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Appendix A.3

Industri-Plex Field Investigation Work Plan

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Toxicological Surface Water, Sediments Sampling and Fish Sampling Work Plan and Quality Assurance Project Plan For the Industri-Plex Site Woburn, Massachusetts

Prepared For:

Industri-Plex Site
Remedial Trust

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1.0 PROJECT DESCRIPTION

This "Toxicological Surface Water, Sediment, and Fish Sampling Work Plan and Quality Assurance Project Plan for the Industri-Plex Site, Woburn, Massachusetts" has been prepared as part of a planned sampling program for the Halls Brook Holding Area (HBHA) and other water bodies near the Industri-Plex Site (Site) in Woburn, Massachusetts. The purpose of this Work Plan/Quality Assurance Project Plan, termed "QAPP" throughout this document, is to ensure that all sample collection and data generation activities associated with Ecological and Human Health Risk Assessment Work Plans yield data that are of acceptable quality for their intended use. To eliminate the duplication of information, and for ease of review, the required components of the Field Sampling Plan have been incorporated into the QAPP in Section 4. This format was agreed upon with Joe LeMay, the Remedial Project Manager (RPM) for the U.S. Environmental Protection Agency (USEPA).

The purpose of the sampling and analysis activities, supported by this QAPP, is to fill data gaps of previous investigations and to augment existing data for use in the ecological and human health risk assessments. In particular, USEPA raised a number of questions related to the design, implementation, and interpretation of past ecological studies and the ecological risk assessment performed as part of the Ground-Water/Surface-Water Investigation Plan (GSIP) Phase 2 Remedial Investigation (RI). These questions led eventually to a request for additional work and this project. The project has evolved over the past several months through discussions with USEPA. However, the primary tasks to be accomplished were set forth by USEPA in Section 2.3.1 and 2.3.2 of the final Groundwater/Surface water Investigation Plan (GSIP) Statement of Work issued by the Agency on August 25, 1998. Sections 2.3.1 and 2.3.2 are included below:

Section 2.3.1 Toxicological Surface Water and Sediment Sampling (extracted from USEPA August 25, 1998 letter)

> *EPA is requiring that comprehensive sediment and surface water toxicity data be collected for the site to properly assess ecological impacts related to site-related contaminated sediments and surface water. EPA's triad sediment sampling analysis approach shall be applied for each of the thirteen sediment samples collected from locations shown on Figure 5. Analytical parameters for sediment samples will be VOCs, metals, and SVOCs, as well as PCBs and pesticides. In addition, macro-invertebrate samples shall be collected at each of these sediment locations and analyzed qualitatively for species and quantitatively for contaminant concentrations. Qualitative analysis will identify type of organisms/species, and number of organisms/species at each of the 13 sediment sample locations. Quantitative benthic analysis will also be conducted at each of the 13 sediment sampling locations, and analyzed for metals at a experienced, certified laboratory. Acute and chronic toxicity testing will be performed on Hyalella and chironomids as the indicator species at each of the 13 sediment-sampling locations. A copy of the chronic toxicity Standard Operating Procedures for Hyalella is attached. The data collected will be applied to*

human health and ecological risk assessments, and utilized in food chain models to evaluate the impact to the mallard duck.

Section 2.3.2 Fish Sampling (extracted from the USEPA's August 25, 1998 letter)

Additional fish samples shall be collected to further evaluate the impacts to fish from the site-related contaminants qualitatively and quantitatively. Previous fish sampling activities have illustrated a depleted fish population in the HBHA Pond. This depletion appears to be associated with the presence of site related contaminants in the HBHA Pond and contaminant plume discharges into the HBHA Pond. This additional sampling will be conducted in four ponds near the Site (two downgradient and two upgradient) and the data will be applied to the human health and ecological risk assessments. These Ponds are identified as North Pond, Phillips Pond, HBHA Pond, and HBHA Wetland pond 3 at Mishawum Road. See figure 5 for fish sampling locations.

The fish samples collected at the reference stations should reflect species collected at the downgradient ponds (HBHA Pond and HBHA Wetland Pond 3). Therefore, fish should be collected from the downgradient ponds first. All fish sampling activities shall comply with EPA's Guidelines for Fish Tissue Preparation and Analyses" (1995). If possible, a minimum of five fish from each of three trophic species (predator, forager, and bottom feeder) should be collected. The variety of species should be representative of different trophic levels. Prior to preparing the fish for tissue analysis, the fish will be examined for histological effects from potential contaminant exposure. The USFWS, with assistance from the Contractor, will collect the fish species, and assist in documenting qualitative fish observations (species; number of fish collected of each species; age; length; weight; visual observation, such as tumors, sores, lesions, etc; fish collecting technique; other environmental observations surrounding sampling area; etc.,). Documentation will also include photographing the fish species. A log will be kept by the USFWS and the Contractor to document these observations. The Contractor shall quantitatively prepare the fish for laboratory analysis. The fish will be analyzed for tissue analysis as follows:

Small fish:	*analyze whole fish for metals*
Medium fish:	*analyze offal and fillet for metals*
Large fish:	*analyze target organs (liver and kidneys) for metals*

Some modifications of this scope have occurred through discussions with the USEPA and as a result of a Reconnaissance Survey conducted in April 1999 (see Section 4 and Appendix A). This work is being performed for the Industri-Plex Site Remedial Trust (ISRT) under the direction of USEPA Region I.

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4.0 ECOLOGICAL ASSESSMENT FIELD SAMPLING PLAN

4.1 Study Area

The study area includes the HBHA Pond, HBHA Wetlands, a segment of the Aberjona River downstream of Mishawum Road, and several water bodies that will serve as Reference Locations for the study (Halls Brook, Northern Branch of the Aberjona River, Phillips Pond, and North Pond.) The water body referred to, as South Pond is located just north of the berm that forms the northern boundary of the Site (Figure 4-1).

The HBHA Pond is characterized by a relatively narrow and flat littoral zone (typically less than three feet deep) along the western, northern, and southern edges of the pond. In some places this littoral "lip" extends to a few feet from shore while in others (e.g., along the western shore) it extend to approximately 40 feet. Most of the pond consists of a dug basin with depths of 8 to 15 feet. The demarcation between the shallow littoral lip and deep basin is sharp and occurs over horizontal distances of a few feet. The deeper locations of HBHA Pond have been observed to stratify vertically, and anoxic conditions can develop beneath the thermocline. At such times, animals that require oxygen (e.g., fish and benthic invertebrates) cannot make use of this zone as habitat. The HBHA Pond and HBHA Wetlands are separated from the downstream portion of the Aberjona watershed by a weir at Mishawum Road. Therefore, the HBHA Pond and HBHA Wetlands can be considered a small-scale pond/wetland system. HBHA Pond is 4.2 acres in size. Vegetation occurs along the banks of the HBHA Pond and HBHA Wetlands and these bordering areas are known to support birds and some wildlife.

4.2 Field Sampling Rationale and Sampling Locations

The plan for sampling to support the risk assessments (ERA and HERA) is based on the August 25, 1998 letter from the USEPA, discussions that have occurred among scientists and managers at the U.S. Environmental Protection Agency (USEPA), U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), and representatives for the ISRT including its consultant Menzie-Cura & Associates. A number of questions and issues raised during these discussions were addressed by conducting an Ecological Reconnaissance Field Survey (Reconnaissance Survey) in April 1999. The USEPA is also checking the physical characteristics of certain potential sediment sampling locations and this information will be used to finalize the locations. The Main Sampling Program is planned for June 14 – June 23 1999.

Table 4-1 lists the sample locations for the 13 sampling stations. Tables 4-2 through 4-9 list number of samples, sample preservation, containers and holding times for all media and all analyses. Table 4-10 lists the sample preservation, container, and holding time requirements for the field and trip blanks.

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4.2.1 Reconnaissance Survey Objectives and Results

The Reconnaissance Survey was performed on April 29-30, 1999. The objectives of the Survey were to:

1. Select a downstream sampling location in the Aberjona River that exhibited depositional characteristics;
2. Visit potential Reference Locations and select locations appropriate for comparison to Halls Brook Holding Area (HBHA) and HBHA Downstream locations (including Ponds 1-3);
3. Field-test sediment sampling equipment to determine what will be needed for the main sampling event;
4. Field-test de-watering methods for sediment sample collection;
5. Evaluate modifications of analytical methods including the use of freeze-drying techniques; and
6. Qualitatively evaluate biological conditions and physical habitat structure with respect to the collection of benthic invertebrates (for assessment and for tissue analysis), emergent and submergent vegetation (for tissue analysis), and fish (for assessment and tissue analysis).

In addition to the above objectives, USEPA personnel collected sediment for the analysis of acid volatile sulfides and simultaneously extracted metals (AVS/SEM). Personnel from the US Fish and Wildlife Service (USFWS) and the National Oceanographic and Atmospheric Administration (NOAA) examined sites for electroshocker boat access and for use as fish Reference Locations.

Sediments collected from each of the 13 locations were sampled for physical parameters including total organic carbon (TOC), percent solids, and grain size distribution. These collections were made to obtain information for judging the comparability of stations. In particular, the information is used to establish whether stations are depositional (i.e., characterized by higher percentages of silt and clay as well as total organic carbon.) These analyses are also used to evaluate the relative effectiveness of de-watering in the field and freeze drying for increasing solids content of sediments; this was identified as an important issue for achieving adequate detection levels.

Sediments from two locations, HBHA Pond Deep and SD-3, were collected in duplicate for chemical analysis including volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, and metals (including arsenic species III and V). These collections were made to evaluate proposed modifications to analytical methods and to evaluate the effect of freeze drying on chemical analytes.

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Sediment sample aliquots were split for freeze-drying preparation to compare the accuracy of the methods for analysis of these chemicals from freeze-dried sediment vs. non-freeze dried sediments. The goal of the freeze-drying protocol is to elevate the percent solids of the samples, without altering the chemistry, and therefore improve the achievable sediment reporting limits on a dry-weight basis.

For VOCs, both low-level (sodium bisulfate preserved) and high-level (methanol preserved) sediment samples were collected to evaluate the method 5035 options for these sediments in meeting the project DQOs. Additionally, a low-level modification (5ml VOA-free water preserved) was performed.

The analytical and observational results of the Survey are provided in Appendix A. Information from the survey is incorporated into the planning of the Main Sampling Program and is included as part of the rationale sections for certain elements of the program. Chemical results from the analytical laboratory were provided to the USEPA Region I, RPM and QAO for review and comment.

4.2.2 Main Sampling Program

The Main Sampling Program is scheduled for June 14 – 23, 1999 and consists of:

- Collection of sediment samples at 13 locations for chemical and physical analyses for use in the Ecological Risk Assessment (ERA) and as part of the sediment triad approach;
- Collection of sediment samples at 13 locations for sediment toxicity tests for use in the ERA and as part of the sediment triad approach;
- Collection of benthic invertebrates at 13 locations for analysis of community structure for use in the ERA and as part of the sediment triad approach;
- Collection of benthic invertebrates for chemical analyses of tissues for use in assessing effects on these organisms and in the food chain models used in the ERA;
- Collection of surface water samples at 13 locations. Three of these locations are deep (> 8') and surface and deeper water samples (above the bottom) will be sampled. This yields 16 water samples for chemical analysis for use in the ERA and to evaluate the source of arsenic (i.e., by examining speciation of arsenic);
- Collection of fish samples for chemical analysis for use in the ERA and for the Human Health Risk Assessment (HERA);
- Observations on the fish community and their habitat for use in the ERA

- Collection of vegetation for chemical analysis for use in bird and mammal food chain models used in the ERA;

All of the above sampling and analysis activities will be performed under the direction of Menzie-Cura and Associates, with the exception of the fish sampling which will be performed by USFWS. Menzie-Cura and USFWS will coordinate during this activity and Menzie-Cura will select fish for tissue analyses. The selection of these fish will be guided by discussions between USFWS, USEPA, and Menzie-Cura. USEPA will also participate in various sampling activities and will provide on-site Agency oversight. USEPA and Menzie-Cura will perform evaluations of benthic habitats. The USFWS will evaluate the habitat for sustainability of fish.

The type (media) of samples to be collected and the chemical, physical, and toxicity analyses to be performed in support of the Main Sampling Program for this Industri-Plex Site investigation are summarized in Section 1, Tables 1-2 through 1-4.

Types and frequencies of field quality control (QC) samples, including Field Duplicates, Field Rinsate Blanks and sample volumes for matrix QC (MS/MSD/MD) are described in Section 3 of this QAPP. Analytical methods to be used for analyses are presented in Section 7 of this QAPP.

4.2.3 Sample Locations

Sample locations for the Main Sampling program are listed in Table 4-1 and shown on Figure 4-1. These locations were initially identified by USEPA and confirmed during the Reconnaissance Survey (Appendix A). Navigational coordinates for all sampling locations are established in the field using a Geographical Positioning System (GPS) as well as by line-of-sight.

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Table 4-1. Locations of the 13 Sampling Stations for Surface Water and Sediment

Location	Longitude (from GPS)	Latitude (from GPS)
SD-01 (S. Branch of Aberjona east of Acadia St.)	71 07 24.0538 W	42 31 44.5577 N
SD-02 (South Pond)	71 08.6546 W	42 31.3426N
SD-03 (Phillips Pond)	71 07.9605 W	42 31.0135 N
SD-04 (Halls Brook Reference Location)	71 08 52.727023489 W	42 30 47.270006017 N
SD-05 (deep station at northern end of HBHA Pond)	71 08 28.291937546 W	42 30 46.710953435 N
SD-06 (west side of HBHA Pond, below Halls Brook)	71 08.4734 W	42 30.7551 N
SD-07 (deep station at southern end of HBHA Pond)	71 08.4254 W	42 30.6925 N
SD-08 (Stream segment in HBHA Wetland)	71 08 18.404373293 W	42 30 31.545846368 N
SD-09 (HBHA Wetland Pond #1)	71 08.3002 W	42 30.4131 N
SD-10 (stream segment in HBHA Wetland)	71 08.2272 W	42 30.2839 N
SD-11 (Pond 3 in HBHA Downstream)	71 08 07.044307109 W	42 30 14.902602803 N
SD-12 (Halls Brook Reference Location upstream of SD-04)	71 08.9418 W	42 30.7507 N
SD-13 (Aberjona north of Olympia)	71 08 03.409536975 W	42 29 57.463215787 N

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Based on the results of the Reconnaissance Survey, several potential sampling locations were found to be non-depositional. During conversations with Joe LeMay and Patti Tyler of USEPA in May and early June, options for re-allocation of these stations were discussed. The Agency is also checking the physical characteristics of sediments at a few locations in Halls Brook, Phillips Pond and HBHA to help reach a final decision about sample locations. The current strategy and options for establishing the remaining stations are as follows.

1. Because the Reconnaissance Survey indicated that shallow locations in HBHA Pond (< 3' depth) are relatively sandy and non-depositional, the Agency has decided that there should be two deep locations and one shallow location (rather than two shallow and one deep location as initially proposed). Station SD-5 was established as a deep location during the Reconnaissance Survey. The second deep location will be identified as SD-6 and is established at the southern (down current) end of HBHA Pond in a deeper location of the pond as indicated by a bathymetric map of the pond. Water depths in this general area were checked during the Reconnaissance Survey and found to be approximately 12'. Sediments at this location are known to be depositional "soupy mud".

