2.623	1.132	0.639	4.60			
10/7/2003	7:59:58	298.4	58.9	2.627	1.128	0.644	4.88			
10/7/2003	8:00:16	316.2	58.9	2.631	1.124	0.650	5.18			1.82 gpm flow rate
10/7/2003	8:00:34	335	58.88	2.647	1.108	0.643	5.48			
10/7/2003	8:00:54	354.9	58.88	2.663	1.092	0.638	5.82			
10/7/2003	8:01:15	376	58.86	2.661	1.094	0.651	6.17			
10/7/2003	8:01:38	398.4	58.86	2.651	1.104	0.673	6.55			
10/7/2003	8:02:02	422.1	58.86	2.673	1.082	0.663	6.95			
10/7/2003	8:02:27	447.2	58.84	2.685	1.070	0.664	7.37			
10/7/2003	8:02:53	473.8	58.84	2.712	1.043	0.651	7.80			
10/7/2003	8:03:21	502	58.84	2.74	1.015	0.638	8.27			
10/7/2003	8:03:51	531.9	58.84	2.75	1.005	0.643	8.77			
10/7/2003	8:04:21	561.9	58.84	2.758	0.997	0.651	9.27			
10/7/2003	8:04:51	591.9	58.84	2.767	0.988	0.658	9.77			
10/7/2003	8:05:21	621.9	58.84	2.765	0.990	0.676	10.27			
10/7/2003	8:05:51	651.9	58.86	2.767	0.988	0.689	10.77			
10/7/2003	8:06:21	681.9	58.86	2.769	0.986	0.703	11.27			
10/7/2003	8:06:51	711.9	58.86	2.775	0.980	0.713	11.77			
10/7/2003	8:07:21	741.9	58.86	2.781	0.974	0.722	12.27			
10/7/2003	8:07:51	771.9	58.86	2.787	0.968	0.732	12.77			
10/7/2003	8:08:21	801.9	58.86	2.795	0.960	0.740	13.27			
10/7/2003	8:08:51	831.9	58.84	2.799	0.956	0.752	13.77			
10/7/2003	8:09:21	861.9	58.86	2.812	0.943	0.754	14.27			1.76 gpm flow rate
10/7/2003	8:09:51	891.9	58.84	2.824	0.931	0.758	14.77			
10/7/2003	8:10:21	921.9	58.84	2.819	0.936	0.779	15.27			
10/7/2003	8:10:51	951.9	58.81	2.825	0.930	0.788	15.77			
10/7/2003	8:11:21	981.9	58.81	2.829	0.926	0.800	16.27			
10/7/2003	8:11:51	1011.9	58.79	2.835	0.920	0.810	16.77			
10/7/2003	8:12:21	1041.9	58.79	2.841	0.914	0.820	17.27			
10/7/2003	8:12:51	1071.9	58.79	2.843	0.912	0.833	17.77			
10/7/2003	8:13:21	1101.9	58.77	2.847	0.908	0.845	18.27			
10/7/2003	8:13:51	1131.9	58.77	2.849	0.906	0.859	18.77			
10/7/2003	8:14:21	1161.9	58.75	2.855	0.900	0.869	19.27			
10/7/2003	8:14:51	1191.9	58.75	2.861	0.894	0.878	19.77			
10/7/2003	8:15:21	1221.9	58.72	2.865	0.890	0.890	20.27			
10/7/2003	8:15:51	1251.9	58.72	2.873	0.882	0.882	20.77			
10/7/2003	8:16:21	1281.9	58.7	2.869	0.886	0.886	21.27			
10/7/2003	8:16:51	1311.9	58.7	2.867	0.888	0.888	21.77			
10/7/2003	8:17:21	1341.9	58.7	2.869	0.886	0.886	22.27			
10/7/2003	8:17:51	1371.9	58.7	2.867	0.888	0.888	22.77			
10/7/2003	8:18:21	1401.9	58.7	2.865	0.890	0.890	23.27			
10/7/2003	8:18:51	1431.9	58.7	2.863	0.892	0.892	23.77			
10/7/2003	8:19:21	1461.9	58.7	2.869	0.886	0.886	24.27			
10/7/2003	8:19:51	1491.9	58.7	2.877	0.878	0.878	24.77			
10/7/2003	8:20:00	0	58.72	2.879	0.876	0.876	24.92			Start Test 2
10/7/2003	8:20:00	0.3	58.72	2.875	0.880	0.880	24.92			
10/7/2003	8:20:00	0.6	58.75	2.874	0.881	0.881	24.92			
10/7/2003	8:20:00	0.9	58.75	2.872	0.883	0.883	24.92			
10/7/2003	8:20:01	1.2	58.77	2.874	0.881	0.881	24.93			
10/7/2003	8:20:01	1.5	58.77	2.872	0.883	0.883	24.93			
10/7/2003	8:20:01	1.8	58.77	2.87	0.885	0.885	24.93			
10/7/2003	8:20:02	2.1	58.77	2.872	0.883	0.883	24.95			
10/7/2003	8:20:02	2.4	58.77	2.872	0.883	0.883	24.95			
10/7/2003	8:20:02	2.7	58.77	2.874	0.881	0.881	24.95			

Well No. **SEA-604**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Adjusted Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	8:20:03	3	58.77	2.872	0.883	0.883	24.97			
10/7/2003	8:20:03	3.3	58.77	2.87	0.885	0.885	24.97			
10/7/2003	8:20:03	3.6	58.79	2.874	0.881	0.881	24.97			
10/7/2003	8:20:03	3.9	58.79	2.874	0.881	0.881	24.97			
10/7/2003	8:20:04	4.2	58.79	2.87	0.885	0.885	24.98			
10/7/2003	8:20:04	4.5	58.79	2.872	0.883	0.883	24.98			
10/7/2003	8:20:04	4.8	58.79	2.876	0.879	0.879	24.98			
10/7/2003	8:20:05	5.1	58.79	2.872	0.883	0.883	25.00			
10/7/2003	8:20:05	5.4	58.79	2.872	0.883	0.883	25.00			
10/7/2003	8:20:05	5.7	58.79	2.872	0.883	0.883	25.00			
10/7/2003	8:20:06	6	58.79	2.872	0.883	0.883	25.02			
10/7/2003	8:20:06	6.4	58.79	2.874	0.881	0.881	25.02			
10/7/2003	8:20:06	6.7	58.79	2.876	0.879	0.879	25.02			
10/7/2003	8:20:07	7.1	58.79	2.874	0.881	0.881	25.03	0.00		Pump Stop
10/7/2003	8:20:07	7.5	58.79	2.972	0.783	0.783	25.03	0.00		
10/7/2003	8:20:08	8	58.81	2.964	0.791	0.791	25.05	0.02	1503.00	
10/7/2003	8:20:08	8.4	58.81	3.033	0.722	0.722	25.05	0.02	1503.00	
10/7/2003	8:20:08	8.9	58.81	3.1	0.655	0.655	25.05	0.02	1503.00	
10/7/2003	8:20:09	9.5	58.81	3.167	0.588	0.588	25.07	0.03	752.00	
10/7/2003	8:20:10	10	58.79	3.232	0.523	0.523	25.08	0.05	501.67	
10/7/2003	8:20:10	10.6	58.79	3.291	0.464	0.464	25.08	0.05	501.67	
10/7/2003	8:20:11	11.3	58.79	3.346	0.409	0.409	25.10	0.07	376.50	
10/7/2003	8:20:11	11.9	58.79	3.399	0.356	0.356	25.10	0.07	376.50	
10/7/2003	8:20:12	12.6	58.79	3.45	0.305	0.305	25.12	0.08	301.40	
10/7/2003	8:20:13	13.4	58.79	3.495	0.260	0.260	25.13	0.10	251.33	
10/7/2003	8:20:14	14.2	58.79	3.534	0.221	0.221	25.15	0.12	215.57	
10/7/2003	8:20:15	15	58.77	3.568	0.187	0.187	25.17	0.13	188.75	
10/7/2003	8:20:15	15.9	58.77	3.6	0.155	0.155	25.17	0.13	188.75	
10/7/2003	8:20:16	16.8	58.77	3.627	0.128	0.128	25.18	0.15	167.89	
10/7/2003	8:20:17	17.8	58.77	3.649	0.106	0.106	25.20	0.17	151.20	
10/7/2003	8:20:18	18.9	58.77	3.668	0.087	0.087	25.22	0.18	137.55	
10/7/2003	8:20:20	20	58.77	3.684	0.071	0.071	25.25	0.22	116.54	
10/7/2003	8:20:21	21.2	58.75	3.698	0.057	0.057	25.27	0.23	108.29	
10/7/2003	8:20:22	22.4	58.75	3.71	0.045	0.045	25.28	0.25	101.13	
10/7/2003	8:20:23	23.8	58.75	3.718	0.037	0.037	25.30	0.27	94.88	
10/7/2003	8:20:25	25.2	58.75	3.726	0.029	0.029	25.33	0.30	84.44	
10/7/2003	8:20:26	26.7	58.72	3.732	0.023	0.023	25.35	0.32	80.05	
10/7/2003	8:20:28	28.2	58.72	3.738	0.017	0.017	25.38	0.35	72.52	
10/7/2003	8:20:29	29.8	58.72	3.74	0.015	0.015	25.40	0.37	69.27	
10/7/2003	8:20:31	31.5	58.7	3.742	0.013	0.013	25.43	0.40	63.58	
10/7/2003	8:20:33	33.3	58.7	3.744	0.011	0.011	25.47	0.43	58.77	
10/7/2003	8:20:35	35.2	58.68	3.744	0.011	0.011	25.50	0.47	54.64	
10/7/2003	8:20:37	37.3	58.68	3.746	0.009	0.009	25.53	0.50	51.07	
10/7/2003	8:20:39	39.5	58.66	3.748	0.007	0.007	25.57	0.53	47.94	
10/7/2003	8:20:41	41.8	58.63	3.748	0.007	0.007	25.60	0.57	45.18	
10/7/2003	8:20:44	44.3	58.63	3.748	0.007	0.007	25.65	0.62	41.59	
10/7/2003	8:20:46	46.9	58.61	3.751	0.004	0.004	25.68	0.65	39.51	
10/7/2003	8:20:49	49.7	58.59	3.751	0.004	0.004	25.73	0.70	36.76	
10/7/2003	8:20:52	52.6	58.59	3.751	0.004	0.004	25.78	0.75	34.38	
10/7/2003	8:20:55	55.7	58.56	3.751	0.004	0.004	25.83	0.80	32.29	
10/7/2003	8:20:59	59	58.54	3.749	0.006	0.006	25.90	0.87	29.88	
10/7/2003	8:21:02	62.5	58.54	3.751	0.004	0.004	25.95	0.92	28.31	
10/7/2003	8:21:06	66.2	58.52	3.751	0.004	0.004	26.02	0.98	26.46	
10/7/2003	8:21:10	70.1	58.5	3.752	0.003	0.003	26.08	1.05	24.84	
10/7/2003	8:21:14	74.3	58.5	3.752	0.003	0.003	26.15	1.12	23.42	
10/7/2003	8:21:18	78.7	58.47	3.752	0.003	0.003	26.22	1.18	22.15	
10/7/2003	8:21:23	83.4	58.45	3.752	0.003	0.003	26.30	1.27	20.76	
10/7/2003	8:21:28	88.4	58.45	3.752	0.003	0.003	26.38	1.35	19.54	
10/7/2003	8:21:33	93.7	58.43	3.752	0.003	0.003	26.47	1.43	18.47	
10/7/2003	8:21:39	99.3	58.41	3.752	0.003	0.003	26.57	1.53	17.33	
10/7/2003	8:21:45	105.2	58.41	3.752	0.003	0.003	26.67	1.63	16.33	
10/7/2003	8:21:51	111.5	58.38	3.753	0.002	0.002	26.77	1.73	15.44	
10/7/2003	8:21:58	118.1	58.36	3.753	0.002	0.002	26.88	1.85	14.53	
10/7/2003	8:22:05	125.1	58.36	3.753	0.002	0.002	27.00	1.97	13.73	
10/7/2003	8:22:12	132.6	58.34	3.753	0.002	0.002	27.12	2.08	13.02	
10/7/2003	8:22:20	140.5	58.32	3.753	0.002	0.002	27.25	2.22	12.29	
10/7/2003	8:22:28	148.9	58.29	3.754	0.001	0.001	27.38	2.35	11.65	
10/7/2003	8:22:37	157.8	58.27	3.754	0.001	0.001	27.53	2.50	11.01	
10/7/2003	8:22:47	167.2	58.25	3.754	0.001	0.001	27.70	2.67	10.39	
10/7/2003	8:22:57	177.2	58.2	3.754	0.001	0.001	27.87	2.83	9.84	
10/7/2003	8:23:07	187.8	58.18	3.755	0.000	0.000	28.03	3.00	9.34	
10/7/2003	8:23:19	199	58.13	3.755	0.000	0.000	28.23	3.20	8.82	
10/7/2003	8:23:30	210.9	58.11	3.755	0.000	0.000	28.42	3.38	8.40	

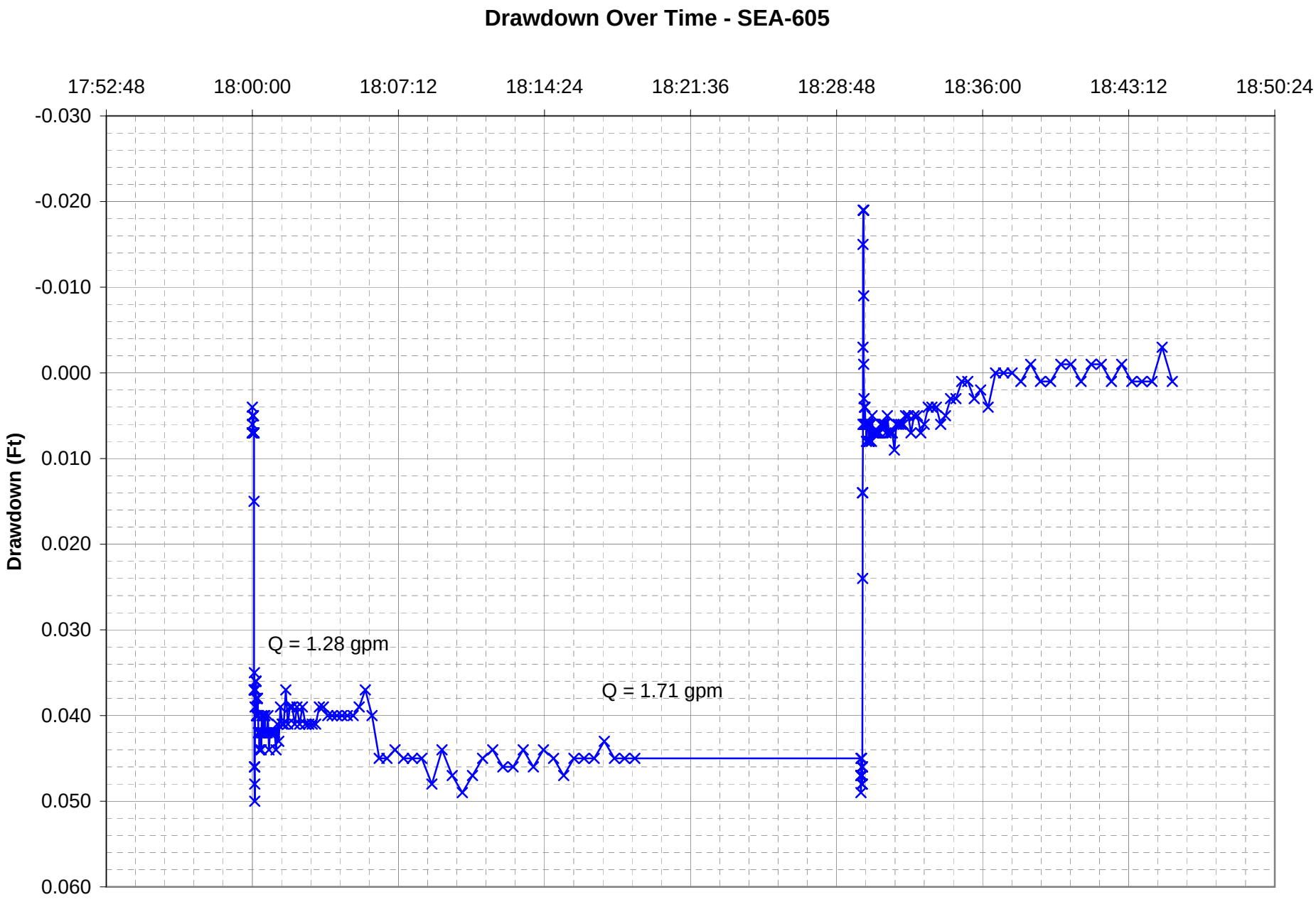
Well No. **SEA-604**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Adjusted Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	8:23:43	223.5	58.09	3.756	-0.001	-0.001	28.63	3.60	7.95	
10/7/2003	8:23:56	236.8	58.09	3.756	-0.001	-0.001	28.85	3.82	7.56	
10/7/2003	8:24:10	250.9	58.09	3.756	-0.001	-0.001	29.08	4.05	7.18	
10/7/2003	8:24:25	265.8	58.11	3.755	0.000	0.000	29.33	4.30	6.82	
										DTW = 10.81 at 8:32

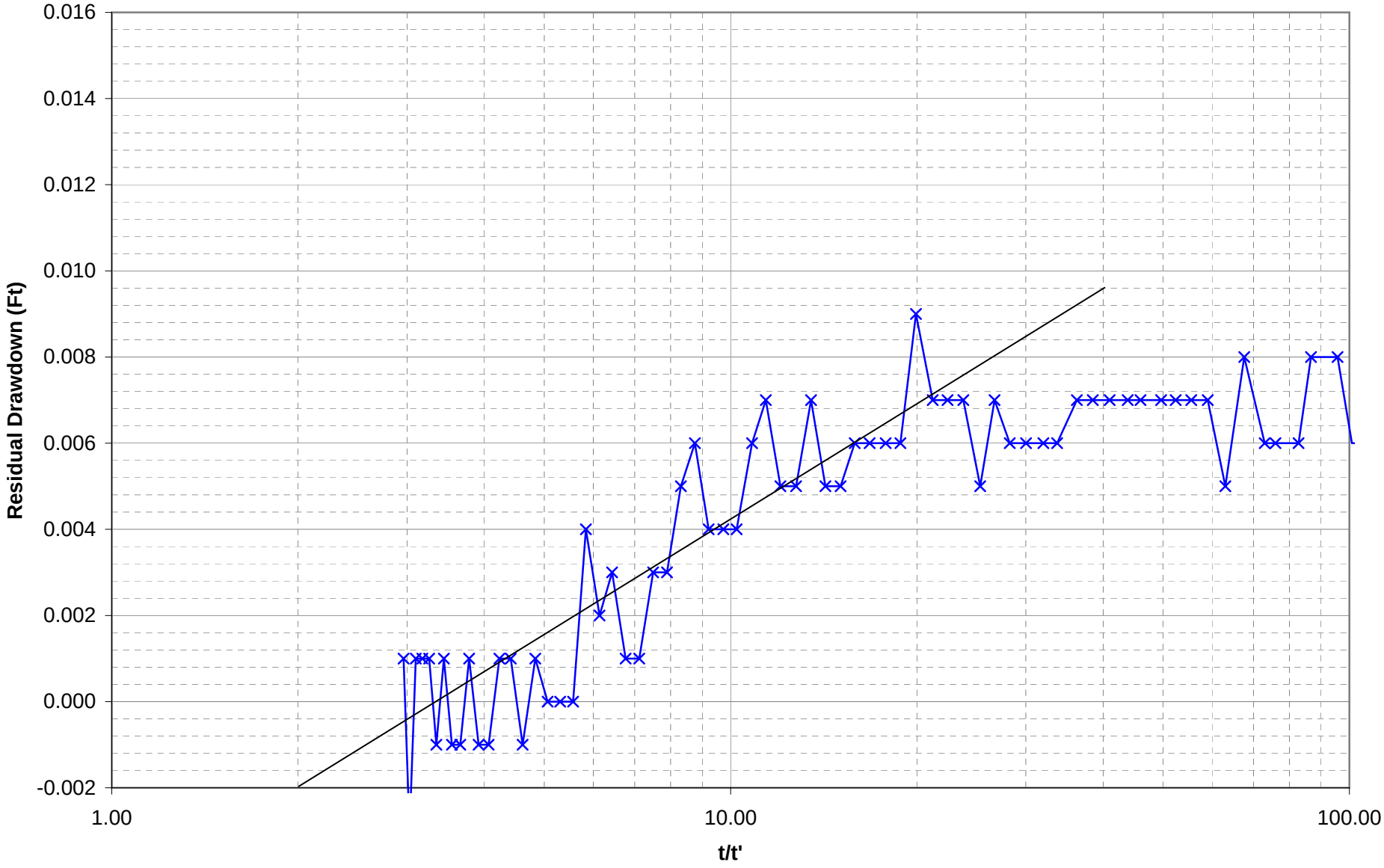
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-605**

Equipment:	In-Situ Inc. MiniTroll Pro				
Test start date and time	10/6/2003 18:00:00				
Test end date and time	10/6/2003 18:45:21				
Period of pumping	30	minutes			
Static depth to water	11.03	feet below top of casing			
Starting transducer depth	5.838	feet below static water level			
Total well depth	23.2	feet below top of casing			
Depth to top of screen	13.0	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.61	gpm, or	310	cfd	
Average drawdown [s]	0.043	ft			
Specific capacity [Q/s]	37.4	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.009	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			6,302	cfd/ft	
Hydraulic conductivity [K = T/b]			630	fpd, or	2.2E-01 cm/sec


Drawdown Over Time - SEA-605
17:52:48
18:00:00
18:07:12
18:14:24
18:21:36
18:28:48
18:36:00
18:43:12
18:50:24
-0.030
-0.020
-0.010
0.000
0.010
0.020
0.030
0.040
0.050
0.060
Drawdown (Ft)
Q = 1.28 gpm
Q = 1.71 gpm

Recovery Plot - SEA-605



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-605**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	17:40:00								DTW = 11.03 at 17:40
10/6/2003	18:00:00	0	52.2	5.834	0.004				Start Test 1
10/6/2003	18:00:00	0.3	52.22	5.832	0.006				
10/6/2003	18:00:00	0.6	52.24	5.831	0.007				
10/6/2003	18:00:00	0.9	52.24	5.831	0.007				
10/6/2003	18:00:01	1.2	52.24	5.831	0.007				
10/6/2003	18:00:01	1.5	52.24	5.833	0.005				
10/6/2003	18:00:01	1.8	52.27	5.831	0.007				
10/6/2003	18:00:02	2.1	52.27	5.831	0.007				
10/6/2003	18:00:02	2.4	52.27	5.831	0.007				
10/6/2003	18:00:02	2.7	52.27	5.831	0.007				
10/6/2003	18:00:03	3	52.27	5.831	0.007				
10/6/2003	18:00:03	3.3	52.27	5.833	0.005				
10/6/2003	18:00:03	3.6	52.27	5.833	0.005				
10/6/2003	18:00:03	3.9	52.27	5.831	0.007				
10/6/2003	18:00:04	4.2	52.27	5.831	0.007				
10/6/2003	18:00:04	4.5	52.27	5.831	0.007				
10/6/2003	18:00:04	4.8	52.29	5.831	0.007				
10/6/2003	18:00:05	5.1	52.27	5.831	0.007	0.00			Pump Start
10/6/2003	18:00:05	5.4	52.29	5.823	0.015	0.00			
10/6/2003	18:00:05	5.7	52.29	5.801	0.037	0.00			
10/6/2003	18:00:06	6	52.29	5.803	0.035	0.02			
10/6/2003	18:00:06	6.4	52.29	5.801	0.037	0.02			
10/6/2003	18:00:06	6.7	52.29	5.792	0.046	0.02			
10/6/2003	18:00:07	7.1	52.29	5.788	0.050	0.03			
10/6/2003	18:00:07	7.5	52.29	5.79	0.048	0.03			
10/6/2003	18:00:07	8	52.29	5.792	0.046	0.03			
10/6/2003	18:00:08	8.4	52.29	5.799	0.039	0.05			
10/6/2003	18:00:08	8.9	52.29	5.801	0.037	0.05			
10/6/2003	18:00:09	9.5	52.29	5.801	0.037	0.07			
10/6/2003	18:00:10	10	52.27	5.802	0.036	0.08			
10/6/2003	18:00:10	10.6	52.27	5.802	0.036	0.08			
10/6/2003	18:00:11	11.3	52.27	5.802	0.036	0.10			
10/6/2003	18:00:11	11.9	52.27	5.8	0.038	0.10			
10/6/2003	18:00:12	12.6	52.27	5.798	0.040	0.12			
10/6/2003	18:00:13	13.4	52.27	5.798	0.040	0.13			
10/6/2003	18:00:14	14.2	52.24	5.8	0.038	0.15			
10/6/2003	18:00:15	15	52.24	5.798	0.040	0.17			
10/6/2003	18:00:15	15.9	52.24	5.8	0.038	0.17			
10/6/2003	18:00:16	16.8	52.24	5.798	0.040	0.18			
10/6/2003	18:00:17	17.8	52.24	5.798	0.040	0.20			
10/6/2003	18:00:18	18.9	52.24	5.796	0.042	0.22			
10/6/2003	18:00:20	20	52.24	5.796	0.042	0.25			
10/6/2003	18:00:21	21.2	52.22	5.794	0.044	0.27			
10/6/2003	18:00:22	22.4	52.22	5.796	0.042	0.28			
10/6/2003	18:00:23	23.8	52.22	5.796	0.042	0.30			
10/6/2003	18:00:25	25.2	52.22	5.796	0.042	0.33			
10/6/2003	18:00:26	26.7	52.22	5.794	0.044	0.35			
10/6/2003	18:00:28	28.2	52.22	5.798	0.040	0.38			
10/6/2003	18:00:29	29.8	52.22	5.796	0.042	0.40			
10/6/2003	18:00:31	31.5	52.22	5.796	0.042	0.43			
10/6/2003	18:00:33	33.3	52.22	5.796	0.042	0.47			
10/6/2003	18:00:35	35.2	52.22	5.798	0.040	0.50			
10/6/2003	18:00:37	37.3	52.22	5.798	0.040	0.53			
10/6/2003	18:00:39	39.5	52.2	5.796	0.042	0.57			
10/6/2003	18:00:41	41.8	52.2	5.796	0.042	0.60			
10/6/2003	18:00:44	44.3	52.2	5.796	0.042	0.65			
10/6/2003	18:00:46	46.9	52.2	5.798	0.040	0.68			
10/6/2003	18:00:49	49.7	52.2	5.794	0.044	0.73			
10/6/2003	18:00:52	52.6	52.2	5.796	0.042	0.78			
10/6/2003	18:00:55	55.7	52.2	5.796	0.042	0.83			
10/6/2003	18:00:58	59	52.2	5.796	0.042	0.88			
10/6/2003	18:01:02	62.5	52.2	5.796	0.042	0.95			
10/6/2003	18:01:06	66.2	52.2	5.796	0.042	1.02			
10/6/2003	18:01:10	70.1	52.2	5.794	0.044	1.08			

Well No. **SEA-605**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	18:01:14	74.3	52.18	5.797	0.041	1.15			
10/6/2003	18:01:18	78.7	52.18	5.795	0.043	1.22			
10/6/2003	18:01:23	83.4	52.18	5.799	0.039	1.30			
10/6/2003	18:01:28	88.4	52.18	5.797	0.041	1.38			
10/6/2003	18:01:33	93.7	52.18	5.797	0.041	1.47			
10/6/2003	18:01:39	99.3	52.18	5.801	0.037	1.57			
10/6/2003	18:01:45	105.2	52.18	5.797	0.041	1.67			
10/6/2003	18:01:51	111.5	52.18	5.799	0.039	1.77			
10/6/2003	18:01:58	118.1	52.18	5.799	0.039	1.88			
10/6/2003	18:02:05	125.1	52.18	5.797	0.041	2.00			
10/6/2003	18:02:12	132.6	52.18	5.799	0.039	2.12			
10/6/2003	18:02:20	140.5	52.18	5.797	0.041	2.25			
10/6/2003	18:02:28	148.9	52.18	5.799	0.039	2.38			
10/6/2003	18:02:37	157.8	52.18	5.797	0.041	2.53			
10/6/2003	18:02:47	167.2	52.18	5.797	0.041	2.70			
10/6/2003	18:02:57	177.2	52.18	5.797	0.041	2.87			
10/6/2003	18:03:07	187.8	52.18	5.797	0.041	3.03			1.40 gpm flow rate
10/6/2003	18:03:18	199	52.18	5.799	0.039	3.22			
10/6/2003	18:03:30	210.9	52.18	5.799	0.039	3.42			
10/6/2003	18:03:43	223.5	52.2	5.798	0.040	3.63			
10/6/2003	18:03:56	236.8	52.2	5.798	0.040	3.85			
10/6/2003	18:04:10	250.9	52.2	5.798	0.040	4.08			
10/6/2003	18:04:25	265.8	52.22	5.798	0.040	4.33			
10/6/2003	18:04:41	281.6	52.24	5.798	0.040	4.60			
10/6/2003	18:04:58	298.4	52.27	5.798	0.040	4.88			
10/6/2003	18:05:16	316.2	52.29	5.799	0.039	5.18			
10/6/2003	18:05:34	335	52.36	5.801	0.037	5.48			
10/6/2003	18:05:54	354.9	52.43	5.798	0.040	5.82			
10/6/2003	18:06:15	376	52.49	5.793	0.045	6.17			
10/6/2003	18:06:38	398.4	52.56	5.793	0.045	6.55			
10/6/2003	18:07:02	422.1	52.63	5.794	0.044	6.95			
10/6/2003	18:07:27	447.2	52.7	5.793	0.045	7.37			
10/6/2003	18:07:53	473.8	52.74	5.793	0.045	7.80			
10/6/2003	18:08:21	502	52.79	5.793	0.045	8.27			
10/6/2003	18:08:51	531.9	52.83	5.79	0.048	8.77			
10/6/2003	18:09:21	561.9	52.88	5.794	0.044	9.27			1.71 gpm flow rate
10/6/2003	18:09:51	591.9	52.9	5.791	0.047	9.77			
10/6/2003	18:10:21	621.9	52.92	5.789	0.049	10.27			
10/6/2003	18:10:51	651.9	52.97	5.791	0.047	10.77			
10/6/2003	18:11:21	681.9	52.99	5.793	0.045	11.27			
10/6/2003	18:11:51	711.9	53.04	5.794	0.044	11.77			
10/6/2003	18:12:21	741.9	53.06	5.792	0.046	12.27			
10/6/2003	18:12:51	771.9	53.06	5.792	0.046	12.77			
10/6/2003	18:13:21	801.9	53.08	5.794	0.044	13.27			
10/6/2003	18:13:51	831.9	53.08	5.792	0.046	13.77			
10/6/2003	18:14:21	861.9	53.08	5.794	0.044	14.27			
10/6/2003	18:14:51	891.9	53.11	5.793	0.045	14.77			
10/6/2003	18:15:21	921.9	53.11	5.791	0.047	15.27			
10/6/2003	18:15:51	951.9	53.11	5.793	0.045	15.77			
10/6/2003	18:16:21	981.9	53.13	5.793	0.045	16.27			1.71 gpm flow rate
10/6/2003	18:16:51	1011.9	53.15	5.793	0.045	16.77			
10/6/2003	18:17:21	1041.9	53.15	5.795	0.043	17.27			
10/6/2003	18:17:51	1071.9	53.15	5.793	0.045	17.77			
10/6/2003	18:18:21	1101.9	53.15	5.793	0.045	18.27			
10/6/2003	18:18:51	1131.9	53.13	5.793	0.045	18.77			
10/6/2003	18:30:00	0	53.13	5.793	0.045	29.92			Start Test 2
10/6/2003	18:30:00	0.3	53.15	5.789	0.049	29.92			
10/6/2003	18:30:00	0.6	53.17	5.791	0.047	29.92			
10/6/2003	18:30:00	0.9	53.17	5.791	0.047	29.92			
10/6/2003	18:30:01	1.2	53.17	5.791	0.047	29.93			
10/6/2003	18:30:01	1.5	53.2	5.791	0.047	29.93			
10/6/2003	18:30:01	1.8	53.2	5.791	0.047	29.93			
10/6/2003	18:30:02	2.1	53.2	5.791	0.047	29.95			
10/6/2003	18:30:02	2.4	53.2	5.793	0.045	29.95			
10/6/2003	18:30:02	2.7	53.2	5.791	0.047	29.95			
10/6/2003	18:30:03	3	53.2	5.791	0.047	29.97			
10/6/2003	18:30:03	3.3	53.22	5.79	0.048	29.97			
10/6/2003	18:30:03	3.6	53.22	5.79	0.048	29.97			
10/6/2003	18:30:03	3.9	53.22	5.792	0.046	29.97			

Well No. **SEA-605**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	18:30:04	4.2	53.22	5.79	0.048	29.98			
10/6/2003	18:30:04	4.5	53.22	5.792	0.046	29.98			
10/6/2003	18:30:04	4.8	53.22	5.792	0.046	29.98	0.00		Pump Stop
10/6/2003	18:30:05	5.1	53.22	5.814	0.024	30.00	0.02	1800.00	
10/6/2003	18:30:05	5.4	53.22	5.824	0.014	30.00	0.02	1800.00	
10/6/2003	18:30:05	5.7	53.22	5.824	0.014	30.00	0.02	1800.00	
10/6/2003	18:30:06	6	53.22	5.832	0.006	30.02	0.03	900.50	
10/6/2003	18:30:06	6.4	53.22	5.841	-0.003	30.02	0.03	900.50	
10/6/2003	18:30:06	6.7	53.22	5.853	-0.015	30.02	0.03	900.50	
10/6/2003	18:30:07	7.1	53.22	5.857	-0.019	30.03	0.05	600.67	
10/6/2003	18:30:07	7.5	53.22	5.857	-0.019	30.03	0.05	600.67	
10/6/2003	18:30:08	8	53.22	5.857	-0.019	30.05	0.07	450.75	
10/6/2003	18:30:08	8.4	53.22	5.847	-0.009	30.05	0.07	450.75	
10/6/2003	18:30:08	8.9	53.24	5.839	-0.001	30.05	0.07	450.75	
10/6/2003	18:30:09	9.5	53.24	5.835	0.003	30.07	0.08	360.80	
10/6/2003	18:30:10	10	53.22	5.834	0.004	30.08	0.10	300.83	
10/6/2003	18:30:10	10.6	53.22	5.832	0.006	30.08	0.10	300.83	
10/6/2003	18:30:11	11.3	53.22	5.832	0.006	30.10	0.12	258.00	
10/6/2003	18:30:11	11.9	53.2	5.832	0.006	30.10	0.12	258.00	
10/6/2003	18:30:12	12.6	53.2	5.834	0.004	30.12	0.13	225.87	
10/6/2003	18:30:13	13.4	53.2	5.832	0.006	30.13	0.15	200.89	
10/6/2003	18:30:14	14.2	53.2	5.832	0.006	30.15	0.17	180.90	
10/6/2003	18:30:15	15	53.2	5.832	0.006	30.17	0.18	164.55	
10/6/2003	18:30:15	15.9	53.2	5.832	0.006	30.17	0.18	164.55	
10/6/2003	18:30:16	16.8	53.2	5.83	0.008	30.18	0.20	150.92	
10/6/2003	18:30:17	17.8	53.2	5.832	0.006	30.20	0.22	139.38	
10/6/2003	18:30:18	18.9	53.2	5.832	0.006	30.22	0.23	129.50	
10/6/2003	18:30:20	20	53.17	5.832	0.006	30.25	0.27	113.44	
10/6/2003	18:30:21	21.2	53.17	5.832	0.006	30.27	0.28	106.82	
10/6/2003	18:30:22	22.4	53.17	5.832	0.006	30.28	0.30	100.94	
10/6/2003	18:30:23	23.8	53.17	5.83	0.008	30.30	0.32	95.68	
10/6/2003	18:30:25	25.2	53.17	5.83	0.008	30.33	0.35	86.67	
10/6/2003	18:30:26	26.7	53.17	5.832	0.006	30.35	0.37	82.77	
10/6/2003	18:30:28	28.2	53.15	5.832	0.006	30.38	0.40	75.96	
10/6/2003	18:30:29	29.8	53.15	5.832	0.006	30.40	0.42	72.96	
10/6/2003	18:30:31	31.5	53.15	5.83	0.008	30.43	0.45	67.63	
10/6/2003	18:30:33	33.3	53.13	5.833	0.005	30.47	0.48	63.03	
10/6/2003	18:30:35	35.2	53.13	5.831	0.007	30.50	0.52	59.03	
10/6/2003	18:30:37	37.3	53.13	5.831	0.007	30.53	0.55	55.52	
10/6/2003	18:30:39	39.5	53.11	5.831	0.007	30.57	0.58	52.40	
10/6/2003	18:30:41	41.8	53.11	5.831	0.007	30.60	0.62	49.62	
10/6/2003	18:30:44	44.3	53.08	5.831	0.007	30.65	0.67	45.98	
10/6/2003	18:30:46	46.9	53.08	5.831	0.007	30.68	0.70	43.83	
10/6/2003	18:30:49	49.7	53.06	5.831	0.007	30.73	0.75	40.98	
10/6/2003	18:30:52	52.6	53.04	5.831	0.007	30.78	0.80	38.48	
10/6/2003	18:30:55	55.7	53.04	5.831	0.007	30.83	0.85	36.27	
10/6/2003	18:30:59	59	53.02	5.832	0.006	30.90	0.92	33.71	
10/6/2003	18:31:02	62.5	52.99	5.832	0.006	30.95	0.97	32.02	
10/6/2003	18:31:06	66.2	52.97	5.832	0.006	31.02	1.03	30.02	
10/6/2003	18:31:10	70.1	52.95	5.832	0.006	31.08	1.10	28.26	
10/6/2003	18:31:14	74.3	52.92	5.831	0.007	31.15	1.17	26.70	
10/6/2003	18:31:18	78.7	52.92	5.833	0.005	31.22	1.23	25.31	
10/6/2003	18:31:23	83.4	52.9	5.831	0.007	31.30	1.32	23.77	
10/6/2003	18:31:28	88.4	52.88	5.831	0.007	31.38	1.40	22.42	
10/6/2003	18:31:33	93.7	52.86	5.831	0.007	31.47	1.48	21.21	
10/6/2003	18:31:39	99.3	52.83	5.829	0.009	31.57	1.58	19.94	
10/6/2003	18:31:45	105.2	52.81	5.832	0.006	31.67	1.68	18.81	
10/6/2003	18:31:51	111.5	52.79	5.832	0.006	31.77	1.78	17.81	
10/6/2003	18:31:58	118.1	52.77	5.832	0.006	31.88	1.90	16.78	
10/6/2003	18:32:05	125.1	52.74	5.832	0.006	32.00	2.02	15.87	
10/6/2003	18:32:12	132.6	52.72	5.833	0.005	32.12	2.13	15.05	
10/6/2003	18:32:20	140.5	52.7	5.833	0.005	32.25	2.27	14.23	
10/6/2003	18:32:28	148.9	52.7	5.831	0.007	32.38	2.40	13.49	
10/6/2003	18:32:37	157.8	52.68	5.833	0.005	32.53	2.55	12.76	
10/6/2003	18:32:47	167.2	52.65	5.833	0.005	32.70	2.72	12.04	
10/6/2003	18:32:57	177.2	52.63	5.831	0.007	32.87	2.88	11.40	
10/6/2003	18:33:07	187.8	52.61	5.832	0.006	33.03	3.05	10.83	
10/6/2003	18:33:19	199	52.58	5.834	0.004	33.23	3.25	10.23	
10/6/2003	18:33:30	210.9	52.56	5.834	0.004	33.42	3.43	9.73	