2. A shallow station (SD-7) will be established in HBHA Pond following USEPA's sediment survey.

3. Two locations in HBHA downstream (SD-8 and SD-10) are located in stream segments. Examination of the tentative location for SD-8 indicated that it is in a segment characterized by firm silty-sand sediment. This probably reflects the effects of faster water currents flowing over this location. USEPA requested that SD-8 and SD-10 be located in as depositional an area as possible within these stream segments. This will require additional examination of these locations and USEPA's contractor is examining these reaches for possible sampling locations. Additional data on the sediment characteristics are expected to be available from USEPA around June 9, 1999 and will be used to finalize locations for SD-8 and SD-10. USEPA will communicate this information to Menzie-Cura and will participate in the Main Sampling Program to insure that the correct locations are sampled.

4. If USEPA's examination of conditions in shallow areas of HBHA Pond and HBHA Wetland indicate that it is prudent to have a reference location that has a higher sand content, the Agency will consider the following: a) request the ISRT to consider an additional Reference Location (increasing the station number from 13 to 14), b) moving one of the non-reference stations (probably SD-12 located in the tributary to HBHA) to a Reference Location. To this end, the Agency is examining locations in Phillips Pond and Halls Brook that are less depositional.

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4.3 Surface Water Sampling

4.3.1 Water Sample Collection

Surface water samples will be collected at the 13 Site locations identified in Table 4-1. Water depths at SD-1, SD-2, SD-4, SD-7, SD-8, SD-9, SD-10, SD-11, SD-12, and SD-13 are relatively shallow ranging between 0.5 and 3.5'. At these locations, a single water sample will be collected at mid-depth to represent water column conditions. Three sample locations – SD-3 in Phillips Pond and SD-5 and SD-6 in HBHA Pond – are deeper locations with water depths of 8' and greater. At these three locations a water sample will be collected at the surface and an additional water sample will be collected within 2 feet above the bottom (~ 7 - 10' water depth).

Surface water samples will be collected using the standard operating procedure, *Surface Water Sampling* (Appendix B). Water samples collected from depths of two feet and shallower will be obtained by lowering decontaminated bottles to the desired depth and allowing them to fill. Water from these bottles will be used either as samples or to fill other bottles. The mouth of the bottle will be orientated upstream to minimize the potential for contamination. If water depths are less than 0.5' (perhaps due to low water flow conditions at locations in June), samples will be collected with a decontaminated wide mouth sampling jar. A number of small samples may need to be collected in this manner and combined. Where depth permits (> 2' depth), decontaminated Niskin or Kemmerer water sample devices will be used to collect surface water samples. In all cases, the performance criteria for sampling are to collect water samples in a manner that prevents contamination from the sediments, minimizes the potential for contamination by the sampling system, and provides a representative sample of the water column. Potential contamination of surface water samples by sediments will also be minimized by either conducting all surface water sampling prior to the sediment sampling event or by performing surface water sampling prior to any sediment sampling at a location (if the sampling events are combined.) In either case, sampling will begin at the most downstream location (SD-13) and proceed upstream.

Water samples will be collected from the deep sections of the HBHA pond. These samples will be collected using a decontaminated Niskin or Kemmerer sampling device lowered to the specified depth (within 2 feet of the bottom). This is to evaluate exposure that may occur in these deeper waters and to examine the possible discharge/diffusion contributions of arsenic. Vertical variations of temperature, dissolved oxygen, and conductivity have been observed in HBHA pond indicating that this pond becomes stratified. Thus, contaminant concentrations may also vary with water depth. Arsenic speciation (as As III and As V) will be performed on the water samples collected from HBHA Pond. For comparison to a reference location, a shallow water and deep water sample will also be collected in Phillips Pond for the same analyses. This will assist in evaluating the origins of arsenic relative to surface water and future groundwater analysis, as well as specific arsenic levels for each species. Based upon previous

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sampling results, USEPA expects higher arsenic concentrations to be present at depth (1-2 feet from the bottom) due to groundwater discharge, and/or desorption from sediment.

4.3.2 Water Sample Analytes, Containers, and Shipment Requirements

All surface water samples will be analyzed for VOCs, SVOCs, Pesticides, PCBs, total metals (unfiltered samples), dissolved (filtered samples), hardness, TOC, and TSS. Table 1-1 presents the chemical analytical parameters for surface water samples. Volatile organic samples will be drawn first and analyzed for VOCs. Two aliquots for all surface water samples at each location will be collected for metals so that the laboratory can filter one aliquot (through 0.45μm pore-size filtration unit) for analysis of dissolved metals and the other aliquot will be digested for total metals. Table 4-2 lists sample container types, preservation, and holding times for all analyses. All samples will be stored on ice, maintained at 4°C and delivered to the laboratory via courier on the same day of collection or via FedX for next day delivery.

Information on sample containers, preservation techniques, and holding times is provided in Table 4-2. Field duplicates, field blanks and MS/MSD/MD samples for QC will be collected at frequencies as described in Section 3 of this document.

4.3.3 Supporting Measurements for Surface Water Quality

At each location, the following water quality parameters will be measured in the field: dissolved oxygen, specific conductivity, temperature, pH, and turbidity. At locations with depths of less than 2', measurements will be made at mid-depth. At locations with depths of greater than 2', measurements will be made at the surface and at the bottom of the water column. At the deep sampling locations in Phillips Pond and HBHA Pond, measurements will be made at the surface, bottom, above the pycnocline/thermocline, within the pycnocline/thermocline, and below the pycnocline/thermocline. Water quality measurements will be made using a YSI 600XL meter for dissolved oxygen, specific conductivity, temperature, and pH and a Hariba turbidometer for qualitative turbidity measurements (as an indication of light penetration). Calibration of field equipment will be performed as described in Section 6 of this QAPP and U.S.EPA Region I's Draft Calibration of Field Instruments, as appropriate (Appendix A).

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Table 4-2. Surface Water Samples: Number, Preservation, Container Specification, and Holding Time Requirements in Support of the Environmental Assessment.

Parameter	Number of Samples	Sample Container(s)	Preservative	Holding Time
Semivolatile Organics	16	(2) 1-L Amber Glass Bottles	Cool, 4°C, protected from light	Extraction: within 7 days of collection Analysis: within 40 days of extraction
Metals (other than Arsenic)	16	(2) 500-ml Polyethylene Bottle's	(1) Nitric Acid, pH < 2, for total metals; Cool, 4°C (2) Unpreserved for lab-filtering/ dissolved metals	6 months 28d mercury 180 d all other metals
Arsenic – total and species	16	(1) 500-mL Ultra-clean, polyethylene or glass bottle; bottles for collection of speciation samples will be wrapped in aluminum foil	Cool, 4°C, protected from light	48 hours
Volatile Organics	16	(3) 40-mL glass vials with Teflon-lined septum	Cool, 4°C, protected from light, HCl to pH<2	14 days
Pesticides	16	(2) 1-L Amber Glass Bottles	Cool, 4°C, protected from light	Extraction: within 7 days of collection Analysis: within 40 days of extraction
PCB Aroclors	16	(2) 1-L Amber Glass Bottles	Cool, 4°C, protected from light	Extraction: within 7 days of collection Analysis: within 40 days of extraction
Total Organic Carbon	16	(1) 500-mL or 1-L Amber Glass Bottles	Cool, 4°C, pH ≤2, sulfuric acid	28 days
Total Suspended Solids	16	(1) 500 mL or 1-L amber - glass bottle	Cool 4°C	7 days

There will be 13 surface and mid-depth samples and three deep samples for a total of 16.

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4.4 Sediment Sampling

4.4.1 Sediment Sample Collection

Sediment samples will be collected at each of the 13 sediment locations listed in Table 4-1 using the Tall Eckman grab sampler. The Petite Ponar Grab sampler with sliding screens will be used as a back-up sampling device. These grab devices can be deployed safely either from small boats or by wading and were successful in sediment collection during the Reconnaissance Survey. The standard operating procedures for sediment sampling are described in the SOP, *Sampling Soft and Fine-Grained Sediments* (Appendix B). Prior to sampling at a location, the grabs and all other sampling devices such as spoons are decontaminated in accordance with the SOP, *Decontamination of Field Equipment* (Appendix B).

The goal of the sampling program is to collect representative sediment from the upper 2 inches (5-cm). This depth interval was selected as the zone most relevant to exposures of ecological receptors. Depositional sediments, characterized by clay/silt to fine sand grain sizes as identified in the Reconnaissance Survey results, will be sampled so that chemical analytical results can be compared from location to location. The sediments will be collected and analyzed for the chemicals and sediment parameters presented in the tables in Section 1 of this QAPP. It is estimated that 6 grabs will need to be collected at a location to provide sufficient sample volume for all the chemical analyses and for the toxicity tests. Samples for VOCs and SEM/AVS will be obtained from the first grab. All other samples will be drawn from a composite made up of the upper 2 inches of sediment from the six grabs.

Collection of VOC Samples

VOC samples for sediments will be collected directly from the sampling device for the first grab taken at a location. The sample will be collected using a syringe and placed in the "low-level" prepared VOC sample container (see Table 4-3). Both the Eckman and Petite Ponar Grabs with sliding screens permit direct access of surface sediment. This makes it possible to collect a VOC sample from the upper 2 inches prior to removing sediment from the grab.

Collection of SEM/AVS Samples

Samples for SEM/AVS will also be collected directly from the sampling device for the first grab taken at a location. This sample will be obtained using a stainless steel spoon or scoop. The SEM/AVS sample bottles provided by the laboratory will be filled completely.

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Table 4-3. Sediment Samples: Number, Preservation, Container Specification, and Holding Time Requirements in Support of the Environmental Assessment

Parameter	Number of Samples	Sample Container(s)	Preservative	Holding Time
Semivolatile Organics	13	(1) 4-ounce glass jar	Cool, 4°C, protected from light	Extraction: within 14 days of collection Analysis: within 40 days of extraction
Metals	13	(1) 4-ounce glass jar	Cool, 4°C	28d mercury, 180 d all other metals
Volatile Organics – Low Level Analysis	13	(3) 40-mL glass vials	5mL Organic-free water, teflon-coated stir bar, Cool, 4°C, protected from light	7 days
Volatile Organics – High Level Analysis	13	(1) 120-mL wide mouth glass jar	30-mL purge-and-trap grade Methanol, Cool, 4°C, protected from light	14 days
Pesticides	13	(1) 4-ounce glass jar	Cool, 4°C, protected from light	Extraction: within 14 days of collection Analysis: within 40 days of extraction
PCB Aroclors	13	(1) 4-ounce glass jar	Cool, 4°C, protected from light	Extraction: within 14 days of collection Analysis: within 40 days of extraction
AVS/SEM	13	(1) 4-ounce glass jar	Cool, 4°C, protected from light	21 days
Total Organic Carbon (TOC)	13	(1) 4-ounce glass jar	Cool, 4°C	28 days
Grain Size	13	Shelby Tubes or zip-lock bag	Cool, 4°C	NA

NA = Not Applicable

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Collection of Other Physical and Chemical Samples

For all other parameters, the upper 2 inches of sediment will be removed from the grab and homogenized in a stainless steel bowl using a stainless steel spoon or scoop. Sufficient sediment will be collected (estimated to require 6 grabs) and mixed in the bowl so that subsamples can be taken for chemical analysis, physical analysis, and sediment toxicity testing. Each of these subsamples will be taken using either a stainless steel spoon or syringe. Each bottle will be labeled to identify sample location, analysis required, date, and the initials of the collector. All of these samples will be kept on ice within coolers and delivered to the appropriate laboratory within 24 hrs.

4.4.2 Sediment Sample Analytes, Containers, and Shipment Requirements

Required sample sizes are listed in Table 4-3 along with sample container types, preservation, and holding times. Sediment samples will be analyzed for VOCs, SVOCs, PCBs, pesticides, metals, AVS/SEM, arsenic speciation (for SD-3, SD-5, and SD-6), total organic carbon, and grain size using methods listed in Section 7 of this QAPP. Field QC samples, including field duplicates, field rinsate blanks and trip blanks, and matrix QC, described in Section 3 of this QAPP.

4.5 Benthic Invertebrate Sample Collection

Benthic invertebrates will be collected for tissue analyses of chemicals and to evaluate the composition and abundance of the benthic community. Information on tissue analyses will be used to evaluate potential effects on benthic invertebrate communities and to support food-chain modeling. Information on the composition and abundance of benthic invertebrates will be used to evaluate potential effects on the benthic invertebrate community.

4.5.1 Benthic Invertebrate Collection for Tissue Analysis

The goal of the sampling effort will be to obtain sufficient benthic invertebrate biomass for tissue analyses of chemicals at each of the 13 sampling locations listed in Table 4-1. It is recognized that this goal may be difficult to achieve and an approach has been developed to guide these sampling efforts. Part of this approach involves setting priorities for analysis with respect to analytes and with regard to the types of invertebrates.

USEPA and the ISRT have prioritized the analyses as follows: 1) all invertebrate samples will be analyzed for metals; 2) if sufficient additional sample is obtained, analysis will also be conducted for PAH compounds; 3) if sufficient extract if obtained for organic chemical analysis, the extract will be stored for possible future analysis of pesticides/PCBs.

During the Reconnaissance Survey in April 1999, amphipods were the most common benthic invertebrates observed and easily recognizable at most stations in the Aberjona River system. This group of organisms is important in the diet of many fish and wildlife species and is, therefore, a good candidate for collection and analysis of tissues if

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sufficient sample amounts can be obtained. In softer sediments, chironomid insect larvae are likely to predominate.

During a conference call on May 21, 1999 with Joe LeMay and Patti Tyler of USEPA, a preference was expressed for collection of benthic invertebrate species at all locations and that amphipods and/or chironomid insect larvae should be favored as the benthic invertebrates of choice for collection. A key sampling issue is the level of effort required to achieve adequate sample sizes for tissue analysis. A subsequent call on June 2, 1999 helped finalize this aspect of the sampling design.

Based on the Reconnaissance Survey and discussions with Joe LeMay and Patti Tyler, the following approach was defined for collection of benthic invertebrates for tissue analysis.

The sample team dedicated to this effort will consist of at three to four people per sample location. At all stream sediment locations and in the shallow station of HBHA Pond amphipods and chironomids will be collected. These taxa will be kept separate. All amphipods will be placed in one jar and all chironomids in another. The goal will be to collect sufficient amounts of amphipods and/or chironomids at all stations. Once the samples have been collected, the results of the collections will be discussed with USEPA and decisions made concerning how to proceed with the analysis. If adequate sample is obtained for a particular taxon (e.g., chironomid larvae) at all or most stations, then analysis will focus on that taxon. If sample sizes are small (e.g., less than 1 g for individual taxa), then the option of combining taxa will be considered. Stream samples will be collected for tissue analysis using a combination of kick nets and sediment grabs. A special sediment-sieving device with an extra large screen and running water has been built to support this sampling effort. The laboratory requires a minimum of 1 g per sample for metals and an additional 1 to 2 g for PAHs, pesticides, and PCBs. Additional sample would be needed to perform project-defined matrix QC including matrix spike and duplicate analyses (see Section 3 of this QAPP). On this basis, a minimum of 1 g wet weight of invertebrates (sufficient to support metals analysis, identified by USEPA and ISRT as the priority for this effort), will be collected per location for metals analysis and up to 5 g to support other analyses, if adequate tissue can be obtained. The number of organisms required to achieve sufficient sample size will depend on the size of the organism. Sample size requirements have been calculated for a range of body lengths that may be encountered and two sets of length to width ratios considered representative of the species expected (Table 4-4). These estimates will be used by the field collection team to estimate sample size requirements. This method will be simpler to implement than in-field weighing because a considerable amount of water as well as debris adheres to the animals when they are picked and sorted from the sample.

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Table 4-4. Estimating Sample Size Requirements for Obtaining Sufficient Biomass for Tissue Analysis.

		Sample Requirements (# of organisms) to Achieve Specified Biomass Levels[a]		
Body Length (cm)	Length:Width Ratio	1 g	2 g	5 g
0.5	10	863	1725	4313
1	10	108	216	539
2	10	13	27	67
3	10	4	8	20
0.5	5	216	431	1078
1	5	27	54	135
2	5	3	7	17
3	5	1	2	5

a. The estimates assume a cylindrical body shape and a specific gravity of 1.1 g/cm^3

Many of the amphipods and chironomids observed during the Field Reconnaissance Survey were small (~ 1 cm) and had length:width ratios between 5 to 1 and 10 to 1. It is estimated that up to 200 benthic invertebrate organisms may be needed to achieve approximately 2-g wet weight of tissue. Actual collection needs will be judged in the field using the information provided in Table 4-4 and by making length and width measurements representative of the organisms being collected. This information will provide the basis for estimating the number of animals that need to be obtained to achieve between 2 and 5g of organisms (preferably amphipods) per location.

At all pond locations, grab samplers will be used to collect the amphipods and/or chironomid insect larvae. As with the stream samples, both amphipods and chironomids will be collected and kept separately. A field decision will be made in consultation with the USEPA representative concerning which group of organisms to use for tissue analysis. This judgment will also be documented in the Field Log.

The following scheme will be used to achieve benthic invertebrate sample size requirements within a "reasonable period of time" during the Main Sampling Program.

- Judgments concerning the abundance of invertebrates at a location will initially be made using grab samples and/or kick net samples. A minimum of five grabs and/or kick net samples will be collected at each location and an effort of 45 minutes to an hour will be expended. This allocation of time is for sampling and sorting and does not include travel and set up time.
- If this initial sampling effort yields less than 0.25 g (based on sizes and numbers of animals), sampling for benthic invertebrates will cease because

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the location would be unlikely to yield the sample-size requirement of at least 1-g of organisms within a "reasonable period of time." For these locations, the invertebrate sampling effort will be reallocated to epiphytic invertebrates.

- If this initial sampling effort yields 0.25 g or more organisms, then the collection will continue for an additional two hours and/or until an estimated 5 g of organisms are collected, which ever occurs first.
- The decision to reallocate sampling effort or to consider a sampling location complete will be made in the field after consultation with and concurrence from the USEPA representative.
- After the collection is complete at a location, the samples will be washed and rinsed with site surface water to help remove debris. The sample will be stored on ice in surface water and washed again at the end of the day's sampling effort.
- Invertebrates (amphipods or chironomids) will be analyzed for metals and, if adequate additional sample size is available, for PAHs. Additional material will be stored frozen.
- Because of expected low abundance of invertebrates at some stations, sample sizes after 3 hours of collection effort may range between 1 and 2 g wet weight. The chain-of-custody will include specific directions to the laboratory in such cases of limited sample sizes. These directions will be: 1) analyzed for metals; and 2) batch the preparation of limited sample size benthic invertebrates with samples of adequate mass so that appropriate project-specific matrix QC can be performed on another benthic sample in the same batch.
- At locations where the collection of adequate sample sizes of benthic invertebrates is judged to take longer than three hours, the sampling effort will be reallocated to provide information on collection of epiphytic invertebrates. These invertebrates include chironomid insect larvae and amphipods that live on plants as well as on the surface of sediments and other substrates. These animals are typically exposed to the water column as well as re-suspended surface sediments. Importantly, these invertebrates include those that are eaten by the mallard, a wildlife species that will be evaluated in the ERA.
- Based on field observations during the Reconnaissance Survey, it is possible that few benthic invertebrates will be found at the HBHA Pond Deep sampling locations such as SD-6 and possibly at Phillips and North Pond locations as well. These may be locations where benthic invertebrate sampling could be reallocated to sampling epiphytic invertebrates.
- Field decisions concerning whether or how to reallocate sampling effort will be made based on discussions with the USEPA representative will require

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concurrence of the USEPA representative and will be documented in the Field Sampling Log.

- If epiphytic samples are collected, it appears reasonable that benthic invertebrates may be found along the root system and roots system/surface water interface. Therefore, epiphytic vegetation will be collected in its entirety. Benthic organisms will be removed from the epiphytic roots and included for analysis.

Invertebrates living on plants will be collected for tissue analysis of chemicals for locations at which sufficient biomass of invertebrates living within sediments can not be obtained. The reallocation of sampling and analytical effort from sediment invertebrates to epiphytic invertebrates will be decided in the field and will be based on discussions between Project Field Manager for Menzie-Cura and the USEPA representative. Epiphytic samples will be collected by cutting submerged aquatic vegetation above the root system and washing the organisms off the plants and onto sieves. These will be processes as described above for benthic invertebrates.

Samples of benthic or epiphytic invertebrates for tissue analysis will be placed in ziplock bags or glass jars and stored on ice for overnight courier shipment to the analytical laboratory. Information recorded in field logs and/or the chain-of-custody for benthic invertebrates samples will include: the client, site name, Sample Identification Number, sampling location, physical characteristics of the sampling station, estimated weight of the sample, date and time, and names of field personnel. Subsequent processing of the sample will be completed at the laboratory.

Information on sample containers, preservation, and holding times are provided in Table 4-5. Analytical methods and detection limits for tissue analyses are presented in Section 7 of this QAPP. Collection locations are listed in Table 4-1.

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Table 4-5. Benthic Tissue Analysis Samples: Number, Sample Preservation, Container Specification, and Holding Time Requirements In Support of the Environmental Assessment

Parameter	Number of Samples	Sample Container(s)	Preservative	Holding Time*
Metals	13 benthic or epiphytic	1-L Amber Glass Bottles or Clean Ziplock Bags	Cool, 4°C, protected from light; store frozen < -10°C	28 d mercury, 180 d all other metals
Semivolatile Organics (PAHs)	13 benthic or epiphytic (if sufficient biomass is collected)	Same as above for delivery to the lab	Cool, 4°C, protected from light; store frozen <10°C	Extraction: 1 year frozen, within 14 days of thawing Analysis: within 40 days of extraction
Pesticides	13 benthic or epiphytic (held for possible future analysis)	Same as above for delivery to the lab	Cool, 4°C, protected from light; store frozen <10°C	Extraction: 1 year frozen, within 14 days of thawing Analysis: within 40 days of extraction
PCB Aroclors	13 benthic or epiphytic (held for possible future analysis)	Same as above for delivery to the lab	Cool, 4°C shipment, stored at < -10°C, protected from light	Extraction: 1 year frozen, within 14 days of thawing Analysis: within 40 days of extraction

*Note: Holding times start from when sample is thawed.

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4.5.2 Benthic Invertebrate Collection for Community Evaluation

The analysis of benthic community structure (*e.g.* diversity and abundance of benthic invertebrates) will be used to support the assessment of possible effects on benthic invertebrates. The data will be analyzed for taxa richness, abundance, percent dominant taxon/taxa, and community composition (see Section 7 of QAPP).

At each of the 13 locations described in Table 4-1, benthic invertebrates will be collected with an Eckman or petite ponar grab using techniques described in the standard operating procedure, *Collection of Benthic Invertebrates with a Grab Sampler* (Appendix B). Three samples will be collected from each location and analyzed separately to provide a measure of within-station variability. This will yield 13 locations x 3 grabs/location = 39 samples.

Each invertebrate benthic sample will be washed in the field through a 0.5-mm mesh sieve, placed into 1-liter plastic jars, and preserved with isopropyl alcohol (Table 4-6). A sample-washing device has been constructed for the project. The device is designed to provide running water to help wash the samples.

Table 4-6. Samples for Analysis of Benthic Invertebrate Composition and Abundance: Number, Sample Preservation, Container Specification, and Holding Time Requirements in Support of the Environmental Assessment.

Parameter	Number of Samples	Sample Container(s)	Preservative	Holding Time
Benthic invertebrates	39 (13 stations x 3 samples)	1 liter plastic jars	Isopropyl alcohol	NA

4.5.3 Assessment of Habitat Conditions at Benthic Sampling Locations

Habitat conditions at each of the 13 sample locations will be evaluated in the field and by several of the analytical measurements made in the laboratory. At each station the following will be determined: physical characteristics of sediments (field observations and grain size analysis), organic content of sediments (field observations on the nature of the sediments and laboratory measurements of total organic carbon), water depth, stream flow velocity (estimated in the field), width of water body, characteristics of shoreline, bordering vegetation, extent of overhanging vegetation. Observations for the Habitat Assessment will be guided by the *Habitat Assessment Field Data Sheet-Low gradient Streams, USEPA Rapid Bioassessment Protocols, 1989.*

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4.6 Sediment Toxicity Tests

Samples for the sediment toxicity tests will be taken from the same homogenized composite sediment sample that is collected at each of the 13 sediment locations (Table 4-1) for chemical and physical analyses. This homogenized sample will consist of the upper 2 inches of sediment from 6 grabs. A clean scoop will be used to transfer the sediment sample from the mixing bowl to the sample container. Unrepresentative material (*e.g.*, stones, wood chips) will be removed from the sample at the discretion of the field sampler and will be documented in the field log. Approximately 3.5 liters of sediment per location will be collected and placed into clean wide mouth glass jars, labeled, and placed on ice in a cooler. Samples will be provided to the laboratory within 24 hrs. At the laboratory, sediment samples for toxicity testing will be refrigerated to 4°C and protected from light prior to use in testing to maintain the integrity of the original sediment.

The sediment toxicity tests will be used to evaluate whether chemicals in sediments within HBHA pond and HBHA wetland are toxic to benthic invertebrates. Acute toxicity tests will be conducted at all 13 sampling locations with the amphipod *Hyallela* and the insect larvae *Chironomus* in accordance with analytical methods presented in Section 7 of this QAPP and Appendix B. Tests of reference sediments will be initiated first. It is anticipated that these sediments will not be acutely toxic and will proceed to chronic testing. A Reference Location will not proceed to a chronic test only if toxicity is substantial (> 75%) and significantly greater less than the control sediment. For stations in HBHA and downstream locations, acute toxicity results will be compared to both the Reference Locations and the control sediments. If acute toxicity for HBHA and downstream locations is significantly greater than that in the Reference Locations and the control sediments, then it will be concluded that the sediments are toxic to benthic invertebrates and chronic tests are not needed to confirm the finding. At no time will the integrity of the testing program be put in jeopardy. Therefore, if there is a question concerning the need for a chronic test, that test will be performed. The sequential testing (acute followed by chronic) will eliminate the need to set up and run long-term tests for sediments in which the organisms can not survive. The chronic test methods are described in Section 7 and Appendix B. Numbers, preservation, and containers are summarized in Table 4-7.

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Table 4-7. Samples for Toxicity Tests: Number, Preservation, Container Specification, and Holding Time Requirements in Support of the Environmental Assessment.

Parameter	Number of Samples	Sample Container(s)	Preservative	Holding Time
Chironomus acute test	13	(1) wide-mouth glass jar, pre-cleaned, capacity of 1.25 L of sediment	Cool, 4°C	14 day holding time
Chironomus chronic test	13	(1) wide-mouth glass jar, pre-cleaned, capacity of 1.25 L of sediment	Cool, 4°C	14 day holding time
Amphipod acute test	13	(1) wide-mouth glass jar, pre-cleaned, capacity of 1.25 L of sediment	Cool, 4°C	14 day holding time
Amphipod chronic test	13	(1) wide-mouth glass jar, pre-cleaned, capacity of 1.25 L of sediment	Cool, 4°C	14 day holding time

4.7 Vegetation Sample Collection

Plant species to be collected for chemical analysis include the cattail (*Typha latifolia*) as emergent vegetation and submergent vegetation such as pondweed (*Potamogeton* sp.) or coontail (*Ceratophyllum*). Each plant sample used for tissue analysis will consist of a single species. Plants can uptake chemicals in sediments to different degrees and a composite sample of more than one species could confound interpretation of the results. Submergent vegetation shall be evaluated in the field during fishing and sediment sampling activities. If no submergent vegetation is present at HBHA Pond, submergent vegetation will be collected either at Pond 1 (SD-09), or downgradient of HBHA Pond at SD-08.

4.7.1 Collection of Emergent Vegetation

During the Reconnaissance Survey, the emergent cattail species *Typha latifolia* was observed both in HBHA wetlands and in the Reference Ponds (Phillips and North). In follow-up discussions with Joe LeMay and Patti Tyler of USEPA, it was agreed that this species would be the target species for emergent vegetation because it is known to be favored as foot by muskrat, the predominant aquatic mammal in HBHA wetlands. Samples will be obtained by digging up individual plants with a trowel. The roots below the plant/soil interface will be cut off, washed free of sediment and/or soil and kept to form the required sample. Lower stems (1-foot length) above the roots will also be cut off and kept as a sample. Samples will be placed in ziplock bags, labeled, and kept on ice for shipment to the laboratory. The collection strategy of sampling roots and lower stems separately is based on the feeding habits of muskrat that are known to eat the roots and/or lower stems of cattails. It also reflects the possibility that metals may differ in concentration between the roots and lower stems.

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Each composite sample of cattail roots or lower stems will consist of five plants. Composite samples will be collected in each of the following locations if plants are available: HBHA Pond, HBHA Wetland Pond #1, and HBHA Pond #3. During the Reconnaissance Survey, cattails were observed in HBHA Wetland Ponds #1 and #3 but were not observed in HBHA Pond. If, during the Main Sampling Program, cattails are not observed in HBHA Pond, the next most downstream stand of cattails will be chosen for sampling (perhaps from the stream segment between HBHA Pond and Wetland Pond #1). This yields a total of 3 locations x 2 composites/location x 2 parts of plants (roots and lower stems) = 12 composite samples for HBHA Pond and wetlands.

Two composite samples of five plants each will also be collected from each of the two Reference Locations: Phillips Pond and North Pond for a total of 2 locations x 2 composites/location x 2 parts of plants (roots and lower stems) = 8 composite samples for emergent vegetation. The collections and analyses are summarized in Table 4-8.

4.7.2 Collection of Submergent Vegetation

Submerged aquatic plants are used as food by many species of aquatic birds and mammals. Some species favor eating roots while others feed on stems and leaves. Some species eat entire plants. In addition, submerged aquatic plants can take up chemicals either through the roots or through the leaves and stems. For these reasons, it is important to measure chemical concentrations in roots and leaves/stems.

During the Reconnaissance Survey a variety of submerged aquatic plants was observed. However, based on limited observations in April 1999, the species of plants differ among ponds. The plan for collection of plants is to first collect from the HBHA to determine the plant species to be sought in the Reference Ponds. Preference will be given to the most common species present in a particular pond. Ideally, this would be the same species for all ponds. However, field observations indicate that species may be restricted to particular locations. For example a monospecific stand of *Ceratophyllum* was observed in North Pond during the Reconnaissance Survey while it was not seen in HBHA. Decisions on which species to sample will be made in the filed based on consultation between the Menzie-Cura Field Operations Manager and the representative from USEPA.