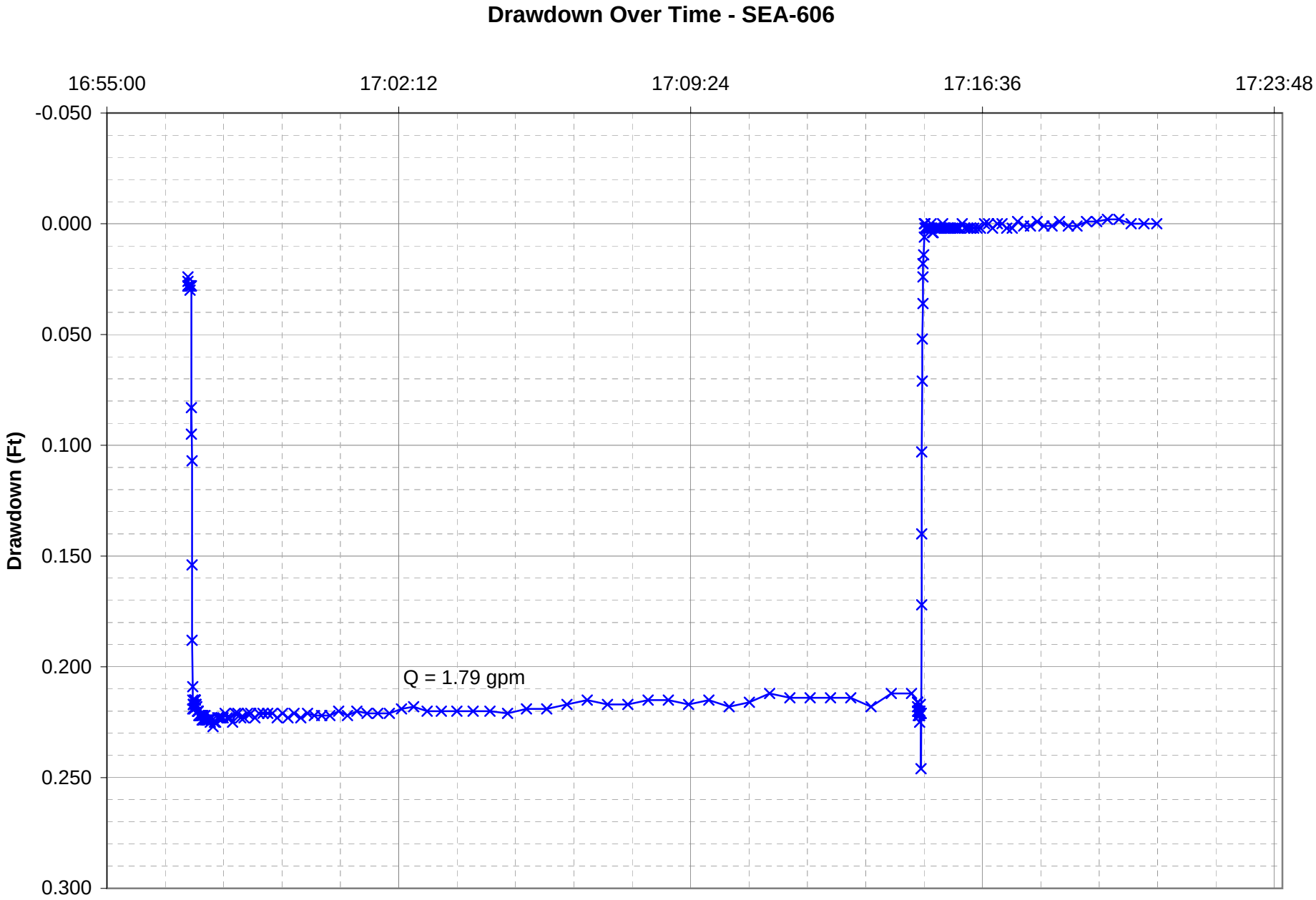
Well No. **SEA-605**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/6/2003	18:33:43	223.5	52.54	5.834	0.004	33.63	3.65	9.21	
10/6/2003	18:33:56	236.8	52.54	5.832	0.006	33.85	3.87	8.75	
10/6/2003	18:34:10	250.9	52.52	5.833	0.005	34.08	4.10	8.31	
10/6/2003	18:34:25	265.8	52.49	5.835	0.003	34.33	4.35	7.89	
10/6/2003	18:34:41	281.6	52.47	5.835	0.003	34.60	4.62	7.49	
10/6/2003	18:34:58	298.4	52.45	5.837	0.001	34.88	4.90	7.12	
10/6/2003	18:35:16	316.2	52.43	5.837	0.001	35.18	5.20	6.77	
10/6/2003	18:35:35	335	52.43	5.835	0.003	35.50	5.52	6.44	
10/6/2003	18:35:54	354.9	52.4	5.836	0.002	35.82	5.83	6.14	
10/6/2003	18:36:16	376	52.38	5.834	0.004	36.18	6.20	5.84	
10/6/2003	18:36:38	398.4	52.36	5.838	0.000	36.55	6.57	5.57	
10/6/2003	18:37:02	422.1	52.36	5.838	0.000	36.95	6.97	5.30	
10/6/2003	18:37:27	447.2	52.34	5.838	0.000	37.37	7.38	5.06	
10/6/2003	18:37:53	473.8	52.31	5.837	0.001	37.80	7.82	4.84	
10/6/2003	18:38:22	502	52.31	5.839	-0.001	38.28	8.30	4.61	
10/6/2003	18:38:51	531.9	52.29	5.837	0.001	38.77	8.78	4.41	
10/6/2003	18:39:21	561.9	52.27	5.837	0.001	39.27	9.28	4.23	
10/6/2003	18:39:51	591.9	52.27	5.839	-0.001	39.77	9.78	4.06	
10/6/2003	18:40:21	621.9	52.27	5.839	-0.001	40.27	10.28	3.92	
10/6/2003	18:40:51	651.9	52.27	5.837	0.001	40.77	10.78	3.78	
10/6/2003	18:41:21	681.9	52.27	5.839	-0.001	41.27	11.28	3.66	
10/6/2003	18:41:51	711.9	52.27	5.839	-0.001	41.77	11.78	3.54	
10/6/2003	18:42:21	741.9	52.27	5.837	0.001	42.27	12.28	3.44	
10/6/2003	18:42:51	771.9	52.24	5.839	-0.001	42.77	12.78	3.35	
10/6/2003	18:43:21	801.9	52.24	5.837	0.001	43.27	13.28	3.26	
10/6/2003	18:43:51	831.9	52.24	5.837	0.001	43.77	13.78	3.18	
10/6/2003	18:44:21	861.9	52.24	5.837	0.001	44.27	14.28	3.10	
10/6/2003	18:44:51	891.9	52.24	5.841	-0.003	44.77	14.78	3.03	
10/6/2003	18:45:21	921.9	52.22	5.837	0.001	45.27	15.28	2.96	

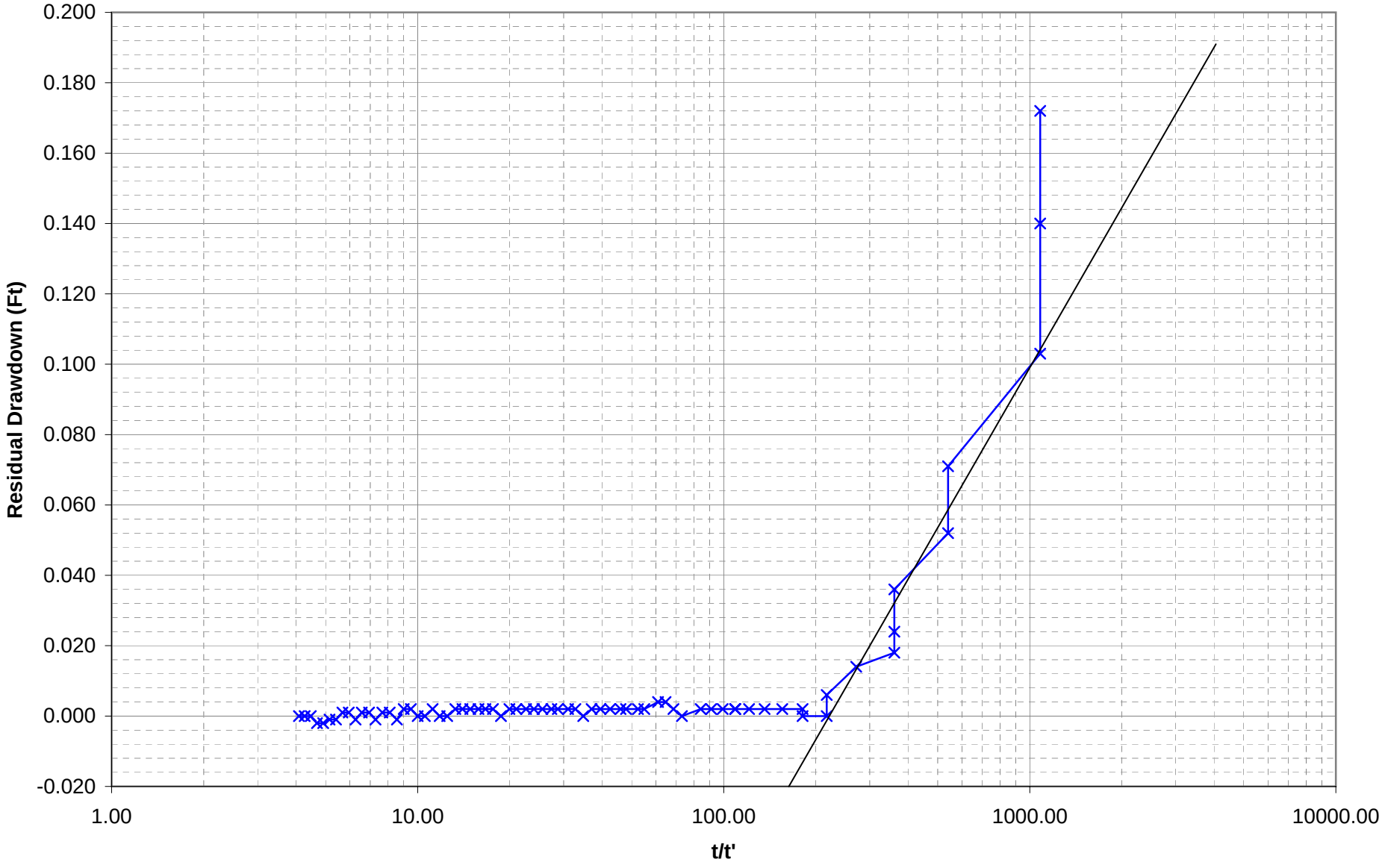
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-606**

Equipment:	In-Situ Inc. MiniTroll Pro				
Test start date and time	10/7/2003 16:57:00				
Test end date and time	10/7/2003 17:20:54				
Period of pumping	18	minutes			
Static depth to water	12.07	feet below top of casing			
Starting transducer depth	2.570	feet below static water level			
Total well depth	23.2	feet below top of casing			
Depth to top of screen	13.0	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.79	gpm, or	345	cfd	
Average drawdown [s]	0.22	ft			
Specific capacity [Q/s]	8.14	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.152	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			414.9	cfd/ft	
Hydraulic conductivity [K = T/b]			41.5	fpd, or	1.5E-02 cm/sec


Drawdown Over Time - SEA-606
16:55:00
17:02:12
17:09:24
17:16:36
17:23:48
-0.050
0.000
0.050
0.100
0.150
0.200
0.250
0.300
Drawdown (Ft)
Q = 1.79 gpm

Recovery Plot - SEA-606



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-606**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	16:37:00								DTW = 12.07 at 16:37
10/7/2003	16:57:00	0	55.51	2.546	0.024				Start Test 1
10/7/2003	16:57:00	0.3	55.51	2.544	0.026				
10/7/2003	16:57:00	0.6	55.53	2.542	0.028				
10/7/2003	16:57:00	0.9	55.53	2.542	0.028				
10/7/2003	16:57:01	1.2	55.55	2.542	0.028				
10/7/2003	16:57:01	1.5	55.55	2.542	0.028				
10/7/2003	16:57:01	1.8	55.55	2.542	0.028				
10/7/2003	16:57:02	2.1	55.55	2.542	0.028				
10/7/2003	16:57:02	2.4	55.55	2.542	0.028				
10/7/2003	16:57:02	2.7	55.55	2.542	0.028				
10/7/2003	16:57:03	3	55.55	2.542	0.028				
10/7/2003	16:57:03	3.3	55.55	2.542	0.028				
10/7/2003	16:57:03	3.6	55.55	2.542	0.028				
10/7/2003	16:57:03	3.9	55.55	2.54	0.030				
10/7/2003	16:57:04	4.2	55.55	2.542	0.028				
10/7/2003	16:57:04	4.5	55.55	2.542	0.028				
10/7/2003	16:57:04	4.8	55.55	2.542	0.028				
10/7/2003	16:57:05	5.1	55.55	2.542	0.028	0.00			Pump Start
10/7/2003	16:57:05	5.4	55.55	2.475	0.095	0.00			
10/7/2003	16:57:05	5.7	55.55	2.487	0.083	0.00			
10/7/2003	16:57:06	6	55.55	2.463	0.107	0.02			
10/7/2003	16:57:06	6.4	55.55	2.416	0.154	0.02			
10/7/2003	16:57:06	6.7	55.55	2.382	0.188	0.02			
10/7/2003	16:57:07	7.1	55.55	2.361	0.209	0.03			
10/7/2003	16:57:07	7.5	55.53	2.355	0.215	0.03			
10/7/2003	16:57:07	8	55.55	2.351	0.219	0.03			
10/7/2003	16:57:08	8.4	55.53	2.353	0.217	0.05			
10/7/2003	16:57:08	8.9	55.53	2.353	0.217	0.05			
10/7/2003	16:57:09	9.5	55.53	2.351	0.219	0.07			
10/7/2003	16:57:10	10	55.53	2.355	0.215	0.08			
10/7/2003	16:57:10	10.6	55.51	2.355	0.215	0.08			
10/7/2003	16:57:11	11.3	55.51	2.355	0.215	0.10			
10/7/2003	16:57:11	11.9	55.51	2.353	0.217	0.10			
10/7/2003	16:57:12	12.6	55.48	2.353	0.217	0.12			
10/7/2003	16:57:13	13.4	55.48	2.352	0.218	0.13			
10/7/2003	16:57:14	14.2	55.48	2.35	0.220	0.15			
10/7/2003	16:57:15	15	55.46	2.35	0.220	0.17			
10/7/2003	16:57:15	15.9	55.46	2.35	0.220	0.17			
10/7/2003	16:57:16	16.8	55.46	2.348	0.222	0.18			
10/7/2003	16:57:17	17.8	55.44	2.348	0.222	0.20			
10/7/2003	16:57:18	18.9	55.44	2.348	0.222	0.22			
10/7/2003	16:57:20	20	55.44	2.348	0.222	0.25			
10/7/2003	16:57:21	21.2	55.44	2.346	0.224	0.27			
10/7/2003	16:57:22	22.4	55.42	2.348	0.222	0.28			
10/7/2003	16:57:23	23.8	55.42	2.346	0.224	0.30			
10/7/2003	16:57:25	25.2	55.42	2.348	0.222	0.33			
10/7/2003	16:57:26	26.7	55.39	2.346	0.224	0.35			
10/7/2003	16:57:28	28.2	55.39	2.346	0.224	0.38			
10/7/2003	16:57:29	29.8	55.39	2.346	0.224	0.40			
10/7/2003	16:57:31	31.5	55.39	2.346	0.224	0.43			
10/7/2003	16:57:33	33.3	55.37	2.345	0.225	0.47			
10/7/2003	16:57:35	35.2	55.37	2.347	0.223	0.50			
10/7/2003	16:57:37	37.3	55.37	2.343	0.227	0.53			
10/7/2003	16:57:39	39.5	55.35	2.345	0.225	0.57			
10/7/2003	16:57:41	41.8	55.35	2.345	0.225	0.60			
10/7/2003	16:57:44	44.3	55.35	2.347	0.223	0.65			
10/7/2003	16:57:46	46.9	55.35	2.347	0.223	0.68			
10/7/2003	16:57:49	49.7	55.33	2.347	0.223	0.73			
10/7/2003	16:57:52	52.6	55.33	2.347	0.223	0.78			
10/7/2003	16:57:55	55.7	55.33	2.349	0.221	0.83			
10/7/2003	16:57:58	59	55.33	2.347	0.223	0.88			
10/7/2003	16:58:02	62.5	55.33	2.347	0.223	0.95			
10/7/2003	16:58:06	66.2	55.3	2.345	0.225	1.02			
10/7/2003	16:58:10	70.1	55.3	2.349	0.221	1.08			

Well No. **SEA-606**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	16:58:14	74.3	55.3	2.349	0.221	1.15			
10/7/2003	16:58:18	78.7	55.3	2.347	0.223	1.22			
10/7/2003	16:58:23	83.4	55.3	2.347	0.223	1.30			
10/7/2003	16:58:28	88.4	55.3	2.349	0.221	1.38			
10/7/2003	16:58:33	93.7	55.3	2.349	0.221	1.47			
10/7/2003	16:58:39	99.3	55.3	2.347	0.223	1.57			
10/7/2003	16:58:45	105.2	55.33	2.349	0.221	1.67			
10/7/2003	16:58:51	111.5	55.33	2.349	0.221	1.77			
10/7/2003	16:58:58	118.1	55.33	2.349	0.221	1.88			
10/7/2003	16:59:05	125.1	55.33	2.349	0.221	2.00			1.82 gpm flow rate
10/7/2003	16:59:12	132.6	55.33	2.347	0.223	2.12			
10/7/2003	16:59:20	140.5	55.35	2.349	0.221	2.25			
10/7/2003	16:59:28	148.9	55.35	2.347	0.223	2.38			
10/7/2003	16:59:37	157.8	55.37	2.349	0.221	2.53			
10/7/2003	16:59:47	167.2	55.37	2.347	0.223	2.70			
10/7/2003	16:59:57	177.2	55.37	2.349	0.221	2.87			
10/7/2003	17:00:07	187.8	55.39	2.348	0.222	3.03			
10/7/2003	17:00:18	199	55.39	2.348	0.222	3.22			
10/7/2003	17:00:30	210.9	55.42	2.348	0.222	3.42			
10/7/2003	17:00:43	223.5	55.44	2.35	0.220	3.63			
10/7/2003	17:00:56	236.8	55.46	2.348	0.222	3.85			
10/7/2003	17:01:10	250.9	55.48	2.35	0.220	4.08			
10/7/2003	17:01:25	265.8	55.51	2.349	0.221	4.33			
10/7/2003	17:01:41	281.6	55.53	2.349	0.221	4.60			
10/7/2003	17:01:58	298.4	55.55	2.349	0.221	4.88			
10/7/2003	17:02:16	316.2	55.58	2.351	0.219	5.18			1.82 gpm flow rate
10/7/2003	17:02:34	335	55.6	2.352	0.218	5.48			
10/7/2003	17:02:54	354.9	55.62	2.35	0.220	5.82			
10/7/2003	17:03:15	376	55.64	2.35	0.220	6.17			
10/7/2003	17:03:38	398.4	55.67	2.35	0.220	6.55			
10/7/2003	17:04:02	422.1	55.69	2.35	0.220	6.95			
10/7/2003	17:04:27	447.2	55.69	2.35	0.220	7.37			
10/7/2003	17:04:53	473.8	55.71	2.349	0.221	7.80			
10/7/2003	17:05:21	502	55.71	2.351	0.219	8.27			
10/7/2003	17:05:51	531.9	55.73	2.351	0.219	8.77			
10/7/2003	17:06:21	561.9	55.73	2.353	0.217	9.27			
10/7/2003	17:06:51	591.9	55.76	2.355	0.215	9.77			
10/7/2003	17:07:21	621.9	55.76	2.353	0.217	10.27			1.76 gpm flow rate
10/7/2003	17:07:51	651.9	55.76	2.353	0.217	10.77			
10/7/2003	17:08:21	681.9	55.78	2.355	0.215	11.27			
10/7/2003	17:08:51	711.9	55.78	2.355	0.215	11.77			
10/7/2003	17:09:21	741.9	55.78	2.353	0.217	12.27			
10/7/2003	17:09:51	771.9	55.78	2.355	0.215	12.77			
10/7/2003	17:10:21	801.9	55.8	2.352	0.218	13.27			
10/7/2003	17:10:51	831.9	55.8	2.354	0.216	13.77			
10/7/2003	17:11:21	861.9	55.8	2.358	0.212	14.27			1.76 gpm flow rate
10/7/2003	17:11:51	891.9	55.8	2.356	0.214	14.77			
10/7/2003	17:12:21	921.9	55.8	2.356	0.214	15.27			
10/7/2003	17:12:51	951.9	55.8	2.356	0.214	15.77			
10/7/2003	17:13:21	981.9	55.82	2.356	0.214	16.27			
10/7/2003	17:13:51	1011.9	55.82	2.352	0.218	16.77			
10/7/2003	17:14:21	1041.9	55.82	2.358	0.212	17.27			
10/7/2003	17:14:51	1071.9	55.82	2.358	0.212	17.77			
10/7/2003	17:15:00	0	55.82	2.354	0.216	17.92			Start Test 2
10/7/2003	17:15:00	0.3	55.85	2.354	0.216	17.92			
10/7/2003	17:15:00	0.6	55.87	2.352	0.218	17.92			
10/7/2003	17:15:00	0.9	55.87	2.35	0.220	17.92			
10/7/2003	17:15:01	1.2	55.87	2.35	0.220	17.93			
10/7/2003	17:15:01	1.5	55.89	2.35	0.220	17.93			
10/7/2003	17:15:01	1.8	55.89	2.348	0.222	17.93			
10/7/2003	17:15:02	2.1	55.89	2.35	0.220	17.95			
10/7/2003	17:15:02	2.4	55.89	2.35	0.220	17.95			
10/7/2003	17:15:02	2.7	55.89	2.35	0.220	17.95			
10/7/2003	17:15:03	3	55.89	2.35	0.220	17.97			
10/7/2003	17:15:03	3.3	55.89	2.35	0.220	17.97			
10/7/2003	17:15:03	3.6	55.89	2.348	0.222	17.97			
10/7/2003	17:15:03	3.9	55.92	2.345	0.225	17.97			
10/7/2003	17:15:04	4.2	55.92	2.353	0.217	17.98			
10/7/2003	17:15:04	4.5	55.92	2.349	0.221	17.98			

Well No. **SEA-606**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	17:15:04	4.8	55.92	2.349	0.221	17.98			
10/7/2003	17:15:05	5.1	55.92	2.349	0.221	18.00			
10/7/2003	17:15:05	5.4	55.92	2.349	0.221	18.00	0.00		Pump Stop
10/7/2003	17:15:05	5.7	55.92	2.324	0.246	18.00	0.00		
10/7/2003	17:15:06	6	55.92	2.398	0.172	18.02	0.02	1081.00	
10/7/2003	17:15:06	6.4	55.92	2.43	0.140	18.02	0.02	1081.00	
10/7/2003	17:15:06	6.7	55.92	2.467	0.103	18.02	0.02	1081.00	
10/7/2003	17:15:07	7.1	55.92	2.499	0.071	18.03	0.03	541.00	
10/7/2003	17:15:07	7.5	55.92	2.518	0.052	18.03	0.03	541.00	
10/7/2003	17:15:08	8	55.92	2.534	0.036	18.05	0.05	361.00	
10/7/2003	17:15:08	8.4	55.94	2.546	0.024	18.05	0.05	361.00	
10/7/2003	17:15:08	8.9	55.92	2.552	0.018	18.05	0.05	361.00	
10/7/2003	17:15:09	9.5	55.94	2.556	0.014	18.07	0.07	271.00	
10/7/2003	17:15:10	10	55.92	2.564	0.006	18.08	0.08	217.00	
10/7/2003	17:15:10	10.6	55.92	2.57	0.000	18.08	0.08	217.00	
10/7/2003	17:15:11	11.3	55.92	2.57	0.000	18.10	0.10	181.00	
10/7/2003	17:15:11	11.9	55.92	2.568	0.002	18.10	0.10	181.00	
10/7/2003	17:15:12	12.6	55.92	2.568	0.002	18.12	0.12	155.29	
10/7/2003	17:15:13	13.4	55.92	2.568	0.002	18.13	0.13	136.00	
10/7/2003	17:15:14	14.2	55.92	2.568	0.002	18.15	0.15	121.00	
10/7/2003	17:15:15	15	55.89	2.568	0.002	18.17	0.17	109.00	
10/7/2003	17:15:15	15.9	55.89	2.568	0.002	18.17	0.17	109.00	
10/7/2003	17:15:16	16.8	55.89	2.568	0.002	18.18	0.18	99.18	
10/7/2003	17:15:17	17.8	55.89	2.568	0.002	18.20	0.20	91.00	
10/7/2003	17:15:18	18.9	55.89	2.568	0.002	18.22	0.22	84.08	
10/7/2003	17:15:20	20	55.89	2.57	0.000	18.25	0.25	73.00	
10/7/2003	17:15:21	21.2	55.89	2.568	0.002	18.27	0.27	68.50	
10/7/2003	17:15:22	22.4	55.89	2.566	0.004	18.28	0.28	64.53	
10/7/2003	17:15:23	23.8	55.89	2.566	0.004	18.30	0.30	61.00	
10/7/2003	17:15:25	25.2	55.89	2.568	0.002	18.33	0.33	55.00	
10/7/2003	17:15:26	26.7	55.89	2.568	0.002	18.35	0.35	52.43	
10/7/2003	17:15:28	28.2	55.89	2.568	0.002	18.38	0.38	47.96	
10/7/2003	17:15:29	29.8	55.89	2.568	0.002	18.40	0.40	46.00	
10/7/2003	17:15:31	31.5	55.89	2.568	0.002	18.43	0.43	42.54	
10/7/2003	17:15:33	33.3	55.89	2.568	0.002	18.47	0.47	39.57	
10/7/2003	17:15:35	35.2	55.89	2.568	0.002	18.50	0.50	37.00	
10/7/2003	17:15:37	37.3	55.89	2.57	0.000	18.53	0.53	34.75	
10/7/2003	17:15:39	39.5	55.89	2.568	0.002	18.57	0.57	32.76	
10/7/2003	17:15:41	41.8	55.89	2.568	0.002	18.60	0.60	31.00	
10/7/2003	17:15:44	44.3	55.89	2.568	0.002	18.65	0.65	28.69	
10/7/2003	17:15:46	46.9	55.89	2.568	0.002	18.68	0.68	27.34	
10/7/2003	17:15:49	49.7	55.87	2.568	0.002	18.73	0.73	25.55	
10/7/2003	17:15:52	52.6	55.89	2.568	0.002	18.78	0.78	23.98	
10/7/2003	17:15:55	55.7	55.87	2.568	0.002	18.83	0.83	22.60	
10/7/2003	17:15:59	59	55.87	2.568	0.002	18.90	0.90	21.00	
10/7/2003	17:16:02	62.5	55.87	2.568	0.002	18.95	0.95	19.95	
10/7/2003	17:16:06	66.2	55.87	2.57	0.000	19.02	1.02	18.70	
10/7/2003	17:16:10	70.1	55.87	2.568	0.002	19.08	1.08	17.62	
10/7/2003	17:16:14	74.3	55.87	2.568	0.002	19.15	1.15	16.65	
10/7/2003	17:16:18	78.7	55.87	2.568	0.002	19.22	1.22	15.79	
10/7/2003	17:16:23	83.4	55.85	2.568	0.002	19.30	1.30	14.85	
10/7/2003	17:16:28	88.4	55.85	2.568	0.002	19.38	1.38	14.01	
10/7/2003	17:16:33	93.7	55.85	2.568	0.002	19.47	1.47	13.27	
10/7/2003	17:16:39	99.3	55.85	2.57	0.000	19.57	1.57	12.49	
10/7/2003	17:16:45	105.2	55.85	2.57	0.000	19.67	1.67	11.80	
10/7/2003	17:16:51	111.5	55.85	2.568	0.002	19.77	1.77	11.19	
10/7/2003	17:16:58	118.1	55.82	2.57	0.000	19.88	1.88	10.56	
10/7/2003	17:17:05	125.1	55.82	2.57	0.000	20.00	2.00	10.00	
10/7/2003	17:17:12	132.6	55.82	2.568	0.002	20.12	2.12	9.50	
10/7/2003	17:17:20	140.5	55.82	2.568	0.002	20.25	2.25	9.00	
10/7/2003	17:17:28	148.9	55.8	2.571	-0.001	20.38	2.38	8.55	
10/7/2003	17:17:37	157.8	55.8	2.569	0.001	20.53	2.53	8.11	
10/7/2003	17:17:47	167.2	55.8	2.569	0.001	20.70	2.70	7.67	
10/7/2003	17:17:57	177.2	55.8	2.571	-0.001	20.87	2.87	7.28	
10/7/2003	17:18:07	187.8	55.78	2.569	0.001	21.03	3.03	6.93	
10/7/2003	17:18:19	199	55.78	2.569	0.001	21.23	3.23	6.57	
10/7/2003	17:18:30	210.9	55.76	2.571	-0.001	21.42	3.42	6.27	
10/7/2003	17:18:43	223.5	55.76	2.569	0.001	21.63	3.63	5.95	
10/7/2003	17:18:56	236.8	55.76	2.569	0.001	21.85	3.85	5.68	

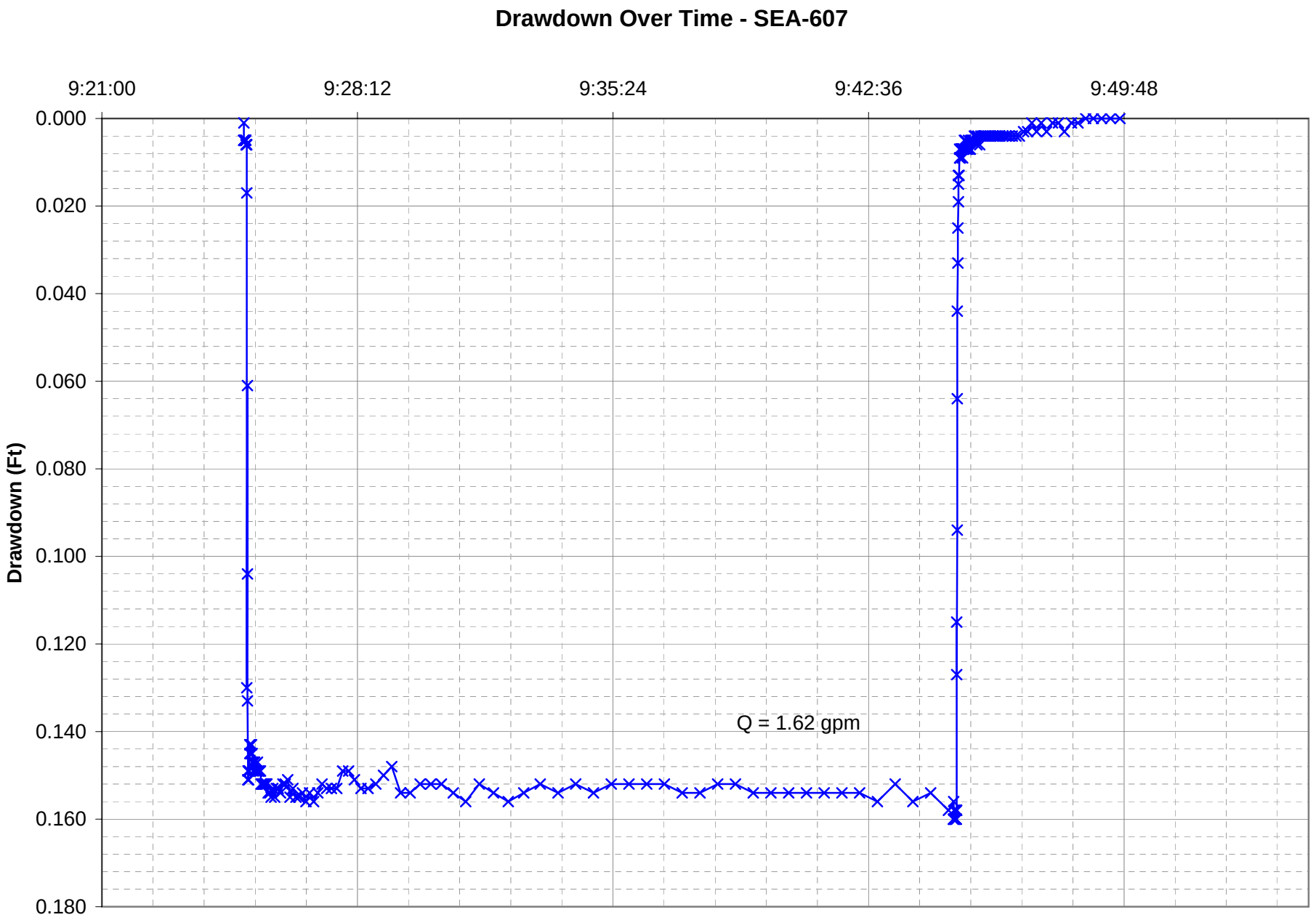
Well No. **SEA-606**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	17:19:10	250.9	55.73	2.571	-0.001	22.08	4.08	5.41	
10/7/2003	17:19:25	265.8	55.73	2.571	-0.001	22.33	4.33	5.15	
10/7/2003	17:19:41	281.6	55.71	2.572	-0.002	22.60	4.60	4.91	
10/7/2003	17:19:58	298.4	55.69	2.572	-0.002	22.88	4.88	4.69	
10/7/2003	17:20:16	316.2	55.69	2.57	0.000	23.18	5.18	4.47	
10/7/2003	17:20:35	335	55.69	2.57	0.000	23.50	5.50	4.27	
10/7/2003	17:20:54	354.9	55.67	2.57	0.000	23.82	5.82	4.09	
10/7/2003	17:30:00								DTW = 12.07 at 17:30

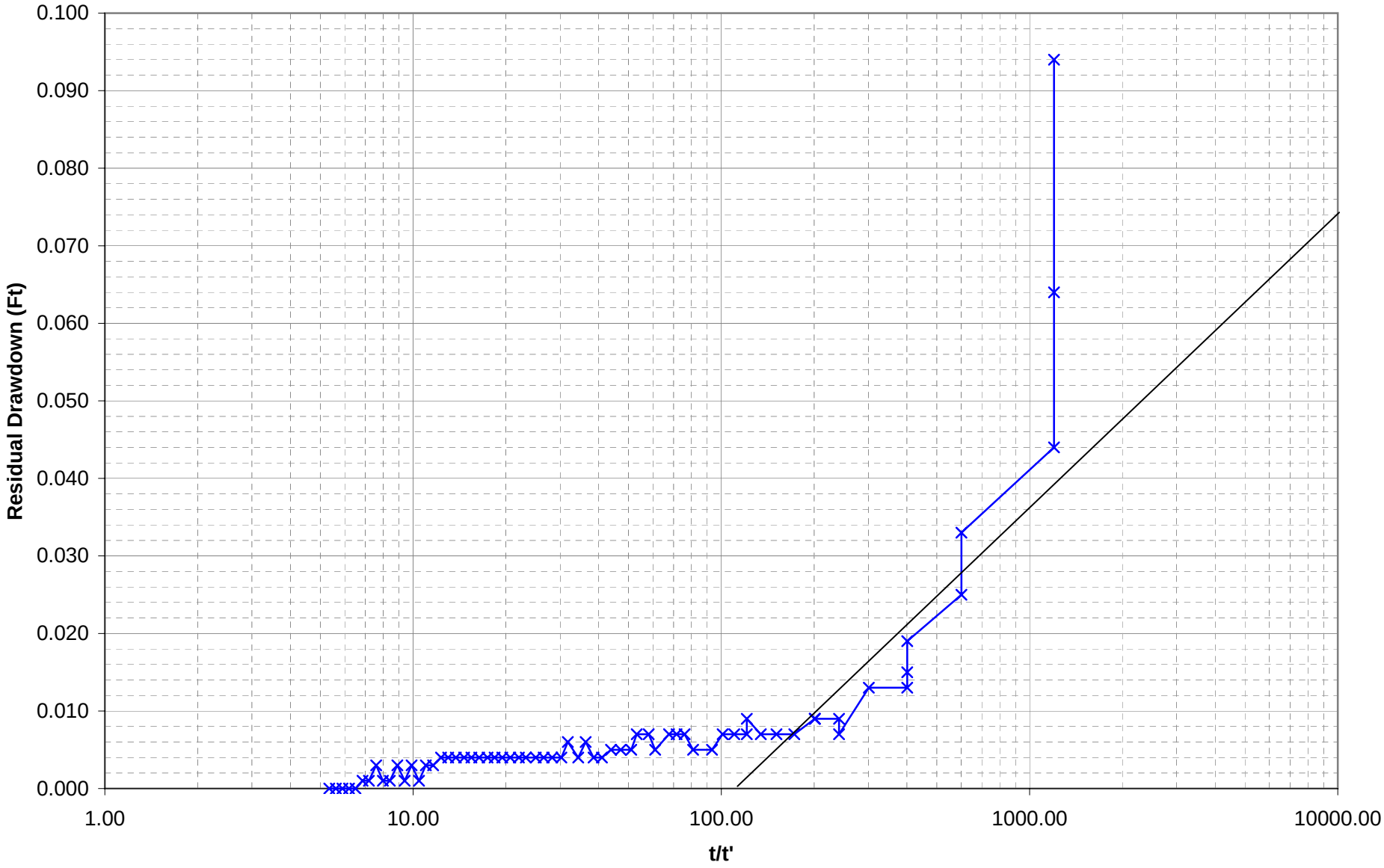
Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-607**

Equipment:	In-Situ Inc.	MiniTroll Pro			
Test start date and time	10/7/2003	9:25:00			
Test end date and time	10/7/2003	9:49:41			
Period of pumping	20	minutes			
Static depth to water	12.17	feet below top of casing			
Startiing transducer depth	4.255	feet below static water level			
Total well depth	23.1	feet below top of casing			
Depth to top of screen	12.9	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.62	gpm, or	312	cfd	
Average drawdown [s]	0.154	ft			
Specific capacity [Q/s]	10.5	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.040	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			1426.8	cfd/ft	
Hydraulic conductivity [K = T/b]			142.7	fpd, or	5.0E-02 cm/sec


Drawdown Over Time - SEA-607
9:21:00
9:28:12
9:35:24
9:42:36
9:49:48
0.000
0.020
0.040
0.060
0.080
0.100
0.120
0.140
0.160
0.180
Drawdown (Ft)
Q = 1.62 gpm

Recovery Plot - SEA-607



Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-607**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	9:06:00								DTW = 12.17 at 9:06
10/7/2003	9:25:00	0	55.94	4.254	0.001				Start Test 1
10/7/2003	9:25:00	0.3	55.96	4.25	0.005				
10/7/2003	9:25:00	0.6	55.98	4.25	0.005				
10/7/2003	9:25:00	0.9	55.98	4.25	0.005				
10/7/2003	9:25:01	1.2	55.98	4.25	0.005				
10/7/2003	9:25:01	1.5	56.01	4.25	0.005				
10/7/2003	9:25:01	1.8	56.01	4.25	0.005				
10/7/2003	9:25:02	2.1	56.01	4.25	0.005				
10/7/2003	9:25:02	2.4	56.01	4.25	0.005				
10/7/2003	9:25:02	2.7	56.01	4.25	0.005				
10/7/2003	9:25:03	3	56.01	4.25	0.005				
10/7/2003	9:25:03	3.3	56.01	4.25	0.005				
10/7/2003	9:25:03	3.6	56.01	4.25	0.005				
10/7/2003	9:25:03	3.9	56.01	4.25	0.005				
10/7/2003	9:25:04	4.2	56.03	4.249	0.006				
10/7/2003	9:25:04	4.5	56.03	4.249	0.006				
10/7/2003	9:25:04	4.8	56.03	4.249	0.006				
10/7/2003	9:25:05	5.1	56.03	4.249	0.006	0.00			Pump Start
10/7/2003	9:25:05	5.4	56.03	4.238	0.017	0.00			
10/7/2003	9:25:05	5.7	56.03	4.125	0.130	0.00			
10/7/2003	9:25:06	6	56.03	4.194	0.061	0.02			
10/7/2003	9:25:06	6.4	56.03	4.151	0.104	0.02			
10/7/2003	9:25:06	6.7	56.03	4.122	0.133	0.02			
10/7/2003	9:25:07	7.1	56.03	4.106	0.149	0.03			
10/7/2003	9:25:07	7.5	56.03	4.104	0.151	0.03			
10/7/2003	9:25:07	8	56.03	4.104	0.151	0.03			
10/7/2003	9:25:08	8.4	56.03	4.104	0.151	0.05			
10/7/2003	9:25:08	8.9	56.03	4.106	0.149	0.05			
10/7/2003	9:25:09	9.5	56.05	4.106	0.149	0.07			
10/7/2003	9:25:10	10	56.03	4.11	0.145	0.08			
10/7/2003	9:25:10	10.6	56.03	4.112	0.143	0.08			
10/7/2003	9:25:11	11.3	56.03	4.112	0.143	0.10			
10/7/2003	9:25:11	11.9	56.03	4.11	0.145	0.10			
10/7/2003	9:25:12	12.6	56.03	4.11	0.145	0.12			
10/7/2003	9:25:13	13.4	56.03	4.112	0.143	0.13			
10/7/2003	9:25:14	14.2	56.03	4.11	0.145	0.15			
10/7/2003	9:25:15	15	56.03	4.108	0.147	0.17			
10/7/2003	9:25:15	15.9	56.03	4.108	0.147	0.17			
10/7/2003	9:25:16	16.8	56.03	4.106	0.149	0.18			
10/7/2003	9:25:17	17.8	56.03	4.108	0.147	0.20			
10/7/2003	9:25:18	18.9	56.03	4.108	0.147	0.22			
10/7/2003	9:25:20	20	56.03	4.106	0.149	0.25			
10/7/2003	9:25:21	21.2	56.03	4.106	0.149	0.27			
10/7/2003	9:25:22	22.4	56.03	4.106	0.149	0.28			
10/7/2003	9:25:23	23.8	56.03	4.108	0.147	0.30			
10/7/2003	9:25:25	25.2	56.05	4.106	0.149	0.33			
10/7/2003	9:25:26	26.7	56.05	4.106	0.149	0.35			Pump Start
10/7/2003	9:25:28	28.2	56.05	4.106	0.149	0.38			
10/7/2003	9:25:29	29.8	56.07	4.103	0.152	0.40			
10/7/2003	9:25:31	31.5	56.07	4.103	0.152	0.43			
10/7/2003	9:25:33	33.3	56.07	4.103	0.152	0.47			
10/7/2003	9:25:35	35.2	56.1	4.103	0.152	0.50			
10/7/2003	9:25:37	37.3	56.1	4.103	0.152	0.53			
10/7/2003	9:25:39	39.5	56.12	4.103	0.152	0.57			
10/7/2003	9:25:41	41.8	56.14	4.101	0.154	0.60			
10/7/2003	9:25:44	44.3	56.16	4.101	0.154	0.65			
10/7/2003	9:25:46	46.9	56.19	4.1	0.155	0.68			
10/7/2003	9:25:49	49.7	56.19	4.102	0.153	0.73			
10/7/2003	9:25:52	52.6	56.21	4.1	0.155	0.78			
10/7/2003	9:25:55	55.7	56.23	4.102	0.153	0.83			
10/7/2003	9:25:58	59	56.26	4.102	0.153	0.88			
10/7/2003	9:26:02	62.5	56.28	4.101	0.154	0.95			1.67 gpm flow rate
10/7/2003	9:26:06	66.2	56.32	4.103	0.152	1.02			
10/7/2003	9:26:10	70.1	56.35	4.103	0.152	1.08			