Samples will be obtained by digging up individual plants with a trowel. The roots below the plant/sediment interface will be cut off, washed free of sediment and kept to form the required sample. The entire plant above the roots will also be kept as a sample. Samples will be placed in ziplock bags, labeled, and kept on ice for shipment to the laboratory.

Each composite sample of roots or upper plant will consist of five plants. Composite samples will be collected in each of the following locations if plants are available: HBHA Pond, HBHA Wetland Pond #1, and HBHA Pond #3. If, during the Main Sampling Program, submerged aquatic plants are not observed in one of these locations, one of the HBHA stream locations (e.g., SD-8 or SD-10) will be used. During the Reconnaissance Survey submerged aquatic plants were observed at SD-8. This yields a total of 3 locations

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x 2 composites/location x 2 parts of plants (roots and lower stems) = 12 composite samples for HBHA Pond and wetlands.

Two composite samples of five plants each will also be collected from each of the two Reference Locations: Phillips Pond and North Pond for a total of 2 locations x 2 composites/location x 2 parts of plants (roots and lower stems) = 8 composite samples for submerged aquatic vegetation. Samples will be placed in ziplock bags, labeled, and kept on ice for shipment to the laboratory. The collections and analyses are summarized in Table 4-8.

Table 4-8. Plant tissue analysis samples: Number, Sample Preservation, Container Specification, and Holding Time Requirements in Support of the Environmental Assessment.

Parameter	Number of Samples	Sample Container(s)	Preservative	Holding Time
Metals	10 composite samples of cattail roots/tubers	Clean Ziplock Bags	Cool, 4°C, protected from light; store frozen < -10°C	28 d mercury 180 d all other metals
Metals	10 composite samples of cattail lower stems	Clean Ziplock Bags	Cool, 4°C, protected from light; store frozen < -10°C	28 d mercury 180 d all other metals
Metals	10 composite samples of roots of submerged aquatic plants	Clean Ziplock Bags	Cool, 4°C, protected from light; store frozen < -10°C	28 d mercury 180 d all other metals
Metals	10 composite samples of leaves and stems of submerged aquatic plants	Clean Ziplock Bags	Cool, 4°C, protected from light; store frozen < -10°C	28 d mercury 180 d all other metals

4.8 Fish Sample Collection

Fish sampling will focus on four ponds: HBHA Pond, HBHA Wetland Pond #3, Phillips Pond (reference), and North Pond (reference). The goals of the fish-sampling program are to:

1. identify the composition and general abundance of fish in the ponds to determine if HBHA ponds are depauperate in species composition and or relative abundance in comparison to the Reference Ponds;
2. examine the age structure and the weight and length relationships for species in the ponds; again, comparisons will be made between the HBHA ponds and the Reference Ponds;
3. evaluate the habitat quality of the ponds with respect to supporting different fish species;
4. determine the potential of the ponds for supporting recreational fishing;
5. measure body burdens of chemicals in fish tissues for use in ERA and HERA; and,

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6. examine fish for gross histopathological anomalies and compare these between HBHA Ponds and Reference Ponds.

4.8.1 Collection of Fish and Fish Habitat Assessment

U.S. Fish and Wildlife Service (USFWS) will conduct the fish-sampling program. Sampling with an elecroshocker boat will be the primary sampling method. A SOP for this sampling is provided in Appendix B. Other methods that may be used by USFWS if needed include gill nets, leaded lines, trout lines, rod and reel, and traps. Sampling will be conducted in the HBHA Ponds first (HBHA Pond and Wetland Pond #3) to determine the species of fish that are present. This is most important for selecting species for tissue analyses because the Reference Pond species will be the same as the species collected in the HBHA. USFWS and Menzie-Cura have discussed the implementation of the field program and will coordinate sampling efforts in the field. A biologist working for Menzie-Cura will participate in the effort and will discuss the observations with the USFWS biologists. Menzie-Cura and USFWS will select fish from the field collections for tissue analyses. The selected fish will be weighed and measured by USFWS and their scales taken (for largemouth bass). The animals will be placed in labeled ziplock bags, placed into a second bag, and placed in a cooler with dry ice. It is anticipated that more fish than will be needed will be selected for analysis in order to insure that there are comparable species among the various sampling ponds. In other words, if there are two bottom fish species collected in HBHA Wetland Pond #3, 5 individuals of each will be kept for possible tissue analysis. The decision concerning which fish to analyze will be made after all ponds have been sampled.

The USFWS sampling protocol involves maintaining the fish alive until decisions have been made on which fish to process. USFWS will be responsible for making all observations on fish (identification, age, length, weight, and presence of gross histopathological anomplies). USFWS will record these data on data sheets and in logs. Copies of these data entries will be made available to Menzie-Cura. USFWS will remove scales from largemouth bass and selected sunfish for analysis of fish age and they will make determinations of age at their laboratory. The age of selected brown bullheads will be determined by examining spines present in the pectoral fins. The analytical USFWS will also be responsible for assessing the habitat quality of the ponds for supporting fish as well as the potential of the ponds for recreational fishing. Menzie-Cura and USEPA will participate in a discussion of these habitat features. This assessment will be qualitative and based on a combination of experience in similar water bodies, a qualitative assessment of the physical and water quality conditions provided by the habitat, and the use of a method for assessing recreational fishing potential.

Menzie-Cura and the contract laboratory – Woods Hole Group - will be responsible for obtaining tissues from the selected fish. Fish will be kept frozen until just prior to analysis. All dissections and inspections of the fish will be made at the laboratory by Dr. George Hampson, a fishery biologist with the Woods Hole Oceanographic Institute. Dr. Menzie of Menzie-Cura will coordinate with Dr. Hampson.

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During the sampling program, the habitat features of each of the four ponds will be documented. Information pertinent to fish populations include: water depth, physical sediment characteristics, type and extent of submerged and emergent vegetation, area, nature of contiguous aquatic environments, general water quality conditions (dissolved oxygen, conductivity, pH, and temperature), and characteristics of shoreline. These will be documented in the field and recorded in logbooks and by using photographs and video.

USFWS will evaluate the four ponds' ability to provide a sustainable fish population that supports recreational fishing. This evaluation will be based on the results of the fish collection. For example, successful collection of adult edible fish species such as largemouth bass and yellow perch would be an indication that the Site ponds contain fish that are sought for recreational fishing. The presence of large sunfish may also indicate this potential. The USFWS plans to use the number of fish caught, species composition, and proportional stock density (PSD) to assess fish stocks. PSD is a categorization and comparison of species-specific size classes that is used to evaluate fishing potential.

4.8.2 Fish Collection for Tissue Analysis

The selection of specific fish for analysis will be based on in-field discussions between Menzie-Cura, USEPA representative, and USFWS. The selection will be made in accordance with the general criteria presented later in this section that have been developed through discussions between Menzie-Cura, USFWS, and USEPA. Menzie-Cura and Woods Hole Group will be responsible for dissecting fish to obtain tissue samples for chemical analyses. This will be conducted at the Woods Hole Group Laboratory and will be performed in accordance with the SOP provided in Appendix B.

The workplan for collecting and analyzing fish tissues for chemicals is slightly different from that described in the USEPA letter of August 25, 1998. That initial scope called for the following:

Small fish:	analyze whole fish for metals
Medium fish:	analyze offal and fillet for metals
Large fish:	analyze target organs (liver and kidneys) and fillets for metals

Instead of the designations of small, medium, and large, it is more useful to obtain fish that represent different feeding strategies (trophic levels). To support the ERA and HERA, fish from three trophic levels (forager, bottom feeder, and piscivore) will be collected from HBHA and from the Reference Ponds for tissue analyses of chemicals. Forager species such as minnows, shiners, and small sunfish, which feed primarily on invertebrates, are eaten by wildlife species and, in the case of larger sunfish, may be eaten by people. Bottom fish such as bullheads, suckers, and eels are in the most intimate contact with sediments and are therefore useful species to examine for judging potential effects of sediments. People also sometimes eat these species. Piscivorous fish such as

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adult largemouth bass, yellow perch, and chain pickerel are those most likely to be eaten by humans. They are also eaten by wildlife species.

The tissues that will be analyzed also differ somewhat from that identified in the USEPA August 25, 1998 letter. The following target tissues will be analyzed:

Forager Fish:	analyze whole fish
Bottom Fish:	analyze liver, remaining offal, and fillet
Piscivorous Fish:	analyze liver, remaining offal, and fillet

The USEPA and USFWS have concurred with these tissue categories. All fish for possible analysis will be stored frozen. Following the completion of the sampling program, Menzie-Cura and USEPA will determine the specific analyses that will be performed. The following reflects the general plan and is dependent upon the types and numbers of fish that are collected.

The goal of the sampling effort is to collect at least five fish from each trophic category from each of the four ponds for tissue analysis of metals. This would yield a total of 3 trophic categories x 5 fish/category x 4 ponds = 60 fish. It is recognized that this goal may be difficult to meet because some of the trophic categories may not be present or fewer than five fish may be collected. In this case, the effort will focus on those fish that are collected within each of the target categories. If no piscivorous fish are obtained in HBHA (i.e., no adult largemouth bass, yellow perch, crappies, or chain pickerel), large individuals of sunfish species (e.g., bluegills) will be substituted for this category. This substitution is made because some people do eat these larger sunfish. If bluegill or other larger sunfish is used as a substitute for largemouth bass, then a second forager species (e.g., golden shiners) will be used as the forager species. Fish selected for tissue analyses in the Reference Ponds will be defined by what is collected within the HBHA. More fish species than needed for chemical analyses will be collected in the HBHA to help insure that there are species matches between the HBHA and Reference Ponds. The final decision on which fish to analyze will be made after the collections are complete. This decision will involve a discussion with the USFWS biologists and will take into account the criteria identified above. The decision will also be discussed with the USEPA RPM or other USEPA representative designated by the RPM.

All fish samples will be placed in ziplock bags and stored on dry ice for shipment to the analytical laboratory. A summary of collections for tissue analyses is provided in Table 4-9.

9.0 DATA REDUCTION, VALIDATION, AND REPORTING

All data generated through field activities or by the laboratories, shall be reduced, reviewed, and evaluated prior to use in the Ecological and Human Health Risk Assessments using the following procedures. Reconciliation with risk assessment requirements is described in Section 12.

9.1 Data Reduction

9.1.1 Field Data Reduction Procedures

Field measurements for quantitative analyses include pH, temperature, specific conductance, and dissolved oxygen. Qualitative measurement of turbidity will be taken to assess light penetration. In addition, field activities include observations and sample collection information. Raw data consist of instrument responses in the form of meter, recorder, or printer output. The technician/operator performing the analysis will enter the data in a field logbook or form for each parameter. All reductions of data must follow the procedures and equations provided in the respective testing protocols (see Table 7-1). The reduction of field data will consist of summarizing the raw field data, which may be presented in the form of tables, logs, illustrations, and graphs, as deemed appropriate.

9.1.2 Laboratory Data Reduction Procedures

Laboratory data reduction procedures will be performed according to the following general protocols and laboratory-specific protocols as described in the laboratory QAPP. All raw analytical data will be recorded and documented using laboratory standard procedures. Laboratory data will include, at a minimum, the unique sample identification number, analytical method used, name of analyst, the date of analysis, matrix sampled, reagent and standard concentrations, and instrument settings. Periodic review of laboratory notebooks (logbooks) and data reports shall be performed by the Lab QA Manager as described in the laboratory QAPP.

Analytical results for sediment samples will be reported on a dry-weight basis. Results for tissue (biota) analyses will be reported on a wet-weight basis. QC data (*e.g.*, laboratory duplicates, surrogates, MS/MSDs) will be compared to the acceptance criteria defined in this QAPP in Sections 3 and 7. Case narratives will be prepared which will include information concerning data that fell outside acceptance limits, and any other anomalous conditions encountered during sample analysis. After the laboratory submits the laboratory data package to the Ecological Project Manager, the data are considered approved by the laboratory and ready for third party data review or validation.

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9.2 Data Validation

All data used in the ERA and HHRA will be evaluated for usability for project goals using the procedures described in this section and in the SOP included as Appendix D.

9.2.1 Procedures Used to Validate Field Data

The procedures to evaluate field information for the Environmental Risk Assessment include checking for transcription errors and review of field logbooks for completeness and field measurements based on the criteria in Section 6 and field SOPs. Historical data from previous Site assessments may be compared to the data generated during this assessment as part of the verification process. These reviews will be performed by the Ecological Project Manager and the Chemistry QA Team.

9.2.2 Procedures Used to Validate Laboratory Data

Procedures to evaluate laboratory data are detailed in the SOP included in Appendix D, and were derived from the USEPA *Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses; Part II. Volatile/Semivolatile Data Validation Functional Guidelines* (1996), USEPA *Region I Laboratory Data Validation Functional Guidelines for Inorganic Analyses* (1989), USEPA *Guidance for Data Useability in Risk Assessment* (9285.7-09A, April 1992), and USEPA quality assurance guidance document QA/G-9. The Chemistry QA Team, New Environmental Horizons, Inc., have modified the EPA protocols to include the criteria in this project QAPP as listed in Sections 3 and 8 (see Appendix D).

Data generated from the April 20, 1999 Preliminary Reconnaissance Survey (USEPA Region I), April 29-30, 1999 Reconnaissance Survey (Menzie-Cura), and June 4, 1999 Supplemental Reconnaissance Sediment Sampling (USEPA Region I) were reviewed to make decisions about sediment sample preparation procedures and Site locations. Also, the QC data were reviewed to ensure that the methods and laboratory's performing the work are meeting the data quality objectives of this QAPP. This is a pro-active approach to generation of valid data for this program. In this way, any issues that may affect the usability or validity of the data for use in risk assessment can be uncovered and corrective actions implemented prior to the start of the Main Sampling Program.

One hundred percent of the data generated during the Main Sampling Program will be assessed for usability, completeness, and adherence to key QA/QC objectives for this project. This data assessment review will follow guidance in USEPA's *Guidance for Data Useability in Risk Assessment,* (PB9285.7-09A, April 1992) and will include a review of all technical holding times, instrument performance check sample results, initial and continuing calibration results, and all batch and matrix QC including field blanks, field duplicates, MS/MSD, matrix duplicates, surrogate recoveries, method blanks, laboratory control samples, standard

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reference material results, and the identification and quantitation of specific compounds of interest.

Data Assessment in support of Industri-Plex requires the review and evaluation of chemical data based upon EPA Region I guidance for data assessment of inorganic and organic and site-specific requirements as defined in this QAPP. The purpose of the data usability assessment is to provide information to the data users (*e.g.*, regulators, risk assessors) of the uncertainty and bias in the data for decision making.

For the Industri-plex project, approximately 10% of the data (one data package, or SDG, per chemical fraction) will undergo the Region I Tier III-type Data Usability Review. The remainder of the data will undergo the Region I Tier II-type Data Usability Review. Data usability assessment will be performed using the project-specific protocols detailed in Appendix D and briefly summarized below.

Data Usability Review Process

A two-stage process for assessment will be performed. The first stage is equivalent to a Region I Tier III validation in scope. The laboratory will submit one full deliverable (Tier III type), including raw data, results, and QC summaries, for each type of analysis they are performing (e.g., Semivolatile Organics Compounds by Method 8270C). This data package will undergo an in-depth evaluation of all of the quality control information provided, as well as a review of the raw data on instrument calibrations, extraction procedures, qualitative and quantitative determinations to ensure that the laboratory is producing data in a manner which is compliant with the methods and with the QAPP. NEH will use a project-specific checklist to conduct the Data Usability Reviews (an example is included in Attachment A of Appendix D) and a project-specific Data Usability Summary Report (included in Attachment B of Appendix D) to document this Tier III-type data usability review. Data summary spreadsheets, with standard data qualifiers applied to the results, will also be generated, as required by the data users. This process combines the functions of third-party validation with usability assessment for a comprehensive review and evaluation of the data for risk assessment. This Tier III-type data usability review will provide a measure of "insurance" of the comparability, accuracy, precision, and sensitivity of the results for the project.

Any deficiencies in performance of the work by the laboratory that are uncovered during the Data Usability Review will quickly be brought to the laboratory's attention for corrective action. If these deficiencies prove to be major, the reviewer may request that the laboratory submit another Tier III package of data after all corrective actions have been taken to ensure the integrity of the project.

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Once the first stage has been successfully completed, the second stage of the assessment process involves an abbreviated, project-specific Data Usability Checklist Review (an example is provided in Attachment C of Appendix D) which is equivalent in scope to a Region I Tier II validation. The laboratory will provide a Tier II deliverable for assessment, which includes sample results and QC summary data (but no raw data). The checklist will be used to evaluate the key data quality indicators for the samples. The data users will be provided with these Data Usability Checklists and a Data Usability Summary Report (as included in Attachment B). Data summary spreadsheets, with standard data qualifiers applied to the results, will also be generated, as required by the data users.

In addition to the precision, accuracy, and sensitivity criteria as defined in Section 3 and 8 of this QAPP, the overall completeness of the data package will also be evaluated. Completeness checks will be administered on all laboratory data packages to determine whether deliverables specified in the QAPP Section 9.3, below, are present. The reviewer will determine whether all required items are present and request copies of missing deliverables using resubmittal request documentation *via* facsimile or email. Such documentation will be included in the Data Usability Summary reports (see Appendix D).

Additionally, method detection limit studies (MDL) for all chemicals of concern in the matrices of interest will be performed by the analytical laboratory. These MDLs must support the project reporting limit requirements and have been performed within one year of the analysis of samples collected for the Environmental Risk Assessment. The laboratory shall follow the MDL procedures as outlined in the Federal Register, Vol. 49, no. 209, October 26, 1984, pp.198-199 and associated laboratory QAPP SOPs.

9.3 Data Reporting

9.3.1 Field Data Reporting

Field data reporting for measurements are described in Sections 4.0, 5.0, 6.0, and Appendix B-7 of this QAPP.

9.3.2 Laboratory Data Reporting

The Laboratory will provide at least two hard-copies of each laboratory data report, an original and a copy for the Data Usability Review, to the Ecological Project Manager. Electronic deliverables may be required for the project database. Specific formats for electronic deliverables shall be determined by the Ecological Project Manager in discussions with the analytical laboratory prior to the start of the program.

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The laboratory data reports for the environmental chemical results must include the following, at a minimum:

1. Case Narrative
   - Date of issuance
   - Laboratory analysis performed
   - Any deviations from intended analytical strategy
   - Numbers of samples and respective matrices
   - QC procedures utilized and also references to the acceptance criteria
   - Project name and number
   - Condition of samples 'as-received'
   - Discussion of whether or not sample holding times were met
   - Discussion of technical problems or other observations which may have created analytical difficulties
   - Discussion of any laboratory QC checks which failed to meet project criteria
   - Signature of the Laboratory QA Manager and/or Laboratory Director or designee

2. Chemistry Data Package
   - Summary page indicating dates of analyses for samples and laboratory QC checks
   - Cross referencing of laboratory sample to project sample identification numbers
   - Description of laboratory data qualifiers used
   - Sample preparation and analyses summary or form with dates of preparation/extraction/analysis and methods used for samples
   - Sample results on a dry-weight basis for sediments and on a wet-weight basis for biota, with units clearly labeled and dilutions clearly marked.
   - Sample-specific reporting limits for all compounds
   - QC summaries including: MS/MSD recoveries, laboratory control samples/standard reference material recoveries, surrogate recoveries, method blank results

In addition, the laboratory data package that will undergo the Region I Tier III-type Data Usability Review must also include the following:

- Raw data for sample results and laboratory QC samples
- Results of (dated) initial and continuing calibration checks, and GC/MS tuning results
- Calibration check compounds, system performance check results
- Chromatograms/spectra or other raw data of sample results and QC checks
- Example result calculations

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12.0 SPECIFIC ROUTINE PROCEDURES TO ASSESS DATA PRECISION, ACCURACY, AND COMPLETENESS

The purpose of this section is to indicate the methods by which it will be ensured that the data collected for this investigation falls in line with the data quality objectives (DQOs) as described in Section 3 of this QAPP. To meet these DQOs, a combination of statistical procedures and qualitative evaluations will be used to check the quality of the data. These procedures will be used by the laboratory in generating the data, and by the Chemistry QA Team in the evaluation of the surface water, sediment, and biota results for ultimate use in the Environmental and Human Health Risk Assessments.

Results for QC samples, including field and laboratory blanks, spikes, and duplicates as previously described in Sections 3, 6, and 8 of this QAPP, will be evaluated using the equations described below to determine the validity and usability of the data. In addition, the data will be reviewed for indications of interferences to results caused by sample matrices, contamination during sampling, contamination in the laboratory, and sample preservation and storage anomalies (*i.e.*, sample analysis performed outside of method holding time or analytical instrument problems). Along with the specific equations-detailed in this section, all project data will undergo a usability review as described in Section 9 and Appendix D.

12.1 Precision Assessment

The relative percent difference (RPD), as a measure of variability, between the matrix spike and matrix spike duplicate for organics, or sample and matrix duplicate in the case of inorganics, and field duplicate pair will be calculated to compare to precision and representativeness DQOs. The RPD of duplicate measurements is calculated according to the following formula.

$$RPD = \frac{(\text{Result in Sample 1} - \text{Result in Sample 2})}{\frac{(\text{Result in Sample 1} + \text{Result in Sample 2})}{2}} \times 100$$

where:
Sample 1 = Initial Sample or spiked sample result
Sample 2 = Duplicate sample or duplicate spiked sample result

12.2 Accuracy Assessment

Accuracy, as a measure of bias, will be evaluated based on the percent recoveries of the matrix spike sample (organics and inorganics), matrix spike duplicate sample (organics), surrogates (organics), internal standards (organics), laboratory control samples and/or standard reference materials (organics and inorganics), initial and continuing calibration check samples (organics and inorganics). These QC results will be compared to the project DQOs for accuracy.

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The increase in concentration of the analyte observed in the spiked sample, due to the addition of a known quantity of the analyte, compared to the reported value of the same analyte in the unspiked sample determines the percent recovery.

Percent recoveries for spiked samples and QC are determined using the following equation:

$$\%R = \frac{\text{(Result in Spiked Sample - Result in original/unspiked Sample)}}{\text{Known amount of spike added}} \times 100$$

Percent recoveries for LCS and SRM are determined using the following equation:

$$\%R = \frac{\text{Result for compound in LCS or SRM}}{\text{Verified amount of compound in LCS or SRM from vendor information}} \times 100$$

Additionally, field and laboratory blanks will be used to evaluate whether field or laboratory procedures represent a possible source of contamination in the biota samples. Unmonitored contamination can allow false positive results to be reported and treated as true sample components when, in fact, they are not. This type of error will adversely affect the accuracy of the reported results. Several types of blanks, including field blanks, method blanks, and instrument blanks, will be used in this project as described in Sections 3, 6, and 8.

Specific DQOs for blanks have been defined for this program in Sections 3, 6, and 8. In general, the procedure for assessing blank samples for potential contamination is as follows.

1. Tabulate blank compound results.
2. Identify blank samples for which compounds are reported above the project-required reporting limits.
3. If no compounds are detected above the reporting limits in any blanks, the associated data are reported unqualified and no blank actions are taken.
4. If compounds are detected above the reporting limits in the blanks, the associated sample compounds will be qualified during data validation. This qualification may result in the negation of results at raised reporting limits due to blank actions.

12.3 Completeness Assessment

Completeness is the ratio of the number of valid sample results to the total number of results planned for collection. Following completion of the sampling, analysis, and data validation, the percent completeness will be calculated and compared to the project DQO of $\geq$ 90% (Section 3 of this QAPP) using the following equation.

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$$\% \text{ Completeness} = \frac{\text{number of valid/usable results obtained}}{\text{number of valid/usable results planned}} \times 100$$

12.4 Overall Assessment of Environmental Data

Data assessment will involve data evaluation and usability to determine if the data collected are of the appropriate quality, quantity and representativeness to support the Environmental Risk Assessment. The affect of the loss of data deemed unacceptable for use, for whatever reason, will be discussed and decisions made on corrective action for potential data gaps. The QC results associated with each analytical parameter for each matrix type will be compared to the objectives presented in Sections 3, 6, and 8 of this QAPP. Only data generated in association with QC results meeting these objectives and the data validation criteria will be considered usable for the Environmental Risk Assessment.

Factors to be considered in the overall data assessment based on the DQOs in this QAPP and the data evaluation by the third-party validator will include, but not necessarily be limited to, the following.

- Were all samples obtained using the methodologies and SOPs proposed in the QAPP?
- Were all proposed analyses performed according to the SOPs provided in the QAPP?
- Were samples obtained from all proposed sampling locations planned?
- Do any analytical results exhibit elevated detection limits due to matrix interferences or contaminants present at high concentrations?
- Were all laboratory data evaluated according to the validation protocols, including project-specific QC objectives as defined in this QAPP?
- Which data sets were found to be unusable (qualified as "R") based on the data evaluation results?
- Which data sets were found to be usable as estimated data, (qualified as "J" or "UJ") based on the data evaluation results?
- Has sufficient data of appropriate quality been generated to support the Environmental Risk Assessment?
- Were all issues requiring corrective action, if any, fully resolved?
- Have any remaining data gaps been identified and summarized in the final report?

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12.5 Reconciliation with Data Used to Assess Precision, Accuracy, Representativeness, Completeness, Comparability for Quality Objectives Measurement

The goal of this project is to produce an Ecological and Human Health Risk Assessment. As such, the data generated must meet the risk assessor's needs as defined in Section 1 and the project DQOs in Section 3 of this QAPP. In summary from Section 3, the primary objectives for assessing the usability of the data are (1) to collect data that are representative of Site conditions and comparable with prior data; (2) to produce data that meet the project reporting limit requirements for Ecological and Human Health Risk Assessment; (3) to produce data of the highest quality possible in order to accurately and precisely characterize the Site ecological conditions.

The Chemistry QA Team during Data Usability Review will apply the standard EPA data validation qualifiers to the data to indicate the level of uncertainty in the associated result. In general, for the purposes of the Environmental Risk Assessment, data that are left unqualified, data qualified "U" (non-detected), data qualified "J" (detected as an estimated result), and data qualified "UJ" (non-detected at an estimated detection reporting limit) are considered valid and usable for project objectives. Data that are qualified "R" (rejected), due to severe exceedances of QC requirements, will be considered invalid and unusable for the Environmental Risk Assessment. See Section 9 and Appendix D for a more detailed explanation of the Data Usability Review process planned for this project.

To meet the needs of this program, field sampling personnel, the analytical laboratory, the data validator and the risk assessors (human health and ecological) will work together on a frequent and regular basis to ensure that the project RLs (or PQLs) are as low as feasible for the media being sampled and that sample analytical results will achieve RLs within the limits of the selected analytical methods. The usability of such data with higher RLs will be evaluated during the risk assessment activities. In general, one half of the sample-specific detection levels may be used in risk calculations as a conservative estimate for compounds that do not meet the project RLs.

The goal of this QAPP program is to generate valid, usable data for the risk assessment activities. However, in environmental sampling and analysis, some data may be lost due to sampling location logistics, field or laboratory errors, or matrix effects that may cause the rejection of results for some compounds. The overall completeness of collection of valid and usable data, as defined in Section 3 of this QAPP, is 90%. The Chemistry QA Team will assess the completeness of the overall data generation against the project goal of producing 90% of the planned data as valid and usable results for the Ecological Risk Assessment. If this goal is not met, data gaps may exist that may compromise the risk assessment.

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Figure 4.1
Locations of Surface Water & Sediment Stations

Menzie Cura & Associates, Inc. 7/7/99

North Woburn, MA

Scale: 1" = 400'

MENZIE • CURA & ASSOCIATES, INC.

Environmental Consultants

One Courthouse Lane, Suite Two •Chelmsford, Massachusetts 01824-1794 • (978) 453-4300 • Fax (978) 453-7260

March 8, 2000

Joe LeMay
EPA – New England, Region I
1 Congress Street
Suite 1100 Mail Code HBO
Boston, MA 02114-2023

Reference Data for Industriplex, Woburn, Massachusetts

Dear Mr. LeMay:

The enclosed data package is for sediment and surface water for the Industriplex reference locations in Woburn, Massachusetts.

This package includes two copies of the following:

- A copy of the field notebook (previously sent to Bruce Yare)
- A copy of the Habitat Assessment Sheets (with the exception of SD-04 and SD-12)
- A written description of each reference location
- A summary of the Habitat Assessment Sheets
- All Reference Sediment data (Organic data previously sent to Bruce Yare)
- All Reference Surface water data (Organic data previously sent to Bruce Yare)
- Data Usability Reports.

The Habitat Assessment Sheets for stations SD-04 and SD-12 are in the possession of Patti Tyler (USEPA) and will be sent to you upon receipt. Electronic copies of the sediment and surface water data will be emailed to you when this package is sent out. These files are in Microsoft Excel.

If further information is needed regarding this data package, please don't hesitate to call Ken Cerreto at (978) 322-2852.

Sincerely,
Menzie-Cura & Associates, Inc.

Kenneth Cerreto

Kenneth Cerreto
Assistant Scientist

Phone: (978) 322-2852
Fax: (978) 970-2791
Email: kcerreto@menziecura.com
http://www.menziecura.com

CC: Bruce Yare, Solutia, Inc.

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SD	Water Body	Comments	Latitude N	Longitude W
01	Aberjona	Aberjona east of Acadia Street	42 31.7426	71 07.4009
02	South Pond	South Pond	42 32.3426	71 08.6546
03	Phillips Pond	Phillips Pond	42 31.0135	71 07.9605
04	Halls Brook	Halls Brook Reference Location	42 30.7878	71 08.8787
05	HBHA	Deep station at northern end of HBHA Pond	42 30.7785	71 08.4715
06	HBHA	West side of HBHA Pond, below Halls Brook	42 30.7511	71 08.4734
07	HBHA	deep station at southern end of HBHA Pond	42 30.6925	71 08.4254
08	HBHA	Stream segment in HBHA Wetland	42 30.5257	71 08.3067
09	HBHA	HBHA Wetland Pond #1	42 30.4131	71 08.3002
10	HBHA	Stream segment in HBHA wetland	42 30.2839	71 08.2272
11	HBHA	Pond 3 in HBHA Downstream	42 30.2483	71 08.1174
12	Halls Brook	Halls Brook reference location upstream of SD-04	42 30.7507	71 08.9418
13	Aberjona	Aberjona north of Olympia	42 29.9577	71 08.0568

SD-01 Aberjona River

This stretch of the Aberjona is similar to the downriver stretch near SD-13. Sediment consisted of black fine mud with leaf matter. Water was slow moving and shallow (0.5 to 3 inches). Water level was significantly reduced (width ranged from 2 to 3 feet), exposing muddy banks.