Well No. **SEA-607**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	9:26:14	74.3	56.37	4.104	0.151	1.15			
10/7/2003	9:26:18	78.7	56.39	4.1	0.155	1.22			
10/7/2003	9:26:23	83.4	56.41	4.102	0.153	1.30			
10/7/2003	9:26:28	88.4	56.44	4.1	0.155	1.38			
10/7/2003	9:26:33	93.7	56.46	4.1	0.155	1.47			
10/7/2003	9:26:39	99.3	56.48	4.101	0.154	1.57			
10/7/2003	9:26:45	105.2	56.5	4.099	0.156	1.67			
10/7/2003	9:26:51	111.5	56.53	4.101	0.154	1.77			
10/7/2003	9:26:58	118.1	56.55	4.099	0.156	1.88			
10/7/2003	9:27:05	125.1	56.57	4.101	0.154	2.00			
10/7/2003	9:27:12	132.6	56.57	4.103	0.152	2.12			
10/7/2003	9:27:20	140.5	56.59	4.102	0.153	2.25			
10/7/2003	9:27:28	148.9	56.62	4.102	0.153	2.38			
10/7/2003	9:27:37	157.8	56.62	4.102	0.153	2.53			
10/7/2003	9:27:47	167.2	56.64	4.106	0.149	2.70			
10/7/2003	9:27:57	177.2	56.64	4.106	0.149	2.87			
10/7/2003	9:28:07	187.8	56.66	4.104	0.151	3.03			
10/7/2003	9:28:18	199	56.66	4.102	0.153	3.22			
10/7/2003	9:28:30	210.9	56.66	4.102	0.153	3.42			
10/7/2003	9:28:43	223.5	56.69	4.103	0.152	3.63			
10/7/2003	9:28:56	236.8	56.69	4.105	0.150	3.85			
10/7/2003	9:29:10	250.9	56.69	4.107	0.148	4.08			1.62 gpm flow rate
10/7/2003	9:29:25	265.8	56.71	4.101	0.154	4.33			
10/7/2003	9:29:41	281.6	56.71	4.101	0.154	4.60			
10/7/2003	9:29:58	298.4	56.71	4.103	0.152	4.88			
10/7/2003	9:30:16	316.2	56.71	4.103	0.152	5.18			
10/7/2003	9:30:34	335	56.71	4.103	0.152	5.48			
10/7/2003	9:30:54	354.9	56.71	4.101	0.154	5.82			
10/7/2003	9:31:15	376	56.71	4.099	0.156	6.17			
10/7/2003	9:31:38	398.4	56.71	4.103	0.152	6.55			
10/7/2003	9:32:02	422.1	56.71	4.101	0.154	6.95			
10/7/2003	9:32:27	447.2	56.71	4.099	0.156	7.37			
10/7/2003	9:32:53	473.8	56.71	4.101	0.154	7.80			
10/7/2003	9:33:21	502	56.71	4.103	0.152	8.27			
10/7/2003	9:33:51	531.9	56.71	4.101	0.154	8.77			
10/7/2003	9:34:21	561.9	56.71	4.103	0.152	9.27			1.62 gpm flow rate
10/7/2003	9:34:51	591.9	56.69	4.101	0.154	9.77			
10/7/2003	9:35:21	621.9	56.69	4.103	0.152	10.27			
10/7/2003	9:35:51	651.9	56.69	4.103	0.152	10.77			
10/7/2003	9:36:21	681.9	56.69	4.103	0.152	11.27			
10/7/2003	9:36:51	711.9	56.69	4.103	0.152	11.77			
10/7/2003	9:37:21	741.9	56.69	4.101	0.154	12.27			
10/7/2003	9:37:51	771.9	56.69	4.101	0.154	12.77			
10/7/2003	9:38:21	801.9	56.69	4.103	0.152	13.27			
10/7/2003	9:38:51	831.9	56.69	4.103	0.152	13.77			
10/7/2003	9:39:21	861.9	56.69	4.101	0.154	14.27			
10/7/2003	9:39:51	891.9	56.69	4.101	0.154	14.77			
10/7/2003	9:40:21	921.9	56.69	4.101	0.154	15.27			
10/7/2003	9:40:51	951.9	56.69	4.101	0.154	15.77			
10/7/2003	9:41:21	981.9	56.69	4.101	0.154	16.27			
10/7/2003	9:41:51	1011.9	56.69	4.101	0.154	16.77			
10/7/2003	9:42:21	1041.9	56.69	4.101	0.154	17.27			
10/7/2003	9:42:51	1071.9	56.69	4.099	0.156	17.77			
10/7/2003	9:43:21	1101.9	56.69	4.103	0.152	18.27			1.62 gpm flow rate
10/7/2003	9:43:51	1131.9	56.69	4.099	0.156	18.77			
10/7/2003	9:44:21	1161.9	56.69	4.101	0.154	19.27			
10/7/2003	9:44:51	1191.9	56.69	4.097	0.158	19.77			
10/7/2003	9:45:00	0	56.69	4.099	0.156	19.92			Start Test 2
10/7/2003	9:45:00	0.3	56.71	4.095	0.160	19.92			
10/7/2003	9:45:00	0.6	56.71	4.095	0.160	19.92			
10/7/2003	9:45:00	0.9	56.73	4.095	0.160	19.92			
10/7/2003	9:45:01	1.2	56.73	4.095	0.160	19.93			
10/7/2003	9:45:01	1.5	56.73	4.095	0.160	19.93			
10/7/2003	9:45:01	1.8	56.75	4.097	0.158	19.93			
10/7/2003	9:45:02	2.1	56.75	4.095	0.160	19.95			
10/7/2003	9:45:02	2.4	56.75	4.097	0.158	19.95			
10/7/2003	9:45:02	2.7	56.75	4.095	0.160	19.95			
10/7/2003	9:45:03	3	56.75	4.095	0.160	19.97			
10/7/2003	9:45:03	3.3	56.75	4.097	0.158	19.97			

Well No. **SEA-607**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	9:45:03	3.6	56.75	4.095	0.160	19.97			
10/7/2003	9:45:03	3.9	56.75	4.097	0.158	19.97			
10/7/2003	9:45:04	4.2	56.75	4.097	0.158	19.98			
10/7/2003	9:45:04	4.5	56.78	4.095	0.160	19.98			
10/7/2003	9:45:04	4.8	56.75	4.095	0.160	19.98			
10/7/2003	9:45:05	5.1	56.78	4.097	0.158	20.00	0.00		Pump Stop
10/7/2003	9:45:05	5.4	56.78	4.14	0.115	20.00	0.00		
10/7/2003	9:45:05	5.7	56.78	4.128	0.127	20.00	0.00		
10/7/2003	9:45:06	6	56.78	4.161	0.094	20.02	0.02	1201.00	
10/7/2003	9:45:06	6.4	56.78	4.191	0.064	20.02	0.02	1201.00	
10/7/2003	9:45:06	6.7	56.78	4.211	0.044	20.02	0.02	1201.00	
10/7/2003	9:45:07	7.1	56.78	4.222	0.033	20.03	0.03	601.00	
10/7/2003	9:45:07	7.5	56.78	4.23	0.025	20.03	0.03	601.00	
10/7/2003	9:45:08	8	56.78	4.236	0.019	20.05	0.05	401.00	
10/7/2003	9:45:08	8.4	56.78	4.24	0.015	20.05	0.05	401.00	
10/7/2003	9:45:08	8.9	56.78	4.242	0.013	20.05	0.05	401.00	
10/7/2003	9:45:09	9.5	56.78	4.242	0.013	20.07	0.07	301.00	
10/7/2003	9:45:10	10	56.78	4.248	0.007	20.08	0.08	241.00	
10/7/2003	9:45:10	10.6	56.78	4.246	0.009	20.08	0.08	241.00	
10/7/2003	9:45:11	11.3	56.75	4.246	0.009	20.10	0.10	201.00	
10/7/2003	9:45:11	11.9	56.75	4.246	0.009	20.10	0.10	201.00	
10/7/2003	9:45:12	12.6	56.75	4.248	0.007	20.12	0.12	172.43	
10/7/2003	9:45:13	13.4	56.75	4.248	0.007	20.13	0.13	151.00	
10/7/2003	9:45:14	14.2	56.75	4.248	0.007	20.15	0.15	134.33	
10/7/2003	9:45:15	15	56.75	4.246	0.009	20.17	0.17	121.00	
10/7/2003	9:45:15	15.9	56.75	4.248	0.007	20.17	0.17	121.00	
10/7/2003	9:45:16	16.8	56.75	4.248	0.007	20.18	0.18	110.09	
10/7/2003	9:45:17	17.8	56.75	4.248	0.007	20.20	0.20	101.00	
10/7/2003	9:45:18	18.9	56.75	4.25	0.005	20.22	0.22	93.31	
10/7/2003	9:45:20	20	56.73	4.25	0.005	20.25	0.25	81.00	
10/7/2003	9:45:21	21.2	56.75	4.248	0.007	20.27	0.27	76.00	
10/7/2003	9:45:22	22.4	56.73	4.248	0.007	20.28	0.28	71.59	
10/7/2003	9:45:23	23.8	56.73	4.248	0.007	20.30	0.30	67.67	
10/7/2003	9:45:25	25.2	56.73	4.25	0.005	20.33	0.33	61.00	
10/7/2003	9:45:26	26.7	56.73	4.248	0.007	20.35	0.35	58.14	
10/7/2003	9:45:28	28.2	56.73	4.248	0.007	20.38	0.38	53.17	
10/7/2003	9:45:29	29.8	56.73	4.25	0.005	20.40	0.40	51.00	
10/7/2003	9:45:31	31.5	56.73	4.25	0.005	20.43	0.43	47.15	
10/7/2003	9:45:33	33.3	56.73	4.25	0.005	20.47	0.47	43.86	
10/7/2003	9:45:35	35.2	56.71	4.251	0.004	20.50	0.50	41.00	
10/7/2003	9:45:37	37.3	56.71	4.251	0.004	20.53	0.53	38.50	
10/7/2003	9:45:39	39.5	56.71	4.249	0.006	20.57	0.57	36.29	
10/7/2003	9:45:41	41.8	56.71	4.251	0.004	20.60	0.60	34.33	
10/7/2003	9:45:44	44.3	56.71	4.249	0.006	20.65	0.65	31.77	
10/7/2003	9:45:46	46.9	56.71	4.251	0.004	20.68	0.68	30.27	
10/7/2003	9:45:49	49.7	56.69	4.251	0.004	20.73	0.73	28.27	
10/7/2003	9:45:52	52.6	56.69	4.251	0.004	20.78	0.78	26.53	
10/7/2003	9:45:55	55.7	56.69	4.251	0.004	20.83	0.83	25.00	
10/7/2003	9:45:59	59	56.69	4.251	0.004	20.90	0.90	23.22	
10/7/2003	9:46:02	62.5	56.66	4.251	0.004	20.95	0.95	22.05	
10/7/2003	9:46:06	66.2	56.66	4.251	0.004	21.02	1.02	20.67	
10/7/2003	9:46:10	70.1	56.66	4.251	0.004	21.08	1.08	19.46	
10/7/2003	9:46:14	74.3	56.66	4.251	0.004	21.15	1.15	18.39	
10/7/2003	9:46:18	78.7	56.64	4.251	0.004	21.22	1.22	17.44	
10/7/2003	9:46:23	83.4	56.64	4.251	0.004	21.30	1.30	16.38	
10/7/2003	9:46:28	88.4	56.64	4.251	0.004	21.38	1.38	15.46	
10/7/2003	9:46:33	93.7	56.64	4.251	0.004	21.47	1.47	14.64	
10/7/2003	9:46:39	99.3	56.62	4.251	0.004	21.57	1.57	13.77	
10/7/2003	9:46:45	105.2	56.62	4.251	0.004	21.67	1.67	13.00	
10/7/2003	9:46:51	111.5	56.62	4.251	0.004	21.77	1.77	12.32	
10/7/2003	9:46:58	118.1	56.59	4.252	0.003	21.88	1.88	11.62	
10/7/2003	9:47:05	125.1	56.59	4.252	0.003	22.00	2.00	11.00	
10/7/2003	9:47:12	132.6	56.59	4.254	0.001	22.12	2.12	10.45	
10/7/2003	9:47:20	140.5	56.57	4.252	0.003	22.25	2.25	9.89	
10/7/2003	9:47:28	148.9	56.57	4.254	0.001	22.38	2.38	9.39	
10/7/2003	9:47:37	157.8	56.57	4.252	0.003	22.53	2.53	8.89	
10/7/2003	9:47:47	167.2	56.55	4.254	0.001	22.70	2.70	8.41	
10/7/2003	9:47:57	177.2	56.55	4.254	0.001	22.87	2.87	7.98	
10/7/2003	9:48:07	187.8	56.53	4.252	0.003	23.03	3.03	7.59	

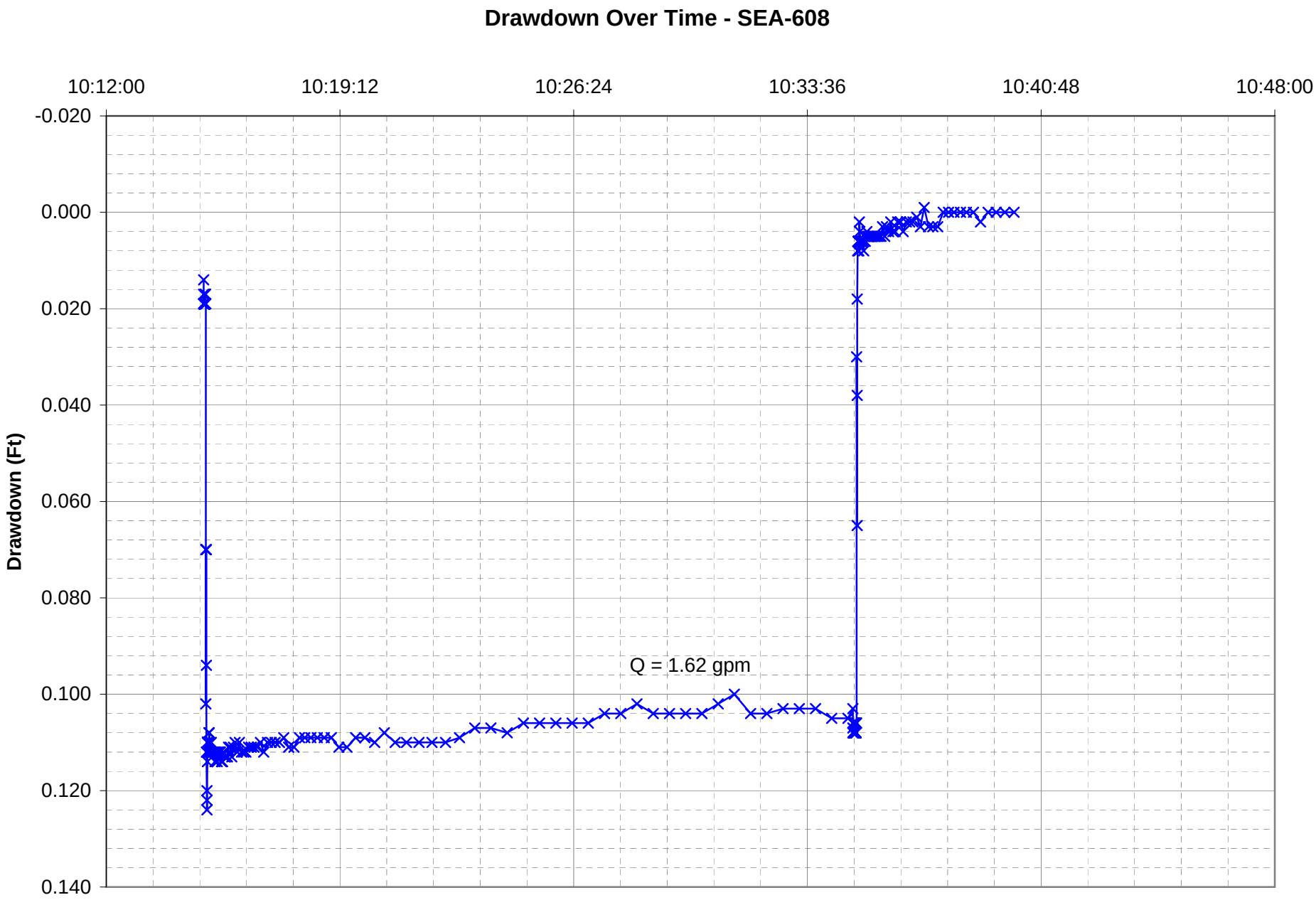
Well No. **SEA-607**

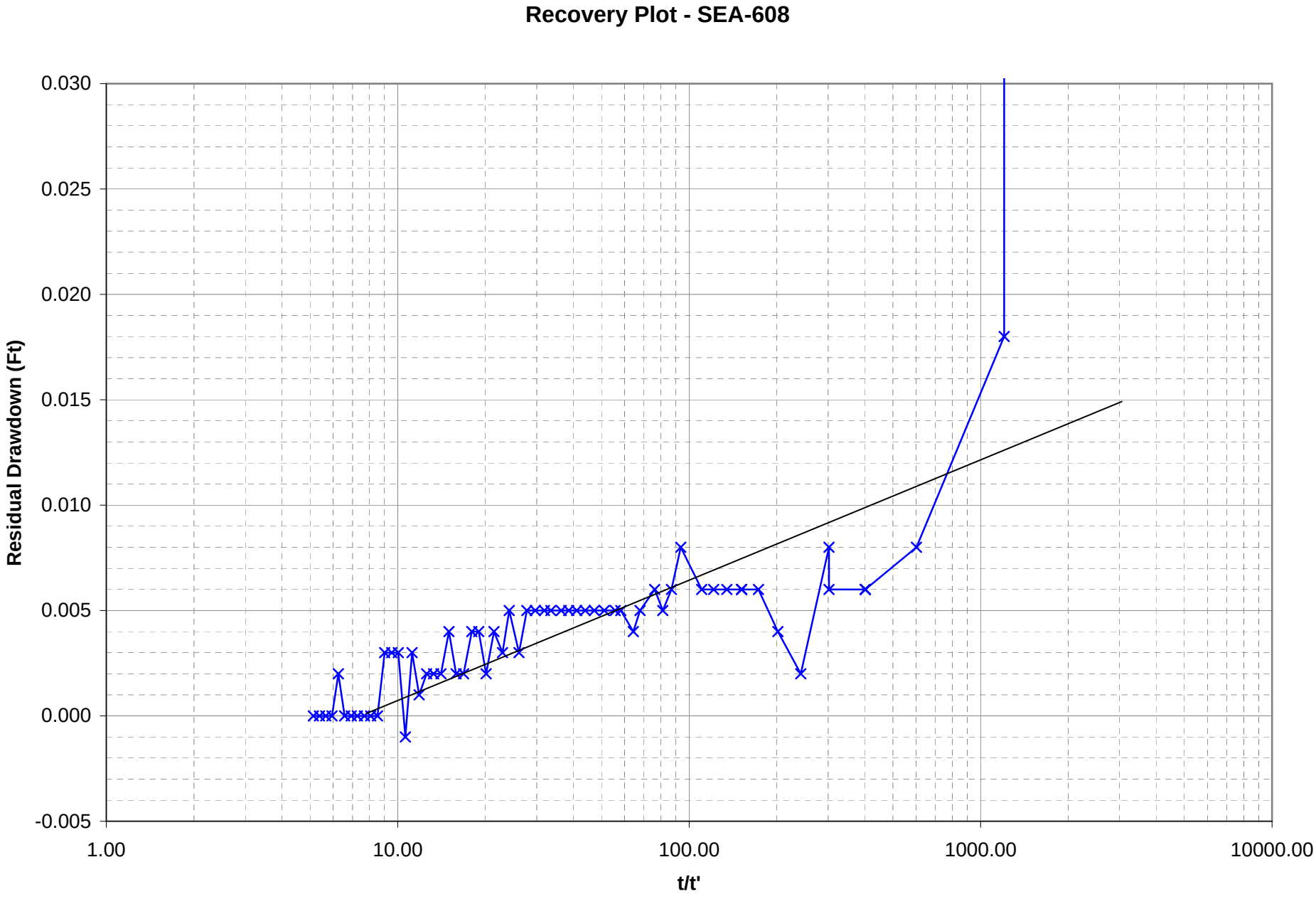
Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	9:48:19	199	56.53	4.254	0.001	23.23	3.23	7.19	
10/7/2003	9:48:30	210.9	56.53	4.254	0.001	23.42	3.42	6.85	
10/7/2003	9:48:43	223.5	56.5	4.255	0.000	23.63	3.63	6.50	
10/7/2003	9:48:56	236.8	56.48	4.255	0.000	23.85	3.85	6.19	
10/7/2003	9:49:10	250.9	56.48	4.255	0.000	24.08	4.08	5.90	
10/7/2003	9:49:25	265.8	56.46	4.255	0.000	24.33	4.33	5.62	
10/7/2003	9:49:41	281.6	56.46	4.255	0.000	24.60	4.60	5.35	
10/7/2003	9:59:00								DTW = 12.18 at 9:59

Pump and Recovery Tests - Summary
Peterson/Puritan OU2
October 2003

Well No. **SEA-608**

Equipment:	In-Situ Inc. MiniTroll Pro				
Test start date and time	10/7/2003 10:15:00				
Test end date and time	10/7/2003 10:39:58				
Period of pumping	20	minutes			
Static depth to water	13.22	feet below top of casing			
Starting transducer depth	4.827	feet below static water level			
Total well depth	22.7	feet below top of casing			
Depth to top of screen	12.5	feet below top of casing			
Height of interval tested [b]	10.0	feet			
Average pumping rate [Q]	1.62	gpm, or	312	cfd	
Average drawdown [s]	0.104	ft			
Specific capacity [Q/s]	15.6	gpm/ft			
Residual drawdown over one log cycle [Δs]			0.006	feet	
Transmissivity [T = (2.3Q)/(4*π*Δs)]			9512.3	cfd/ft	
Hydraulic conductivity [K = T/b]			951.2	fpd, or	3.4E-01 cm/sec


Drawdown Over Time - SEA-608
10:12:00
10:19:12
10:26:24
10:33:36
10:40:48
10:48:00
-0.020
0.000
0.020
0.040
0.060
0.080
0.100
0.120
0.140
Drawdown (Ft)
Q = 1.62 gpm


Recovery Plot - SEA-608
Residual Drawdown (Ft)
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
1.00
10.00
100.00
1000.00
10000.00
t/t'

Pump and Recovery Tests - Data
Peterson/Puritan OU2
October 2003

Well No. **SEA-608**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	10:05:00								DTW = 13.24 at 10:05
10/7/2003	10:15:00	0	55.92	4.813	0.014				Start Test 1
10/7/2003	10:15:00	0.3	55.94	4.808	0.019				
10/7/2003	10:15:00	0.6	55.96	4.808	0.019				
10/7/2003	10:15:00	0.9	55.96	4.81	0.017				
10/7/2003	10:15:01	1.2	55.98	4.808	0.019				
10/7/2003	10:15:01	1.5	55.98	4.808	0.019				
10/7/2003	10:15:01	1.8	55.98	4.808	0.019				
10/7/2003	10:15:02	2.1	55.98	4.808	0.019				
10/7/2003	10:15:02	2.4	55.98	4.808	0.019				
10/7/2003	10:15:02	2.7	56.01	4.808	0.019				
10/7/2003	10:15:03	3	56.01	4.81	0.017				
10/7/2003	10:15:03	3.3	56.01	4.808	0.019				
10/7/2003	10:15:03	3.6	56.01	4.81	0.017				
10/7/2003	10:15:03	3.9	56.01	4.81	0.017				
10/7/2003	10:15:04	4.2	56.01	4.808	0.019	0.00			Pump Start
10/7/2003	10:15:04	4.5	56.01	4.725	0.102	0.00			
10/7/2003	10:15:04	4.8	56.01	4.757	0.070	0.00			
10/7/2003	10:15:05	5.1	56.01	4.757	0.070	0.02			
10/7/2003	10:15:05	5.4	56.03	4.733	0.094	0.02			
10/7/2003	10:15:05	5.7	56.01	4.715	0.112	0.02			
10/7/2003	10:15:06	6	56.03	4.705	0.122	0.03			
10/7/2003	10:15:06	6.4	56.03	4.703	0.124	0.03			
10/7/2003	10:15:06	6.7	56.03	4.707	0.120	0.03			
10/7/2003	10:15:07	7.1	56.03	4.713	0.114	0.05			
10/7/2003	10:15:07	7.5	56.03	4.717	0.110	0.05			
10/7/2003	10:15:07	8	56.03	4.717	0.110	0.05			
10/7/2003	10:15:08	8.4	56.03	4.717	0.110	0.07			
10/7/2003	10:15:08	8.9	56.03	4.715	0.112	0.07			
10/7/2003	10:15:09	9.5	56.03	4.715	0.112	0.08			
10/7/2003	10:15:10	10	56.03	4.719	0.108	0.10			
10/7/2003	10:15:10	10.6	56.03	4.719	0.108	0.10			
10/7/2003	10:15:11	11.3	56.03	4.717	0.110	0.12			
10/7/2003	10:15:11	11.9	56.03	4.715	0.112	0.12			
10/7/2003	10:15:12	12.6	56.01	4.715	0.112	0.13			
10/7/2003	10:15:13	13.4	56.03	4.715	0.112	0.15			
10/7/2003	10:15:14	14.2	56.03	4.717	0.110	0.17			
10/7/2003	10:15:15	15	56.03	4.715	0.112	0.18			
10/7/2003	10:15:15	15.9	56.01	4.715	0.112	0.18			
10/7/2003	10:15:16	16.8	56.03	4.715	0.112	0.20			
10/7/2003	10:15:17	17.8	56.03	4.715	0.112	0.22			
10/7/2003	10:15:18	18.9	56.03	4.715	0.112	0.23			
10/7/2003	10:15:20	20	56.03	4.715	0.112	0.27			
10/7/2003	10:15:21	21.2	56.03	4.713	0.114	0.28			
10/7/2003	10:15:22	22.4	56.03	4.715	0.112	0.30			
10/7/2003	10:15:23	23.8	56.03	4.715	0.112	0.32			
10/7/2003	10:15:25	25.2	56.05	4.713	0.114	0.35			
10/7/2003	10:15:26	26.7	56.05	4.715	0.112	0.37			
10/7/2003	10:15:28	28.2	56.05	4.715	0.112	0.40			
10/7/2003	10:15:29	29.8	56.07	4.715	0.112	0.42			
10/7/2003	10:15:31	31.5	56.07	4.715	0.112	0.45			
10/7/2003	10:15:33	33.3	56.07	4.713	0.114	0.48			
10/7/2003	10:15:35	35.2	56.1	4.713	0.114	0.52			
10/7/2003	10:15:37	37.3	56.1	4.715	0.112	0.55			
10/7/2003	10:15:39	39.5	56.12	4.714	0.113	0.58			
10/7/2003	10:15:41	41.8	56.12	4.714	0.113	0.62			
10/7/2003	10:15:44	44.3	56.14	4.714	0.113	0.67			
10/7/2003	10:15:46	46.9	56.14	4.716	0.111	0.70			
10/7/2003	10:15:49	49.7	56.16	4.716	0.111	0.75			
10/7/2003	10:15:52	52.6	56.16	4.714	0.113	0.80			
10/7/2003	10:15:55	55.7	56.19	4.716	0.111	0.85			
10/7/2003	10:15:58	59	56.21	4.717	0.110	0.90			
10/7/2003	10:16:02	62.5	56.23	4.715	0.112	0.97			
10/7/2003	10:16:06	66.2	56.26	4.717	0.110	1.03			
10/7/2003	10:16:10	70.1	56.26	4.715	0.112	1.10			

Well No. **SEA-608**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	10:16:14	74.3	56.28	4.715	0.112	1.17			
10/7/2003	10:16:18	78.7	56.3	4.715	0.112	1.23			
10/7/2003	10:16:23	83.4	56.32	4.716	0.111	1.32			
10/7/2003	10:16:28	88.4	56.35	4.716	0.111	1.40			
10/7/2003	10:16:33	93.7	56.37	4.716	0.111	1.48			
10/7/2003	10:16:39	99.3	56.39	4.716	0.111	1.58			
10/7/2003	10:16:45	105.2	56.41	4.717	0.110	1.68			
10/7/2003	10:16:51	111.5	56.41	4.715	0.112	1.78			
10/7/2003	10:16:58	118.1	56.44	4.717	0.110	1.90			
10/7/2003	10:17:05	125.1	56.46	4.717	0.110	2.02			
10/7/2003	10:17:12	132.6	56.46	4.717	0.110	2.13			
10/7/2003	10:17:20	140.5	56.48	4.717	0.110	2.27			
10/7/2003	10:17:28	148.9	56.5	4.718	0.109	2.40			
10/7/2003	10:17:37	157.8	56.5	4.716	0.111	2.55			
10/7/2003	10:17:47	167.2	56.53	4.716	0.111	2.72			
10/7/2003	10:17:57	177.2	56.53	4.718	0.109	2.88			
10/7/2003	10:18:07	187.8	56.55	4.718	0.109	3.05			1.62 gpm flow rate
10/7/2003	10:18:18	199	56.55	4.718	0.109	3.23			
10/7/2003	10:18:30	210.9	56.57	4.718	0.109	3.43			
10/7/2003	10:18:43	223.5	56.57	4.718	0.109	3.65			
10/7/2003	10:18:56	236.8	56.59	4.718	0.109	3.87			
10/7/2003	10:19:10	250.9	56.59	4.716	0.111	4.10			
10/7/2003	10:19:25	265.8	56.59	4.716	0.111	4.35			
10/7/2003	10:19:41	281.6	56.59	4.718	0.109	4.62			
10/7/2003	10:19:58	298.4	56.59	4.718	0.109	4.90			
10/7/2003	10:20:16	316.2	56.62	4.717	0.110	5.20			
10/7/2003	10:20:34	335	56.62	4.719	0.108	5.50			
10/7/2003	10:20:54	354.9	56.62	4.717	0.110	5.83			
10/7/2003	10:21:15	376	56.62	4.717	0.110	6.18			
10/7/2003	10:21:38	398.4	56.62	4.717	0.110	6.57			
10/7/2003	10:22:02	422.1	56.62	4.717	0.110	6.97			
10/7/2003	10:22:27	447.2	56.62	4.717	0.110	7.38			
10/7/2003	10:22:53	473.8	56.59	4.718	0.109	7.82			
10/7/2003	10:23:21	502	56.59	4.72	0.107	8.28			1.62 gpm flow rate
10/7/2003	10:23:51	531.9	56.59	4.72	0.107	8.78			
10/7/2003	10:24:21	561.9	56.62	4.719	0.108	9.28			
10/7/2003	10:24:51	591.9	56.59	4.721	0.106	9.78			
10/7/2003	10:25:21	621.9	56.59	4.721	0.106	10.28			
10/7/2003	10:25:51	651.9	56.59	4.721	0.106	10.78			
10/7/2003	10:26:21	681.9	56.59	4.721	0.106	11.28			
10/7/2003	10:26:51	711.9	56.59	4.721	0.106	11.78			
10/7/2003	10:27:21	741.9	56.59	4.723	0.104	12.28			
10/7/2003	10:27:51	771.9	56.59	4.723	0.104	12.78			
10/7/2003	10:28:21	801.9	56.59	4.725	0.102	13.28			1.58 gpm flow rate
10/7/2003	10:28:51	831.9	56.59	4.723	0.104	13.78			
10/7/2003	10:29:21	861.9	56.59	4.723	0.104	14.28			
10/7/2003	10:29:51	891.9	56.59	4.723	0.104	14.78			
10/7/2003	10:30:21	921.9	56.59	4.723	0.104	15.28			
10/7/2003	10:30:51	951.9	56.59	4.725	0.102	15.78			
10/7/2003	10:31:21	981.9	56.59	4.727	0.100	16.28			
10/7/2003	10:31:51	1011.9	56.59	4.723	0.104	16.78			
10/7/2003	10:32:21	1041.9	56.59	4.723	0.104	17.28			1.62 gpm flow rate
10/7/2003	10:32:51	1071.9	56.57	4.724	0.103	17.78			
10/7/2003	10:33:21	1101.9	56.57	4.724	0.103	18.28			
10/7/2003	10:33:51	1131.9	56.57	4.724	0.103	18.78			
10/7/2003	10:34:21	1161.9	56.57	4.722	0.105	19.28			
10/7/2003	10:34:51	1191.9	56.57	4.722	0.105	19.78			
10/7/2003	10:35:00	0	56.57	4.724	0.103	19.93			Start Test 2
10/7/2003	10:35:00	0.3	56.59	4.72	0.107	19.93			
10/7/2003	10:35:00	0.6	56.62	4.719	0.108	19.93			
10/7/2003	10:35:00	0.9	56.62	4.721	0.106	19.93			
10/7/2003	10:35:01	1.2	56.64	4.721	0.106	19.95			
10/7/2003	10:35:01	1.5	56.64	4.721	0.106	19.95			
10/7/2003	10:35:01	1.8	56.64	4.719	0.108	19.95			
10/7/2003	10:35:02	2.1	56.64	4.719	0.108	19.97			
10/7/2003	10:35:02	2.4	56.64	4.721	0.106	19.97			
10/7/2003	10:35:02	2.7	56.64	4.721	0.106	19.97			
10/7/2003	10:35:03	3	56.66	4.719	0.108	19.98			
10/7/2003	10:35:03	3.3	56.66	4.721	0.106	19.98			

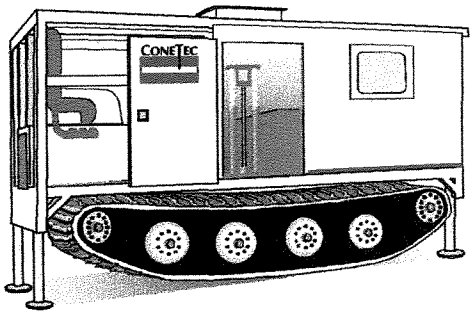
Well No. **SEA-608**

Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	10:35:03	3.6	56.66	4.721	0.106	19.98			
10/7/2003	10:35:03	3.9	56.66	4.719	0.108	19.98			
10/7/2003	10:35:04	4.2	56.66	4.721	0.106	20.00			
10/7/2003	10:35:04	4.5	56.66	4.721	0.106	20.00			
10/7/2003	10:35:04	4.8	56.66	4.719	0.108	20.00			
10/7/2003	10:35:05	5.1	56.66	4.721	0.106	20.02			
10/7/2003	10:35:05	5.4	56.66	4.719	0.108	20.02			
10/7/2003	10:35:05	5.7	56.66	4.721	0.106	20.02			
10/7/2003	10:35:06	6	56.66	4.719	0.108	20.03			
10/7/2003	10:35:06	6.4	56.66	4.721	0.106	20.03			
10/7/2003	10:35:06	6.7	56.66	4.719	0.108	20.03			
10/7/2003	10:35:07	7.1	56.66	4.721	0.106	20.05	0.00		Pump Stop
10/7/2003	10:35:07	7.5	56.66	4.797	0.030	20.05	0.00		
10/7/2003	10:35:08	8	56.69	4.762	0.065	20.07	0.02	1204.00	
10/7/2003	10:35:08	8.4	56.69	4.789	0.038	20.07	0.02	1204.00	
10/7/2003	10:35:08	8.9	56.69	4.809	0.018	20.07	0.02	1204.00	
10/7/2003	10:35:09	9.5	56.69	4.819	0.008	20.08	0.03	602.50	
10/7/2003	10:35:10	10	56.66	4.821	0.006	20.10	0.05	402.00	
10/7/2003	10:35:10	10.6	56.66	4.821	0.006	20.10	0.05	402.00	
10/7/2003	10:35:11	11.3	56.66	4.821	0.006	20.12	0.07	301.75	
10/7/2003	10:35:11	11.9	56.66	4.819	0.008	20.12	0.07	301.75	
10/7/2003	10:35:12	12.6	56.66	4.825	0.002	20.13	0.08	241.60	
10/7/2003	10:35:13	13.4	56.64	4.823	0.004	20.15	0.10	201.50	
10/7/2003	10:35:14	14.2	56.64	4.821	0.006	20.17	0.12	172.86	
10/7/2003	10:35:15	15	56.64	4.821	0.006	20.18	0.13	151.38	
10/7/2003	10:35:15	15.9	56.64	4.821	0.006	20.18	0.13	151.38	
10/7/2003	10:35:16	16.8	56.64	4.821	0.006	20.20	0.15	134.67	
10/7/2003	10:35:17	17.8	56.64	4.821	0.006	20.22	0.17	121.30	
10/7/2003	10:35:18	18.9	56.64	4.821	0.006	20.23	0.18	110.36	
10/7/2003	10:35:20	20	56.64	4.819	0.008	20.27	0.22	93.54	
10/7/2003	10:35:21	21.2	56.64	4.821	0.006	20.28	0.23	86.93	
10/7/2003	10:35:22	22.4	56.62	4.822	0.005	20.30	0.25	81.20	
10/7/2003	10:35:23	23.8	56.64	4.821	0.006	20.32	0.27	76.19	
10/7/2003	10:35:25	25.2	56.62	4.822	0.005	20.35	0.30	67.83	
10/7/2003	10:35:26	26.7	56.62	4.823	0.004	20.37	0.32	64.32	
10/7/2003	10:35:28	28.2	56.62	4.822	0.005	20.40	0.35	58.29	
10/7/2003	10:35:29	29.8	56.62	4.822	0.005	20.42	0.37	55.68	
10/7/2003	10:35:31	31.5	56.62	4.822	0.005	20.45	0.40	51.13	
10/7/2003	10:35:33	33.3	56.59	4.822	0.005	20.48	0.43	47.27	
10/7/2003	10:35:35	35.2	56.59	4.822	0.005	20.52	0.47	43.96	
10/7/2003	10:35:37	37.3	56.59	4.822	0.005	20.55	0.50	41.10	
10/7/2003	10:35:39	39.5	56.59	4.822	0.005	20.58	0.53	38.59	
10/7/2003	10:35:41	41.8	56.59	4.822	0.005	20.62	0.57	36.38	
10/7/2003	10:35:44	44.3	56.57	4.822	0.005	20.67	0.62	33.51	
10/7/2003	10:35:46	46.9	56.57	4.822	0.005	20.70	0.65	31.85	
10/7/2003	10:35:49	49.7	56.57	4.822	0.005	20.75	0.70	29.64	
10/7/2003	10:35:52	52.6	56.55	4.822	0.005	20.80	0.75	27.73	
10/7/2003	10:35:55	55.7	56.55	4.824	0.003	20.85	0.80	26.06	
10/7/2003	10:35:59	59	56.53	4.822	0.005	20.92	0.87	24.13	
10/7/2003	10:36:02	62.5	56.53	4.824	0.003	20.97	0.92	22.87	
10/7/2003	10:36:06	66.2	56.5	4.823	0.004	21.03	0.98	21.39	
10/7/2003	10:36:10	70.1	56.5	4.825	0.002	21.10	1.05	20.10	
10/7/2003	10:36:14	74.3	56.48	4.823	0.004	21.17	1.12	18.96	
10/7/2003	10:36:18	78.7	56.48	4.823	0.004	21.23	1.18	17.94	
10/7/2003	10:36:23	83.4	56.46	4.825	0.002	21.32	1.27	16.83	
10/7/2003	10:36:28	88.4	56.46	4.825	0.002	21.40	1.35	15.85	
10/7/2003	10:36:33	93.7	56.44	4.823	0.004	21.48	1.43	14.99	
10/7/2003	10:36:39	99.3	56.44	4.825	0.002	21.58	1.53	14.08	
10/7/2003	10:36:45	105.2	56.41	4.825	0.002	21.68	1.63	13.28	
10/7/2003	10:36:51	111.5	56.41	4.825	0.002	21.78	1.73	12.57	
10/7/2003	10:36:58	118.1	56.39	4.826	0.001	21.90	1.85	11.84	
10/7/2003	10:37:05	125.1	56.37	4.824	0.003	22.02	1.97	11.19	
10/7/2003	10:37:12	132.6	56.37	4.828	-0.001	22.13	2.08	10.62	
10/7/2003	10:37:20	140.5	56.35	4.824	0.003	22.27	2.22	10.05	
10/7/2003	10:37:28	148.9	56.32	4.824	0.003	22.40	2.35	9.53	
10/7/2003	10:37:37	157.8	56.32	4.824	0.003	22.55	2.50	9.02	
10/7/2003	10:37:47	167.2	56.3	4.827	0.000	22.72	2.67	8.52	
10/7/2003	10:37:57	177.2	56.3	4.827	0.000	22.88	2.83	8.08	
10/7/2003	10:38:07	187.8	56.28	4.827	0.000	23.05	3.00	7.68	