SD-02 South Pond

Water depth was less than 3 feet throughout the pond. Cattails, *Potamogeton*, stands of *Ceratophyllum*, and mats of *Cladophora* present. Wildlife was observed including small fish (possibly golden shiners) and turtles. Depositional sediment was observed (black fine-particulate matter with lots of sticks).

SD-03 Phillips Pond

Phillips Pond appears to act as a depositional area. Deep sediment samples were soft and anaerobic and contained a few chironomid larvae.

SD-04 Halls Brook

This stretch of Halls Brook drains an open field. This station is located just upstream of where Halls Brook runs through residential and commercial areas. Width ranged from 4 to 10 feet. This station may differ ecologically from the Aberjona and HBHA Downstream locations due to its open characteristics. Sediment was characterized by silt and large amounts of plant material. Mallards, frogs, and amphipods were observed.

SD-12 Halls Brook

This station is upstream of station SD-04. Sediment consisted of peaty muck. Slow moving, shallow water (0.5 to 3 inches). Water level was significantly reduced, width ranged from 2 to 3 feet, exposing muddy banks.

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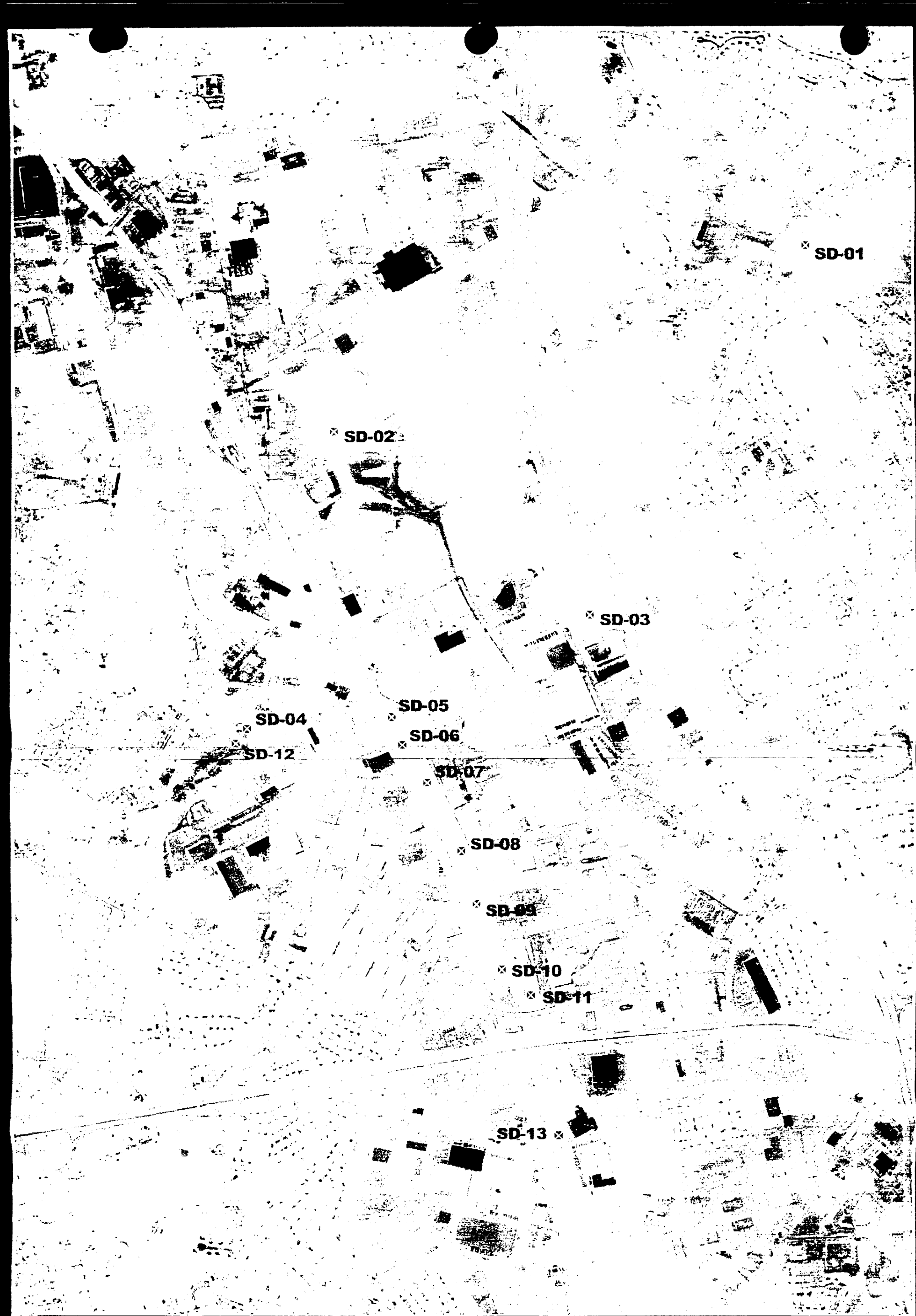

Figure 4.1
Locations of Surface Water & Sediment Stations

Menzie Cura & Associates, Inc. 7/7/99

North Woburn, MA

Scale: 1" = 400'

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 1 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE ___(LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE ___(LB)	Left Bank 10	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE ___(LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score _____

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Phillips Pond	LOCATION Woburn	
STATION # SD03 RIVERMILE _____	STREAM CLASS	
LAT _____ LONG _____	RIVER BASIN	
STORET #	AGENCY	
INVESTIGATORS		
FORM COMPLETED BY FO	DATE _____ TIME _____ AM PM	REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE	20 19 (18) 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE	20 19 18 17 16	(15) 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability N/A	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 (19) 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 (18) 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 13	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity 4	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 1 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	(5) 4 3 2 1 0
8. Bank Stability (score each bank) 9	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE ___(LB)	Left Bank 10 (9)	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10 (9)	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. 7	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE ___(LB)	Left Bank 10	8 (7) 6	5 (4) 3	2 1 0
SCORE ___(RB)	Right Bank 10	8 7 6	5 (4) 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) 3	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE ___(LB)	Left Bank 10 9	8 7 (6)	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10 9	8 7 (6)	5 4 3	2 1 0

Total Score _____

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Phillips Pond	LOCATION	
STATION # SD-3 RIVERMILE _____	STREAM CLASS	
LAT _____ LONG _____	RIVER BASIN	
STORET #	AGENCY	
INVESTIGATORS		
FORM COMPLETED BY	DATE _____ TIME _____ AM PM	REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover (14)	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 (8) 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization (11)	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 (7) 6	5 4 3 2 1 0
3. Pool Variability (NA)	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition (10)	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	(10) 9 8 7 6	(5) 4 3 2 1 0
5. Channel Flow Status (17)	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration SCORE 13	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity NA? SCORE 5	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 1 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) SCORE 9 (LB) SCORE 9 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. 6/6 SCORE 9 (LB) SCORE 9 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less on average stubble height.
	Left Bank 10	8 7 6	5 4 3	2 1 0
	Right Bank 10	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 5 (LB) SCORE 5 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score _____

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME South Pond	LOCATION	
STATION # SD-2 RIVERMILE	STREAM CLASS	
LAT LONG	RIVER BASIN	
STORET #	AGENCY	
INVESTIGATORS		
FORM COMPLETED BY Bart Hoskins	DATE 6-21-99 TIME AM PM	REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 17	20 19 18 (17) 16	15 14 13 12 (11)	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 15	20 19 18 17 (16)	15 14 13 12 11	10 9 8 (7) 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE NA	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-20% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 3	20 19 18 17 16	15 14 13 12 11	10 (9) 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 18	20 19 (18) 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 1 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE ___(LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE ___(LB)	Left Bank 10	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE ___(LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score _____

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME S. Pond	LOCATION I Plex Woburn
STATION # SD02 RIVERMILE	STREAM CLASS
LAT LONG	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY KO	DATE TIME AM PM / REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability N/A	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition ?	Little or no enlargement of islands or point bars and less than 5% <20% for low-gradient streams) of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 (0)
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 (18) 17 16	15 14 13 12 11	10 9 8 7 6	5 4 (3) 2 1 (0)

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 13	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 (18) 17 16	15 14 (13) 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity 5 ~~NA~~	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 1 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	(5) 4 3 2 1 0
8. Bank Stability (score each bank) 9	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE ___ (LB)	Left Bank 10 (9)	8 7 6	5 4 3	2 1 0
SCORE ___ (RB)	Right Bank 10 (9)	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. 6	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE ___ (LB)	Left Bank 10	8 7 6	(5) 4 3	2 1 0
SCORE ___ (RB)	Right Bank 10	8 7 6	(5) 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) 5	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE ___ (LB)	Left Bank 10 9	8 7 6	(5) 4 3	2 1 0
SCORE ___ (RB)	Right Bank 10 9	8 7 6	(5) 4 3	2 1 0

Total Score _____

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME South Pond	LOCATION
STATION # SD-2 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS CAM	
FORM COMPLETED BY CAM	DATE _____ TIME _____ AM PM / REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 17	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE	20 19 (18) 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization 15	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability NA	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition 3	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 (3) 2 1 0
5. Channel Flow Status 18	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 (18) 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE 20	(20) 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 1 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE 10	20 19 18 17 16	15 14 13 12 11	(10) 9 (8) 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 9 (LB)	Left Bank 10 (9)	8 7 6	5 4 3	2 1 0
SCORE 9 (RB)	Right Bank 10 (9)	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 10/10 (LB)	Left Bank 10	(8) 7 6	5 4 3	2 1 0
SCORE 10 (RB)	Right Bank 10	(8) 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 10 (LB)	Left Bank 10 (9)	8 7 6	5 4 3	2 1 0
SCORE 10 (RB)	Right Bank 10 (9)	8 7 6	5 4 3	2 1 0

Total Score _____

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME South Branch of Aberjona	LOCATION Woburn
STATION # SO-1 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY Bart Hoskins	DATE _____ TIME _____ AM PM / REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE ~~16~~ 4	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 (4) 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE ~~13~~ 10	20 19 18 17 16	15 14 (13) 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 4	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 (4) 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE ~~6~~ 4	20 19 18 17 16	15 14 13 12 11	10 9 8 7 (6)	5 (4) 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE ~~5~~ 3	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	(5) 4 (3) 2 1 0

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 20	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity 10	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 1 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 9 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 9 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 10 (LB)	Left Bank 10	8 7 6	5 4 3	2 1 0
SCORE 10 (RB)	Right Bank 10	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 10 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 10 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score _____

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME S. branch Aquetong	LOCATION N. Reading
STATION # SD01 RIVERMILE 0	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY KTO	DATE _____ TIME _____ AM PM / REASON FOR SURVEY

Part KO Consultant

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 4	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 (4) 3 2 1 0
2. Pool Substrate Characterization 10	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 (7) 6	5 4 3 2 1 0
3. Pool Variability 4	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 (4) 3 2 1 0
4. Sediment Deposition 4	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 (2) 1 0
5. Channel Flow Status 3	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 (3) 2 1 0

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 1 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE ___(LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE ___(LB)	Left Bank 10	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE ___(LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE ___(RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score _____

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME	LOCATION
STATION # _____ RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY	DATE _____ TIME _____ AM PM / REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

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"Rite in the Rain"

ALL-WEATHER

LINE RULE

Spiral Notebook

Industriplex 4/29-7/2

No. 393
32 Sheets
4 5/8" x 7"

US EPA ARCHIVE DOCUMENT

7/29

SD 13 [illegible]
[illegible] left
way

[illegible]
[illegible] water - [illegible] + [illegible]
sediment.

Ample food [illegible],
[illegible]
edge of [illegible]
[illegible] turkey,
muskrat

SD-11 - Pond 3
mallards + geese
cattails - no emergents
very soft bottom
[illegible] take
for physical character
[illegible], left bank

US EPA ARCHIVE DOCUMENT

[illegible] 1/29/97

Temp	[illegible]	Second	D	Time
[illegible]	[illegible]	[illegible]	1.0'	1122
			1.0	
			1.0	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11.11	[illegible]	[illegible]	[illegible]	

The Eckman [illegible] well took two chipper used ruler to check sed depth upon sampling.

HBHA Shallow 1

right bank (looking downstream) is sand, rock, & mud bottom ~ 0.5 - 3' deep - we did not attempt crossing at this date - we will try on Friday. We need to discuss plan.

STA SD 3 4/23/99

TEMP	DO	PH	Spcond	Depth
13.8	13.1	7.55	[illegible]2	1.2'
12.45	[illegible]	7.41	1015	[illegible]
9.9	[illegible]	7.26	11194	80'

4/30/99 → 26 m at 335° from rock
SD - [illegible] South
visit "North Pond" - like south one just N. of Berm
- fine blk sediment
water depth ≈ < 3'
Ceratophyllum (weeds)
uniform on bottom
will probably have to use a cart
- many turtles, birds, old cattails, kids, fishes

11:41 at mid, water 1.5'
Temp - 13.4
D.O. - 13.2
Conductivity 8204
pH 7.5

not many blackbirds
pharaohs wing

pics 1-5
last one toward plug & power line

- fish present
shiners?

SD-2 North @
0940

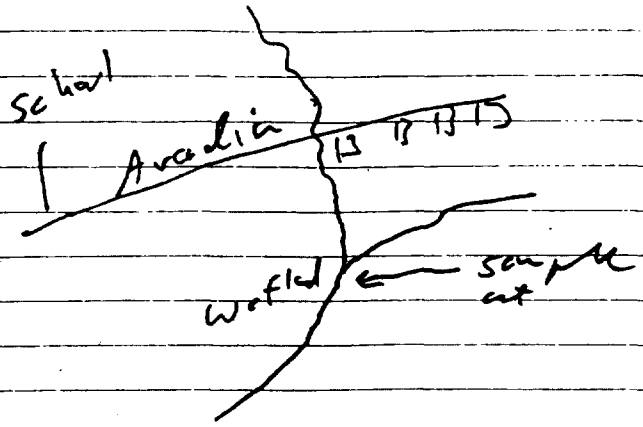
"Cladophora?" Lower
dominated - fine black
anaerobic bottom -
physical open surface
* plant

~ 10m off culvert
leading to SD-2 south
pond
turtles, blue heron
- no chironomids visible
- caddisfly - probably
associated with plant

Water Quality

Depth	Temp	Cond	DO	pH
1'	14.3	6935	14.96	8.3

Aberjona @ Arcadia



black foam and
good water flow
long matter

clearing pickerel
~ 6"

- gluey of skunk
cabbage

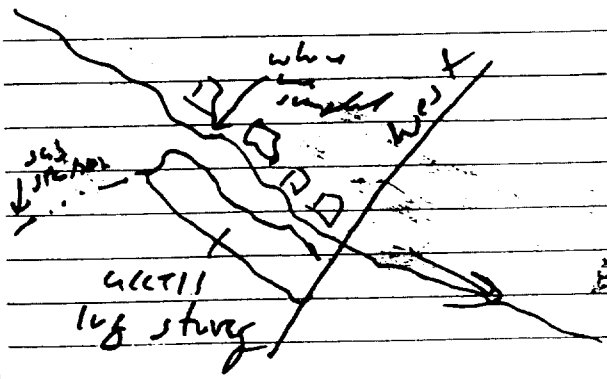
3 pictures taken

Water Quality 8"-12"
Temp 12.7, DO 7.4 PH=7.2 Cond 7767
Sloan 10215

Aberjona at West St.

Temp 13.25
COND 4766
Sp Cond 6185
D.O. 9.51
pH 6.87
% DO = 93

3 pictures - lost on Kevin's GPS
stream ~ 10' wide
soft bottom but some
sand, skunk cabbage
near houses



Hills Brook - SD - 4

Temp 14.3
DO - 12.32 mg/L
pH 7.19
Cond 7369
Sp. Cond 9270

4. 10' across

drains an open field.
+ then moves swiftly over
a rocky bottom

we sampled just
upstream of rocky area
at edge of field

much plant material
with silt - mollusc -
frogs, amphipods
seems clear

Halls Brook Holding Area Pond
Southend 21440

75[illegible] from Southend Centered E to W

Depth	Temp	Cond	DO	Sand	Ph
1	14.7	9937	10.9	12148	7.14
4	12.16	10175	9.88	13579	6.87
8.5	10.6	32262	1.95	46652	6.70
9.8	10.0	39800	0.81	54391	6.87

11.00 m
into bottom

SD-12 - cmid
phragmites

amphipods + chironomids
open area next to last
parking lot at corner
of building

sampled with Ponar

fine silt within vegetation
matter, some fine sand

Temp. 17°C
Cond 906 7
DO 13.48
Sp. Cond 11,187
pH 7.13

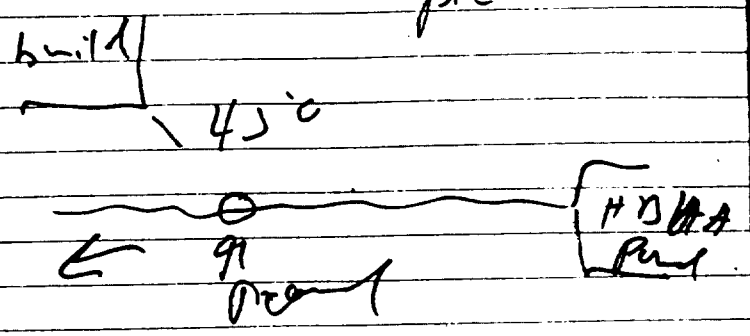
HBHA Pond S.E.
sand bottom
up to ~ 3-4'
apparent sunfish nest
fine particulate
material covering it
- sunfish nest
stands of Pheag

Then we took trip below
HBHA Pond -
occassional sunfish
nest

bottom remains firm
for some distance
- bottom supports RAY
initial lillies
almost like a
sea grass - becomes
softer as we go
downstream

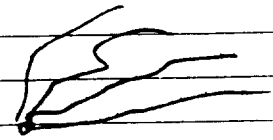
Pond south of
HBHA Pond
HBHA Pond 1
1' deep

pic



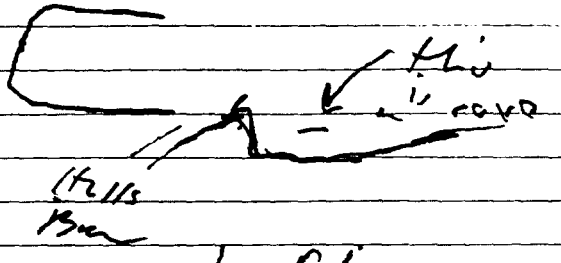
surrounded by Typha
- good location

bottom covered by
stringy-like RAV of
~ 8" long



Pond Control
West bank
across from 2nd
window south of
DEC at
access to rd
~ 100' offshore

medium sand
rest of shelf is
sand to rocky



1 pk

1 pic

US EPA ARCHIVE DOCUMENT

6/17/99

SD-4 @ 11:30

Water Quality:

Temp = 15.8

Specific conductance = 506

pH = 6.94

[illegible]

[illegible]

complete surface water, rinsate, sediment

could use 4 grabs for sediment metals

3 grabs for inverts

picked invert = chironomids only

SD-12 @ 1:15 pm

Turbidity 2

Temp 16.6 °C

Sp C 499

Sal 0.24

D.O. 9.35

@ 0.645'

pH 5.76

- sediment peaty muck

Water, sediment,

SD - 13 @ 3:15 pm

Turbidity = 2

Temp = 18.4 °C

SpC = 872

Salinity = —

DO = 7.9

@ 0.7'

pH = 5.7

Turbid slow moving, partially frozen

SD-03 not used

Turbidity -

Temp -

SpC -

Salinity -

US EPA ARCHIVE DOCUMENT

~~Turb~~ SD-03

	Depth	Turb	Temp	SpC	DO	pH
S	.6 ~~11.64~~	T.O.	21	.42	7.45	6.49
BS		10				
T	3'	10	~~20.72~~			
IT		T.O.				
BT	3.3	10	20.66	.42	7.20	6.64
Bottom						
	5.04	10	19.73	.43	6.31	6.55
	7.20	10	15.03	.49	2.47	6.42
	9.18	10	~~12.1~~ 11.25	.80	1.27	6.30

GPS - SP-03 6/28/99

WPT - 1114
N - 42° 31.0135
W - 71° 07.9605

H.B.H.A. - Shallow SD-6
Water Depth 1ft.

Turb - 2

Temp - 21.4

SpC - .77 ms/cc

DO - 7.72

pH - 6.54

GPS ~ WPT 1116

North 42° 3.7511

West 71° 08.4734

HBHA - South Deep - 11.8 ft
SD-7

Depth	Turb	Spc	DO	PH	Temp
1.0'	EXP 4 / 10	.79	6.5 ~~7.14~~	6.97	21.19
3.0'	5 / 10	.79	5.75	6.88	19.8
5.0'	-10 / 10	1.41	1.3	6.56	18.7
7.0'	-10 / 10	2.89	0.77	6.71	14.35
8.0'	-10 / 10	3.10	0.71	6.83	12.83

GPS - 1115
North 42° 30.6925
West 71° 08.4254

SD-5 - 12.8 ft

Depth	Turb	Spc	DO	PH	Temp
1.0	-10	0.78	6.0 ~~6.4~~	7.07	21.12
3.0	-10	0.781	5.4	6.86	20.06
5.0	-10	1.53	1.82	6.71	17.34
7.0	-10	2.91	0.83	6.51	12.49
9.0	-10	10.00	0.72	6.92	12.02

GPS WP 1117
N 42 30.8072
W 71 08.4876

7/2/99

Calibrate
YSI

cond ✓
pH ✓
D.O. ✓

6/21/99

0930 At location SD02
W.Q.
At 1 ft
Temp 19.8°C
pH 7.7
S. Cond ? 350
DO 5.5 mg/l @ 1'
bottom @ ~ 1.5'

Heavy plant growth Ceratophyllum, Potamogeton?, algae

shallow depth ~ 2'
mucky bottom with lots of shells

collected cattails (2 comp) + 2 composite of SAV

6/21/99
@ ~ 10:30
Station SD-01 South Branch
Neponset River
Temp 70°F
Weather: overcast, part sun, little wind
PPE - waders, gloves

Water quality taken in poly jar

Temp 16.58
Spc 560 ?
Sal 0.28 ?
DO 7.28
Dep 0.701
pH 7.05

shallow narrow stream, very slow moving. depth 0.5"-3" width 2-3' with bordering areas of exposed mud

Location: 42° 31' 44.5577"
71° 07' 24.0538

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6/15/99 @ [redacted] 1400

SD-11

center of panel #3

YSI (new)

temp 20.81
Cond 642
D.O. 11.7
ORP 62.4
Sp Cond 700
D.O.% 130.9
pH 6.95

HORIBA

pH 6.77
Turb = 12
Temp = 20.6
Salinity = 0.03%.

bottom ranges from sandy to very mucky - major depositional area, chironomids + oligochaetes collected 2 composites of cattails + 2 composites of SAV

6/21/99
SD-10 @ ~ 1400

Temp 20.9
Cond 632
D.O. 8.63
ORP - 145.9
Sp Cond - 684
D.O.% 89.4
pH 7.11

depth 0.5 - 6"
slow but steady flow

turbidity : 132

dense phragmites on
both banks
some exposed seals

US EPA ARCHIVE DOCUMENT

6/22/99

SD-9

Temp 23.89

Cond 687

DO 7.71

ORP 61.9

SPCOND 702.22

D.O. 88.2

pH 6.67

Horiba

turbidity 17

~~D.O.~~

6/22/99

SD-08 -

examined early in day for SEDS + WATER

w/ 11:00

very shallow, covered with

c[illegible] grass-like plant,

pond lilies -

scripted lilies + cattails

@ 1330 measured water

quality in 6" of water

YSI

Temp - 29.8

Cond - 773

D.O. - 12.5

ORP - 60.7

Sp C - 708

% DO - 167%

pH - 7.2

Horiba Turbidity - 12

US EPA ARCHIVE DOCUMENT

6/23

HBHA Pond #7
Vertical profile ~ 10:00

	1'	3'	5'	7'	9'	11'
Temp	22.19	21.28	18.28	13.97	12.04	11.70
pH	7.19	6.82	6.66	6.87	7.01	7.13
Sp Cond	YSI 704/ Hach 70006.0		20500	27990	31770	3009.0
DO	8.12	5.46	4.65	4.2	.38	2.8
ORP	71.9	85.1	55.5	-234.3	-275.2	-336.7
CNU	666.0	810	216	2204.0	2893.0	2428.0
TURB	0	10	221	400	120	(120-250) Shifting
SAL	.3	NR				

*Note
bottom @ ~11.2' ysi dropped into bottom sediment and then pulled back up to 11ft.
Probably Stirred up bottom.

US EPA ARCHIVE DOCUMENT

7/2/99

SD-2

10:30

[illegible] 1.1

Temp [illegible] 3.25

SpCond 320

D.O. 6.75

pH 5.48

Turbidity 5.7

w. pond

7151

42 31.3426 N

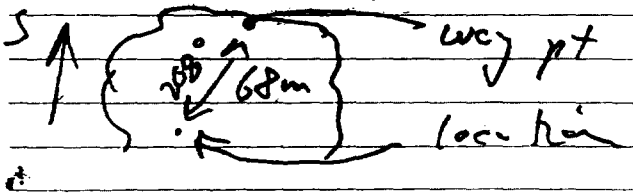
71 08.6546 W

- at culvert

NAD 27

68 m [illegible] compass bearing

20[illegible] toward weigh pt.



SD-5

@ 10:50

Surface - 1.7'

Temp 22.2

[illegible]

SpC 748

[illegible] .94

[illegible] 13

[illegible]

• Depth 6'

[illegible]

Temp [illegible]

SpC [illegible]

[illegible]

pH 6.03

[illegible]

[illegible]

[illegible]

SpC [illegible]

10.00 [illegible] 0.98.9

pH 4.0 [illegible] 6 36.3

~~Turbidity~~

Turbidity = 10

SD 6

Turbidity = 10
@ 0.8'
Temp 22.3
Spc 725
D.O. 7.05
pH 6.49

secchi ~ 1.5'

SD - 7

Turbidity at surface
11

	Depth				
	1.6'	4.4'	6.07	8.2'	10.5'
Temp	22	21	15.85	13.3	12
spc	783	1426	2850	3488	3952
D.O.	7.25	2.86	0.76	0.39	0.3
pH	6.4	6.1	6.25	6.4	6.5

SD - 7

	11.5'	bottom
Temp	11.67	
spc	2763	
D.O.	0.25	
[illegible]		
pH	6.63	

[illegible] @ 12:05

[illegible]	[illegible]	8.91	9.7
Temp	[illegible]	13.5	11.3
spc	[illegible]	875	1285
D.O.	[illegible]	3.26	2.21
pH	[illegible]	6.21	6.55

Turbidity = 4

definite
petroleum
smell
& sheen
when pulled
anchor at
SD-5 but
not noticeable
at SD-7

SD-8
0.7'
@ 12:00

Temp 22.6
Sp Cond 793
D.O. 6.15.6
pH 6.47
[illegible] = 12
[illegible] profile
[illegible] SD-5

Depth	10.9	2.6	[illegible]	7.4	[illegible]
Temp	22.4	[illegible]	[illegible]	12.7	12.1
Sp Cond	[illegible]	755	7300	6653	7030
Sulfide	0.37	0.39	[illegible]	3.4	5.9
D.O.	6.07	5.91	2.2	1.0	0.5
pH	6.62	6.59	6.13	6.2	6.41

JULY 2 1999

SD04 12:30

Surface
Turb. - 11
Temp 22.75
Sp Cond 483.00 sal .23
DO 9.80
pH 6.80

SD12 12:38

Surface
Turbidity 10
Temp 22.22
Sp Cond 475 Sal .23
DO 8.97
pH 6.81

SD10 12:55

Surface
Turbidity 7
Temp 23.85
Sp. Cond 813
DO 4.60
pH 6.69
Sal 0.40

SD10 Coordinates:
WP 1154
42° 30.2839
[illegible] 2272

[illegible] effluent
[illegible]
[illegible] 12
[illegible] 16
[illegible] 816
[illegible] 5.68
[illegible] 6.80
[illegible] 0.4

SD13 13:15

Surface
Turb. 5
Temp 23.23
Sp Cond 637
DO 5.15
pH 6.94
sal .30

SD-1 13:40

Temp 23.9
Sp. Cond: ~~56~~ 564
Sal: 0.27
DO: 6.25
pH: 6.97
turb: 12

Water only a few inches deep
Less water than last time
WQ taken by filling a cup and
placing meter in cup

GPS Coordinates

SD01
42° 31 44.5577 N
71° 07 24.0538 W

SD02 wp 1151
42° 31.3426 N
71° 08.6546 W

SD03
42° 31.0135 N
71° 07.9605 W

SD04
42° 30 47.2700
71° 08 52.7270

SD05
42° 30 46.7109
71° 08 28.2919

SD06
42° 30.7511
71° 08.4734

SD07
42° 30.6925

SD08
42 30 31.5458
71 08 18.4043

SD09 (taken 25 yards from site on western shore)
42° 30.4131
71 [illegible] 08.3002

SD10
42° 30.2839
71° 08.2272

SD11 42 30 14.9026
71 08 07.0443

SD12
42 30.7507
71 08.9418

SD13
42 29 57.4632
71 08 03.4095

US EPA ARCHIVE DOCUMENT

APPENDIX A.4

TETRA TECH 2000 AND 2001 FIELD SAMPLE LOG SHEETS

SAMPLE LOG SHEETS

JULY 2000

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WS10-0005-071100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1442 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neil (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.20 units ORP -230 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IPSD-WS09-0005-071100

Tetra Tech NUS Job No /PMS 0564-0372
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1437 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.29 units ORP -97.8 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-WS08-0005-071100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7 / 11 /2000 1428 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.25 units ORP -175.8 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-WS07-0005-071100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1520 hours (military) Duplicate: _____ hours

Sampler(s): (B. Irwin) / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: B. Irwin (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.51 units ORP -45.2 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-WS06-0005-071100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1515 hours (military) Duplicate: _____ hours

Sampler(s): (B. Irwin) / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.61 units ORP -104.4 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP5D-WS05-0005-071100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1567 hours (military) Duplicate: _____ hours

Sampler(s): (B. Irwin) / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.25 units ORP -90.5 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IPSD-WS04-0005-071100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1500 (military) hours Duplicate: _____ hours