Well No. **SEA-608**

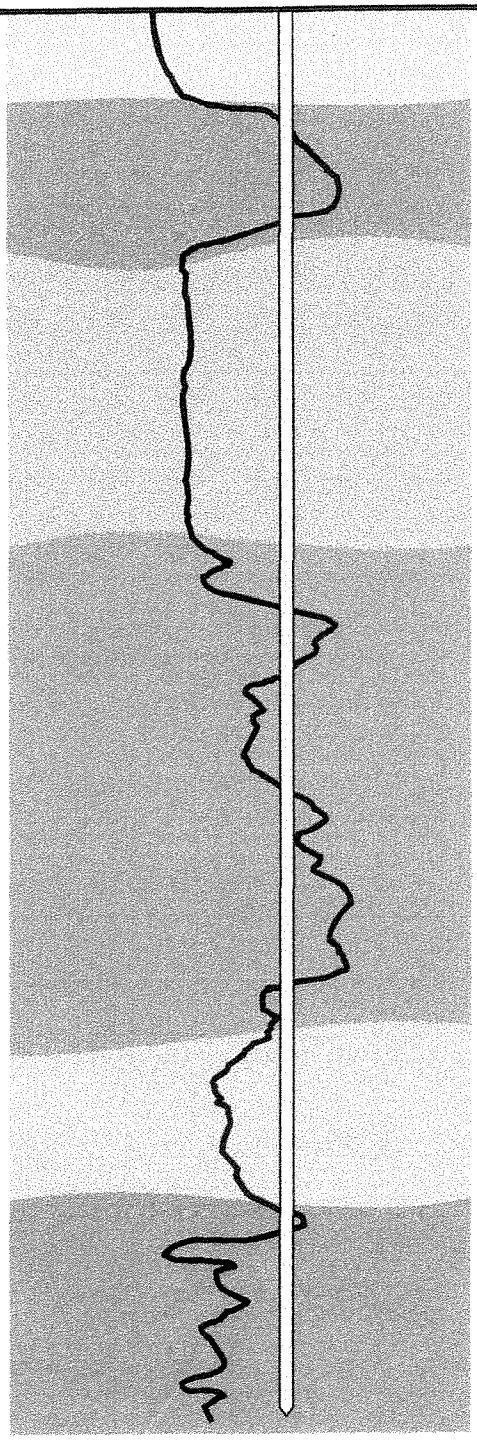
Date	Time	Test Time Elapsed Sec	Temp-erature oF	Depth Below SWL Ft	Draw-down Ft	Time Since Pump Start t min	Time Since Pump Stop t' min	t/t'	Comments
10/7/2003	10:38:19	199	56.28	4.827	0.000	23.25	3.20	7.27	
10/7/2003	10:38:30	210.9	56.26	4.827	0.000	23.43	3.38	6.93	
10/7/2003	10:38:43	223.5	56.26	4.827	0.000	23.65	3.60	6.57	
10/7/2003	10:38:56	236.8	56.23	4.825	0.002	23.87	3.82	6.25	
10/7/2003	10:39:10	250.9	56.23	4.827	0.000	24.10	4.05	5.95	
10/7/2003	10:39:25	265.8	56.23	4.827	0.000	24.35	4.30	5.66	
10/7/2003	10:39:41	281.6	56.21	4.827	0.000	24.62	4.57	5.39	
10/7/2003	10:39:58	298.4	56.21	4.827	0.000	24.90	4.85	5.13	
10/7/2003	10:45:00								DTW = 13.22 at 10:45

Appendix F2 Geotechnical Tests - Field



CONETEC

Geotechnical and Environmental In Situ Testing Contractors



ConeTec Field Report

Presentation of CPTU Test Results for:

Peterson/Puritan OU2 Superfund Site Cumberland, Rhode Island

Presented to:	Shield Environmental
Date:	September 18, 2003
Presented by:	ConeTec Inc. 436 Commerce Lane, Unit C West Berlin, NJ 08091 (856) 767-8600

PRESENTATION OF IN SITU TESTING PROGRAM RESULTS

Peterson/Puritan OU2 Superfund Site
Cumberland, RI

September 9 and 10, 2003

Prepared for:

Shield Environmental Associates Inc.
Charlotte, NC

Prepared by:

ConeTec Inc.
West Berlin, NJ

September 18, 2003

TABLE OF CONTENTS

1.0 INTRODUCTION. 3

2.0 FIELD EQUIPMENT AND PROCEDURES 4

2.1 CONE PENETRATION TESTING 4
2.2 PORE PRESSURE DISSIPATION TESTS 6

3.0 CONE PENETRATION TEST DATA AND INTERPRETATION 8

3.1 ANALYSIS OF PIEZOCONE DATA - GENERAL 8
3.2 CONE PLOTS 9
3.3 PORE PRESSURE DISSIPATION TEST RESULTS 9
3.4 DATA PROCESSING 10
3.5 DATA DISK 10

4.0 REFERENCES 11

TABLES

TABLE 1 Summary of CPTU Soundings

FIGURES

FIGURE 1 Typical Cone Penetrometer
FIGURE 2 Typical Dissipation Tests

APPENDICES

APPENDIX A CPT Plots
APPENDIX B Data Interpretation
APPENDIX C Dissipation Tests
APPENDIX D Data Diskette

1.0 INTRODUCTION

This report presents the results of a cone penetrometer testing (CPT) program carried out at the Peterson/Puritan OU2 Superfund Site located in Cumberland, RI. The work was performed for Shield Environmental Associates, Inc. The CPT program took place during a single day on September 10th, 2003, (site orientation and preparatory work were completed on September 9th) when a total of 11 soundings were completed at nine different sounding locations. The CPT testing was performed in areas near the base of the landfill as well as through the top central portion of the waste.

CPT sounding locations were selected and numbered under the direction and supervision of Shield Environmental Associates personnel (Mr. John Long). Final survey data of the CPT sounding locations were provided by Shield Environmental.

2.0 FIELD EQUIPMENT AND PROCEDURES

2.1 CONE PENETRATION TESTING

The cone penetrometer tests were carried out using an integrated electronic piezo cone manufactured by ConeTec in Vancouver, Canada. The piezo cone used was a compression model cone penetrometer with a 15 cm^2 tip and a 225 cm^2 friction sleeve. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85. The piezo cone dimensions and the operating procedure were in accordance with ASTM Standard D-3441. A diagram of the cone penetrometer used for this project is shown as Figure 1.

Pore pressure filter elements, made of porous plastic, were saturated under a vacuum using glycerin as the saturating fluid. The pore pressure element was six millimeters thick and was located immediately behind the tip (the U_2 location) for all soundings.

The cone was advanced using a 25 ton, unitized, truck-mounted cone penetration rig. The following data were recorded onto magnetic media every five centimeters (approximately every two inches) as the cone was advanced into the ground:

- Tip Resistance (Qc)
- Sleeve Friction (Fs)
- Dynamic Pore Pressure (Ut)

The field data recorded is included on the attached diskette (appendix D).

Before each sounding a complete set of analog baseline readings are taken with a multi-meter and compared with the digitized value on the computer screen. This provides a check on the analog to digital conversion board.

Evaluation of the analog baselines is key to consistent readings. The baseline data should be stable and should not wander excessively during the course of a sounding. Baseline data can be used to apply corrections to the cone data where necessary. For this project, the baseline shift from sounding to sounding was small, typically less than 0.1% of full scale, and no data corrections were applied.

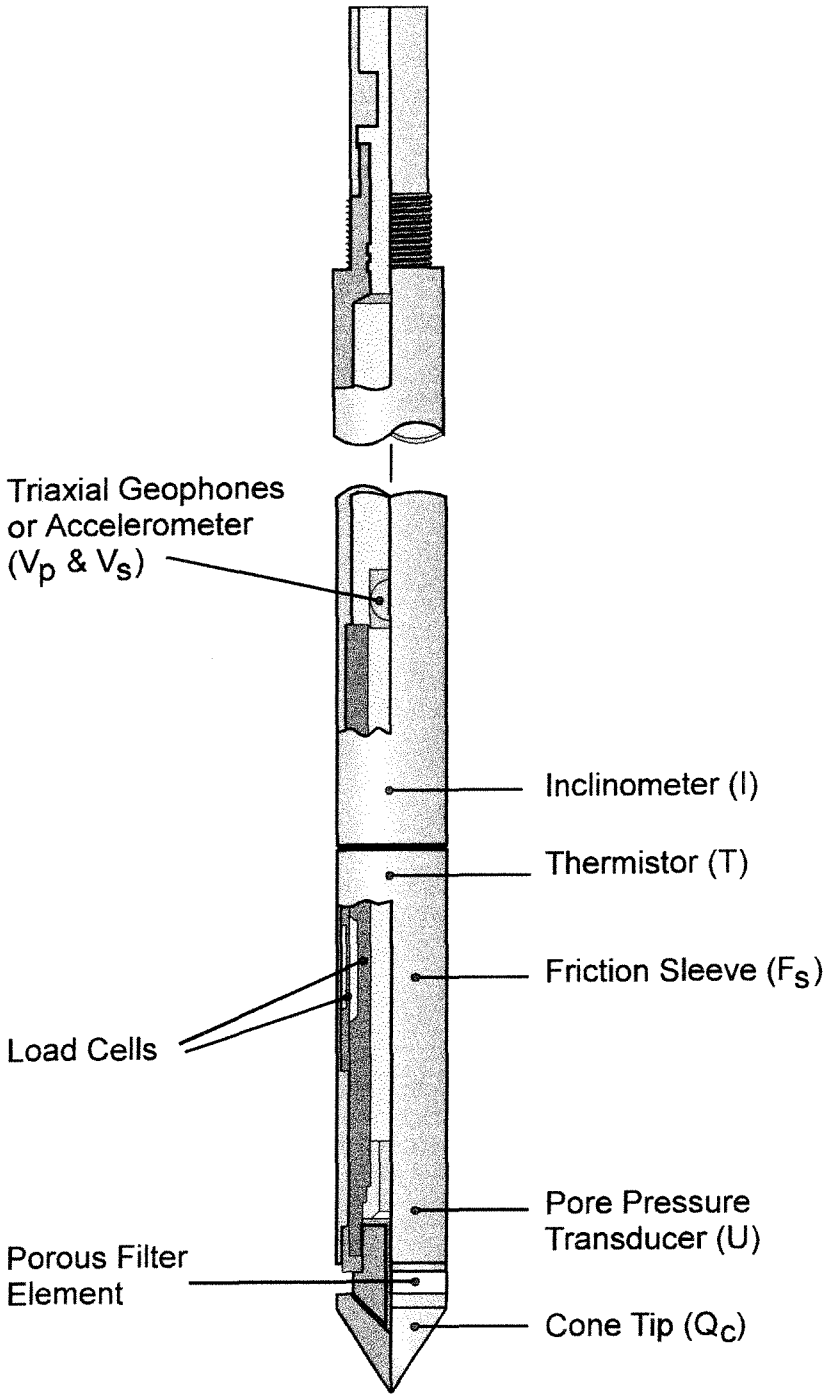


FIGURE 1 - TYPICAL CONE PENETROMETER

2.2 PORE PRESSURE DISSIPATION TESTS

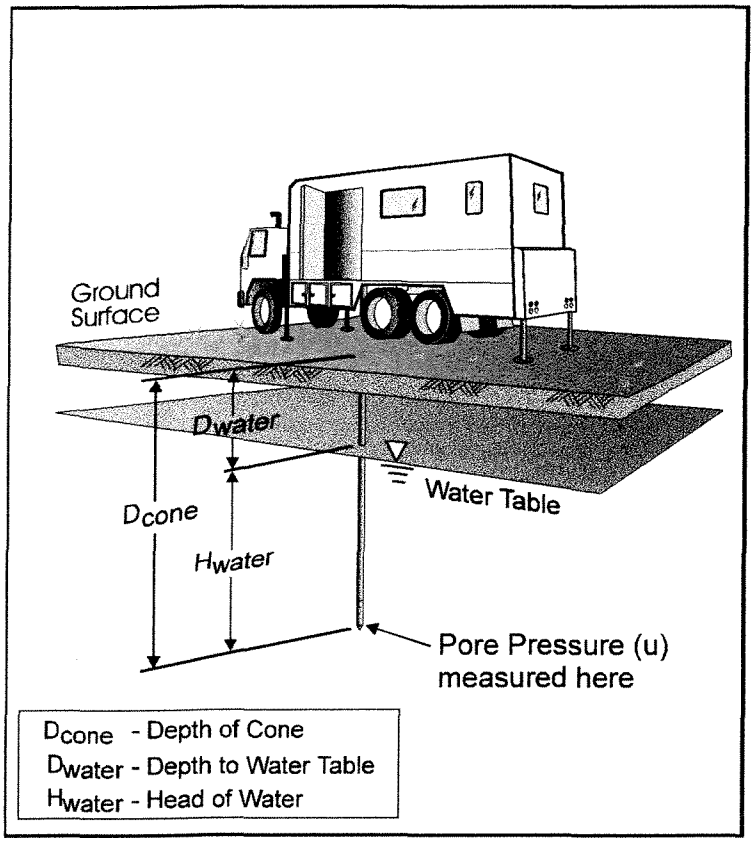
When cone penetration is stopped, the piezo cone essentially becomes a piezometer. While stopped, pore water pressures are automatically recorded at five-second intervals and the readings are stored in a dissipation file (.ppd). Dissipation data can then be plotted onto a dissipation curve consisting of pore water pressure (U) verses time (t). The shapes of dissipation curves are very useful in evaluating soil type, drainage and in situ static water level.

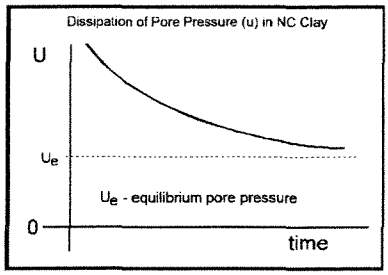
A flat curve that stabilizes quickly (i.e. less than 30 seconds) is typical of a free draining sand. In this case, the final measured pore water pressure is the static in situ water pressure.

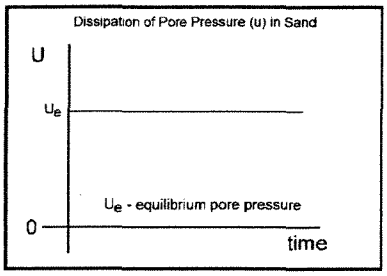
Soils that generate excess dynamic pore water pressure during penetration will dissipate this excess pressure when penetration stops. The shape of the dissipation curve and the time of dissipation can be used to estimate C_h, the coefficient of consolidation that can in turn be used to calculate K_h, the horizontal permeability.

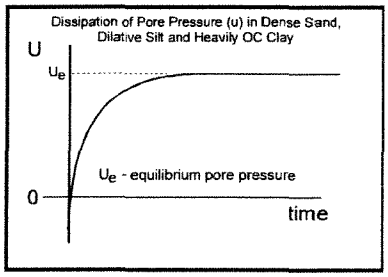
Figure 3 shows some idealized shapes of various pore water pressure dissipation curves. The reader is referred Robertson et. al., 1990 to reference dissipation test data analytical techniques.

Estimation of Ground Water Table from CPT Dissipation Tests









Water Table Calculation

$$D_{water} = D_{cone} - H_{water}$$

where $H_{water} = U_e$ (depth units)

Useful Conversion Factors:
1psi = 0.704m = 2.31 feet (water)
1tsf = 0.958 bar = 13.9 psi
1m = 3.28 feet

FIGURE 3 - TYPICAL DISSIPATION TESTS

3.0 CONE PENETRATION TEST DATA AND INTERPRETATION

3.1 ANALYSIS OF PIEZOCONE DATA - GENERAL

A total of 11 CPT soundings, involving approximately 355 feet of testing, were completed at nine locations.

The interpretation of cone data is based on the relationship between cone bearing, Qc, sleeve friction, Fs, and penetration pore water pressure, U. The friction ratio, Rf , (sleeve friction divided by cone bearing) is a calculated parameter which is used to infer soil behavior type. Generally, saturated cohesive soils have low tip resistance, high friction ratios and generate large excess pore water pressures. Cohesionless soils have higher tip resistances, lower friction ratios and do not generate significant excess pore water pressure.

The interpretation of soils encountered on this project was carried out using correlations developed by Robertson et al., 1986. It should be noted that it is not always possible to clearly identify a soil type based on Qc, Fs and Ut. Occasionally soils will fall within different soil categories on the classification charts. In these situations, experience and judgment and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type. Computer tabulations of the interpreted soil types along with certain other geotechnical parameters for each cone hole is presented in Appendix B.

Each of the parameters measured in the sounding is discussed briefly below. A detailed explanation of CPTU testing and interpretation of the results can be found in "Guidelines for Geotechnical Design Using CPT and CPTU" by P. K. Robertson and R. G. Campanella, listed in the references.

TIP RESISTANCE (Q_c): The resistance to penetration, measured at the cone tip, provides an accurate profile of subsurface strata. The recorded tip resistance is a composite of the penetration resistance of the soils located five to ten cone diameters (7 to 14 inches) in front of and behind the tip. The actual resistance "sensed" by the tip depends on the soil properties and on the relative stiffness of the layers encountered. Tip resistance is often corrected for pore pressure effects when testing in soft saturated cohesive soils.

For this project the correction was made and the tip resistance shown, Q_t is the corrected tip resistance.

The correction used is: $Q_t = Q_c + (1+a)U$

Where:
Q_t = corrected tip resistance
Q_c = measured tip resistance
a = net area ratio for cone (0.85 for this project)
U = dynamic pore water pressure measured behind tip

SLEEVE FRICTION (F_s) The resistance recorded on the friction sleeve, is a measure of the remolded strength of the soil. Values of sleeve friction in very soft soils (such as peat) may fluctuate due to the measured force being small relative to the capacity of the measuring load cell.

FRICTION RATIO (R_f) The ratio of sleeve friction to tip resistance expressed as a percentage, is an indicator of soil type. Cohesive soils generally have friction ratios that are greater than two, while sands and non-plastic silts have friction ratios that are lower than two.

PORE PRESSURE (U) Dynamic pore water pressure is measured during penetration. (dynamic pore water pressure data can be found in the .cor, .ifi (importable) and .ifp (printable) files). Static pore water pressure is measured when cone penetration is stopped (static pore water pressure data can be found in the .ppd files). The measured dynamic pore water pressure changes with the location of the porous filter and negative readings are possible when the filter is located behind the tip.

It is important to note that the CPT classifies soil by physical behavior, not by grain size; therefore, the CPT classification should be verified against samples obtained from a conventional drilling program. While the CPT soil classification may not always be accurate in terms of the actual label it applies to a particular soil, it is very accurate in grouping soils with similar mechanical properties.

Table 1 presents a summary of CPT soundings, including sounding depths.

3.2 CONE PLOTS

The data from each sounding was plotted using the computer program ScreenZ. The plots are included in Appendix A. ScreenZ was developed by ConeTec Inc. and it incorporates soil behavior type (SBT) classification as part of the plot. The soil classification is based on the classification chart reproduced chart in Appendix B.

3.3 PORE PRESSURE DISSIPATION TEST RESULTS

When conducting CPT investigations, pore water pressure dissipations are automatically recorded during pauses in penetration. The pore water pressure data is recorded at five second intervals. Dynamic and static pore pressure dissipation data for each CPT is included on the data disk. A total of eight dissipation tests, involving a total of 0.5 hours of testing, were completed during this project. These tests were performed to confirm water table depths at certain locations. The water depths were used in the data interpretations.

3.4 DATA PROCESSING

The electronic data files were processed using the program ScreenZ. ScreenZ is a program developed by ConeTec to calculate common engineering parameters from CPT data. The processed data files are attached in Appendix B. The files are also included on the data disk. For this project, the depth to ground water was determined from data provided by the dissipation test results. The exact depth used (Table 1) is noted in the header of each file.

3.5 DATA DISK

One data disk is included in Appendix C. The disk includes all of the CPT (.cor files, includes dynamic pore water pressure data), static pore water pressure (.ppd files) and tabular data (.tbl files).

5.0 REFERENCES

Robertson, P.K. and Campananella, R.G., 1989, "Guidelines for Geotechnical Design using CPT and CPTU", Soil Mechanics Series No. 120, The University of British Columbia.

Robertson, P.K., Sully, J., Woeller, D.G., Lunne, T., Powell, J.M., and Gillespie, D.J., 1990, "Guidelines for Interpretation of CPTU Test Data for determination of consolidation and permeability Parameters for Soils, Report prepared by ConeTec Investigations Ltd. for Energy Mines and Resources, Contract No. 23420-9-m644/01-OSC (copies available from ConeTec, Inc.).

APPENDIX A

TABLE 1 - SUMMARY OF CPT SOUNDINGS

ConeTec Inc.
Job No.: 03-760
Location: Peterson/Puritan OU2 Superfund Site, Cumberland, RI
Client: Sheild Environmental Associates, Inc.
Date: September 9th and 10th, 2003

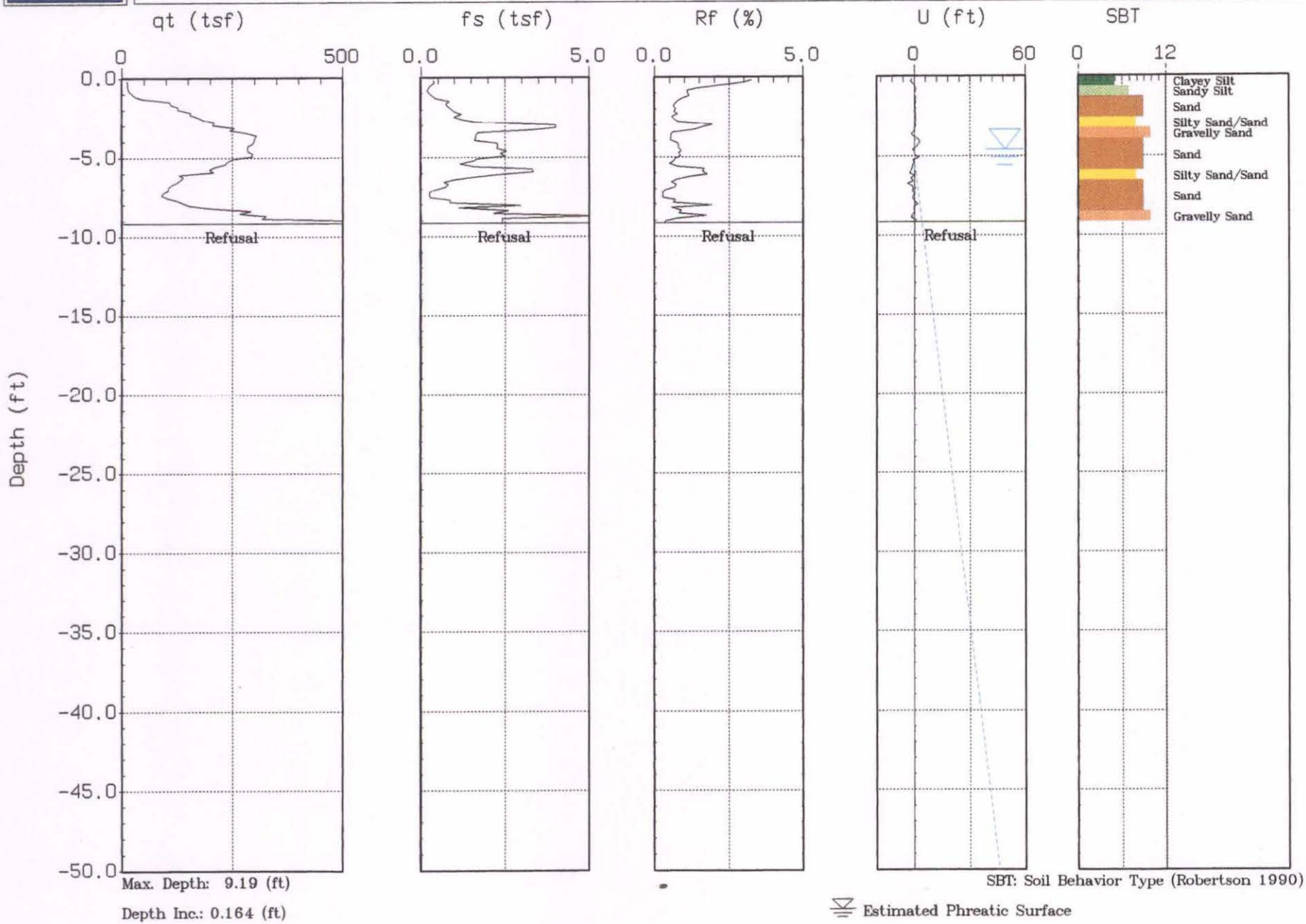
Date	CPTU Sounding	File Name	Sounding Depth (ft)	Dissipation Tests (sec)	Est. Water Table Depth (ft)	Dissipation Test Depth (ft)	Comments
10-Sep-03	CPT-1	760CP001	9.19	440	4.6	9.19	Refusal
10-Sep-03	CPT-1A	760CP01A	40.03	145	4.7	40.03	
10-Sep-03	CPT-2	760CP002	37.07	80	5.0	37.07	Refusal
10-Sep-03	CPT-3	760CP003	49.70				Refusal
10-Sep-03	CPT-4	760CP004	45.44				Refusal
10-Sep-03	CPT-5	760CP005	1.64				Refusal
10-Sep-03	CPT-5A	760CP05A	13.62				Refusal
10-Sep-03	CPT-6	760CP006	45.11	155	23.4	27.89	
10-Sep-03	CPT-7	760CP007	39.86	360	14.1	32.48	Refusal
				80	15.3	39.86	
10-Sep-03	CPT-8	760CP008	40.03	110	3.5	12.96	
10-Sep-03	CPT-9	760CP009	33.30	420	29.0	33.30	Refusal
	11		354.99	1,790			
				0.50	Hours		

CONETEC

Shield Environmental

Site: CPT-1
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 09:32



Max. Depth: 9.19 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

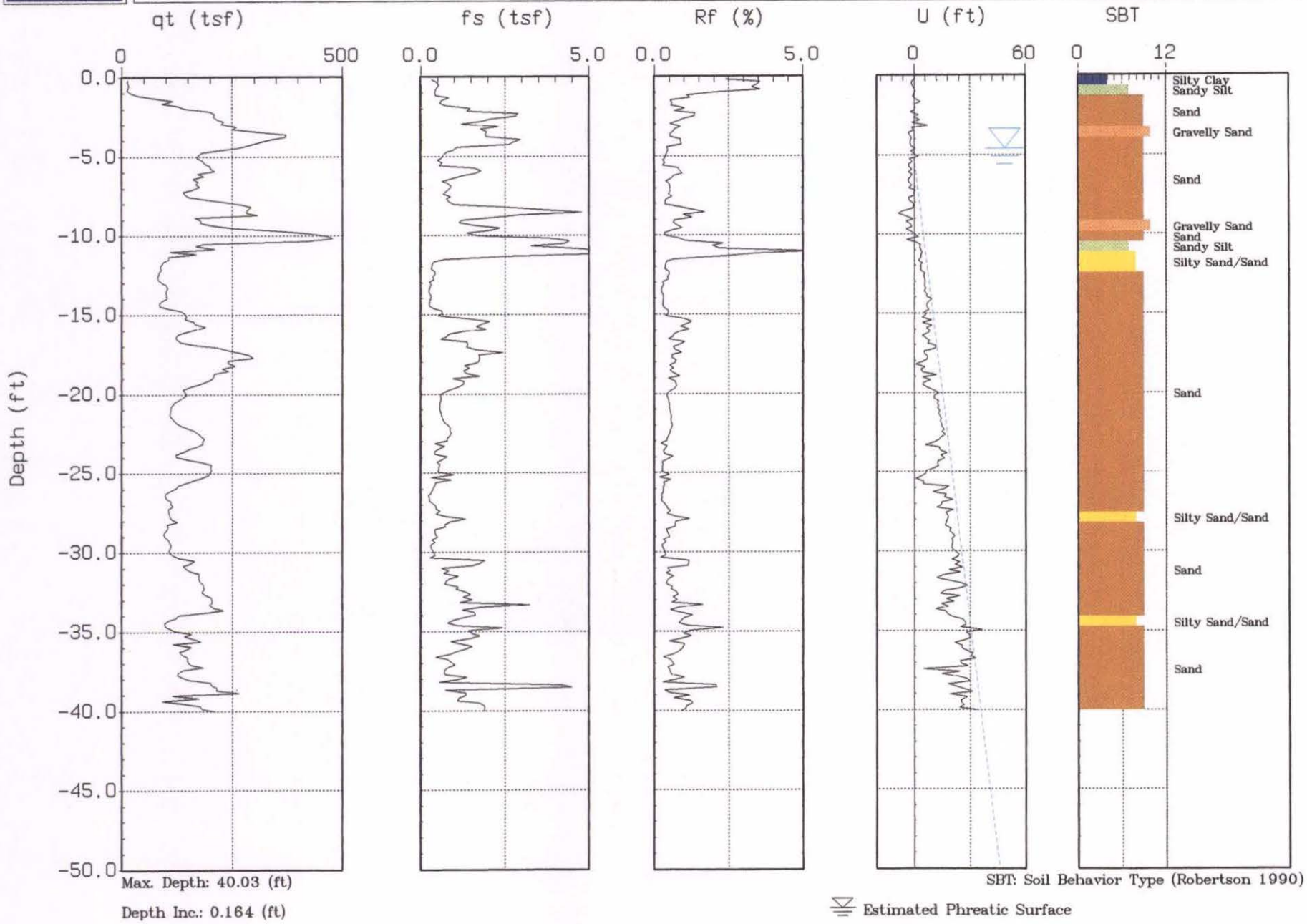
Estimated Phreatic Surface

CONETEC

Shield Environmental

Site: CPT-1A
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 09:57



Max. Depth: 40.03 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

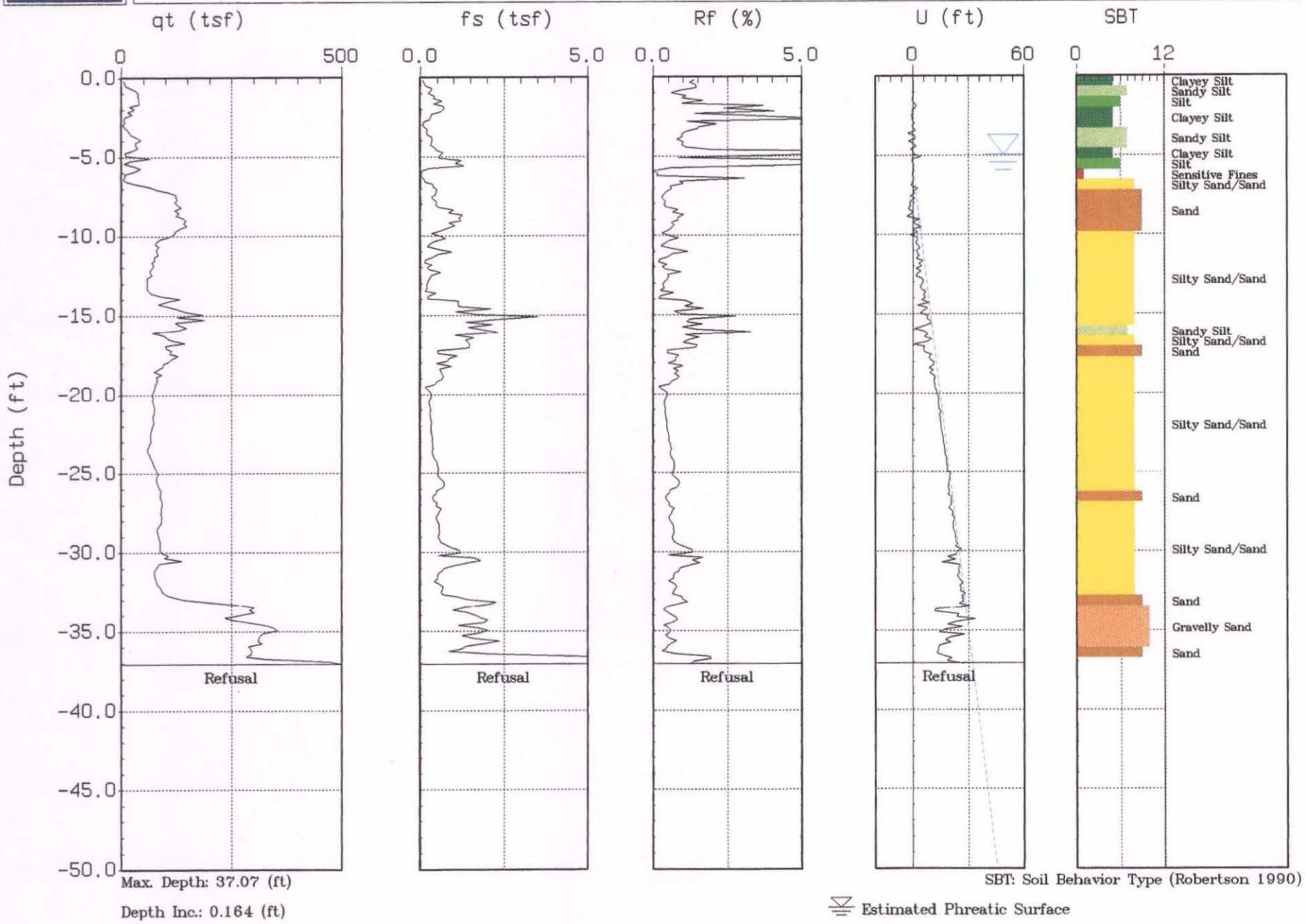
Estimated Phreatic Surface

CONETEC

Shield Environmental

Site: CPT-2
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 10:50



Max. Depth: 37.07 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

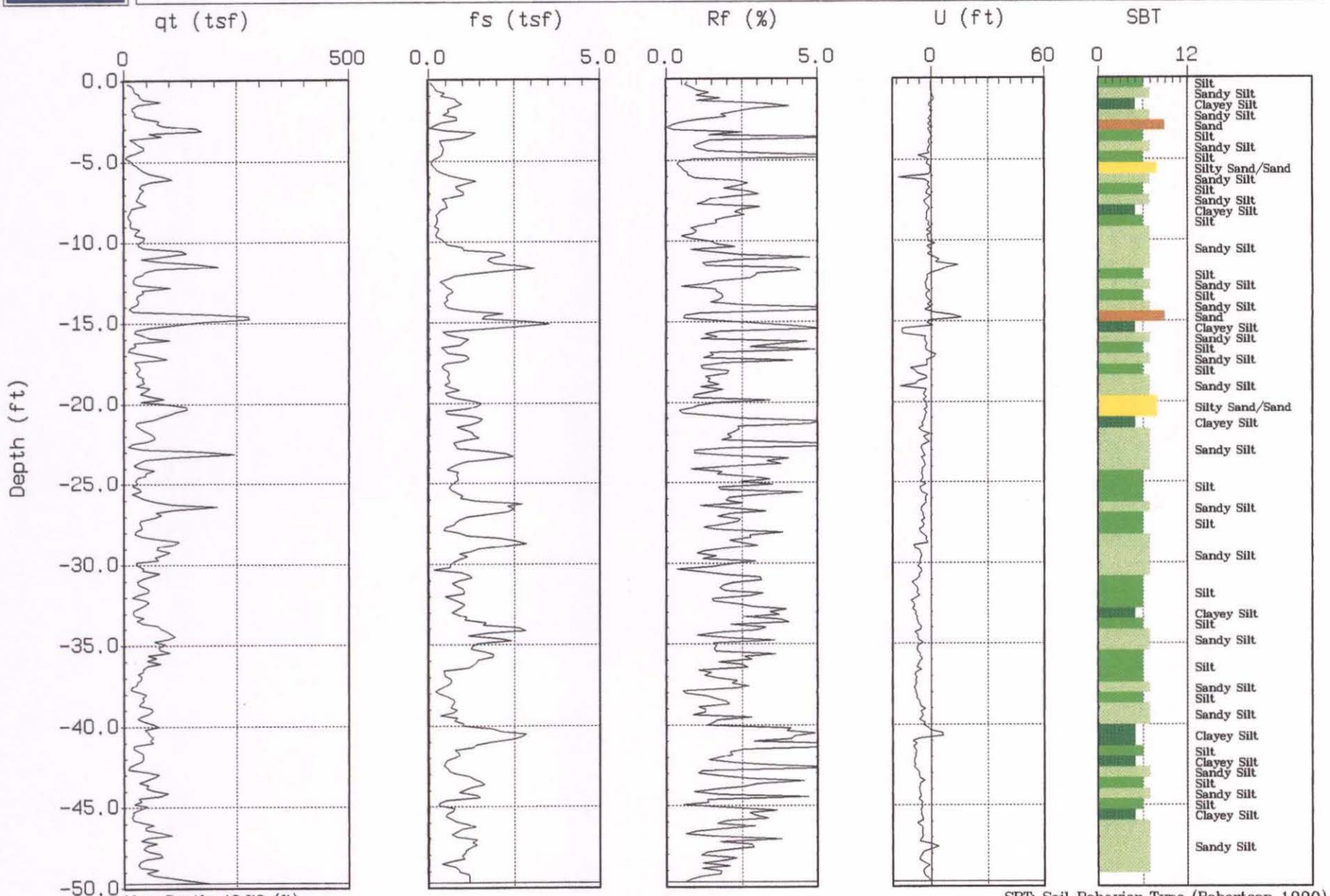
Estimated Phreatic Surface

CONETEC

Shield Environmental

Site: CPT-3
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 11:48



Max. Depth: 49.70 (ft)

Depth Inc.: 0.164 (ft)

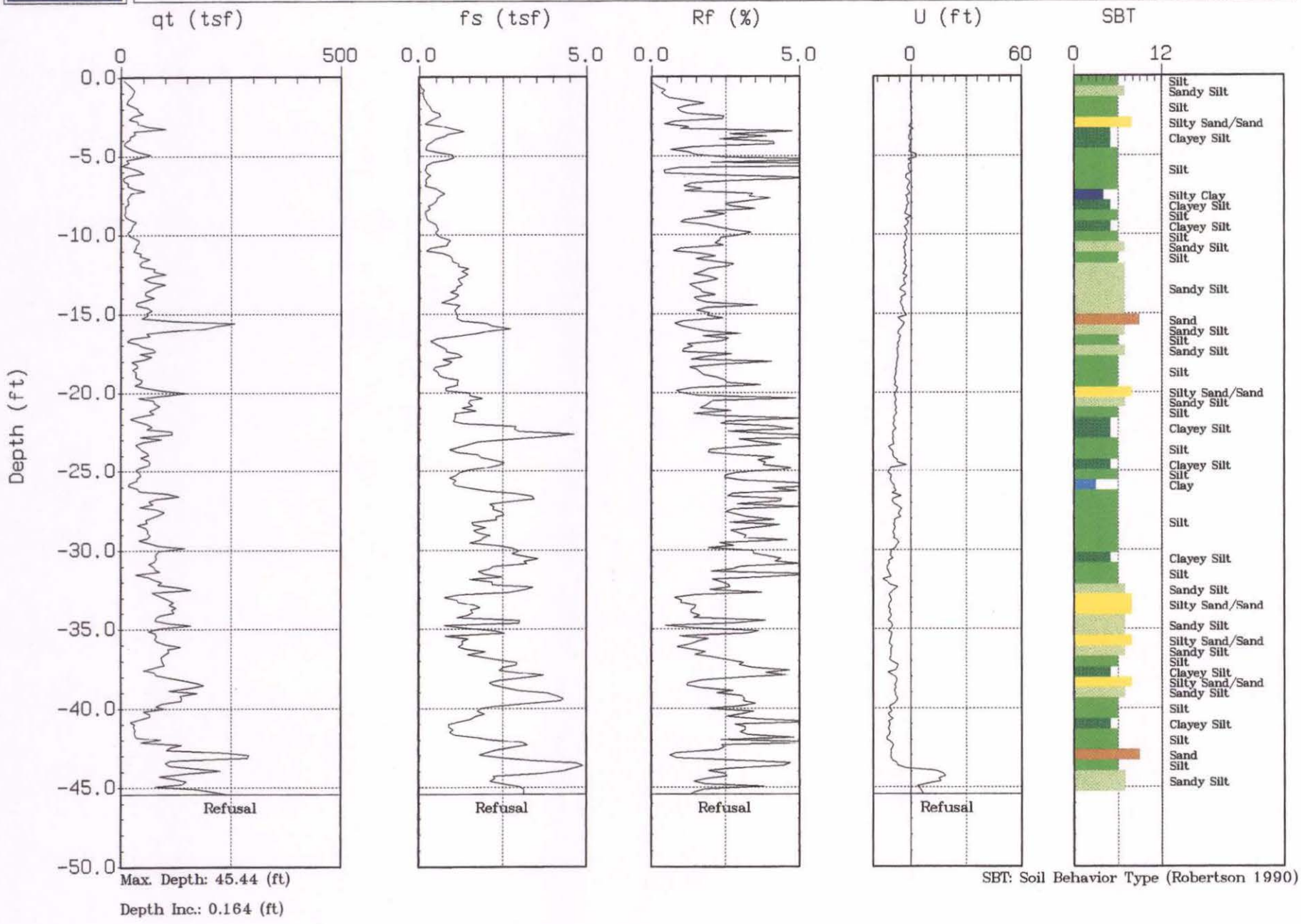
SBT: Soil Behavior Type (Robertson 1990)

CONETEC

Shield Environmental

Site: CPT-4
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 12:39



Max. Depth: 45.44 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

CONETEC

Shield Environmental

Site: CPT-5
Location: Peterson/Puritan

Cone: 20 TON A D139
Date: 09:10:03 13:35



Max. Depth: 1.97 (ft)

Depth Inc.: 0.164 (ft)

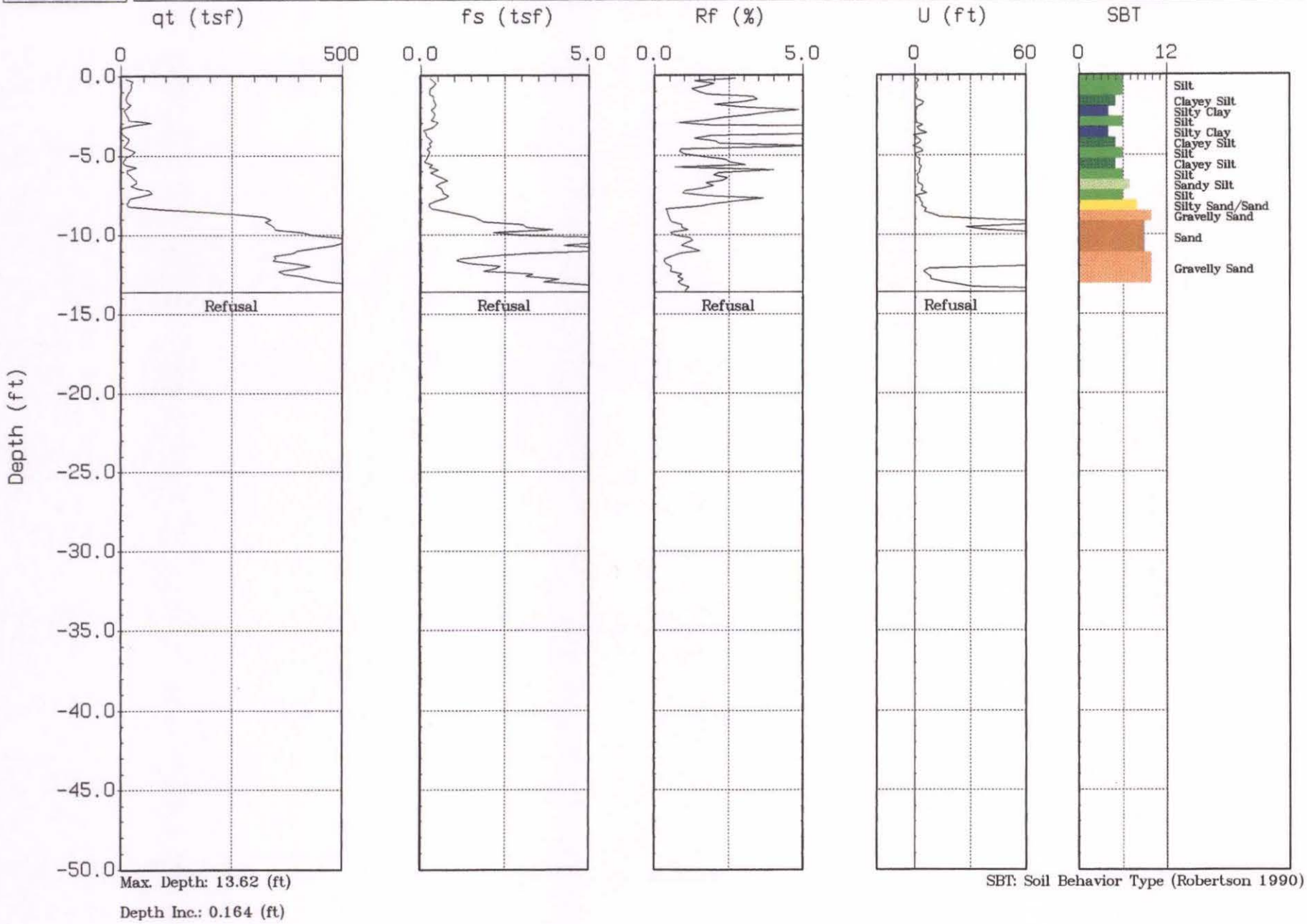
SBT: Soil Behavior Type (Robertson 1990)

CONETEC

Shield Environmental

Site: CPT-5A
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 13:43



Max. Depth: 13.62 (ft)

Depth Inc.: 0.164 (ft)

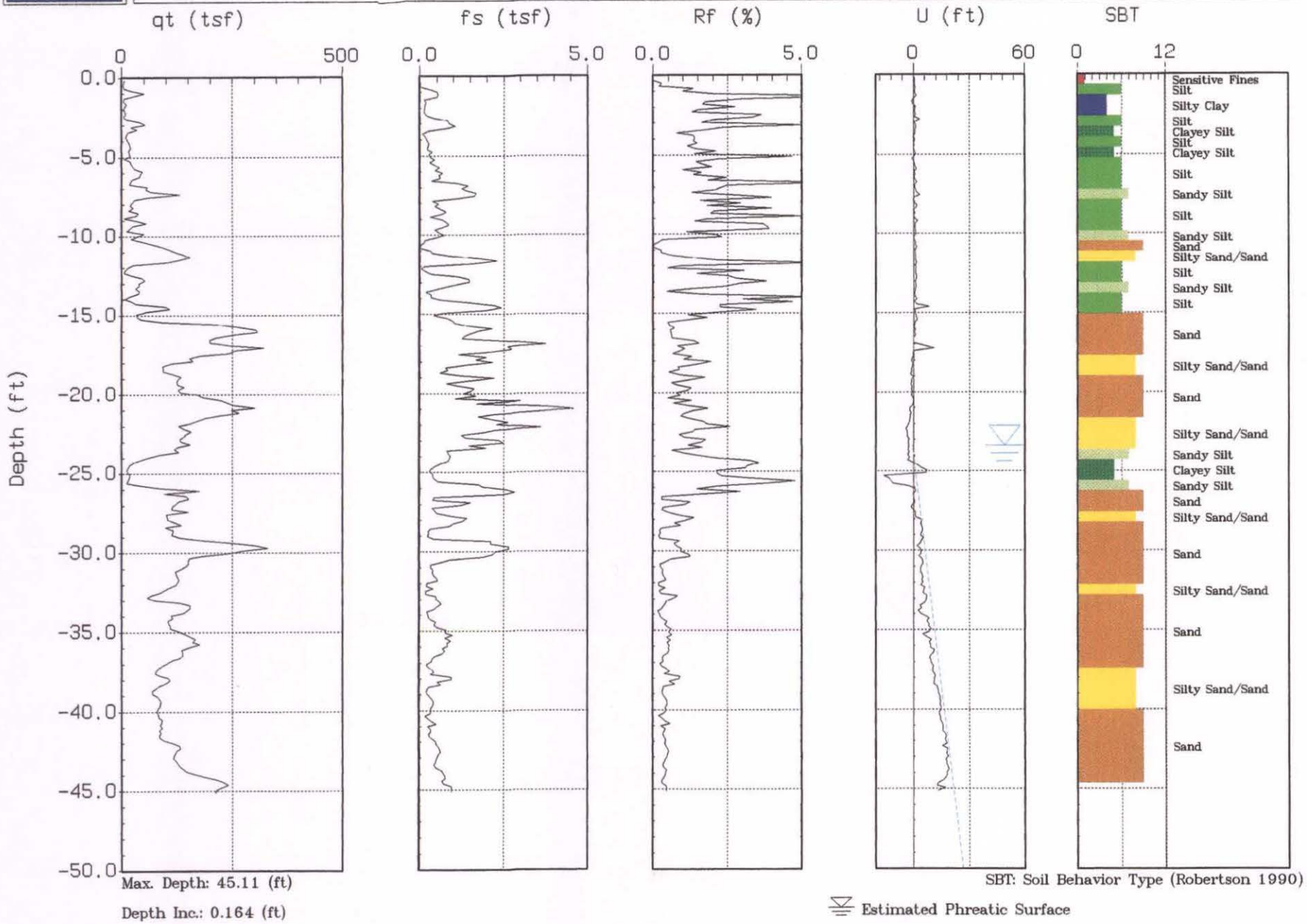
SBT: Soil Behavior Type (Robertson 1990)

CONETEC

Shield Environmental

Site: CPT-6
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 15:11



Max. Depth: 45.11 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

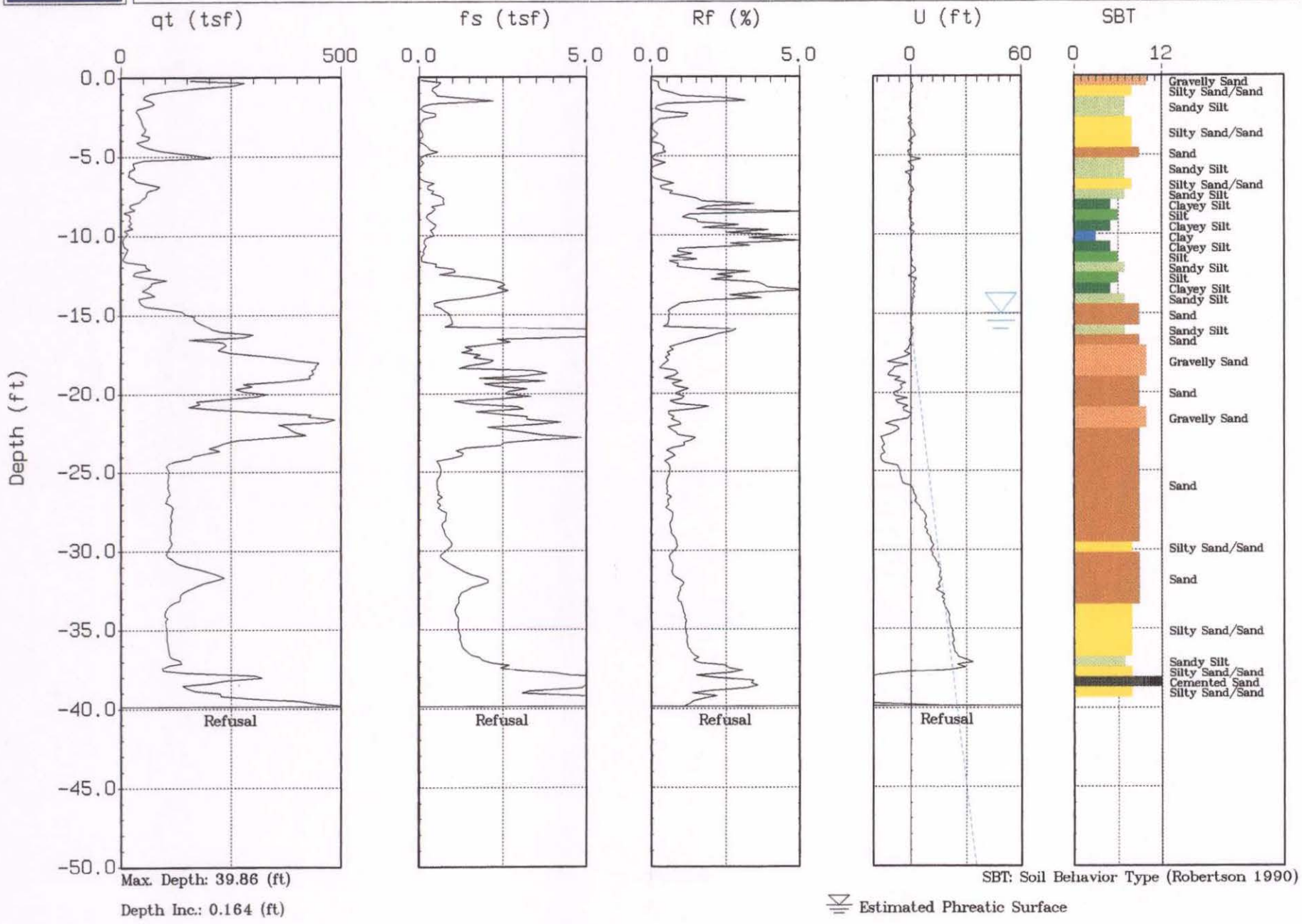
Estimated Phreatic Surface

CONETEC

Shield Environmental

Site: CPT-7
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 16:26



Max. Depth: 39.86 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

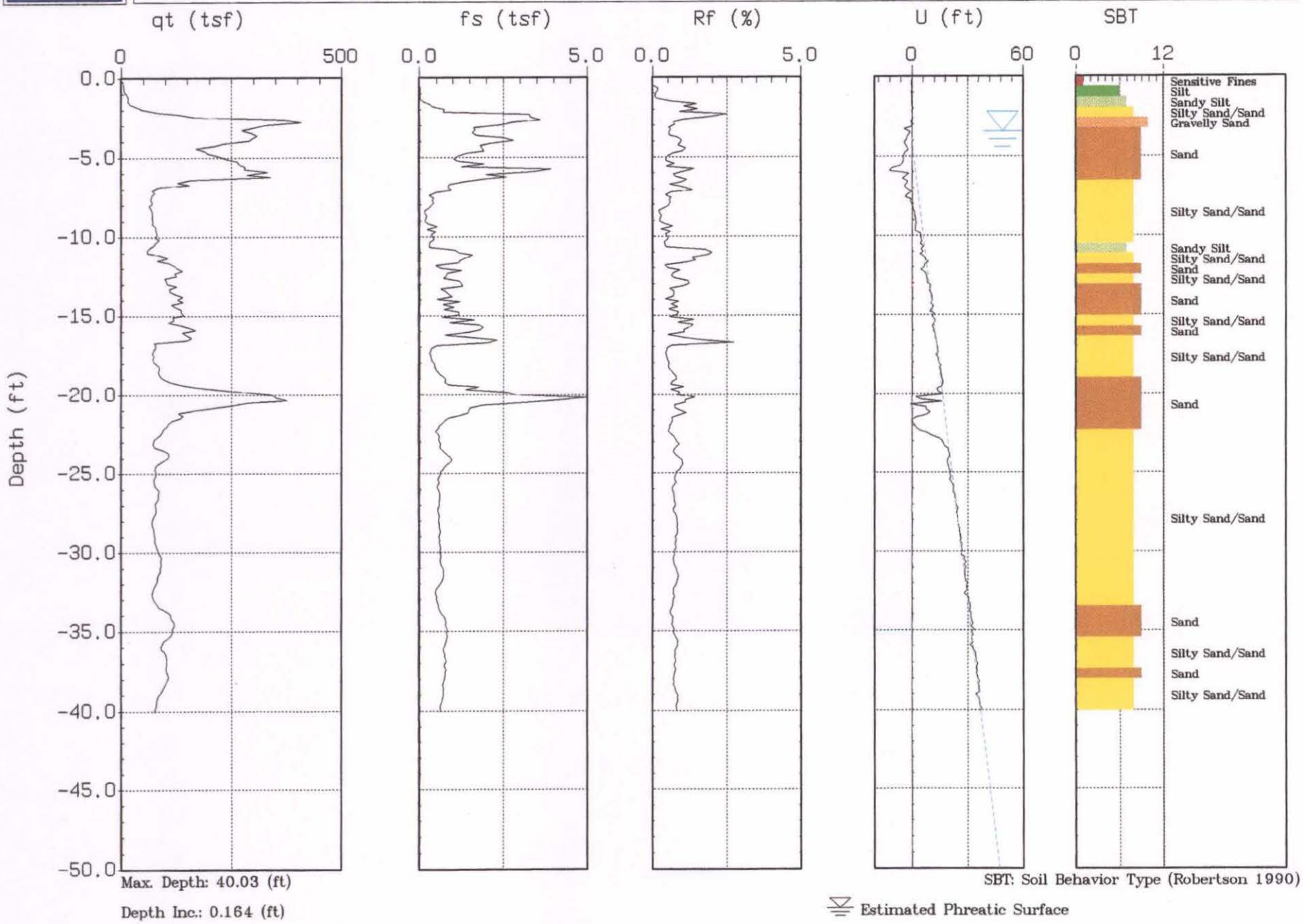
Estimated Phreatic Surface

CONETEC

Shield Environmental

Site: CPT-8
Location: Peterson/Puritan

Cone: 20 TON AD139
Date: 09:10:03 17:24

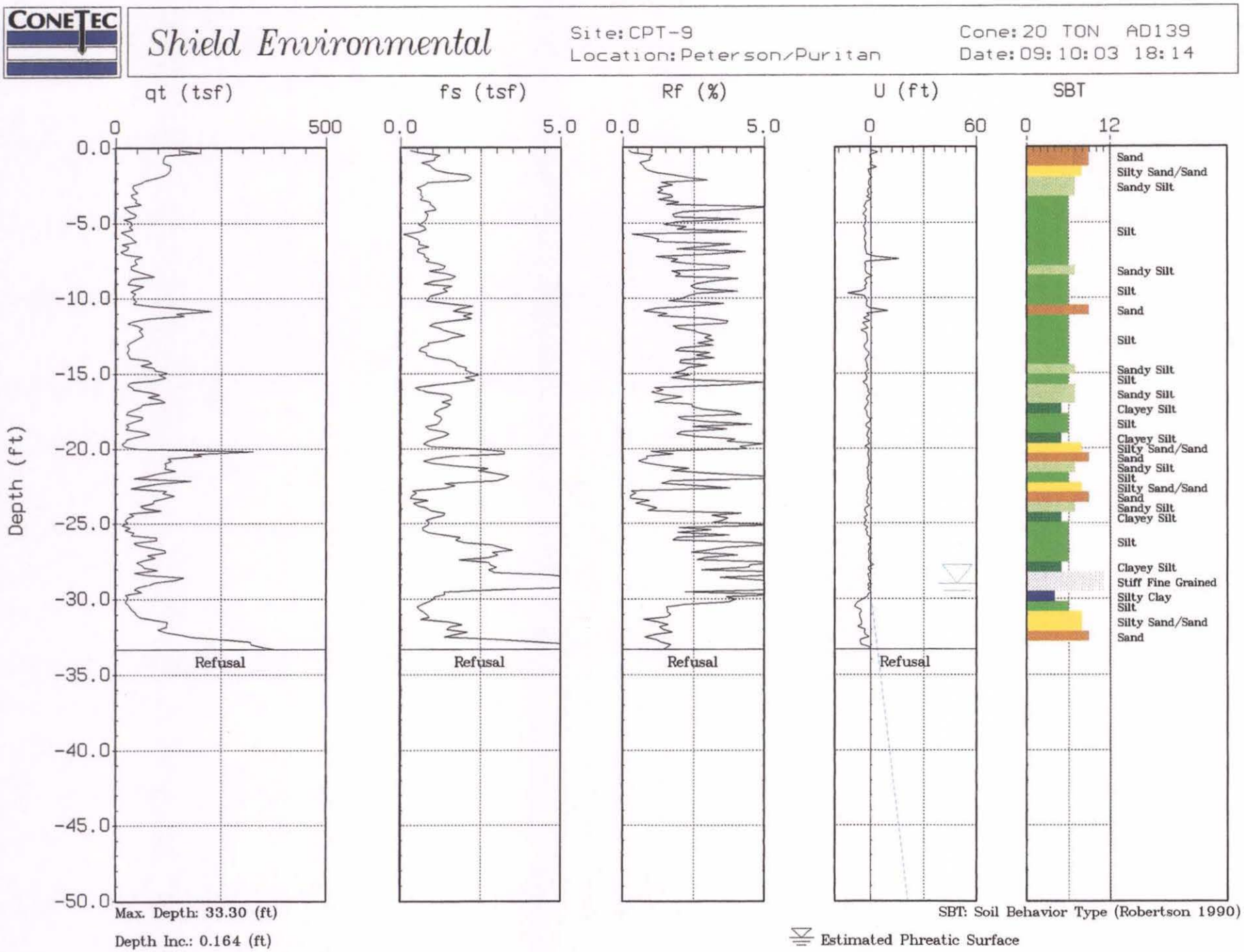


Max. Depth: 40.03 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Estimated Phreatic Surface


CONETEC
Shield Environmental
Site: CPT-9
Location: Peterson/Puritan
Cone: 20 TON AD139
Date: 09:10:03 18:14
qt (tsf)
fs (tsf)
Rf (%)
U (ft)
SBT
Depth (ft)
Refusal
Max. Depth: 33.30 (ft)
Depth Inc.: 0.164 (ft)
Sand
Silty Sand/Sand
Sandy Silt
Silt
Clayey Silt
Stiff Fine Grained
Silty Clay
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

APPENDIX B

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-1
Location: Peterson/Puritan
[illegible]: 20 TON AD139
[illegible]: 09:10:03 09:32

Water Table (m): 1.42 (ft): 4.65 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160 (blows/ft)	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	12.41	0.30	2.44	5	18.85	1.89	1.89	0.00	2.00	6.0	11.9	95.13	5.0E-06	8	630.74
2	0.30	0.98	29.16	0.30	1.04	7	18.85	5.66	5.66	0.00	2.00	9.3	18.7	0.00	5.0E-04	6	493.90
3	0.50	1.64	117.21	0.80	0.69	9	18.85	9.43	9.43	0.00	2.00	22.5	45.0	0.00	5.0E-02	0	1192.6
4	0.70	2.30	166.15	1.10	0.66	9	18.85	13.20	13.20	0.00	2.00	31.9	63.8	0.00	5.0E-02	0	1207.6
5	0.90	2.95	228.00	3.23	1.42	8	18.85	16.97	16.97	0.00	2.00	54.7	109.4	0.00	5.0E-03	0	1288.9
6	1.10	3.61	296.52	1.63	0.55	10	18.85	20.74	20.74	0.00	2.00	47.4	94.9	0.00	5.0E+00	0	1371.6
7	1.30	4.27	287.49	2.33	0.81	9	18.85	24.51	24.51	0.00	1.98	55.2	109.1	0.00	5.0E-02	0	1125.0
8	1.50	4.92	269.32	2.02	0.75	9	18.85	28.28	27.47	0.81	1.87	51.7	96.6	0.00	5.0E-02	7	940.23
9	1.70	5.58	211.70	2.34	1.10	9	18.85	32.05	29.28	2.77	1.81	40.6	73.5	0.00	5.0E-02	6	693.05
10	1.90	6.23	130.87	1.39	1.06	8	18.85	35.82	31.09	4.73	1.76	31.4	55.1	0.00	5.0E-03	6	403.02
11	2.10	6.89	104.08	0.53	0.51	9	18.85	39.59	32.89	6.70	1.71	20.0	34.1	0.00	5.0E-02	6	302.53
12	2.30	7.55	112.65	0.55	0.49	9	18.85	43.36	34.70	8.66	1.66	21.6	35.9	0.00	5.0E-02	6	310.38
13	2.50	8.20	227.39	2.20	0.97	9	18.85	47.13	36.51	10.62	1.62	43.7	70.7	0.00	5.0E-02	6	596.59
14	2.70	8.86	507.76	3.21	0.63	10	18.85	50.90	38.32	12.58	1.58	81.2	128.4	0.00	5.0E+00	0	1270.7

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-1A
Location: Peterson/Puritan
Cone: 20 TON AD139
[illegible]: 09:10:03 09:57

Water Table (m): 1.42 (ft): 4.65 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	14.00	0.44	3.18	4	18.85	1.89	1.89	0.00	2.00	9.0	17.9	107.39	5.0E-07	8	712.00
2	0.30	0.98	34.97	0.52	1.48	7	18.85	5.66	5.66	0.00	2.00	11.2	22.4	0.00	5.0E-04	6	592.55
3	0.50	1.64	119.25	0.83	0.69	9	18.85	9.43	9.43	0.00	2.00	22.9	45.8	0.00	5.0E-02	0	1213.4
4	0.70	2.30	207.97	2.28	1.10	9	18.85	13.20	13.20	0.00	2.00	39.9	79.9	0.00	5.0E-02	0	1511.8
5	0.90	2.95	241.51	1.76	0.73	9	18.85	16.97	16.97	0.00	2.00	46.4	92.7	0.00	5.0E-02	0	1365.4
6	1.10	3.61	346.25	2.19	0.63	10	18.85	20.74	20.74	0.00	2.00	55.4	110.8	0.00	5.0E+00	0	1601.8
7	1.30	4.27	271.39	1.84	0.68	9	18.85	24.51	24.51	0.00	1.98	52.1	103.0	0.00	5.0E-02	0	1062.0
8	1.50	4.92	176.46	0.62	0.35	9	18.85	28.28	27.47	0.81	1.87	33.9	63.3	0.00	5.0E-02	7	615.67
9	1.70	5.58	199.06	1.12	0.57	9	18.85	32.05	29.28	2.77	1.81	38.2	69.1	0.00	5.0E-02	7	651.61
10	1.90	6.23	172.32	1.09	0.63	9	18.85	35.82	31.09	4.73	1.76	33.1	58.1	0.00	5.0E-02	7	531.01
11	2.10	6.89	160.35	0.81	0.50	9	18.85	39.59	32.89	6.70	1.71	30.8	52.5	0.00	5.0E-02	7	466.75
12	2.30	7.55	178.11	0.77	0.43	9	18.85	43.36	34.70	8.66	1.66	34.2	56.8	0.00	5.0E-02	7	491.46
13	2.50	8.20	283.00	2.91	1.03	9	18.85	47.13	36.51	10.62	1.62	54.3	88.0	0.00	5.0E-02	6	742.80
14	2.70	8.86	207.23	1.84	0.89	9	18.85	50.90	38.32	12.58	1.58	39.8	62.9	0.00	5.0E-02	6	517.83
15	2.90	9.51	306.54	1.82	0.59	10	18.85	54.67	40.13	14.54	1.54	49.0	75.8	0.00	5.0E+00	7	731.98
16	3.10	10.17	386.99	3.54	0.91	9	18.85	58.44	41.94	16.51	1.51	74.3	112.3	0.00	5.0E-02	7	884.48
17	3.30	10.83	163.73	4.90	2.99	7	18.85	62.22	43.75	18.47	1.48	52.4	77.5	0.00	5.0E-04	8	357.88
18	3.50	11.48	99.11	0.98	0.98	8	18.85	65.99	45.55	20.43	1.45	23.8	34.5	0.00	5.0E-03	6	207.41
19	3.70	12.14	85.68	0.35	0.41	8	18.85	69.76	47.36	22.39	1.42	20.6	29.2	0.00	5.0E-03	6	172.19
20	3.90	12.80	88.22	0.31	0.35	9	18.85	73.53	49.17	24.35	1.40	16.9	23.6	0.00	5.0E-02	6	170.74
21	4.10	13.45	100.89	0.25	0.25	9	18.85	77.30	50.98	26.32	1.37	19.4	26.6	0.00	5.0E-02	6	188.47
22	4.30	14.11	90.55	0.26	0.28	9	18.85	81.07	52.79	28.28	1.35	17.4	23.4	0.00	5.0E-02	6	163.13
[illegible]	4.50	14.76	131.50	0.52	0.40	9	18.85	84.84	54.60	30.24	1.32	25.2	33.4	0.00	5.0E-02	6	229.66
	4.70	15.42	165.00	1.71	1.04	9	18.85	88.61	56.41	32.20	1.30	31.7	41.3	0.00	5.0E-02	6	279.25
25	4.90	16.08	140.77	1.18	0.84	9	18.85	92.38	58.22	34.16	1.28	27.0	34.7	0.00	5.0E-02	6	230.55
26	5.10	16.73	159.26	1.17	0.73	9	18.85	96.15	60.02	36.13	1.26	30.6	38.6	0.00	5.0E-02	6	253.11
27	5.30	17.39	273.14	1.88	0.69	9	18.85	99.92	61.83	38.09	1.24	52.4	65.3	0.00	5.0E-02	6	422.45
28	5.50	18.04	241.43	1.52	0.63	9	18.85	103.69	63.64	40.05	1.23	46.4	56.9	0.00	5.0E-02	6	362.56
29	5.70	18.70	215.33	1.32	0.61	9	18.85	107.46	65.45	42.01	1.21	41.3	50.0	0.00	5.0E-02	6	314.20
30	5.90	19.36	165.08	1.15	0.70	9	18.85	111.23	67.26	43.97	1.19	31.7	37.8	0.00	5.0E-02	6	233.97
31	6.10	20.01	139.32	0.62	0.44	9	18.85	115.00	69.07	45.94	1.18	26.8	31.5	0.00	5.0E-02	6	191.99
32	6.30	20.67	113.92	0.56	0.49	9	18.85	118.77	70.88	47.90	1.16	21.9	25.4	0.00	5.0E-02	6	152.63
33	6.50	21.33	111.81	0.62	0.55	9	18.85	122.55	72.68	49.86	1.15	21.5	24.6	0.00	5.0E-02	6	145.99
34	6.70	21.98	143.15	0.81	0.56	9	18.85	126.32	74.49	51.82	1.13	27.5	31.2	0.00	5.0E-02	6	182.79
35	6.90	22.64	179.78	0.82	0.46	9	18.85	130.09	76.30	53.78	1.12	34.5	38.7	0.00	5.0E-02	6	224.48
36	7.10	23.29	160.55	0.51	0.32	9	18.85	133.86	78.11	55.75	1.11	30.8	34.1	0.00	5.0E-02	6	195.60
37	7.30	23.95	144.72	0.57	0.39	9	18.85	137.63	79.92	57.71	1.09	27.8	30.4	0.00	5.0E-02	6	172.11
38	7.50	24.61	201.10	0.53	0.26	9	18.85	141.40	81.73	59.67	1.08	38.6	41.8	0.00	5.0E-02	7	234.49
39	7.70	25.26	171.95	0.65	0.38	9	18.85	145.17	83.54	61.63	1.07	33.0	35.4	0.00	5.0E-02	6	195.87
40	7.90	25.92	114.88	0.34	0.30	9	18.85	148.94	85.34	63.59	1.06	22.1	23.4	0.00	5.0E-02	6	127.47
41	8.10	26.57	104.54	0.26	0.25	9	18.85	152.71	87.15	65.56	1.05	20.1	21.0	0.00	5.0E-02	6	113.40
42	8.30	27.23	108.33	0.48	0.44	9	18.85	156.48	88.96	67.52	1.04	20.8	21.6	0.00	5.0E-02	6	115.14
43	8.50	27.89	111.60	0.91	0.81	8	18.85	160.25	90.77	69.48	1.03	26.8	27.5	0.00	5.0E-03	6	116.27
44	8.70	28.54	98.59	0.49	0.50	9	18.85	164.02	92.58	71.44	1.02	18.9	19.3	0.00	5.0E-02	6	100.46
45	8.90	29.20	105.44	0.37	0.35	9	18.85	167.79	94.39	73.40	1.01	20.2	20.4	0.00	5.0E-02	6	105.46
46	9.10	29.86	109.91	0.35	0.32	9	18.85	171.56	96.20	75.37	1.00	21.1	21.1	0.00	5.0E-02	6	107.91
47	9.30	30.51	146.32	1.36	0.93	9	18.85	175.33	98.00	77.33	0.99	28.1	27.8	0.00	5.0E-02	6	141.54
48	9.50	31.17	161.47	0.80	0.49	9	18.85	179.10	99.81	79.29	0.98	31.0	30.4	0.00	5.0E-02	6	153.50
49	9.70	31.82	180.00	0.85	0.47	9	18.85	182.88	101.62	81.25	0.97	34.6	33.6	0.00	5.0E-02	6	168.24
50	9.90	32.48	189.50	1.26	0.67	9	18.85	186.65	103.43	83.21	0.96	36.4	35.0	0.00	5.0E-02	6	174.08
51	10.10	33.14	202.59	1.91	0.95	9	18.85	190.42	105.24	85.18	0.95	38.9	37.1	0.00	5.0E-02	6	182.99
52	10.30	33.79	167.38	1.41	0.84	9	18.85	194.19	107.05	87.14	0.95	32.1	30.4	0.00	5.0E-02	6	148.29
53	10.50	34.45	100.83	1.31	1.29	8	18.85	197.96	108.86	89.10	0.94	24.2	22.7	0.00	5.0E-03	6	87.10
	10.70	35.10	144.50	1.53	1.06	9	18.85	201.73	110.67	91.06	0.93	27.7	25.8	0.00	5.0E-02	6	123.53
[illegible]	10.90	35.76	148.58	1.21	0.82	9	18.85	205.50	112.47	93.02	0.92	28.5	26.3	0.00	5.0E-02	6	124.99
56	11.10	36.42	140.53	0.78	0.55	9	18.85	209.27	114.28	94.99	0.92	27.0	24.7	0.00	5.0E-02	6	116.22
57	11.30	37.07	156.74	0.85	0.54	9	18.85	213.04	116.09	96.95	0.91	30.1	27.3	0.00	5.0E-02	6	127.78
58	11.50	37.73	134.89	0.96	0.71	9	18.85	216.81	117.90	98.91	0.90	25.9	23.3	0.00	5.0E-02	6	107.99
59	11.70	38.39	207.88	2.48	1.19	9	18.85	220.58	119.71	100.87	0.89	39.9	35.7	0.00	5.0E-02	6	164.86

60	11.90	39.04	161.25	1.22	0.76	9	18.85	224.35	121.52	102.83	0.89	31.0	27.5	0.00	5.0E-02	6	125.55
61	12.10	39.70	176.33	1.85	1.05	9	18.85	228.12	123.33	104.80	0.88	33.9	29.8	0.00	5.0E-02	6	135.41

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-2
Location: Peterson/Puritan
Cone: 20 TON AD139
e: 09:10:03 10:50

Water Table (m): 1.52 (ft): 5.00 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	10.99	0.15	1.39	5	18.85	1.89	1.89	0.00	2.00	5.3	10.6	84.28	5.0E-06	6	558.80
2	0.30	0.98	37.20	0.33	0.89	7	18.85	5.66	5.66	0.00	2.00	11.9	23.8	0.00	5.0E-04	6	630.46
3	0.50	1.64	31.55	0.60	1.89	6	18.85	9.43	9.43	0.00	2.00	12.1	24.2	241.54	5.0E-05	6	320.29
4	0.70	2.30	12.73	0.37	2.93	5	18.85	13.20	13.20	0.00	2.00	6.1	12.2	96.70	5.0E-06	5	91.59
5	0.90	2.95	7.81	0.11	1.47	5	18.85	16.97	16.97	0.00	2.00	3.7	7.5	58.59	5.0E-06	5	43.16
6	1.10	3.61	28.98	0.27	0.91	7	18.85	20.74	20.74	0.00	2.00	9.3	18.5	0.00	5.0E-04	6	133.16
7	1.30	4.27	31.03	0.37	1.20	7	18.85	24.51	24.51	0.00	1.98	9.9	19.6	0.00	5.0E-04	6	120.56
8	1.50	4.92	25.67	0.75	2.92	5	18.85	28.28	28.28	0.00	1.84	12.3	22.7	194.89	5.0E-06	5	86.14
9	1.70	5.58	27.04	0.65	2.39	6	18.85	32.05	30.32	1.73	1.78	10.4	18.5	205.07	5.0E-05	5	84.53
10	1.90	6.23	8.00	0.06	0.72	1	18.85	35.82	32.13	3.69	1.73	3.8	6.6	58.56	1.0E-07	5	22.78
11	2.10	6.89	72.25	0.41	0.57	8	18.85	39.59	33.94	5.65	1.68	17.3	29.1	0.00	5.0E-03	6	203.19
12	2.30	7.55	122.86	0.41	0.33	9	18.85	43.36	35.75	7.61	1.64	23.6	38.6	0.00	5.0E-02	7	328.72
13	2.50	8.20	127.89	0.70	0.55	9	18.85	47.13	37.56	9.57	1.60	24.6	39.2	0.00	5.0E-02	6	325.64
14	2.70	8.86	137.25	1.11	0.81	9	18.85	50.90	39.37	11.54	1.56	26.4	41.1	0.00	5.0E-02	6	333.41
15	2.90	9.51	130.70	0.68	0.52	9	18.85	54.67	41.18	13.50	1.53	25.1	38.3	0.00	5.0E-02	6	303.38
16	3.10	10.17	88.44	0.50	0.57	8	18.85	58.44	42.98	15.46	1.49	21.2	31.7	0.00	5.0E-03	6	196.17
17	3.30	10.83	81.54	0.54	0.66	8	18.85	62.22	44.79	17.42	1.46	19.6	28.6	0.00	5.0E-03	6	173.36
18	3.50	11.48	72.38	0.23	0.32	8	18.85	65.99	46.60	19.38	1.43	17.4	24.9	0.00	5.0E-03	6	147.69
19	3.70	12.14	67.11	0.35	0.52	8	18.85	69.76	48.41	21.35	1.41	16.1	22.7	0.00	5.0E-03	6	131.63
20	3.90	12.80	58.51	0.23	0.39	8	18.85	73.53	50.22	23.31	1.38	14.0	19.4	0.00	5.0E-03	6	110.38
21	4.10	13.45	69.15	0.25	0.37	8	18.85	77.30	52.03	25.27	1.36	16.6	22.5	0.00	5.0E-03	6	126.11
22	4.30	14.11	107.46	0.90	0.84	8	18.85	81.07	53.84	27.23	1.33	25.8	34.4	0.00	5.0E-03	6	190.11
23	4.50	14.76	145.61	2.08	1.43	8	18.85	84.84	55.64	29.19	1.31	34.9	45.9	0.00	5.0E-03	6	249.69
	4.70	15.42	146.58	1.80	1.22	8	18.85	88.61	57.45	31.16	1.29	35.2	45.4	0.00	5.0E-03	6	243.38
25	4.90	16.08	99.55	1.70	1.71	7	18.85	92.38	59.26	33.12	1.27	31.9	40.5	0.00	5.0E-04	6	159.70
26	5.10	16.73	114.31	1.42	1.24	8	18.85	96.15	61.07	35.08	1.25	27.4	34.4	0.00	5.0E-03	6	178.11
27	5.30	17.39	116.51	0.74	0.64	9	18.85	99.92	62.88	37.04	1.23	22.4	27.6	0.00	5.0E-02	6	176.30
28	5.50	18.04	95.02	0.69	0.72	8	18.85	103.69	64.69	39.00	1.22	22.8	27.7	0.00	5.0E-03	6	139.41
29	5.70	18.70	81.16	0.64	0.79	8	18.85	107.46	66.50	40.97	1.20	19.5	23.4	0.00	5.0E-03	6	115.55
30	5.90	19.36	76.37	0.31	0.41	8	18.85	111.23	68.30	42.93	1.18	18.3	21.7	0.00	5.0E-03	6	105.70
31	6.10	20.01	70.43	0.30	0.43	8	18.85	115.00	70.11	44.89	1.17	16.9	19.8	0.00	5.0E-03	6	94.79
32	6.30	20.67	73.37	0.27	0.37	8	18.85	118.77	71.92	46.85	1.15	17.6	20.3	0.00	5.0E-03	6	96.28
33	6.50	21.33	72.46	0.30	0.41	8	18.85	122.55	73.73	48.81	1.14	17.4	19.8	0.00	5.0E-03	6	92.68
34	6.70	21.98	70.14	0.31	0.45	8	18.85	126.32	75.54	50.78	1.13	16.8	19.0	0.00	5.0E-03	6	87.46
35	6.90	22.64	66.29	0.34	0.51	8	18.85	130.09	77.35	52.74	1.11	15.9	17.7	0.00	5.0E-03	6	80.59
36	7.10	23.29	60.76	0.35	0.58	8	18.85	133.86	79.16	54.70	1.10	14.6	16.0	0.00	5.0E-03	6	72.00
37	7.30	23.95	67.10	0.42	0.63	8	18.85	137.63	80.97	56.66	1.09	16.1	17.5	0.00	5.0E-03	6	77.87
38	7.50	24.61	77.15	0.52	0.68	8	18.85	141.40	82.77	58.62	1.08	18.5	19.9	0.00	5.0E-03	6	87.77
39	7.70	25.26	80.47	0.61	0.75	8	18.85	145.17	84.58	60.59	1.06	19.3	20.6	0.00	5.0E-03	6	89.61
40	7.90	25.92	86.85	0.58	0.67	8	18.85	148.94	86.39	62.55	1.05	20.8	21.9	0.00	5.0E-03	6	94.79
41	8.10	26.57	90.09	0.41	0.46	9	18.85	152.71	88.20	64.51	1.04	17.3	18.0	0.00	5.0E-02	6	96.33
42	8.30	27.23	90.21	0.56	0.62	8	18.85	156.48	90.01	66.47	1.03	21.6	22.3	0.00	5.0E-03	6	94.47
43	8.50	27.89	90.32	0.50	0.56	8	18.85	160.25	91.82	68.43	1.02	21.7	22.1	0.00	5.0E-03	6	92.69
44	8.70	28.54	82.63	0.56	0.68	8	18.85	164.02	93.63	70.40	1.01	19.8	20.1	0.00	5.0E-03	6	82.97
45	8.90	29.20	86.65	0.61	0.71	8	18.85	167.79	95.43	72.36	1.00	20.8	20.8	0.00	5.0E-03	6	85.41
46	9.10	29.86	93.41	0.96	1.03	8	18.85	171.56	97.24	74.32	0.99	22.4	22.2	0.00	5.0E-03	6	90.45
47	9.30	30.51	101.03	1.43	1.42	8	18.85	175.33	99.05	76.28	0.98	24.2	23.8	0.00	5.0E-03	6	96.14
48	9.50	31.17	75.52	0.60	0.79	8	18.85	179.10	100.86	78.24	0.97	18.1	17.7	0.00	5.0E-03	6	70.11
49	9.70	31.82	81.39	0.54	0.66	8	18.85	182.88	102.67	80.21	0.97	19.5	18.9	0.00	5.0E-03	6	74.32
50	9.90	32.48	100.00	0.76	0.76	8	18.85	186.65	104.48	82.17	0.96	24.0	23.0	0.00	5.0E-03	6	90.10
51	10.10	33.14	224.49	1.76	0.78	9	18.85	190.42	106.29	84.13	0.95	43.1	40.9	0.00	5.0E-02	6	200.98
52	10.30	33.79	274.09	1.42	0.52	10	18.85	194.19	108.09	86.09	0.94	43.9	41.3	0.00	5.0E+00	6	241.63
53	10.50	34.45	304.37	1.67	0.55	10	18.85	197.96	109.90	88.05	0.93	48.7	45.5	0.00	5.0E+00	6	264.06
	10.70	35.10	325.54	1.64	0.50	10	18.85	201.73	111.71	90.02	0.93	52.1	48.2	0.00	5.0E+00	6	277.95
	10.90	35.76	302.81	1.72	0.57	10	18.85	205.50	113.52	91.98	0.92	48.4	44.5	0.00	5.0E+00	6	254.26
56	11.10	36.42	300.35	3.66	1.22	9	18.85	209.27	115.33	93.94	0.91	57.7	52.6	0.00	5.0E-02	6	248.20

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-3
Location: Peterson/Puritan
Cone: 20 TON AD139
e: 09:10:03 11:48

Water Table (m): 16.76 (ft): 55.00 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	17.80	0.15	0.81	6	18.85	1.89	1.89	0.00	2.00	6.8	13.7	136.53	5.0E-05	7	905.22
2	0.30	0.98	48.18	0.60	1.24	7	18.85	5.66	5.66	0.00	2.00	15.4	30.8	0.00	5.0E-04	6	816.79
3	0.50	1.64	23.47	0.71	3.05	5	18.85	9.43	9.43	0.00	2.00	11.3	22.5	179.46	5.0E-06	8	237.97
4	0.70	2.30	53.77	0.60	1.11	7	18.85	13.20	13.20	0.00	2.00	17.2	34.4	0.00	5.0E-04	6	390.13
5	0.90	2.95	119.07	0.50	0.42	9	18.85	16.97	16.97	0.00	2.00	22.9	45.7	0.00	5.0E-02	7	672.66
6	1.10	3.61	37.73	0.70	1.87	6	18.85	20.74	20.74	0.00	2.00	14.5	29.0	288.07	5.0E-05	6	173.63
7	1.30	4.27	31.86	0.40	1.26	7	18.85	24.51	24.51	0.00	1.98	10.2	20.2	0.00	5.0E-04	6	123.78
8	1.50	4.92	16.17	0.15	0.94	6	18.85	28.28	28.28	0.00	1.84	6.2	11.4	121.94	5.0E-05	5	53.90
9	1.70	5.58	55.93	0.36	0.64	8	18.85	32.05	32.05	0.00	1.73	13.4	23.2	0.00	5.0E-03	6	166.53
10	1.90	6.23	60.10	1.06	1.76	7	18.85	35.82	35.82	0.00	1.64	19.2	31.4	0.00	5.0E-04	6	160.07
11	2.10	6.89	36.32	0.88	2.43	6	18.85	39.59	39.59	0.00	1.56	13.9	21.7	275.74	5.0E-05	5	87.06
12	2.30	7.55	33.16	0.48	1.45	7	18.85	43.36	43.36	0.00	1.49	10.6	15.8	0.00	5.0E-04	5	72.40
13	2.50	8.20	11.61	0.26	2.28	5	18.85	47.13	47.13	0.00	1.43	5.6	7.9	85.37	5.0E-06	4	22.64
14	2.70	8.86	19.60	0.23	1.17	6	18.85	50.90	50.90	0.00	1.37	7.5	10.3	146.48	5.0E-05	5	35.97
15	2.90	9.51	34.72	0.27	0.77	7	18.85	54.67	54.67	0.00	1.32	11.1	14.7	0.00	5.0E-04	6	59.97
16	3.10	10.17	58.77	0.75	1.27	7	18.85	58.44	58.44	0.00	1.28	18.8	24.1	0.00	5.0E-04	6	95.54
17	3.30	10.83	85.77	1.95	2.28	7	18.85	62.22	62.22	0.00	1.24	27.4	34.1	0.00	5.0E-04	5	131.34
18	3.50	11.48	122.61	2.45	2.00	7	18.85	65.99	65.99	0.00	1.20	39.2	47.3	0.00	5.0E-04	6	177.38
19	3.70	12.14	27.17	0.72	2.65	6	18.85	69.76	69.76	0.00	1.17	10.4	12.2	203.11	5.0E-05	4	36.40
20	3.90	12.80	53.89	0.57	1.06	7	18.85	73.53	73.53	0.00	1.14	17.2	19.7	0.00	5.0E-04	6	69.36
21	4.10	13.45	30.13	0.52	1.73	6	18.85	77.30	77.30	0.00	1.11	11.6	12.9	225.25	5.0E-05	5	36.43
22	4.30	14.11	60.17	1.08	1.79	7	18.85	81.07	81.07	0.00	1.09	19.3	20.9	0.00	5.0E-04	5	70.25
[illegible]	4.50	14.76	208.54	2.41	1.16	9	18.85	84.84	84.84	0.00	1.06	40.0	42.5	0.00	5.0E-02	6	234.98
	4.70	15.42	37.66	1.21	3.21	5	18.85	88.61	88.61	0.00	1.04	18.1	18.8	282.15	5.0E-06	4	39.80
25	4.90	16.08	50.89	1.00	1.96	7	18.85	92.38	92.38	0.00	1.02	16.3	16.6	0.00	5.0E-04	5	51.88
26	5.10	16.73	32.90	0.62	1.88	6	18.85	96.15	96.15	0.00	1.00	12.6	12.6	244.95	5.0E-05	5	31.84
27	5.30	17.39	44.54	0.76	1.71	7	18.85	99.92	99.92	0.00	0.98	14.3	14.0	0.00	5.0E-04	5	41.79
28	5.50	18.04	33.74	0.53	1.57	6	18.85	103.69	103.69	0.00	0.96	13.0	12.5	250.84	5.0E-05	5	30.24
29	5.70	18.70	42.13	0.57	1.35	7	18.85	107.46	107.46	0.00	0.94	13.5	12.7	0.00	5.0E-04	5	36.64
30	5.90	19.36	57.34	0.67	1.17	7	18.85	111.23	111.23	0.00	0.93	18.3	17.0	0.00	5.0E-04	5	48.49
31	6.10	20.01	102.43	1.34	1.30	8	18.85	115.00	115.00	0.00	0.91	24.6	22.4	0.00	5.0E-03	5	84.50
32	6.30	20.67	89.50	0.97	1.09	8	18.85	118.77	118.77	0.00	0.90	21.5	19.3	0.00	5.0E-03	6	71.34
33	6.50	21.33	32.97	1.13	3.44	5	18.85	122.55	122.55	0.00	0.88	15.8	14.0	243.43	5.0E-06	4	24.83
34	6.70	21.98	60.97	1.26	2.06	7	18.85	126.32	126.32	0.00	0.87	19.5	17.0	0.00	5.0E-04	5	45.34
35	6.90	22.64	59.87	0.98	1.63	7	18.85	130.09	130.09	0.00	0.86	19.2	16.4	0.00	5.0E-04	5	43.18
36	7.10	23.29	108.95	1.93	1.77	7	18.85	133.86	133.86	0.00	0.85	34.9	29.5	0.00	5.0E-04	5	77.14
37	7.30	23.95	41.74	0.73	1.74	7	18.85	137.63	137.63	0.00	0.83	13.4	11.1	0.00	5.0E-04	5	28.12
38	7.50	24.61	33.23	0.81	2.44	6	18.85	141.40	141.40	0.00	0.82	12.8	10.5	243.88	5.0E-05	4	21.56
39	7.70	25.26	27.03	0.68	2.52	6	18.85	145.17	145.17	0.00	0.81	10.4	8.4	195.97	5.0E-05	4	16.87
40	7.90	25.92	64.16	1.50	2.34	6	18.85	148.94	148.94	0.00	0.80	24.6	19.8	480.84	5.0E-05	5	40.36
41	8.10	26.57	118.50	2.21	1.87	7	18.85	152.71	152.71	0.00	0.79	37.9	30.0	0.00	5.0E-04	5	73.49
42	8.30	27.23	43.83	0.88	2.02	6	18.85	156.48	156.48	0.00	0.78	16.8	13.2	324.07	5.0E-05	4	25.89
43	8.50	27.89	32.29	0.73	2.27	6	18.85	160.25	160.25	0.00	0.77	12.4	9.6	235.15	5.0E-05	4	18.34
44	8.70	28.54	95.75	2.43	2.54	7	18.85	164.02	164.02	0.00	0.76	30.6	23.4	0.00	5.0E-04	5	55.04
45	8.90	29.20	82.56	1.18	1.43	7	18.85	167.79	167.79	0.00	0.76	26.4	20.0	0.00	5.0E-04	5	46.24
46	9.10	29.86	43.13	0.73	1.68	7	18.85	171.56	171.56	0.00	0.75	13.8	10.3	0.00	5.0E-04	4	23.14
47	9.30	30.51	55.35	0.88	1.59	7	18.85	175.33	175.33	0.00	0.74	17.7	13.1	0.00	5.0E-04	5	29.31
48	9.50	31.17	39.01	0.83	2.13	6	18.85	179.10	179.10	0.00	0.73	15.0	11.0	285.28	5.0E-05	4	19.91
49	9.70	31.82	36.96	0.80	2.16	6	18.85	182.88	182.88	0.00	0.72	14.2	10.3	269.24	5.0E-05	4	18.40
50	9.90	32.48	38.46	0.92	2.39	6	18.85	186.65	186.65	0.00	0.72	14.8	10.6	280.45	5.0E-05	4	18.78
51	10.10	33.14	28.59	0.92	3.23	5	18.85	190.42	190.42	0.00	0.71	13.7	9.7	204.37	5.0E-06	3	13.42
52	10.30	33.79	72.83	2.18	2.99	6	18.85	194.19	194.19	0.00	0.70	28.0	19.6	543.78	5.0E-05	4	35.00
53	10.50	34.45	94.62	1.83	1.93	7	18.85	197.96	197.96	0.00	0.70	30.3	21.1	0.00	5.0E-04	5	44.88
	10.70	35.10	86.94	1.38	1.59	7	18.85	201.73	201.73	0.00	0.69	27.8	19.2	0.00	5.0E-04	5	40.37
	10.90	35.76	63.84	1.64	2.57	6	18.85	205.50	205.50	0.00	0.68	24.5	16.7	473.89	5.0E-05	4	28.83
56	11.10	36.42	41.71	0.83	2.00	6	18.85	209.27	209.27	0.00	0.68	16.0	10.8	303.58	5.0E-05	4	18.13
57	11.30	37.07	33.17	0.60	1.80	6	18.85	213.04	213.04	0.00	0.67	12.7	8.5	237.67	5.0E-05	4	13.95
58	11.50	37.73	28.83	0.32	1.12	7	18.85	216.81	216.81	0.00	0.66	9.2	6.1	0.00	5.0E-04	4	11.76
59	11.70	38.39	38.67	0.67	1.74	6	18.85	220.58	220.58	0.00	0.66	14.8	9.8	279.31	5.0E-05	4	15.83

60	11.90	39.04	54.32	0.62	1.14	7	18.85	224.35	224.35	0.00	0.65	17.4	11.4	0.00	5.0E-04	5	22.24
61	12.10	39.70	53.89	0.90	1.67	7	18.85	228.12	228.12	0.00	0.65	17.2	11.2	0.00	5.0E-04	4	21.68
62	12.30	40.35	54.72	2.37	4.33	5	18.85	231.89	231.89	0.00	0.64	26.3	16.9	401.72	5.0E-06	3	21.65
63	12.50	41.01	40.77	1.71	4.21	5	18.85	235.66	235.66	0.00	0.64	19.6	12.5	294.22	5.0E-06	3	15.61
64	12.70	41.67	38.64	0.82	2.12	6	18.85	239.43	239.43	0.00	0.63	14.8	9.4	277.64	5.0E-05	4	14.49
	12.90	42.32	20.23	0.50	2.48	5	18.85	243.20	243.20	0.00	0.63	9.7	6.1	135.87	5.0E-06	3	6.98
[illegible]	13.10	42.98	60.54	0.98	1.61	7	18.85	246.98	246.98	0.00	0.62	19.4	12.1	0.00	5.0E-04	4	22.53
67	13.30	43.63	49.91	1.36	2.72	6	18.85	250.75	250.75	0.00	0.62	19.2	11.8	363.24	5.0E-05	4	18.11
68	13.50	44.29	61.95	1.07	1.73	7	18.85	254.52	254.52	0.00	0.61	19.8	12.2	0.00	5.0E-04	4	22.37
69	13.70	44.95	31.94	0.51	1.60	6	18.85	258.29	258.29	0.00	0.61	12.3	7.5	224.60	5.0E-05	4	10.87
70	13.90	45.60	23.83	0.62	2.60	5	18.85	262.06	262.06	0.00	0.60	11.4	6.9	162.04	5.0E-06	3	7.73
71	14.10	46.26	60.31	1.07	1.77	7	18.85	265.83	265.83	0.00	0.60	19.3	11.6	0.00	5.0E-04	4	20.78
72	14.30	46.92	66.91	1.04	1.55	7	18.85	269.60	269.60	0.00	0.60	21.4	12.8	0.00	5.0E-04	4	22.82
73	14.50	47.57	56.29	1.18	2.10	7	18.85	273.37	273.37	0.00	0.59	18.0	10.7	0.00	5.0E-04	4	18.77
74	14.70	48.23	48.73	0.76	1.56	7	18.85	277.14	277.14	0.00	0.59	15.6	9.2	0.00	5.0E-04	4	15.88
75	14.90	48.88	56.40	0.92	1.63	7	18.85	280.91	280.91	0.00	0.58	18.0	10.5	0.00	5.0E-04	4	18.27

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-4
Location: Peterson/Puritan
Cone: 20 TON AD139
e: 09:10:03 12:39

Water Table (m): 16.76 (ft): 55.00 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	15.31	0.02	0.13	6	18.85	1.89	1.89	0.00	2.00	5.9	11.8	117.43	5.0E-05	7	778.60
2	0.30	0.98	25.52	0.11	0.44	7	18.85	5.66	5.66	0.00	2.00	8.2	16.3	0.00	5.0E-04	7	432.20
3	0.50	1.64	21.92	0.25	1.14	6	18.85	9.43	9.43	0.00	2.00	8.4	16.8	167.61	5.0E-05	6	222.26
4	0.70	2.30	33.04	0.50	1.52	6	18.85	13.20	13.20	0.00	2.00	12.7	25.4	252.70	5.0E-05	6	239.35
5	0.90	2.95	58.63	0.54	0.91	8	18.85	16.97	16.97	0.00	2.00	14.1	28.1	0.00	5.0E-03	6	330.72
6	1.10	3.61	24.77	0.84	3.40	5	18.85	20.74	20.74	0.00	2.00	11.9	23.8	188.57	5.0E-06	5	113.66
7	1.30	4.27	13.92	0.24	1.74	5	18.85	24.51	24.51	0.00	1.98	6.7	13.2	104.97	5.0E-06	5	53.54
8	1.50	4.92	39.74	0.83	2.09	6	18.85	28.28	28.28	0.00	1.84	15.3	28.1	302.91	5.0E-05	5	133.89
9	1.70	5.58	20.00	0.23	1.15	6	18.85	32.05	32.05	0.00	1.73	7.7	13.3	151.06	5.0E-05	5	58.92
10	1.90	6.23	18.79	0.23	1.25	6	18.85	35.82	35.82	0.00	1.64	7.2	11.8	141.46	5.0E-05	5	49.36
11	2.10	6.89	28.05	0.36	1.28	6	18.85	39.59	39.59	0.00	1.56	10.8	16.8	212.27	5.0E-05	5	67.02
12	2.30	7.55	17.36	0.60	3.44	4	18.85	43.36	43.36	0.00	1.49	11.1	16.5	129.85	5.0E-07	4	37.43
13	2.50	8.20	11.13	0.28	2.56	5	18.85	47.13	47.13	0.00	1.43	5.3	7.6	81.67	5.0E-06	4	21.66
14	2.70	8.86	17.99	0.24	1.31	6	18.85	50.90	50.90	0.00	1.37	6.9	9.5	134.12	5.0E-05	5	32.93
15	2.90	9.51	21.56	0.51	2.39	5	18.85	54.67	54.67	0.00	1.32	10.3	13.7	161.20	5.0E-06	4	36.85
16	3.10	10.17	31.66	0.74	2.35	6	18.85	58.44	58.44	0.00	1.28	12.2	15.6	238.47	5.0E-05	5	51.00
17	3.30	10.83	34.71	0.51	1.46	7	18.85	62.22	62.22	0.00	1.24	11.1	13.8	0.00	5.0E-04	5	52.56
18	3.50	11.48	49.56	1.01	2.03	6	18.85	65.99	65.99	0.00	1.20	19.0	22.9	375.37	5.0E-05	5	71.11
19	3.70	12.14	73.91	1.33	1.80	7	18.85	69.76	69.76	0.00	1.17	23.7	27.7	0.00	5.0E-04	5	100.71
20	3.90	12.80	71.97	1.24	1.73	7	18.85	73.53	73.53	0.00	1.14	23.0	26.3	0.00	5.0E-04	5	92.96
21	4.10	13.45	63.50	1.08	1.69	7	18.85	77.30	77.30	0.00	1.11	20.3	22.6	0.00	5.0E-04	5	77.86
22	4.30	14.11	50.45	0.96	1.90	7	18.85	81.07	81.07	0.00	1.09	16.1	17.5	0.00	5.0E-04	5	58.74
[illegible]	4.50	14.76	61.50	1.10	1.78	7	18.85	84.84	84.84	0.00	1.06	19.7	20.9	0.00	5.0E-04	5	68.59
	4.70	15.42	160.14	1.63	1.02	9	18.85	88.61	88.61	0.00	1.04	30.7	32.0	0.00	5.0E-02	6	172.49
25	4.90	16.08	107.62	1.92	1.78	7	18.85	92.38	92.38	0.00	1.02	34.4	35.1	0.00	5.0E-04	5	110.84
26	5.10	16.73	30.05	0.50	1.65	6	18.85	96.15	96.15	0.00	1.00	11.5	11.5	223.07	5.0E-05	5	29.00
27	5.30	17.39	65.37	1.00	1.53	7	18.85	99.92	99.92	0.00	0.98	20.9	20.5	0.00	5.0E-04	5	61.80
28	5.50	18.04	37.28	0.75	2.00	6	18.85	103.69	103.69	0.00	0.96	14.3	13.8	278.00	5.0E-05	5	33.51
29	5.70	18.70	31.65	0.56	1.79	6	18.85	107.46	107.46	0.00	0.94	12.2	11.5	234.47	5.0E-05	5	27.27
30	5.90	19.36	45.27	1.05	2.33	6	18.85	111.23	111.23	0.00	0.93	17.4	16.1	338.79	5.0E-05	5	38.07
31	6.10	20.01	94.12	1.42	1.51	8	18.85	115.00	115.00	0.00	0.91	22.6	20.6	0.00	5.0E-03	5	77.56
32	6.30	20.67	78.55	1.46	1.86	7	18.85	118.77	118.77	0.00	0.90	25.1	22.6	0.00	5.0E-04	5	62.49
33	6.50	21.33	51.72	1.22	2.36	6	18.85	122.55	122.55	0.00	0.88	19.9	17.6	387.41	5.0E-05	5	39.52
34	6.70	21.98	56.42	2.01	3.57	5	18.85	126.32	126.32	0.00	0.87	27.1	23.6	423.21	5.0E-06	4	41.88
35	6.90	22.64	91.78	3.53	3.85	5	18.85	130.09	130.09	0.00	0.86	44.1	37.8	694.49	5.0E-06	4	66.73
36	7.10	23.29	42.22	1.33	3.14	6	18.85	133.86	133.86	0.00	0.85	16.2	13.7	313.52	5.0E-05	4	29.28
37	7.30	23.95	57.23	1.74	3.04	6	18.85	137.63	137.63	0.00	0.83	22.0	18.3	428.55	5.0E-05	4	38.92
38	7.50	24.61	51.33	2.09	4.08	5	18.85	141.40	141.40	0.00	0.82	24.6	20.3	382.87	5.0E-06	4	33.85
39	7.70	25.26	39.67	1.08	2.71	6	18.85	145.17	145.17	0.00	0.81	15.2	12.4	293.02	5.0E-05	4	25.23
40	7.90	25.92	28.56	1.42	4.96	3	18.85	148.94	148.94	0.00	0.80	27.4	22.0	207.40	5.0E-08	3	17.41
41	8.10	26.57	94.08	3.11	3.30	6	18.85	152.71	152.71	0.00	0.79	36.1	28.6	710.34	5.0E-05	4	58.14
42	8.30	27.23	73.15	2.24	3.07	6	18.85	156.48	156.48	0.00	0.78	28.1	22.0	549.25	5.0E-05	4	43.88
43	8.50	27.89	68.28	2.18	3.19	6	18.85	160.25	160.25	0.00	0.77	26.2	20.3	511.58	5.0E-05	4	39.90
44	8.70	28.54	53.43	1.74	3.26	6	18.85	164.02	164.02	0.00	0.76	20.5	15.7	397.19	5.0E-05	4	30.27
45	8.90	29.20	58.19	1.84	3.16	6	18.85	167.79	167.79	0.00	0.76	22.3	16.9	433.51	5.0E-05	4	32.29
46	9.10	29.86	99.12	2.72	2.74	6	18.85	171.56	171.56	0.00	0.75	38.1	28.4	747.50	5.0E-05	5	54.46
47	9.30	30.51	74.48	3.24	4.35	5	18.85	175.33	175.33	0.00	0.74	35.8	26.4	557.98	5.0E-06	4	39.78
48	9.50	31.17	67.76	2.00	2.95	6	18.85	179.10	179.10	0.00	0.73	26.0	19.0	506.10	5.0E-05	4	35.32
49	9.70	31.82	78.13	2.09	2.67	6	18.85	182.88	182.88	0.00	0.72	30.0	21.7	585.43	5.0E-05	4	40.02
50	9.90	32.48	110.16	2.59	2.35	7	18.85	186.65	186.65	0.00	0.72	35.2	25.3	0.00	5.0E-04	5	55.66
51	10.10	33.14	108.83	1.16	1.07	8	18.85	190.42	190.42	0.00	0.71	26.1	18.5	0.00	5.0E-03	5	53.87
52	10.30	33.79	111.49	1.59	1.43	8	18.85	194.19	194.19	0.00	0.70	26.8	18.8	0.00	5.0E-03	5	54.12
53	10.50	34.45	105.80	1.96	1.85	7	18.85	197.96	197.96	0.00	0.70	33.9	23.6	0.00	5.0E-04	5	50.31
	10.70	35.10	77.20	1.73	2.24	7	18.85	201.73	201.73	0.00	0.69	24.7	17.0	0.00	5.0E-04	5	35.74
	10.90	35.76	98.04	1.31	1.33	8	18.85	205.50	205.50	0.00	0.68	23.5	16.1	0.00	5.0E-03	5	44.80
56	11.10	36.42	100.74	1.66	1.65	7	18.85	209.27	209.27	0.00	0.68	32.2	21.8	0.00	5.0E-04	5	45.21
57	11.30	37.07	89.32	2.66	2.98	6	18.85	213.04	213.04	0.00	0.67	34.3	23.0	668.93	5.0E-05	4	39.25
58	11.50	37.73	78.29	3.06	3.91	5	18.85	216.81	216.81	0.00	0.66	37.6	25.0	583.93	5.0E-06	4	33.67
59	11.70	38.39	163.22	2.33	1.43	8	18.85	220.58	220.58	0.00	0.66	39.2	25.8	0.00	5.0E-03	5	70.03

60	11.90	39.04	138.30	3.80	2.75	7	18.85	224.35	224.35	0.00	0.65	44.3	28.9	0.00	5.0E-04	5	58.18
61	12.10	39.70	101.17	2.89	2.86	6	18.85	228.12	228.12	0.00	0.65	38.9	25.2	758.76	5.0E-05	4	41.58
62	12.30	40.35	55.89	1.72	3.08	6	18.85	231.89	231.89	0.00	0.64	21.5	13.8	410.67	5.0E-05	4	22.14
63	12.50	41.01	27.75	0.99	3.55	5	18.85	235.66	235.66	0.00	0.64	13.3	8.5	194.26	5.0E-06	3	10.30
64	12.70	41.67	46.81	1.44	3.07	6	18.85	239.43	239.43	0.00	0.63	18.0	11.4	340.36	5.0E-05	4	17.77
	12.90	42.32	99.57	2.85	2.86	6	18.85	243.20	243.20	0.00	0.63	38.2	24.0	745.27	5.0E-05	4	38.30
[illegible]	13.10	42.98	232.57	2.40	1.03	9	18.85	246.98	246.98	0.00	0.62	44.7	27.8	0.00	5.0E-02	6	89.40
67	13.30	43.63	151.39	4.62	3.05	6	18.85	250.75	250.75	0.00	0.62	58.1	35.9	1142.64	5.0E-05	5	56.9
68	13.50	44.29	125.33	2.55	2.03	7	18.85	254.52	254.52	0.00	0.61	40.1	24.6	0.00	5.0E-04	5	46.27
69	13.70	44.95	150.50	2.94	1.96	7	18.85	258.29	258.29	0.00	0.61	48.2	29.3	0.00	5.0E-04	5	54.94

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-5
Location: Peterson/Puritan
Cone: 20 TON A D139
e: 09:10:03 13:35

Water Table (m): 16.76 (ft): 55.00 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160 (blows/ft)	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	6.63	0.13	2.04	4	18.85	1.89	1.89	0.00	2.00	4.2	8.5	50.76	5.0E-07	8	336.54
2	0.30	0.98	122.21	0.67	0.55	9	18.85	5.66	5.66	0.00	2.00	23.5	46.9	0.00	5.0E-02	0	2073.3
3	0.50	1.64	128.78	0.58	0.45	9	18.85	9.43	9.43	0.00	2.00	24.7	49.5	0.00	5.0E-02	0	1310.5

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-5A
Location: Peterson/Puritan
Cone: 20 TON AD139
e: 09:10:03 13:43

Water Table (m): 16.76 (ft): 55.00 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160 (blows/ft)	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	20.10	0.36	1.78	6	18.85	1.89	1.89	0.00	2.00	7.7	15.4	154.19	5.0E-05	0	1022.2
2	0.30	0.98	16.34	0.29	1.76	6	18.85	5.66	5.66	0.00	2.00	6.3	12.5	125.00	5.0E-05	6	276.27
3	0.50	1.64	15.04	0.40	2.68	5	18.85	9.43	9.43	0.00	2.00	7.2	14.4	114.74	5.0E-06	5	152.15
4	0.70	2.30	11.20	0.36	3.21	4	18.85	13.20	13.20	0.00	2.00	7.2	14.3	84.98	5.0E-07	5	80.50
5	0.90	2.95	26.98	0.39	1.45	6	18.85	16.97	16.97	0.00	2.00	10.4	20.7	205.86	5.0E-05	6	151.65
6	1.10	3.61	6.95	0.15	2.20	4	18.85	20.74	20.74	0.00	2.00	4.4	8.9	51.70	5.0E-07	4	31.16
7	1.30	4.27	12.98	0.26	2.00	5	18.85	24.51	24.51	0.00	1.98	6.2	12.3	97.71	5.0E-06	5	49.83
8	1.50	4.92	18.00	0.21	1.17	6	18.85	28.28	28.28	0.00	1.84	6.9	12.7	135.96	5.0E-05	5	60.10
9	1.70	5.58	15.58	0.30	1.91	5	18.85	32.05	32.05	0.00	1.73	7.5	12.9	117.08	5.0E-06	5	45.66
10	1.90	6.23	23.41	0.52	2.23	6	18.85	35.82	35.82	0.00	1.64	9.0	14.7	176.93	5.0E-05	5	61.74
11	2.10	6.89	39.42	0.56	1.43	7	18.85	39.59	39.59	0.00	1.56	12.6	19.6	0.00	5.0E-04	5	94.57
12	2.30	7.55	37.55	0.66	1.75	6	18.85	43.36	43.36	0.00	1.49	14.4	21.4	284.91	5.0E-05	5	82.13
13	2.50	8.20	77.59	0.41	0.53	8	18.85	47.13	47.13	0.00	1.43	18.6	26.5	0.00	5.0E-03	6	157.04
14	2.70	8.86	312.45	1.57	0.50	10	18.85	50.90	50.90	0.00	1.37	50.0	68.6	0.00	5.0E+00	7	588.26
15	2.90	9.51	360.71	3.07	0.85	9	18.85	54.67	54.67	0.00	1.32	69.3	91.7	0.00	5.0E-02	6	632.36
16	3.10	10.17	484.28	5.13	1.06	9	18.85	58.44	58.44	0.00	1.28	93.0	119.0	0.00	5.0E-02	6	794.47
17	3.30	10.83	425.31	4.74	1.11	9	18.85	62.22	62.22	0.00	1.24	81.7	101.3	0.00	5.0E-02	6	655.27
18	3.50	11.48	357.18	1.42	0.40	10	18.85	65.99	65.99	0.00	1.20	57.1	68.9	0.00	5.0E+00	7	518.65
19	3.70	12.14	386.56	2.44	0.63	10	18.85	69.76	69.76	0.00	1.17	61.9	72.5	0.00	5.0E+00	7	531.00
20	3.90	12.80	459.71	3.88	0.84	10	18.85	73.53	73.53	0.00	1.14	73.6	84.0	0.00	5.0E+00	6	599.22

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-6
Location: Peterson/Puritan
Cone: 20 TON AD139
e: 09:10:03 15:11

Water Table (m): 7.13 (ft): 23.40 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	4.98	0.00	0.10	1	18.85	1.89	1.89	0.00	2.00	2.4	4.8	38.06	1.0E-07	7	252.35
2	0.30	0.98	25.53	0.45	1.76	6	18.85	5.66	5.66	0.00	2.00	9.8	19.6	195.60	5.0E-05	6	432.28
3	0.50	1.64	6.96	0.14	2.08	4	18.85	9.43	9.43	0.00	2.00	4.5	8.9	52.72	5.0E-07	5	69.90
4	0.70	2.30	8.66	0.21	2.43	4	18.85	13.20	13.20	0.00	2.00	5.5	11.1	65.42	5.0E-07	5	61.97
5	0.90	2.95	37.05	0.88	2.38	6	18.85	16.97	16.97	0.00	2.00	14.2	28.5	283.17	5.0E-05	5	208.61
6	1.10	3.61	11.60	0.16	1.34	5	18.85	20.74	20.74	0.00	2.00	5.6	11.1	87.43	5.0E-06	5	52.70
7	1.30	4.27	17.56	0.24	1.34	6	18.85	24.51	24.51	0.00	1.98	6.7	13.3	132.87	5.0E-05	5	67.77
8	1.50	4.92	15.25	0.34	2.20	5	18.85	28.28	28.28	0.00	1.84	7.3	13.5	114.85	5.0E-06	5	50.76
9	1.70	5.58	30.02	0.43	1.44	6	18.85	32.05	32.05	0.00	1.73	11.5	19.9	227.98	5.0E-05	5	88.91
10	1.90	6.23	31.23	0.54	1.72	6	18.85	35.82	35.82	0.00	1.64	12.0	19.6	236.95	5.0E-05	5	82.68
11	2.10	6.89	48.88	1.28	2.62	6	18.85	39.59	39.59	0.00	1.56	18.8	29.2	372.25	5.0E-05	5	117.53
12	2.30	7.55	59.97	1.20	2.00	7	18.85	43.36	43.36	0.00	1.49	19.2	28.5	0.00	5.0E-04	5	131.78
13	2.50	8.20	23.89	0.59	2.46	6	18.85	47.13	47.13	0.00	1.43	9.2	13.1	179.68	5.0E-05	5	47.65
14	2.70	8.86	32.39	0.59	1.82	6	18.85	50.90	50.90	0.00	1.37	12.4	17.1	244.72	5.0E-05	5	60.09
15	2.90	9.51	25.26	0.63	2.48	6	18.85	54.67	54.67	0.00	1.32	9.7	12.8	189.60	5.0E-05	5	43.35
16	3.10	10.17	42.62	0.36	0.84	7	18.85	58.44	58.44	0.00	1.28	13.6	17.5	0.00	5.0E-04	6	69.01
17	3.30	10.83	113.77	0.17	0.15	9	18.85	62.22	62.22	0.00	1.24	21.8	27.1	0.00	5.0E-02	7	174.55
18	3.50	11.48	103.15	1.63	1.58	8	18.85	65.99	65.99	0.00	1.20	24.8	29.8	0.00	5.0E-03	6	149.07
19	3.70	12.14	12.61	0.17	1.33	6	18.85	69.76	69.76	0.00	1.17	4.8	5.7	91.25	5.0E-05	4	16.35
20	3.90	12.80	43.45	1.29	2.97	6	18.85	73.53	73.53	0.00	1.14	16.7	19.0	327.82	5.0E-05	5	55.73
21	4.10	13.45	32.15	0.42	1.31	7	18.85	77.30	77.30	0.00	1.11	10.3	11.5	0.00	5.0E-04	5	38.93
22	4.30	14.11	38.86	1.15	2.97	6	18.85	81.07	81.07	0.00	1.09	14.9	16.2	291.98	5.0E-05	4	45.02
[illegible]	4.50	14.76	57.88	1.37	2.36	6	18.85	84.84	84.84	0.00	1.06	22.2	23.6	437.70	5.0E-05	5	64.49
	4.70	15.42	153.97	1.04	0.68	9	18.85	88.61	88.61	0.00	1.04	29.6	30.7	0.00	5.0E-02	6	165.81
25	4.90	16.08	267.96	1.68	0.63	9	18.85	92.38	92.38	0.00	1.02	51.4	52.4	0.00	5.0E-02	6	277.46
26	5.10	16.73	241.13	2.59	1.07	9	18.85	96.15	96.15	0.00	1.00	46.3	46.2	0.00	5.0E-02	6	239.75
27	5.30	17.39	206.85	1.98	0.95	9	18.85	99.92	99.92	0.00	0.98	39.7	38.9	0.00	5.0E-02	6	197.73
28	5.50	18.04	114.00	1.49	1.30	8	18.85	103.69	103.69	0.00	0.96	27.4	26.3	0.00	5.0E-03	6	104.55
29	5.70	18.70	117.09	1.21	1.03	8	18.85	107.46	107.46	0.00	0.94	28.1	26.5	0.00	5.0E-03	6	103.60
30	5.90	19.36	129.56	1.25	0.96	9	18.85	111.23	111.23	0.00	0.93	24.9	23.1	0.00	5.0E-02	6	110.82
31	6.10	20.01	177.08	1.38	0.78	9	18.85	115.00	115.00	0.00	0.91	34.0	31.0	0.00	5.0E-02	6	146.82
32	6.30	20.67	259.19	3.25	1.25	9	18.85	118.77	118.77	0.00	0.90	49.8	44.7	0.00	5.0E-02	6	208.49
33	6.50	21.33	210.86	2.39	1.14	9	18.85	122.55	122.55	0.00	0.88	40.5	35.8	0.00	5.0E-02	6	164.19
34	6.70	21.98	144.20	2.69	1.86	8	18.85	126.32	126.32	0.00	0.87	34.6	30.1	0.00	5.0E-03	5	108.59
35	6.90	22.64	137.65	1.71	1.24	8	18.85	130.09	130.09	0.00	0.86	33.0	28.3	0.00	5.0E-03	6	100.58
36	7.10	23.29	131.86	1.68	1.27	8	18.85	133.86	133.86	0.00	0.85	31.6	26.8	0.00	5.0E-03	6	93.56
37	7.30	23.95	53.55	0.87	1.62	7	18.85	137.63	135.98	1.64	0.84	17.1	14.4	0.00	5.0E-04	5	36.79
38	7.50	24.61	14.21	0.43	3.03	5	18.85	141.40	137.79	3.61	0.83	6.8	5.7	97.81	5.0E-06	3	8.87
39	7.70	25.26	14.71	0.44	2.97	5	18.85	145.17	139.60	5.57	0.83	7.1	5.8	101.38	5.0E-06	3	9.08
40	7.90	25.92	101.47	2.25	2.22	7	18.85	148.94	141.41	7.53	0.82	32.5	26.7	0.00	5.0E-04	5	67.83
41	8.10	26.57	136.42	1.19	0.88	9	18.85	152.71	143.22	9.49	0.82	26.2	21.4	0.00	5.0E-02	6	90.38
42	8.30	27.23	119.07	0.62	0.52	9	18.85	156.48	145.03	11.45	0.81	22.9	18.6	0.00	5.0E-02	6	77.74
43	8.50	27.89	114.74	1.14	0.99	8	18.85	160.25	146.84	13.42	0.81	27.5	22.2	0.00	5.0E-03	6	73.92
44	8.70	28.54	110.52	0.43	0.39	9	18.85	164.02	148.64	15.38	0.80	21.2	17.0	0.00	5.0E-02	6	70.28
45	8.90	29.20	212.93	1.21	0.57	9	18.85	167.79	150.45	17.34	0.80	40.9	32.6	0.00	5.0E-02	6	134.75
46	9.10	29.86	259.40	2.43	0.93	9	18.85	171.56	152.26	19.30	0.79	49.8	39.5	0.00	5.0E-02	6	162.42
47	9.30	30.51	149.33	0.93	0.62	9	18.85	175.33	154.07	21.26	0.79	28.7	22.6	0.00	5.0E-02	6	91.91
48	9.50	31.17	125.72	0.37	0.30	9	18.85	179.10	155.88	23.23	0.78	24.1	18.9	0.00	5.0E-02	6	76.28
49	9.70	31.82	121.71	0.36	0.30	9	18.85	182.88	157.69	25.19	0.78	23.4	18.2	0.00	5.0E-02	6	72.94
50	9.90	32.48	76.95	0.30	0.39	8	18.85	186.65	159.50	27.15	0.77	18.5	14.3	0.00	5.0E-03	6	45.14
51	10.10	33.14	127.97	0.55	0.43	9	18.85	190.42	161.30	29.11	0.77	24.6	18.9	0.00	5.0E-02	6	74.98
52	10.30	33.79	127.97	0.28	0.22	9	18.85	194.19	163.11	31.07	0.77	24.6	18.8	0.00	5.0E-02	6	74.12
53	10.50	34.45	107.16	0.43	0.40	9	18.85	197.96	164.92	33.04	0.76	20.6	15.7	0.00	5.0E-02	6	61.18
	10.70	35.10	147.99	0.81	0.55	9	18.85	201.73	166.73	35.00	0.76	28.4	21.5	0.00	5.0E-02	6	84.00
	10.90	35.76	155.76	0.81	0.52	9	18.85	205.50	168.54	36.96	0.75	29.9	22.5	0.00	5.0E-02	6	87.50
56	11.10	36.42	130.27	0.55	0.42	9	18.85	209.27	170.35	38.92	0.75	25.0	18.8	0.00	5.0E-02	6	72.19
57	11.30	37.07	89.46	0.29	0.32	9	18.85	213.04	172.16	40.88	0.75	17.2	12.8	0.00	5.0E-02	6	48.65
58	11.50	37.73	93.81	0.66	0.70	8	18.85	216.81	173.96	42.85	0.74	22.5	16.7	0.00	5.0E-03	6	50.52
59	11.70	38.39	82.55	0.41	0.50	8	18.85	220.58	175.77	44.81	0.74	19.8	14.6	0.00	5.0E-03	6	43.83

60	11.90	39.04	80.44	0.30	0.37	8	18.85	224.35	177.58	46.77	0.73	19.3	14.2	0.00	5.0E-03	6	42.22
61	12.10	39.70	83.12	0.36	0.44	8	18.85	228.12	179.39	48.73	0.73	19.9	14.6	0.00	5.0E-03	6	43.21
62	12.30	40.35	86.77	0.27	0.31	9	18.85	231.89	181.20	50.69	0.73	16.7	12.1	0.00	5.0E-02	6	44.69
63	12.50	41.01	87.49	0.35	0.39	9	18.85	235.66	183.01	52.66	0.72	16.8	12.2	0.00	5.0E-02	6	44.61
64	12.70	41.67	94.55	0.36	0.38	9	18.85	239.43	184.82	54.62	0.72	18.2	13.1	0.00	5.0E-02	6	47.82
	12.90	42.32	126.55	0.57	0.45	9	18.85	243.20	186.62	56.58	0.72	24.3	17.4	0.00	5.0E-02	6	63.79
66	13.10	42.98	121.19	0.51	0.42	9	18.85	246.98	188.43	58.54	0.71	23.3	16.6	0.00	5.0E-02	6	60.43
67	13.30	43.63	146.13	0.56	0.39	9	18.85	250.75	190.24	60.50	0.71	28.1	19.9	0.00	5.0E-02	6	72.42
68	13.50	44.29	218.58	0.72	0.33	9	18.85	254.52	192.05	62.47	0.71	42.0	29.6	0.00	5.0E-02	6	107.93

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-7
Location: Peterson/Puritan
Cone: 20 TON AD139
e: 09:10:03 16:26

Water Table (m): 4.57 (ft): 15.00 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	215.15	0.41	0.19	10	18.85	1.89	1.89	0.00	2.00	34.4	68.8	0.00	5.0E+00	0	10954.
2	0.30	0.98	70.64	0.66	0.93	8	18.85	5.66	5.66	0.00	2.00	17.0	33.9	0.00	5.0E-03	0	1198.0
3	0.50	1.64	61.21	0.68	1.12	7	18.85	9.43	9.43	0.00	2.00	19.6	39.2	0.00	5.0E-04	6	622.35
4	0.70	2.30	40.05	0.29	0.74	7	18.85	13.20	13.20	0.00	2.00	12.8	25.6	0.00	5.0E-04	6	290.32
5	0.90	2.95	50.12	0.03	0.06	8	18.85	16.97	16.97	0.00	2.00	12.0	24.1	0.00	5.0E-03	0	282.56
6	1.10	3.61	56.48	0.06	0.10	8	18.85	20.74	20.74	0.00	2.00	13.6	27.1	0.00	5.0E-03	7	260.47
7	1.30	4.27	55.22	0.17	0.31	8	18.85	24.51	24.51	0.00	1.98	13.3	26.2	0.00	5.0E-03	6	215.28
8	1.50	4.92	135.69	0.20	0.15	9	18.85	28.28	28.28	0.00	1.84	26.1	47.9	0.00	5.0E-02	7	459.63
9	1.70	5.58	26.22	0.04	0.16	7	18.85	32.05	32.05	0.00	1.73	8.4	14.5	0.00	5.0E-04	6	77.55
10	1.90	6.23	24.39	0.04	0.16	7	18.85	35.82	35.82	0.00	1.64	7.8	12.8	0.00	5.0E-04	6	64.36
11	2.10	6.89	71.60	0.34	0.47	8	18.85	39.59	39.59	0.00	1.56	17.2	26.7	0.00	5.0E-03	6	172.61
12	2.30	7.55	51.00	0.61	1.19	7	18.85	43.36	43.36	0.00	1.49	16.3	24.3	0.00	5.0E-04	6	111.90
13	2.50	8.20	19.39	0.48	2.48	5	18.85	47.13	47.13	0.00	1.43	9.3	13.3	145.13	5.0E-06	4	38.49
14	2.70	8.86	20.73	0.28	1.34	6	18.85	50.90	50.90	0.00	1.37	8.0	10.9	155.13	5.0E-05	5	38.09
15	2.90	9.51	16.67	0.41	2.47	5	18.85	54.67	54.67	0.00	1.32	8.0	10.6	123.65	5.0E-06	4	28.27
16	3.10	10.17	5.79	0.22	3.85	3	18.85	58.44	58.44	0.00	1.28	5.6	7.1	39.77	5.0E-08	3	8.50
17	3.30	10.83	11.07	0.14	1.31	5	18.85	62.22	62.22	0.00	1.24	5.3	6.6	80.05	5.0E-06	4	16.08
18	3.50	11.48	19.39	0.17	0.86	6	18.85	65.99	65.99	0.00	1.20	7.4	9.0	143.63	5.0E-05	5	27.21
19	3.70	12.14	45.67	0.79	1.72	7	18.85	69.76	69.76	0.00	1.17	14.6	17.1	0.00	5.0E-04	5	61.85
20	3.90	12.80	73.42	2.13	2.90	6	18.85	73.53	73.53	0.00	1.14	28.2	32.2	557.99	5.0E-05	5	94.86
21	4.10	13.45	62.46	2.35	3.76	5	18.85	77.30	77.30	0.00	1.11	30.0	33.4	473.51	5.0E-06	4	76.57
22	4.30	14.11	45.33	0.79	1.74	7	18.85	81.07	81.07	0.00	1.09	14.5	15.8	0.00	5.0E-04	5	52.68
23	4.50	14.76	137.15	0.80	0.58	9	18.85	84.84	84.84	0.00	1.06	26.3	28.0	0.00	5.0E-02	6	154.19
	4.70	15.42	180.15	0.92	0.51	9	18.85	88.61	87.35	1.26	1.05	34.6	36.2	0.00	5.0E-02	6	196.97
25	4.90	16.08	252.87	5.97	2.36	7	18.85	92.38	89.16	3.22	1.04	80.9	83.9	0.00	5.0E-04	8	271.23
26	5.10	16.73	213.74	2.11	0.99	9	18.85	96.15	90.97	5.18	1.03	41.0	42.1	0.00	5.0E-02	6	224.49
27	5.30	17.39	283.61	1.58	0.56	10	18.85	99.92	92.78	7.14	1.02	45.4	46.1	0.00	5.0E+00	6	292.37
28	5.50	18.04	433.40	1.75	0.40	10	18.85	103.69	94.59	9.10	1.01	69.3	69.8	0.00	5.0E+00	7	438.77
29	5.70	18.70	432.01	3.02	0.70	10	18.85	107.46	96.40	11.07	1.00	69.1	68.9	0.00	5.0E+00	6	429.11
30	5.90	19.36	302.38	2.80	0.93	9	18.85	111.23	98.21	13.03	0.99	58.1	57.3	0.00	5.0E-02	6	294.45
31	6.10	20.01	287.59	2.73	0.95	9	18.85	115.00	100.01	14.99	0.98	55.2	54.0	0.00	5.0E-02	6	274.89
32	6.30	20.67	178.62	2.15	1.21	9	18.85	118.77	101.82	16.95	0.97	34.3	33.3	0.00	5.0E-02	6	167.24
33	6.50	21.33	412.00	2.65	0.64	10	18.85	122.55	103.63	18.91	0.96	65.9	63.4	0.00	5.0E+00	6	380.48
34	6.70	21.98	396.58	3.10	0.78	10	18.85	126.32	105.44	20.88	0.95	63.5	60.5	0.00	5.0E+00	6	359.87
35	6.90	22.64	352.36	3.81	1.08	9	18.85	130.09	107.25	22.84	0.95	67.7	63.9	0.00	5.0E-02	6	314.19
36	7.10	23.29	219.57	1.87	0.85	9	18.85	133.86	109.06	24.80	0.94	42.2	39.5	0.00	5.0E-02	6	192.05
37	7.30	23.95	157.68	1.01	0.64	9	18.85	137.63	110.87	26.76	0.93	30.3	28.1	0.00	5.0E-02	6	135.30
38	7.50	24.61	106.19	0.62	0.58	9	18.85	141.40	112.68	28.72	0.92	20.4	18.8	0.00	5.0E-02	6	89.22
39	7.70	25.26	106.59	0.58	0.55	9	18.85	145.17	114.48	30.69	0.91	20.5	18.7	0.00	5.0E-02	6	88.11
40	7.90	25.92	107.56	0.55	0.51	9	18.85	148.94	116.29	32.65	0.91	20.7	18.7	0.00	5.0E-02	6	87.51
41	8.10	26.57	104.81	0.58	0.56	9	18.85	152.71	118.10	34.61	0.90	20.1	18.1	0.00	5.0E-02	6	83.90
42	8.30	27.23	116.01	0.66	0.57	9	18.85	156.48	119.91	36.57	0.89	22.3	19.9	0.00	5.0E-02	6	91.57
43	8.50	27.89	113.68	0.76	0.67	9	18.85	160.25	121.72	38.53	0.89	21.8	19.4	0.00	5.0E-02	6	88.34
44	8.70	28.54	112.44	0.72	0.64	9	18.85	164.02	123.53	40.50	0.88	21.6	19.0	0.00	5.0E-02	6	86.05
45	8.90	29.20	112.46	0.89	0.79	9	18.85	167.79	125.34	42.46	0.87	21.6	18.9	0.00	5.0E-02	6	84.80
46	9.10	29.86	106.68	0.81	0.76	8	18.85	171.56	127.14	44.42	0.87	25.6	22.2	0.00	5.0E-03	6	79.20
47	9.30	30.51	120.03	0.77	0.64	9	18.85	175.33	128.95	46.38	0.86	23.0	19.9	0.00	5.0E-02	6	88.00
48	9.50	31.17	189.74	1.31	0.69	9	18.85	179.10	130.76	48.34	0.86	36.4	31.2	0.00	5.0E-02	6	137.93
49	9.70	31.82	204.57	1.94	0.95	9	18.85	182.88	132.57	50.31	0.85	39.3	33.4	0.00	5.0E-02	6	146.76
50	9.90	32.48	146.56	1.37	0.93	9	18.85	186.65	134.38	52.27	0.84	28.1	23.8	0.00	5.0E-02	6	103.32
51	10.10	33.14	124.79	1.16	0.93	9	18.85	190.42	136.19	54.23	0.84	24.0	20.1	0.00	5.0E-02	6	86.57
52	10.30	33.79	100.87	1.08	1.07	8	18.85	194.19	138.00	56.19	0.83	24.2	20.2	0.00	5.0E-03	5	68.77
53	10.50	34.45	101.73	1.15	1.14	8	18.85	197.96	139.80	58.15	0.83	24.4	20.2	0.00	5.0E-03	5	68.44
	10.70	35.10	103.34	1.19	1.15	8	18.85	201.73	141.61	60.12	0.82	24.8	20.4	0.00	5.0E-03	5	68.63
	10.90	35.76	104.91	1.25	1.19	8	18.85	205.50	143.42	62.08	0.82	25.2	20.6	0.00	5.0E-03	5	68.79
56	11.10	36.42	109.95	1.54	1.40	8	18.85	209.27	145.23	64.04	0.81	26.4	21.4	0.00	5.0E-03	5	71.23
57	11.30	37.07	117.79	2.29	1.94	7	18.85	213.04	147.04	66.00	0.81	37.7	30.4	0.00	5.0E-04	5	75.46
58	11.50	37.73	217.98	4.56	2.09	8	18.85	216.81	148.85	67.96	0.80	52.3	42.0	0.00	5.0E-03	5	139.13
59	11.70	38.39	181.79	6.17	3.39	12	18.85	220.58	150.66	69.93	0.80	87.3	69.6	0.00	0.0E+00	8	114.37

60	11.90	39.04	230.99	4.14	1.79	8	18.85	224.35	152.46	71.89	0.79	55.4	43.9	0.00	5.0E-03	6	143.98

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-8
Location: Peterson/Puritan
Cone: 20 TON AD139
e: 09:10:03 17:24

Water Table (m): 1.07 (ft): 3.50 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160 (blows/ft)	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	4.52	0.00	0.06	1	18.85	1.89	1.89	0.00	2.00	2.2	4.3	34.59	1.0E-07	0	229.34
2	0.30	0.98	12.31	0.01	0.10	6	18.85	5.66	5.66	0.00	2.00	4.7	9.5	94.12	5.0E-05	7	208.01
3	0.50	1.64	29.70	0.37	1.25	7	18.85	9.43	9.43	0.00	2.00	9.5	19.0	0.00	5.0E-04	6	301.44
4	0.70	2.30	187.05	2.71	1.45	8	18.85	13.20	13.20	0.00	2.00	44.9	89.8	0.00	5.0E-03	0	1359.6
5	0.90	2.95	326.48	2.12	0.65	10	18.85	16.97	16.97	0.00	2.00	52.2	104.5	0.00	5.0E+00	0	1846.1
6	1.10	3.61	297.58	2.14	0.72	9	18.85	20.74	20.41	0.33	2.00	57.1	114.3	0.00	5.0E-02	0	1398.4
7	1.30	4.27	200.71	1.92	0.96	9	18.85	24.51	22.22	2.29	2.00	38.5	77.1	0.00	5.0E-02	6	865.99
8	1.50	4.92	229.83	1.17	0.51	9	18.85	28.28	24.03	4.25	2.00	44.1	88.1	0.00	5.0E-02	7	916.97
9	1.70	5.58	289.56	2.60	0.90	9	18.85	32.05	25.84	6.21	1.93	55.6	107.0	0.00	5.0E-02	0	1074.6
10	1.90	6.23	226.63	1.88	0.83	9	18.85	35.82	27.65	8.17	1.86	43.5	81.0	0.00	5.0E-02	7	785.62
11	2.10	6.89	95.45	0.78	0.81	8	18.85	39.59	29.46	10.14	1.80	22.9	41.3	0.00	5.0E-03	6	309.74
12	2.30	7.55	68.75	0.37	0.54	8	18.85	43.36	31.26	12.10	1.75	16.5	28.9	0.00	5.0E-03	6	209.72
13	2.50	8.20	67.51	0.22	0.33	8	18.85	47.13	33.07	14.06	1.70	16.2	27.6	0.00	5.0E-03	6	194.52
14	2.70	8.86	70.43	0.20	0.28	8	18.85	50.90	34.88	16.02	1.66	16.9	28.0	0.00	5.0E-03	6	192.37
15	2.90	9.51	78.90	0.39	0.49	8	18.85	54.67	36.69	17.98	1.62	18.9	30.6	0.00	5.0E-03	6	204.96
16	3.10	10.17	78.26	0.35	0.45	8	18.85	58.44	38.50	19.95	1.58	18.8	29.6	0.00	5.0E-03	6	193.63
17	3.30	10.83	66.80	1.02	1.52	7	18.85	62.22	40.31	21.91	1.54	21.4	33.0	0.00	5.0E-04	6	157.54
18	3.50	11.48	103.27	1.05	1.01	8	18.85	65.99	42.12	23.87	1.51	24.8	37.4	0.00	5.0E-03	6	233.82
19	3.70	12.14	127.47	0.87	0.68	9	18.85	69.76	43.92	25.83	1.48	24.5	36.1	0.00	5.0E-02	6	277.00
20	3.90	12.80	107.00	1.10	1.03	8	18.85	73.53	45.73	27.79	1.45	25.7	37.2	0.00	5.0E-03	6	223.01
21	4.10	13.45	119.72	0.80	0.67	9	18.85	77.30	47.54	29.76	1.42	23.0	32.6	0.00	5.0E-02	6	240.13
22	4.30	14.11	125.65	0.85	0.68	9	18.85	81.07	49.35	31.72	1.39	24.1	33.6	0.00	5.0E-02	6	242.79
[illegible]	4.50	14.76	132.36	0.93	0.70	9	18.85	84.84	51.16	33.68	1.37	25.4	34.8	0.00	5.0E-02	6	246.71
	4.70	15.42	126.44	1.54	1.22	8	18.85	88.61	52.97	35.64	1.34	30.3	40.8	0.00	5.0E-03	6	227.49
25	4.90	16.08	153.21	1.39	0.91	9	18.85	92.38	54.78	37.60	1.32	29.4	38.9	0.00	5.0E-02	6	266.82
26	5.10	16.73	94.54	1.31	1.38	8	18.85	96.15	56.59	39.57	1.30	22.7	29.5	0.00	5.0E-03	6	158.69
27	5.30	17.39	71.95	0.33	0.45	8	18.85	99.92	58.39	41.53	1.28	17.3	22.1	0.00	5.0E-03	6	116.57
28	5.50	18.04	80.62	0.43	0.54	8	18.85	103.69	60.20	43.49	1.26	19.3	24.4	0.00	5.0E-03	6	126.84
29	5.70	18.70	89.09	0.65	0.73	8	18.85	107.46	62.01	45.45	1.24	21.4	26.6	0.00	5.0E-03	6	136.18
30	5.90	19.36	160.15	1.18	0.74	9	18.85	111.23	63.82	47.41	1.23	30.7	37.7	0.00	5.0E-02	6	239.16
31	6.10	20.01	339.50	3.63	1.07	9	18.85	115.00	65.63	49.38	1.21	65.2	78.7	0.00	5.0E-02	6	494.86
32	6.30	20.67	226.80	1.98	0.88	9	18.85	118.77	67.44	51.34	1.19	43.5	51.9	0.00	5.0E-02	6	321.11
33	6.50	21.33	128.46	1.06	0.82	9	18.85	122.55	69.25	53.30	1.18	24.7	29.0	0.00	5.0E-02	6	176.33
34	6.70	21.98	99.74	0.57	0.57	9	18.85	126.32	71.05	55.26	1.16	19.2	22.2	0.00	5.0E-02	6	132.98
35	6.90	22.64	79.86	0.57	0.71	8	18.85	130.09	72.86	57.22	1.15	19.2	22.0	0.00	5.0E-03	6	103.43
36	7.10	23.29	85.41	0.65	0.76	8	18.85	133.86	74.67	59.19	1.13	20.5	23.2	0.00	5.0E-03	6	108.02
37	7.30	23.95	100.24	0.90	0.90	8	18.85	137.63	76.48	61.15	1.12	24.1	26.9	0.00	5.0E-03	6	124.03
38	7.50	24.61	77.95	0.71	0.91	8	18.85	141.40	78.29	63.11	1.11	18.7	20.7	0.00	5.0E-03	6	93.78
39	7.70	25.26	74.99	0.57	0.76	8	18.85	145.17	80.10	65.07	1.09	18.0	19.7	0.00	5.0E-03	6	88.07
40	7.90	25.92	81.37	0.55	0.68	8	18.85	148.94	81.91	67.03	1.08	19.5	21.1	0.00	5.0E-03	6	93.55
41	8.10	26.57	81.04	0.59	0.72	8	18.85	152.71	83.71	69.00	1.07	19.5	20.8	0.00	5.0E-03	6	91.11
42	8.30	27.23	77.76	0.56	0.72	8	18.85	156.48	85.52	70.96	1.06	18.7	19.8	0.00	5.0E-03	6	85.46
43	8.50	27.89	70.64	0.57	0.81	8	18.85	160.25	87.33	72.92	1.05	17.0	17.8	0.00	5.0E-03	6	75.82
44	8.70	28.54	72.86	0.60	0.82	8	18.85	164.02	89.14	74.88	1.04	17.5	18.1	0.00	5.0E-03	6	76.63
45	8.90	29.20	76.28	0.58	0.76	8	18.85	167.79	90.95	76.84	1.03	18.3	18.8	0.00	5.0E-03	6	78.67
46	9.10	29.86	83.94	0.62	0.74	8	18.85	171.56	92.76	78.81	1.02	20.1	20.5	0.00	5.0E-03	6	85.02
47	9.30	30.51	89.71	0.62	0.70	8	18.85	175.33	94.57	80.77	1.01	21.5	21.7	0.00	5.0E-03	6	89.22
48	9.50	31.17	86.40	0.70	0.82	8	18.85	179.10	96.37	82.73	1.00	20.7	20.7	0.00	5.0E-03	6	84.21
49	9.70	31.82	78.82	0.63	0.80	8	18.85	182.88	98.18	84.69	0.99	18.9	18.7	0.00	5.0E-03	6	75.21
50	9.90	32.48	70.25	0.49	0.70	8	18.85	186.65	99.99	86.65	0.98	16.9	16.5	0.00	5.0E-03	6	65.58
51	10.10	33.14	78.60	0.53	0.67	8	18.85	190.42	101.80	88.62	0.97	18.9	18.3	0.00	5.0E-03	6	72.26
52	10.30	33.79	105.98	0.65	0.62	9	18.85	194.19	103.61	90.58	0.96	20.3	19.6	0.00	5.0E-02	6	96.32
53	10.50	34.45	117.66	0.78	0.66	9	18.85	197.96	105.42	92.54	0.95	22.6	21.5	0.00	5.0E-02	6	105.27
	10.70	35.10	111.59	0.81	0.73	9	18.85	201.73	107.23	94.50	0.95	21.4	20.3	0.00	5.0E-02	6	98.03
[illegible]	10.90	35.76	92.16	0.75	0.82	8	18.85	205.50	109.04	96.46	0.94	22.1	20.7	0.00	5.0E-03	6	79.25
56	11.10	36.42	99.81	0.74	0.74	8	18.85	209.27	110.84	98.43	0.93	24.0	22.3	0.00	5.0E-03	6	84.55
57	11.30	37.07	101.77	0.75	0.74	8	18.85	213.04	112.65	100.39	0.92	24.4	22.5	0.00	5.0E-03	6	84.84
58	11.50	37.73	104.72	0.75	0.72	9	18.85	216.81	114.46	102.35	0.91	20.1	18.4	0.00	5.0E-02	6	85.94
59	11.70	38.39	96.52	0.70	0.72	8	18.85	220.58	116.27	104.31	0.91	23.2	21.0	0.00	5.0E-03	6	77.80

60	11.90	39.04	83.52	0.69	0.82	8	18.85	224.35	118.08	106.27	0.90	20.0	18.1	0.00	5.0E-03	6	66.00
61	12.10	39.70	77.20	0.62	0.80	8	18.85	228.12	119.89	108.24	0.89	18.5	16.6	0.00	5.0E-03	6	59.92

ConeTec Investigations Ltd. - CPT Interpretation
Client: Shield Environmental
Site: CPT-9
Location: Peterson/Puritan
Cone: 20 TON AD139
[redacted]: 09:10:03 18:14

Water Table (m): 8.84 (ft): 29.00 Unit Weight of Water (Default): 62.44 pcf
Su Nkt used: 12.50

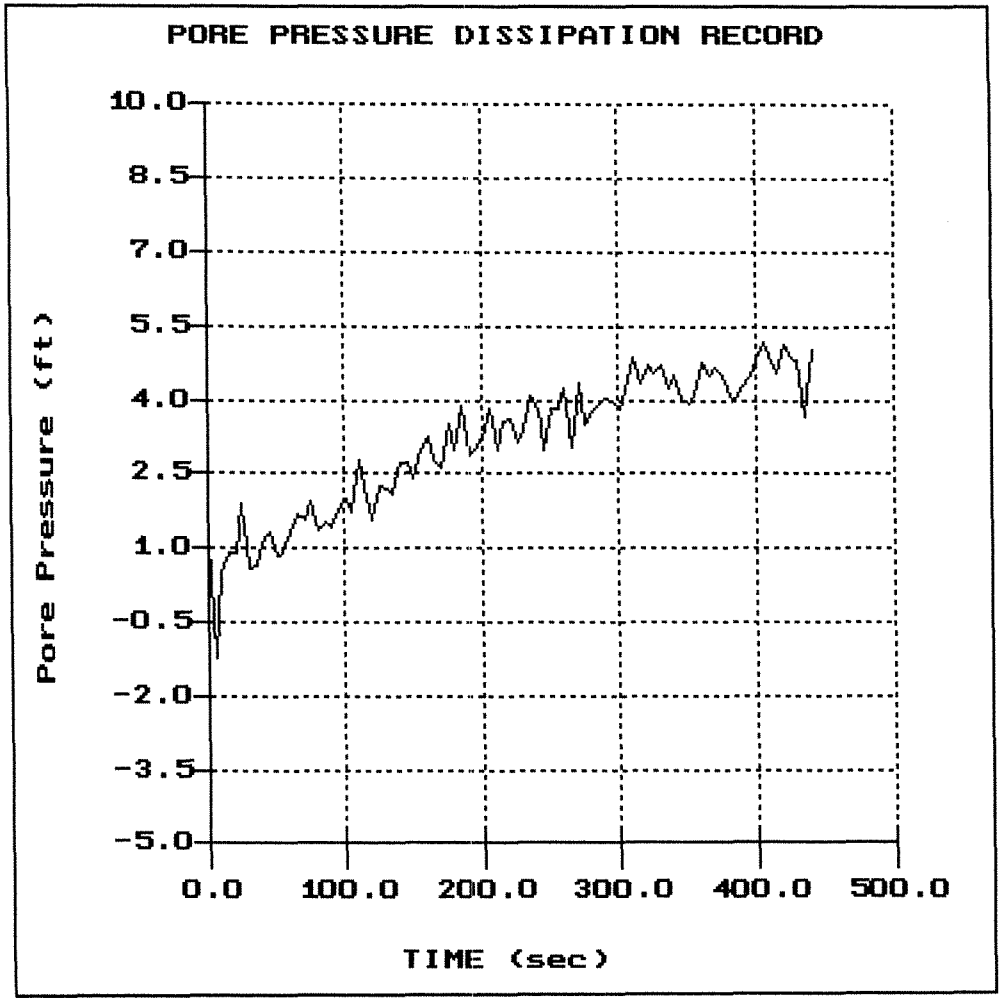
Layer	Depth (m)	Depth (ft)	Qt (tsf)	Fs (tsf)	Rf (%)	SBT	U Wt (kN/m^3)	TStress (kPa)	EStress (kPa)	HPres (kPa)	Cn	N60 (blows/ft)	N160	Su (kPa)	k (cm/s)	SBTn	Qtn
1	0.10	0.33	145.67	0.77	0.53	9	18.85	1.89	1.89	0.00	2.00	28.0	55.9	0.00	5.0E-02	0	7416.4
2	0.30	0.98	121.39	0.88	0.73	9	18.85	5.66	5.66	0.00	2.00	23.3	46.6	0.00	5.0E-02	0	2059.3
3	0.50	1.64	116.55	1.70	1.46	8	18.85	9.43	9.43	0.00	2.00	28.0	55.9	0.00	5.0E-03	0	1185.9
4	0.70	2.30	53.32	1.03	1.93	7	18.85	13.20	13.20	0.00	2.00	17.1	34.1	0.00	5.0E-04	8	386.87
5	0.90	2.95	42.75	0.63	1.47	7	18.85	16.97	16.97	0.00	2.00	13.7	27.4	0.00	5.0E-04	6	240.89
6	1.10	3.61	43.42	0.86	1.99	6	18.85	20.74	20.74	0.00	2.00	16.7	33.3	331.79	5.0E-05	6	199.98
7	1.30	4.27	38.54	0.87	2.24	6	18.85	24.51	24.51	0.00	1.98	14.8	29.3	294.03	5.0E-05	5	149.96
8	1.50	4.92	31.56	0.69	2.17	6	18.85	28.28	28.28	0.00	1.84	12.1	22.3	240.14	5.0E-05	5	106.15
9	1.70	5.58	27.98	0.43	1.55	6	18.85	32.05	32.05	0.00	1.73	10.7	18.6	212.29	5.0E-05	5	82.80
10	1.90	6.23	33.38	0.62	1.86	6	18.85	35.82	35.82	0.00	1.64	12.8	21.0	253.46	5.0E-05	5	88.45
11	2.10	6.89	31.38	0.62	1.96	6	18.85	39.59	39.59	0.00	1.56	12.0	18.7	237.83	5.0E-05	5	75.09
12	2.30	7.55	44.63	1.04	2.33	6	18.85	43.36	43.36	0.00	1.49	17.1	25.5	339.31	5.0E-05	5	97.81
13	2.50	8.20	62.27	1.33	2.13	7	18.85	47.13	47.13	0.00	1.43	19.9	28.4	0.00	5.0E-04	5	125.82
14	2.70	8.86	41.18	1.22	2.95	6	18.85	50.90	50.90	0.00	1.37	15.8	21.7	312.23	5.0E-05	5	76.67
15	2.90	9.51	43.19	1.21	2.81	6	18.85	54.67	54.67	0.00	1.32	16.6	22.0	327.36	5.0E-05	5	74.84
16	3.10	10.17	55.86	1.33	2.38	6	18.85	58.44	58.44	0.00	1.28	21.4	27.5	424.32	5.0E-05	5	90.75
17	3.30	10.83	172.53	1.91	1.11	9	18.85	62.22	62.22	0.00	1.24	33.1	41.1	0.00	5.0E-02	6	265.22
18	3.50	11.48	48.23	1.39	2.89	6	18.85	65.99	65.99	0.00	1.20	18.5	22.3	365.12	5.0E-05	5	69.17
19	3.70	12.14	60.80	1.55	2.54	6	18.85	69.76	69.76	0.00	1.17	23.3	27.4	461.34	5.0E-05	5	82.67
20	3.90	12.80	39.21	1.16	2.96	6	18.85	73.53	73.53	0.00	1.14	15.1	17.2	295.28	5.0E-05	4	50.20
21	4.10	13.45	29.46	0.69	2.35	6	18.85	77.30	77.30	0.00	1.11	11.3	12.6	220.09	5.0E-05	4	35.59
22	4.30	14.11	63.29	1.51	2.39	6	18.85	81.07	81.07	0.00	1.09	24.3	26.4	479.55	5.0E-05	5	73.94
[illegible]	4.50	14.76	101.68	2.17	2.14	7	18.85	84.84	84.84	0.00	1.06	32.5	34.6	0.00	5.0E-04	5	114.06
	4.70	15.42	68.08	1.77	2.60	6	18.85	88.61	88.61	0.00	1.04	26.1	27.2	515.74	5.0E-05	5	72.76
25	4.90	16.08	66.37	0.82	1.24	7	18.85	92.38	92.38	0.00	1.02	21.2	21.6	0.00	5.0E-04	5	67.97
26	5.10	16.73	90.29	1.50	1.66	7	18.85	96.15	96.15	0.00	1.00	28.9	28.8	0.00	5.0E-04	5	89.15
27	5.30	17.39	38.59	1.19	3.08	5	18.85	99.92	99.92	0.00	0.98	18.5	18.1	288.38	5.0E-06	4	36.08
28	5.50	18.04	48.30	1.22	2.52	6	18.85	103.69	103.69	0.00	0.96	18.5	17.8	362.62	5.0E-05	5	43.71
29	5.70	18.70	50.57	1.13	2.23	6	18.85	107.46	107.46	0.00	0.94	19.4	18.3	379.82	5.0E-05	5	44.18
30	5.90	19.36	28.67	0.97	3.40	5	18.85	111.23	111.23	0.00	0.93	13.8	12.8	211.28	5.0E-06	4	23.74
31	6.10	20.01	146.31	2.43	1.66	8	18.85	115.00	115.00	0.00	0.91	35.1	32.0	0.00	5.0E-03	6	121.13
32	6.30	20.67	143.52	1.10	0.76	9	18.85	118.77	118.77	0.00	0.90	27.6	24.7	0.00	5.0E-02	6	115.00
33	6.50	21.33	119.37	2.45	2.05	7	18.85	122.55	122.55	0.00	0.88	38.2	33.8	0.00	5.0E-04	5	92.51
34	6.70	21.98	98.84	2.75	2.78	6	18.85	126.32	126.32	0.00	0.87	38.0	33.1	748.97	5.0E-05	5	74.12
35	6.90	22.64	84.11	0.98	1.17	8	18.85	130.09	130.09	0.00	0.86	20.2	17.3	0.00	5.0E-03	5	61.07
36	7.10	23.29	108.02	0.47	0.44	9	18.85	133.86	133.86	0.00	0.85	20.7	17.5	0.00	5.0E-02	6	76.47
37	7.30	23.95	66.87	0.91	1.37	7	18.85	137.63	137.63	0.00	0.83	21.4	17.9	0.00	5.0E-04	5	45.64
38	7.50	24.61	29.86	1.00	3.34	5	18.85	141.40	141.40	0.00	0.82	14.3	11.8	218.01	5.0E-06	4	19.27
39	7.70	25.26	28.81	0.77	2.66	6	18.85	145.17	145.17	0.00	0.81	11.1	9.0	209.66	5.0E-05	4	18.05
40	7.90	25.92	68.65	1.74	2.53	6	18.85	148.94	148.94	0.00	0.80	26.4	21.1	515.29	5.0E-05	5	43.25
41	8.10	26.57	92.99	3.08	3.32	6	18.85	152.71	152.71	0.00	0.79	35.7	28.3	701.92	5.0E-05	4	57.46
42	8.30	27.23	72.17	2.59	3.59	6	18.85	156.48	156.48	0.00	0.78	27.7	21.7	541.74	5.0E-05	4	43.28
43	8.50	27.89	68.25	2.87	4.21	5	18.85	160.25	160.25	0.00	0.77	32.8	25.3	511.34	5.0E-06	4	39.89
44	8.70	28.54	116.78	6.86	5.87	11	18.85	164.02	164.02	0.00	0.76	112.1	85.7	0.00	0.0E+00	9	67.35
45	8.90	29.20	59.15	5.86	8.00	11	18.85	167.79	167.20	0.60	0.76	56.8	43.0	0.00	0.0E+00	3	32.96
46	9.10	29.86	24.79	1.07	4.31	4	18.85	171.56	169.01	2.56	0.75	15.9	11.9	176.67	5.0E-07	3	13.07
47	9.30	30.51	36.69	0.62	1.70	6	18.85	175.33	170.81	4.52	0.75	14.1	10.6	267.76	5.0E-05	4	19.59
48	9.50	31.17	78.85	0.96	1.22	8	18.85	179.10	172.62	6.48	0.74	18.9	14.1	0.00	5.0E-03	5	42.81
49	9.70	31.82	115.33	1.75	1.52	8	18.85	182.88	174.43	8.44	0.74	27.7	20.5	0.00	5.0E-03	5	62.42
50	9.90	32.48	228.16	2.61	1.14	9	18.85	186.65	176.24	10.41	0.74	43.8	32.3	0.00	5.0E-02	6	123.22

APPENDIX C

Shield Env.

Hole:CPT-1
Location:Peterson/Puritan

Cone:20 TON AD139
Date:09:10:03 09:32

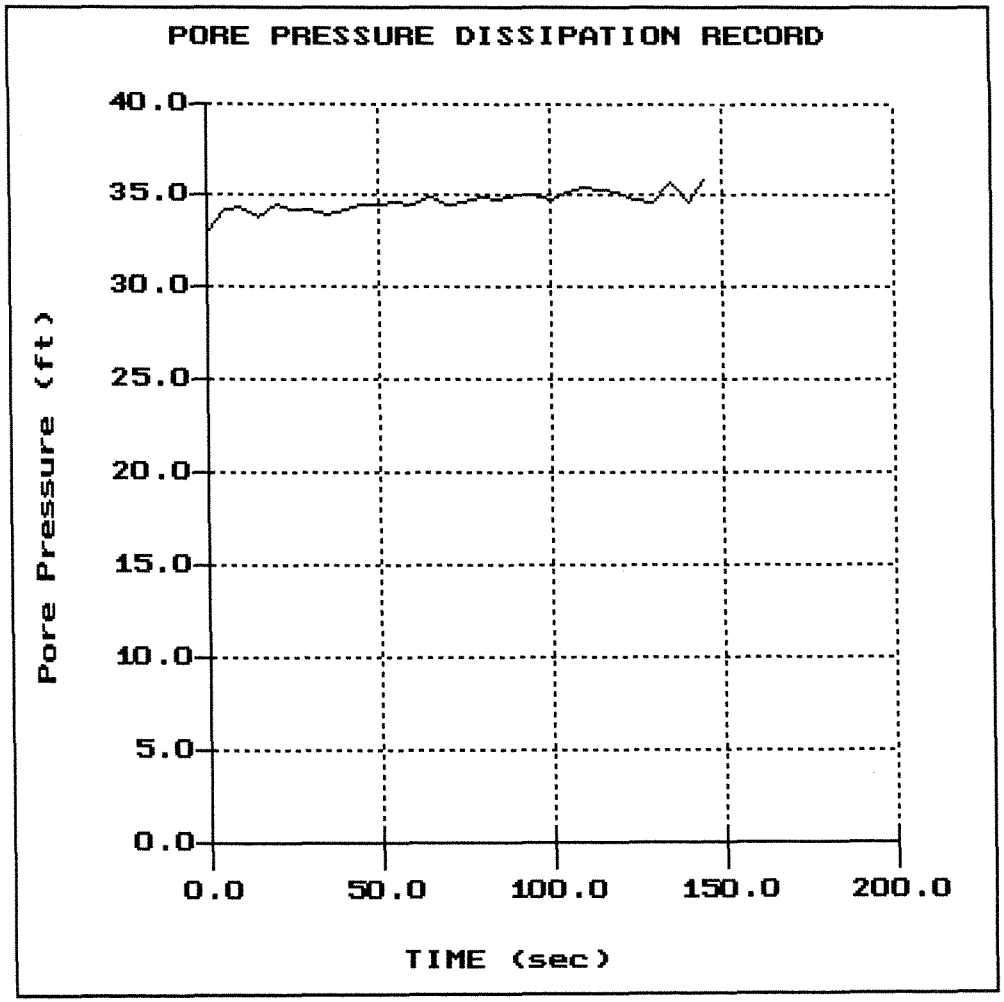


File: 760CP001.PPD
Depth (m): 2.80
(ft): 9.19
Duration : 440.0s
U-min: -1.27 5.0s
U-max: 5.16 405.0s

Shield Env.

Hole:CPT-1A
Location:Peterson/Puritan

Cone:20 TON AD139
Date:09:10:03 09:57

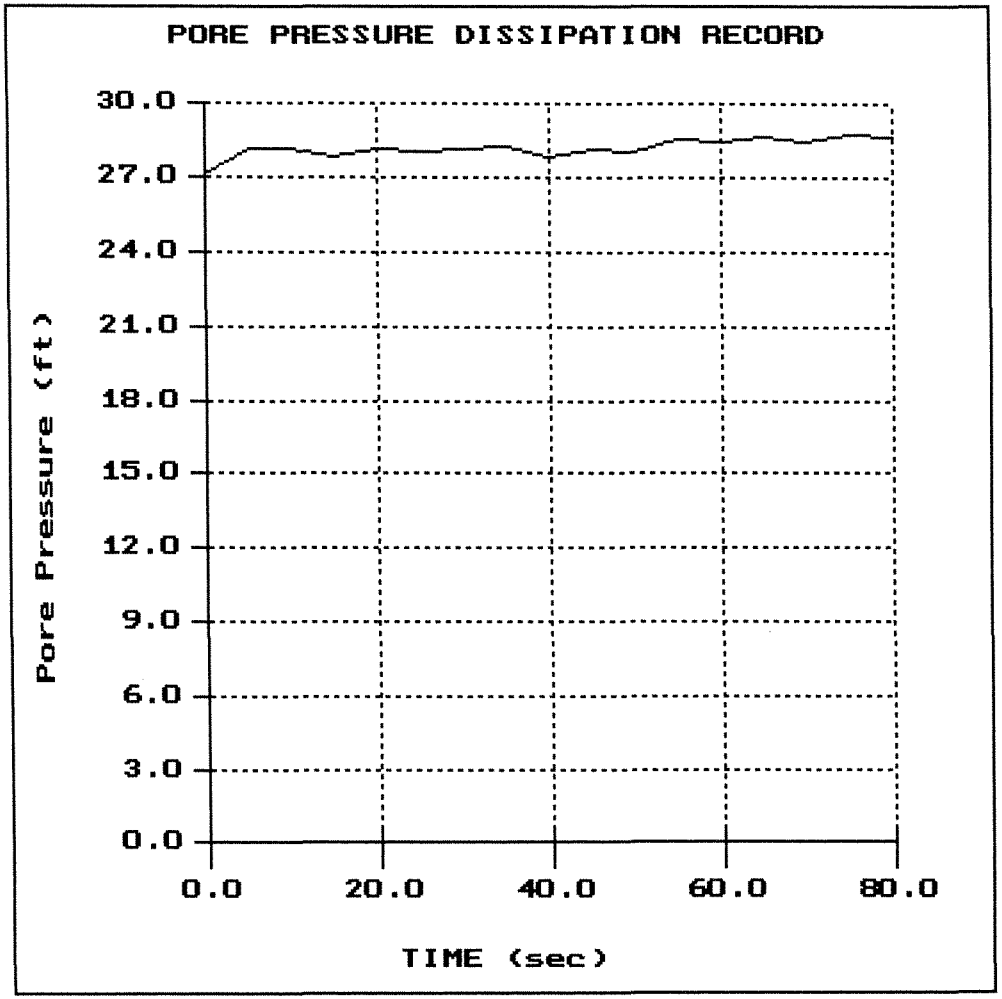


File: 760CP01A.PPD
Depth (m): 12.20
(ft): 40.03
Duration : 145.0s
U-min: 32.94 0.0s
U-max: 35.81 145.0s

Shield Env.

Hole:CPT-2
Location:Peterson/Puritan

Cone:20 TON AD139
Date:09:10:03 10:50

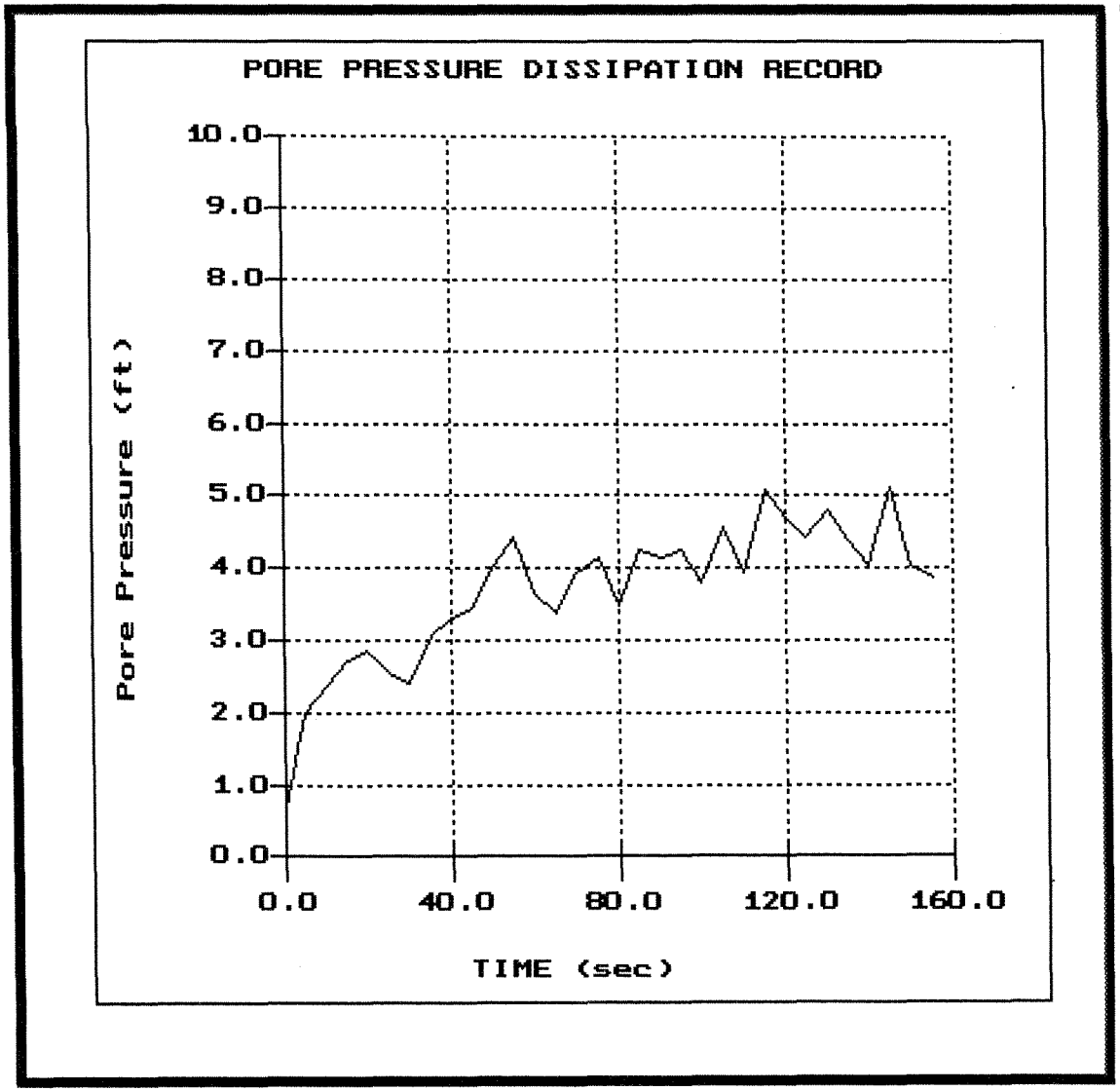


File: 760CP002.PPD
Depth (m): 11.30
(ft): 37.07
Duration : 80.0s
U-min: 27.08 0.0s
U-max: 28.77 75.0s

Shield Env.

Hole:CPT-6
Location:Peterson/Puritan

Cone:20 TON AD139
Date:09:10:03 15:11

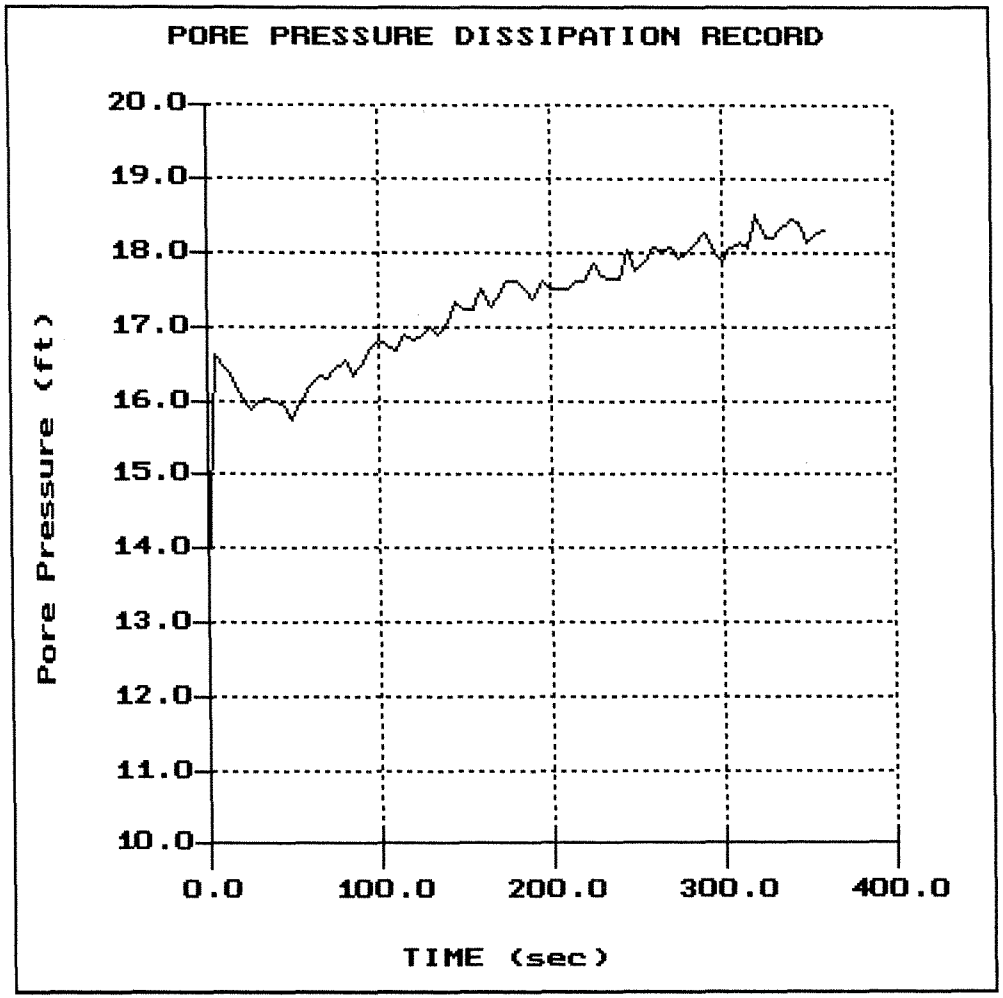


File: 760CP006.PPD
Depth (m): 8.50
(ft): 27.89
Duration : 155.0s
U-min: 0.66 0.0s
U-max: 5.12 145.0s

Shield Env.

Hole:CPT-7
Location:Peterson/Puritan

Cone:20 TON AD139
Date:09:10:03 16:26

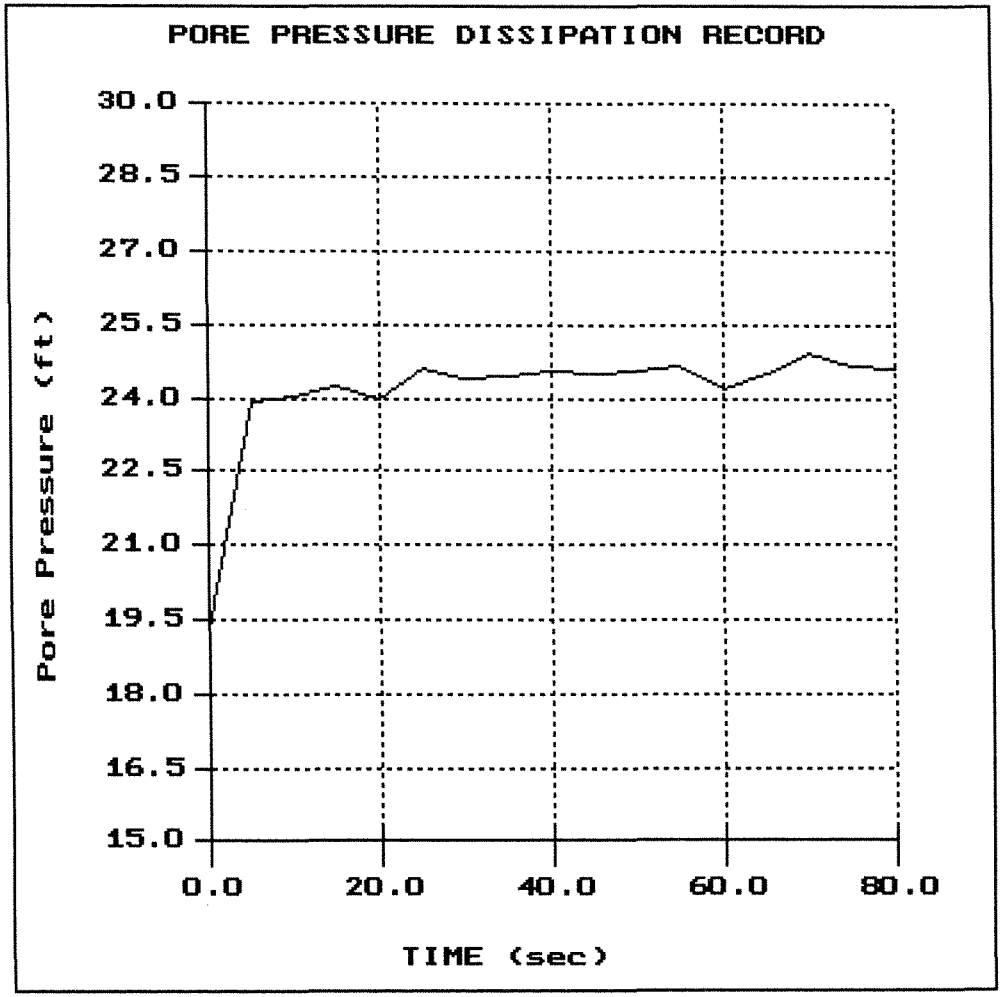


File: 760CP007.PPD
Depth (m): 9.90
(ft): 32.48
Duration : 360.0s
U-min: 13.52 0.0s
U-max: 18.49 320.0s

Shield Env.

Hole:CPT-7
Location:Peterson/Puritan

Cone:20 TON AD139
Date:09:10:03 16:26

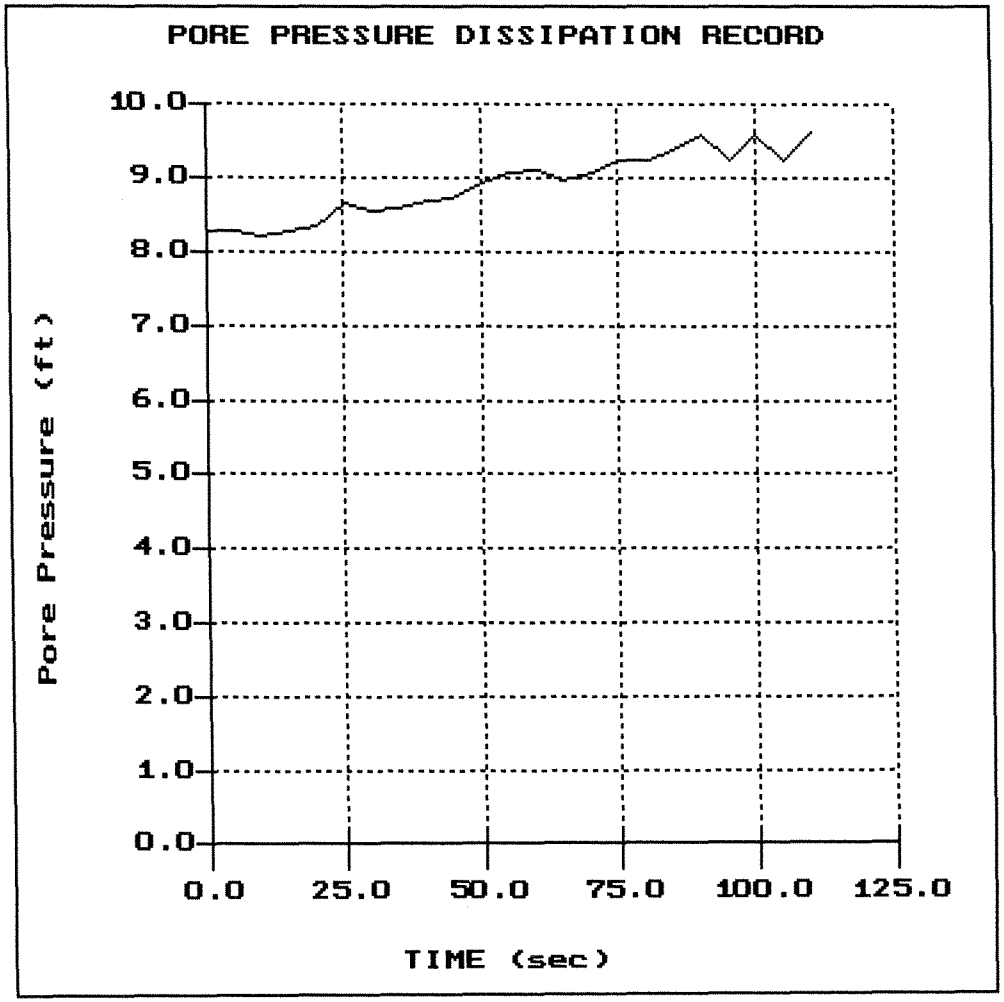


File: 760CP007.PPD
Depth (m): 12.15
(ft): 39.86
Duration : 80.0s
U-min: 19.29 0.0s
U-max: 24.87 70.0s

Shield Env.

Hole:CPT-8
Location:Peterson/Puritan

Cone:20 TON AD139
Date:09:10:03 17:24

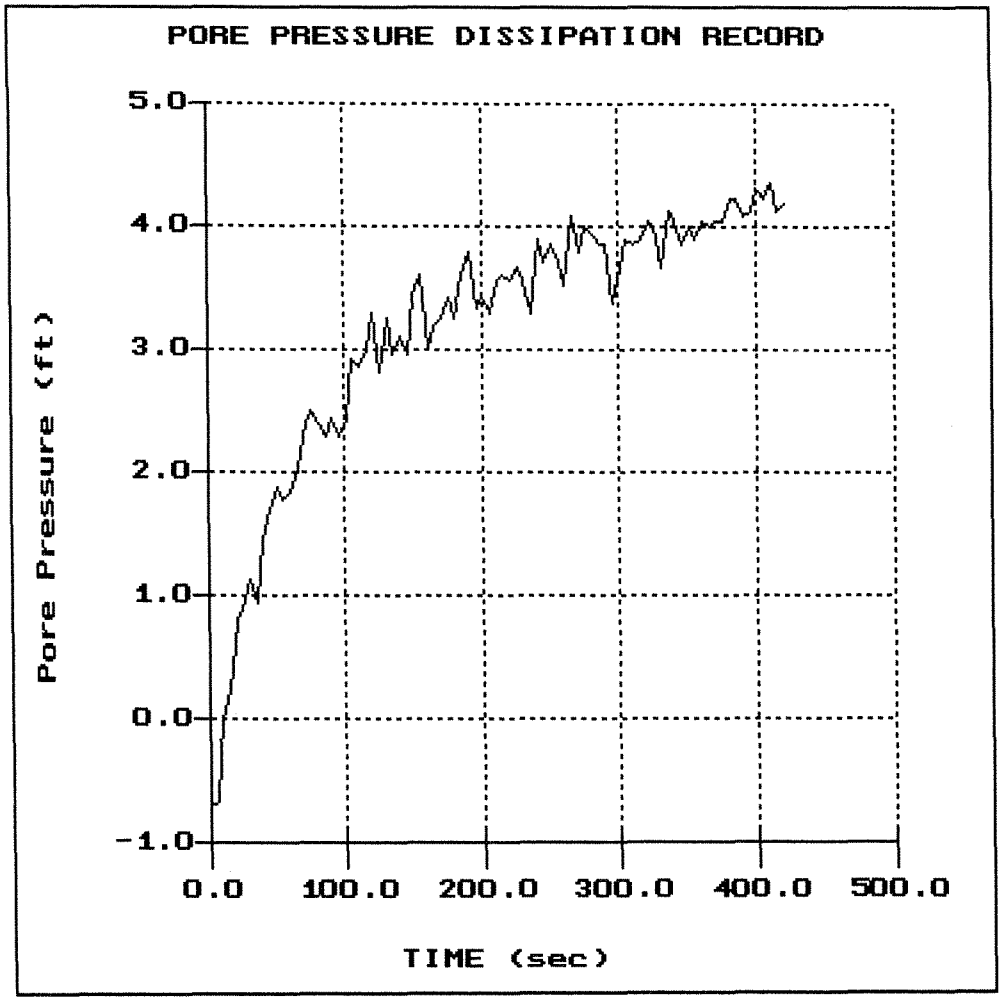


File: 760CP008.PPD
Depth (m): 3.95
(ft): 12.96
Duration : 110.0s
U-min: 8.21 10.0s
U-max: 9.62 110.0s

Shield Env.

Hole:CPT-9
Location:Peterson/Puritan

Cone:20 TON AD139
Date:09:10:03 18:14



File: 760CP009.PPD
Depth (m): 10.15
(ft): 33.30
Duration : 420.0s
U-min: -0.70 0.0s
U-max: 4.36 410.0s

12/9/06 - 70

Daily Log

WEATHER: Overcast, Periodic Rain, Low 50's

RSK; JT6 Gather Supplies (Sampling Equip, PPE, Coolers etc.) & Mobilize to Site. Arrive @ Site, Check Flow Conditions, Prepare for Sampling on 1/10/06.

1/10/06

0630 Depart Hotel

0700 On Site, Load Supplies, Sampling Equipment into Boat, Launch Boat, Safety Meeting.

0730 - 1500 Sample Monitoring Wells GW 702, 703; SEA-60 Rinse Blank Collected @ 1430

1500-1730 RSK: JT6 Evaluate Site Monitoring Wells to see which ones still exist.

1730 Done for the Day.

1/11/06

WEATHER: Overcast, 40's-50's

0630 RSK: JT6 Prep Supplies for Pickup

0700 RSK: JT6 on Site, Safety Meeting

0700-0830 RSK: JT6 Continue w/ Site Evaluation

0900-0930 Specific Capacity Test @ GWP-705B

0930 Lab Picks Samples up @ Site

1000 RSK: JT6 off Site

1500 RSK: JT6 @ Depot Road, Drop off Boat & Equipment

1600 RSK: Pick Environmental, Drop off Rental Equipment.

1/11/06 GNP-705B Specific Capacity Test (AM)

- Initial ∇ prior to pump installation 19.78'
- ∇ After pump installation 19.78'

Time	Elapsed Time (min)	∇ (ft)	Flow (LPM)	Total Purged (L) (Gal)
0900	0	19.78	0	0
0901	1	20.53	1.95	1.95
0902	2	20.56	1.70	
0903	3	20.56	1.80	
0904	4	20.56	1.80	
0905	5	20.56	1.90	
0910	10	20.56	1.90	
0915	15	20.56	1.90	
0920	20	20.56	1.90	
0925	25	20.56	1.90	
0930	30	20.56	1.90	

~14.5 Gal

ARCADIS

Appendix Q

Habitat Characterization Summary

Habitat Characterization Summary

- ***Habitat locations are presented on the figure titled "Habitat Characterization Results"***

- ***A comprehensive list of vegetative and wildlife species observed during the wildlife surveys is presented on the tables titled "Vegetation Observations by Habitat" and "Wildlife Observations by Habitat"***

- ***Habitat classifications (in bold type below each habitat type) are based on the Natural Community Classification of Rhode Island (Rhode Island Natural Heritage Program [RINHP], 2005)***

Blackstone River

- **Riverine, Lower Perennial Stream/River**

The Blackstone River serves as the ecological backbone of the region. The river's conditions often dictate the conditions of the surrounding habitats. During periods of high flow, much of the Quinnville well field and Unnamed Island are inundated and/or overflowed by the waters of the Blackstone River. The Blackstone has been altered through history to suit the needs of centuries of people living along its banks.

Evidence of variability in river conditions was observed in numerous areas. Debris lines were found as high as 8 feet above the July 2005 water level. Steep banks and areas of bank scour and deposition indicated that periods of high flow occur throughout the year. River substrate ranged from boulder and cobble in high flow areas to sand and silt in the more quiescent backwaters and depositional areas. Erosion has exposed the root masses of trees along the banks, providing cover and shade for aquatic species. Similarly, banks erosion also resulted in numerous areas of downfall. Above-water portions of partially fallen trees act as perches for many species of piscivorous birds. Belted kingfisher (*Ceryle alcyon*), double-crested cormorants (*Phalarcrocorax auritus*), and great blue heron (*Ardea herodias*) were observed during field activities. Rough-winged swallows (*Stelgidopteryx semipennis*), spotted sandpiper (*Actitis macularia*), and tree swallows (*Tachycineta bicolor*) were observed foraging on aquatic invertebrates. Evidence of raccoon (*Procyon lotor*), deer (*Odocoileus virginianus*) and rat (*Rattus norvegicus*) foraging along the banks was also identified.

Riparian

- **Maple-Sycamore Floodplain Forest (numerous variations)**

National Research Council (2002) defines riparian areas as "…. transitional (areas) between terrestrial and aquatic ecosystems and are distinguished by gradients in biophysical conditions, ecological processes, and biota. They are areas through which surface and subsurface hydrology connect waterbodies with their adjacent uplands. They include those portions of terrestrial ecosystems that significantly influence exchanges of energy and matter with aquatic ecosystems (i.e., a zone of influence). Riparian areas are adjacent to perennial, intermittent, and ephemeral streams, lakes, and estuarine-marine shorelines."

The Blackstone River riparian corridor includes the transitional and floodplain habitats between the river proper and a number of other areas of the Site (i.e., J.M. Mills Landfill, Quinnville well field, Unnamed Island). The majority of the riparian corridor is densely forested, typically dominated by eastern cottonwood (*Populus deltiodes*), box-elder maple *(Acer negundo*), silver maple (*Acer saccharinum*), black willow (*Salix nigra*), green ash (*Fraxinus pennsylvanica*) and

sycamore (*Platanus occidentalis*). These species form a moderate-to-closed canopy with an average height of approximately 50 to 60 feet. In some areas the canopy's density limits the growth of the shrub and herbaceous layers. Other areas have well developed herbaceous and shrub layers. These understory layers were typically dominated by jewelweed (*Impatiens capensis*), joe-pye weed (*Eupatorium dubium*), and various species of fern (New York [*Thelypteris noveboracensis*], royal [*Osmunda regalis*], and sensitive [*Onoclea sensibilis*]). The riparian corridor functions as an important resource to avian species migrating and feeding along the Blackstone River. Many resident and migratory avian species use this corridor throughout the year. Wild turkey (*Meleagris gallopavo*), grackle (*Quiscalus quiscula*), catbird (*Dumetella carolinensis*), and robin (*Turdus migratorius*) were the more common species observed during the July 2005 habitat assessment field observation periods.

A diversion of the Blackstone River from its original path created an isolated landmass, the Unnamed Island, between the current river channel and a backwater area created by the former channel. A man-made berm now connects the Unnamed Island with the land between Pratt Dam and the Blackstone Canal Bikeway. Human earth-moving activities on the island have resulted in the creation of a number of excavations and depressions scattered among the island. The majority of the Unnamed Island is riparian in nature and heavily vegetated. Water inundation during high flow conditions in the Blackstone River has filled the excavations and depressions creating ponds, wetlands, and vernal pools.

The Quinnville well field makes up the most extensive riparian area along the Site. The gently sloping floodplain is undeveloped and heavily vegetated; however it shows some signs of historical alteration and human impact. Access roads and pump houses constructed during the period of water supply well operation have changed the natural topography of the area. A steep berm runs along the edge of the Blackstone River approximately 10-20 yards landward of the water's edge. The berm rises from fringing forested wetlands on the river's edge and is vegetated by a number of upland species. Typical low-lying, moist, floodplain species of shrubs and trees (i.e., arrowwood viburnum [*Virburnum dentatum*], meadowsweet [*Spirea latifolia*], and Allegheny blackberry [*Rubus allegheniensis*]) dominate the area within the berm. Several densely populated red maple (*Acer rubrum*) forested areas were observed within the berm. The closed canopies prevented shrub and herbaceous growth in these areas. Several wetland swales were identified cutting through the berm. These swales allow surface water from the Blackstone River to flow into the floodplain area behind the berm during periods of elevated water levels. The swales were heavily vegetated with wetland vegetation.

Wetlands

- **Palustrine, Open Mineral Soil, Semi-permanently Flooded (Deep) Emergent Marsh**
- **Palustrine, Open Mineral Soil, *Acer rubrum* – Deciduous Shrub Swamp**

The wetland community on the north side of the railroad is a mosaic of habitats. Habitat variation results from changes in hydrologic inputs and diversion of input and drainage watercourses by surrounding land uses. The railroad bounds the wetland to the west and creates a significant hydrologic barrier, only one flow through from the wetlands, at the northern extent of the wetland complex, was identified during the field work.

The southern extent of the wetland complex is open-water habitat with tree-lined banks. The wetland transitions from open water, through an emergent marsh area to a flooded forest/swamp area at its northern extent. The open water area contained dense beds of submerged aquatic vegetation and emergent vegetation grew along the banks where adequate light was available. The open water wetland is ringed by a narrow forested wetland community of 50 to 60 foot high

maples, black willow, and sycamore. The moderate canopy allowed the development of a dense shrub layer dominated with silky dogwood and poison ivy (*Toxicodendron radicans*). A tree-lined berm bisects the open water habitat, forming two individual open water areas that are hydrologically connected during periods of moderate-to-high water elevation. The emergent marsh area was predominantly cattail (*Typha latifolia*) and buttonbush (*Cephalanthus occidentialis*). This vegetation scheme transitioned into a red maple (*Acer rubrum*) dominated flooded forest/swamp with a canopy ranging from 12 to 20 feet. Stands of common reed (*Phragmites australis*) were beginning to develop around the margins of the forested wetland.

Bull (*Rana catesbeiana*) and green (*Rana clamitans melanota*) frogs were observed and heard singing throughout the wetland complex. Observations of avian species included great blue heron, double crested cormorants, mallard (*Anas platyrhynchos*) and a brood of wood ducks (*Aix sponsa*). A muskrat (*Ondatra zibethica*) was observed feeding along the edge of the wetland, and tracks of raccoon, whitetail deer and rats were also observed. Red-winged blackbirds, grackles, song sparrows (*Melospiza melodia*), yellow warblers (*Dendroica petechia*) and common yellowthroat (*Geothlypis trichas*) were observed among the vegetation in the emergent wetland and along the banks of the open water.

Ponds

- **Lacustine, Eutrophic Pond**
- **Palustrine, Open Mineral Soil, Seasonally Flooded (Shallow) Emergent Marsh**

Four distinct ponds exist on the Site. Three ponds are situated on the Unnamed Island (Pond A, Pond D, and Pond E) and the remaining pond (Pond F) is located just upstream of Pratt Dam at the southern tip of the Blackstone River backwater (former channel).

The largest pond, Pond A, retains water throughout the year. The steep banks and depth of the pond inhibit the growth of aquatic and wetland vegetation. Species common to riparian and disturbed areas, such as purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), stinging nettle (*Urtica dioica*) and various species of goldenrod (*Solidago spp*.) dominate the vegetative communities at the highwater elevation of Pond A. Purple loosestrife covers a small island (20’ x 50’) in the northern portion of Pond A. Two smaller depressions are located just south of Pond A.

Pond D and Pond E are hydrologically connected to Pond A during times of high water and become isolated as the water levels recedes during the summer months.

The banks of Pond D are overgrown with purple loosestrife and small (<20’) black willow. Carp were observed swimming through the dense emergent vegetation. Both green and bull frogs were identified by call.

Pond E is hydrologically isolated from the Pond A to a greater degree than Pond D, only exchanging water during extreme high water events. There is dense canopy and limited understory growth in the area surrounding Pond E. Green and bull frogs were observed in the pond during the mid-day wildlife survey. During the evening event, Fowler’s toads (*Bufo woodhousei fowleri*) and Northern Gray treefrogs (*Hyla vericolor*) were identified by their call.

Pond F is located adjacent to the bridge across the top of Pratt Dam. The banks are lined with mature trees that provide shade to the pond during the day. Canada geese and a wood duck were observed feeding on the sparse aquatic vegetation in the shallows of the pond.

Landfill

- **Disturbed community – not able to classify using Rhode Island Natural Community Classification System**
- **Late successional field, transition between grassland and shrub/scrub**

The J.M. Mills Landfill is a distinctive area with the Site. The vegetative cover is a mosaic of different herbaceous, shrub, and tree communities. These community types range from grass monocultures dominating small open areas to dense stands of small trees and shrubs. The distribution and species composition of these communities are indicative of a late successional field habitat.

Staghorn sucmac (*Rhus typhina*), winged sumac (*Rhus copallinuum*), blackberry (*Rubus allegheniensis*), and meadowsweet (*Spiraea latifolia*) dominated the shrub layer, while canary reed grass, deer-tongue panicum (*Dichanthelium clandestinum*), mugwort (*Artemisia vulgaris*), goldenrods and common reed dominated the dense monoculture herbaceous stands. Many day beds, presumable used by white-tailed deer, were observed on the west side of landfill among the tall grasses. Insectivorous birds, including barn, tree, and rough-winged swallows and chimney swifts, were observed feeding above the landfill.

Human Use

- **Disturbed communities – not able to classify using Rhode Island Natural Community Classification System**

Each of the habitats identified onsite has at one time or another been influenced by anthropogenic activities. While activities have ceased in many areas; industrial, residential, and commercial activities continue to affect some areas of the Site. These human use areas consist of a quarry, Nune's parcel, recreational areas along the Blackstone River and Pratt Dam, residential development, and various commercial properties along Martin Street. A large stone/gravel quarry abuts the northern portion of the wetland complex. The Nune's parcel bounds the Blackstone River above Pratt Dam and creates the southeastern portion of the Site. Historically, this property was used as waste transfer/disposal area. Currently, a portion of the Nune's parcel is used to stage landscaping materials by the municipal park commission and the remainder of the property consists of an open lot littered with refuse and debris and a tree-lined area along the banks of the Blackstone River. The downstream section of the Blackstone River that shares a border with the southwest corner of the parcel is lined with large concrete barriers. Chain-link fence secures the landward boundaries of the parcel. The open lot is dominated by vegetative species common to disturbed areas, including various species of goldenrod and clover (*Melilotus* spp.). Barn, tree, and rough-winged swallows were observed foraging over the open lot. Whitetail deer and cottontail rabbits (*Sylvilagus floridanus*) were also observed using Nune's Parcel.

References

National Research Council. 2002. *Riparian Areas*. National Academy Press, Washington, DC. 428 pp.

Rhode Island Natural Heritage Program. 2005 – online. *A Natural Community Classification of Rhode Island.* http://www.dem.ri.gov/programs/bpoladm/plandev/heritage/

ARCADIS

Appendix R

Vernal Pool Evaluation Memorandum

MEMORANDUM

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

To: Helen Douglas

Date: June 6, 2005

From: Joseph Shisler
Scott Larew

cc: Steve Turchon
David Buys

Re: Peterson/Puritan Superfund Site
Cumberland, RI

On April 22, 2005 Helen Douglas, Joseph Shisler and Scott Larew of Blasland, Bouck & Lee (BBL) performed a vernal pool survey in Operable Unit 2 (OU-2) at the Peterson/Puritan Superfund Site (the Site). The objective of the survey was to identify and document potential vernal pool habitat located on or adjacent to the Site. In general, the survey area included the Blackstone River floodplain between Martin Street and Pratt Dam, including the unnamed island in the Blackstone River.

The United States Geological Survey (USGS) defines vernal pools as "small bodies of standing water that form in the spring from meltwater and are often dry by mid-summer or may even be dry before the end of the spring growing season. May vernal ponds occur in depressions in agricultural areas, but may also be found in woodlots. Wetland vegetation may become established but are usually dominated by annuals." Vernal pools provide critical breeding habitat for many amphibians. The temporary nature of vernal pools, and lack of a hydrologic connection to permanent water bodies, isolate the pools from fish populations. The absence of these predators enable the young of many amphibian species to hatch and grow in the relative safety of the pool. In Rhode Island, and much of southern New England, many vernal pools fill with water in the fall and maintain some degree of water through spring. Wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), marbled salamanders (*Ambystoma opacum*), and, to a lesser degree, gray treefrogs (*Hyla versicolor*), northern spring peepers (*Pseudacris c. crucifer)*, Eastern American toads (*Bufo a. americanus*), and red-spotted newts (*Notophthalmus v. viridescens*) rely heavily on vernal pools in Rhode Island to complete their breeding cycle (URI, 2001).

BBL scientists conducted a preliminary search and review of digital ortho-corrected aerial photographs, USGS topographic quadrangles, National Wetland Inventory (NWI) maps, and United States Department of Agriculture (USDA) soil surveys to identify potential vernal pools within the study area. The search identified several areas on the unnamed island in the Blackstone River that showed features indicative of vernal pools. These areas were not identified as wetlands on NWI maps.

The field survey primarily focused on the areas identified during the preliminary data review. Four target areas on the unnamed island in the Blackstone River identified during the review were verified as vernal pools during the field survey. The depressions appeared to be man-made excavations that retained water when the Blackstone River saturates the soils of the unnamed island during the spring high-water period. As the river receded, these depressions held water;

water levels are increased or maintained by precipitation throughout the spring. Three of the pools were similar in size, approximately 30 feet in diameter. The remaining pool was rectangular in shape, approximately 40 feet in length and 15 feet wide. Green frogs (*Rana clamitans melanota*), tadpoles (unidentified spp.), mosquito larvae, midges and daphnia were observed in the water in each depression. Fish were not observed in the depressions. Hydrologic connections to the Blackstone River or the large pond on the unnamed island were not observed. Several other depressions showing signs of hydrology were identified on the island but were completely dry at the time of the survey. Isolated pools also exist in wash channel on the unnamed island. The channel flows from the western corner of the island to the large pond in the middle, and as water recedes the ponds are created in the gentle undulations of the channel bed. Although the pools are temporarily isolated, the hydrologic connection to both the Blackstone River and the large unnamed island pond preclude them from being vernal pool habitats. Wildlife observations in these pools were limited to mosquito larvae.

Another vernal pool habitat was identified in the small forested area of the Blackstone River floodplain between the J.M. Mills Landfill and the Hope Global facility. The vernal pool appeared to form in a discharge pond associated with an abandoned stormwater outfall. This pool was approximately 50' in length and 25' in width. Wildlife observations included tadpoles (unidentified spp.), green frogs, and tubiflex worms.

Pictures of the five vernal pool habitats and a list of wildlife observations are attached.

References

University of Rhode Island. Website: http://www.uri.edu/cels/nrs/paton/index.html. Last updated: November 26, 2001.

Photographs


Vernal Pool # 1 - Unnamed Island


Vernal Pool # 2 - Unnamed Island


Vernal Pool # 3 - Unnamed Island


Vernal Pool # 4 - Unnamed Island


Vernal Pool # 5 – Blackstone River Floodplain

Wildlife Observations

Ampibians
Chrysemys picta picata (Eastern Painted Turtle)
Rana clamitans melanota (Green Frog)

Mammals
Didelphis marcupialis (Opossum)
Lutra canadensis (River Otter)
Marmota monax (Woodchuck)
Mustela vison (Mink)
Odocoileus virginianus (Whitetail Deer)
Ondatra zibethica (Muskrat)
Procyon lotor (Raccoon)
Sciurus carolinensis (Gray Squirrel)
Sylvilagus floridanus (Cottontail)

Birds
Agelaius phoeniceus (Red-winged Blackbird)
Anas platyrhynchos (Mallard)
Ardea herodias (Great Blue Heron)

Branta canadensis (Canada Goose)
Butorides virescens (Green Heron)
Cardinalis cardinalis (Cardinal)
Carduelis tristis (American Goldfinch)
Charadrius vociferous (Killdeer)
Colaptes auratus (Yellow-shafted Flicker)
Corcus brachyrynochos (Common Crow)
Cyanocitta cristata (Blue Jay)
Dendrocia coronata (Yellow-rumped Warbler)
Dendroica petechia (Yellow Warbler)
Dumetella carolinensis (Gray Catbird)
Melospiza melodia (Song Sparrow)
Meleagris gallopavo (Wild Turkey)
Minus polyglottos (Northern Mockbingbird)
Parus articapillus (Black-capped Chickadee)
Sialia sialia (Eastern Bluebird)
Tachycineta bicolor (Tree Swallow)
Turdus migratorius (Robin)
Tyrannus tyrannus (Eastern Kingbird)
Zenaida macroura (Mourning Dove)
Zonotrichia albicollis (White-throated Sparrow)

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