Sampler(s): (B. Irwin) / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.35 units ORP -143.2 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-WS03-0005-071100

Tetra Tech NUS Job No./PMS 0564-03.02
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1452 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.55 units ORP -163.1 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WS02-0005-0

Tetra Tech NUS Job No./PMS 0564-0372

QC Information: _____ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1440 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin K. Lundgren K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.00 units ORP -94.1 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WS01-0005-071100

Tetra Tech NUS Job No./PMS 0564-0222

QC Information: IPSD DUP05 0005 071100 (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1430 hours (military) Duplicate: 1435 hours

Sampler(s): (B. Irwin) / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 5.81 units ORP -30.1 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-RB01-071100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Direct Pour
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 735 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- ___ Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH _____ units ORP _____ mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX (U) 7110100

Sample ID: IP-SD-~~TTP~~ AM-01-071000

Tetra Tech NUS Job No./PMS 0564-_____

QC Information: _____ (if applicable)

Sample Method: Eckmann

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/10/2000 1607 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

Depth 1.0 feet

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

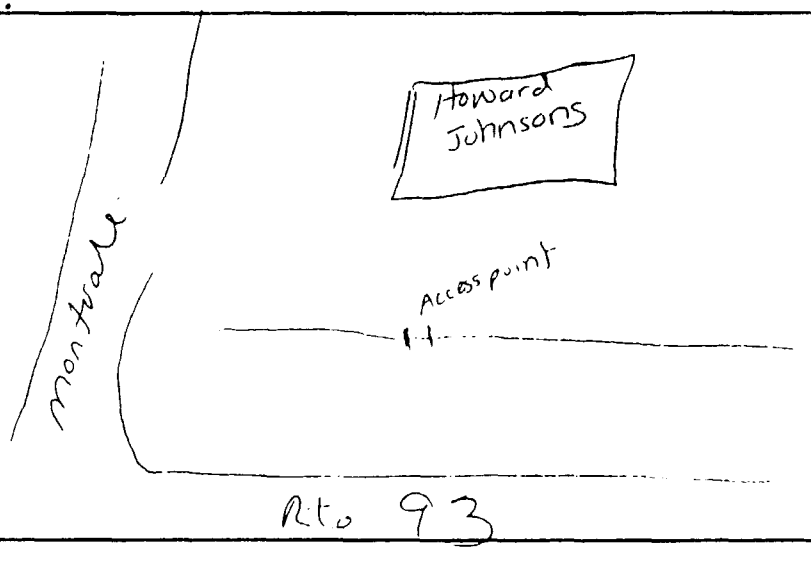
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic silty sand

SAMPLE DATA/REMARKS: pH 6.69 units ORP -166.7 mV

sample collected in a small area ~5' x 10'

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-AS-01-071000

Tetra Tech NUS Job No./PMS 0564-_____
QC Information: IPSD DUP 01 071000 (if applicable)

Sample Method: Ekman
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/10/2000 1440 (military) hours Duplicate: 1443 hours
Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: Kim Lundgren (Signature)

H&S Monitor Reading: _____ ppm

Depth 1.0 foot

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH 6.52 units ORP -148.4 mV

ANALYSIS	Check
TAL METALS	
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

Field Duplicate collected here

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IPSD-AS-02-071000

Tetra Tech NUS Job No./PMS 0564-_____
QC Information: _____ (if applicable)

Sample Method: Ekman Sampler
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/10/2000 1415 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

1.5 feet

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck with sand

SAMPLE DATA/REMARKS: pH 6.48 units ORP -128.5 mV

ANALYSIS	Check
TAL METALS	
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-JP-01-071000

Tetra Tech NUS Job No./PMS 0564-_____
QC Information: _____ (if applicable)

Sample Method: Ekman Sampler
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/10/2000 1220 (military) hours Duplicate: _____ hours

Sampler(s): (B. Irwin) K. Lundgren / (K. O'Neill) (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

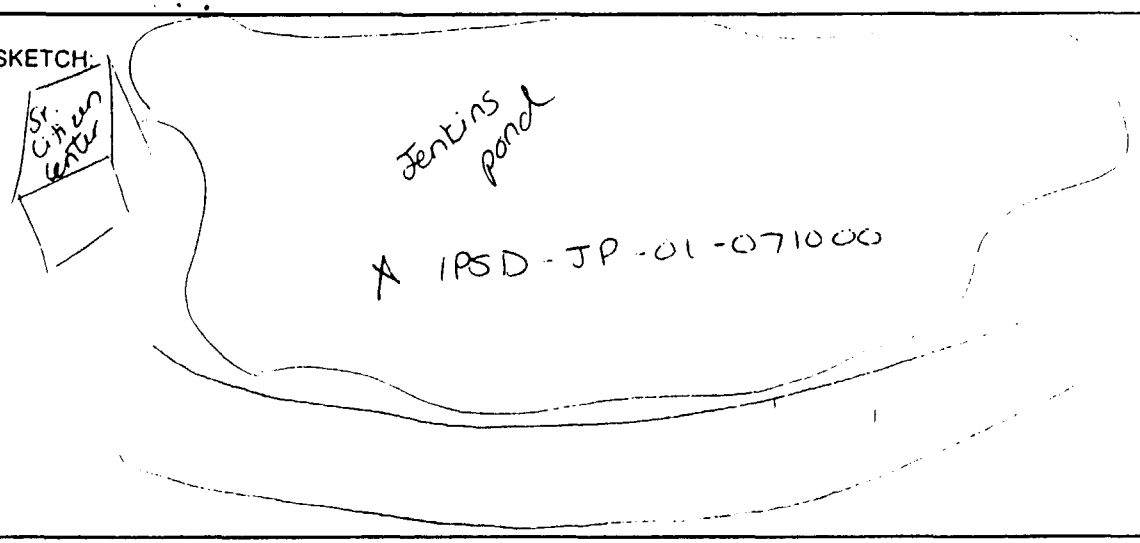
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck

SAMPLE DATA/REMARKS: pH 6.13 units ORP -95.1 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-MP-02-071000

Tetra Tech NUS Job No./PMS 0564-_____
QC Information: _____ (if applicable)

Sample Method: Ekman Sampler
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7 / 10 /2000 11:15 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

Depth 2.0 feet

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck with sand

SAMPLE DATA/REMARKS: pH 5.97 units ORP -34.1 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-MP-01-071000

Tetra Tech NUS Job No./PMS 0564-_____
QC Information: _____ (if applicable)

Sample Method: Ekman Sampler
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/10/2000 1030 (military) hours Duplicate: _____ hours

Sampler(s): (B. Irwin) K. Lundgren / (K. O'Neill) (circle appropriate)

Data Recorded By: Kim Lundgren (Signature)

H&S Monitor Reading: _____ ppm

H_2O Depth - 2.2 water is not going over spillway

5.56

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

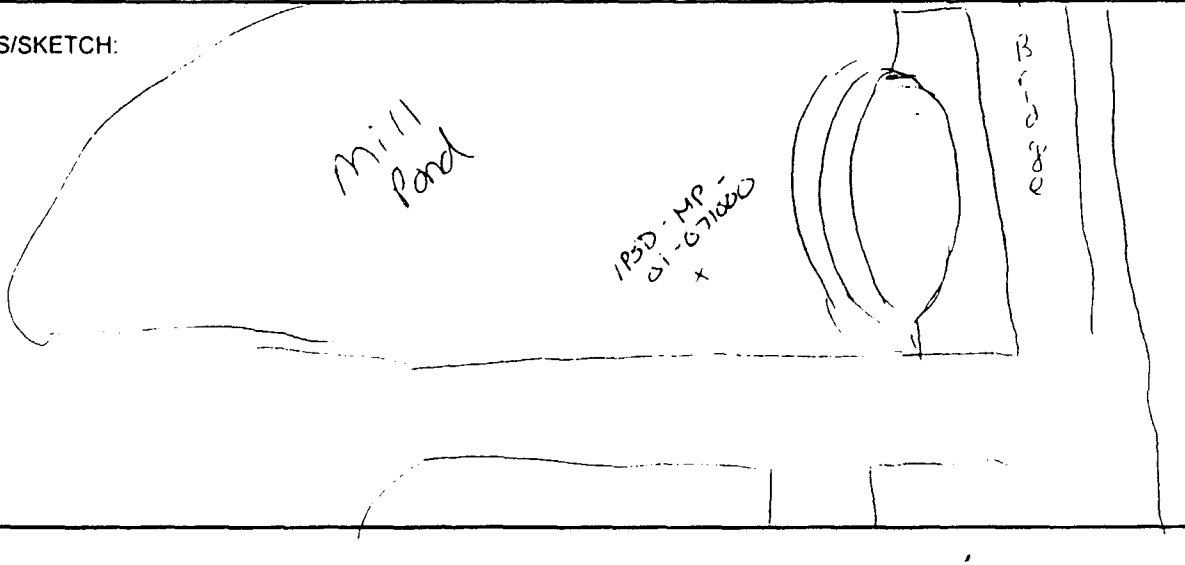
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck with sand

SAMPLE DATA/REMARKS: pH 5.56 units ORP -100.8 mV

*on additional 8oz container + 2 32 oz containers collected at this location for hexavalent chromium digestive study
used boat to collect samples

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-RB07-071800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: Rinsate blank (if applicable)

Sample Method: Direct Pour
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/18/2000 1220 hours (military) Duplicate: ___ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: Kim Lundy (Signature)

H&S Monitor Reading: ___ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other DIUF Lot # 0203180 Exp 2/01

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH ___ units ORP ___ mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-RB06-071700

Tetra Tech NUS Job No./PMS 0564-03,22
QC Information: Rinsate blank (if applicable)

Sample Method: Direct Pour
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/17/2000 1516 hours (military) Duplicate: ___ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: ___ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other DIWF Lot # 0203180 Exp 2/01

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH ___ units ORP ___ mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-RB05-071700

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: Rinsate blank (if applicable)

Sample Method: Direct Pour
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/17/2000 958 hours (military) Duplicate: ___ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: Kim Lundgren (Signature)

H&S Monitor Reading: ___ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other DIWF Lot # 0203180 Exp 2/01

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH ___ units ORP ___ mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-3D-RB04-071300-(RW) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0372

QC Information: Rinsate (if applicable)

Sample Method: Direct Pour

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 (RW) 1230 hours (military) Duplicate: ___ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: B. Lundy (Signature)

H&S Monitor Reading: ___ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- ___ Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other DUP Lot # 0203180 Exp 2/01

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH ___ units ORP ___ mV

ANALYSIS	Check
TAL METALS	
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-RBC3-~~071700~~ 071300 (RW) 7/13/00

Tetra Tech NUS Job No./PMS 0564-C322
QC Information: Perscite (if applicable)

Sample Method: Direct Pour
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 (W) 1012 hours (military) Duplicate: ___ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: B. Lundy (Signature)

H&S Monitor Reading: ___ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- ___ Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other DIUF Lot # 0203180

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH ___ units ORP ___ mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

Page

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-RB-02-071200

Tetra Tech NUS Job No./PMS 0564-C377
QC Information: Rinsate (if applicable)

Sample Method: Direct Pour
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/12/2000 1048 (military) hours Duplicate: _____ hours
Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: K. Lundgren (Signature)
H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- ___ Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other DIUF LOT # 0203180

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH _____ units ORP _____ mV

ANALYSIS	Check	NOTES/SKETCH:
TAL METALS	✓	
CYANIDE	✓ 7/12/00	
Hex. CHROMIUM		
SULFIDES		

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-RB03-071100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Direct Pour
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/11/2000 1342 hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- ___ Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other DI UF Lot # 0203180

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH _____ units ORP _____ mV

ANALYSIS	Check
TAL METALS	
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-~~DD~~ SD-LM02-0005-071700

Tetra Tech NUS Job No./PMS 0564-0322

QC Information: _____ (if applicable)

Sample Method: Eckman

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/17/2000 1115 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck, sulfide sheen
pasty consistency

SAMPLE DATA/REMARKS: pH 6.70 units ORP -386.6 mV

water depth: ~~sample collected~~ 37 feet ~~below water surface~~
KO 7/17/00 KO 7/17/00

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-1M03-0005-071700

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Eckman
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/17/2000 1040 (military) hours Duplicate: _____ hours

Sampler(s): (B. Irwin) / K. Lundgren / (K. O'Neill) (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck dark brown
slight sheen + sulfide odor

SAMPLE DATA/REMARKS: pH 6.75 units ORP -325.7 mV

(KL) 7/17/00
water depth: 52 feet ~~below water surface~~

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-LM01-0005-071700

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Eckman
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/17/2000 1005 hours (military) Duplicate: _____ hours
Sampler(s): (B. Irwin) K. Lundgren / (K. O'Neill) (circle appropriate)
Data Recorded By: Kim Lundgren (Signature)
H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
dark brown/black organic muck (pea soup consistency), sulfide odor, sheen

SAMPLE DATA/REMARKS: pH 6.66 units ORP -466 mV

~~sample collected~~ water @ a depth of 75 feet
KL 7/17/00

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WG20-0005-~~071200~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-03222
QC Information: IPSD-DUP08-071300 (if applicable)

Sample Method: SCOOP
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 1206 hours (military) Duplicate: 1210 hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic soil w/ silt + decayed leaf matter

SAMPLE DATA/REMARKS: pH 5.29 units ORP* 56.3 mV

standing water > 6 inches bgs

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WG19-0005-~~071200~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/13/2000 (W) 1200 (military) hours Duplicate: _____ hours
Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: K. Lundgren (Signature)
H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
moist organic soil with decayed leaf matter

SAMPLE DATA/REMARKS: pH 5.25 units ORP +28.3 mV

no standing water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WG18-0005-~~071700~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0372
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/(W)/2000 1156 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: B. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Organic muck w/ partially decayed leaf matter

SAMPLE DATA/REMARKS: pH 5.26 units ORP +24.3 mV

standing water @ 5 inches

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

collected @ edge of fragmites

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WG17-0005 · ~~071200~~ 071300 @ 7/13/00

Tetra Tech NUS Job No./PMS 0564-0372
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 @ 1152 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck with silt and fine sand

SAMPLE DATA/REMARKS: pH 5.64 units ORP +57.9 mV standing water @ 6 inches

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WG16-0005-~~071200~~ 071300 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322

QC Information: _____ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 1146 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck decayed leaves

SAMPLE DATA/REMARKS: pH 5.64 units ORP +138.3 mV

water at 4 inches bgs

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH: collected at edge of fragmites

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WG15-0005-~~071200~~ 071300 (KW) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322

QC Information: _____ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/~~12~~13/2000 (KW) 1140 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Organic muck w/ some silt

SAMPLE DATA/REMARKS: pH 5.56 ~~5.57~~ units ORP -120.8 mV ~~-225.9~~

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

collected near tree root overturn

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WG14-0005-~~071200~~ 071300 (KW) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/13/2000 (KW) 1133 hours (military) Duplicate: _____ hours
Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: K. Lundgren (Signature)
H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic Muck w/ partially decayed leaves

SAMPLE DATA/REMARKS: pH 5.57 units ORP -225.4 mV standing water 1 inch bgs

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WG13-0005-~~071200~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0327

QC Information: _____ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 (W) 1123 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) Saturated organic matter w/ decaying leaves

SAMPLE DATA/REMARKS: pH 5.65 units ORP -214.4 mV

water at surface

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WG12-0005-~~071300~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 (W) 1115 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Saturated organic muck

SAMPLE DATA/REMARKS: pH 5.78 units ORP -109.3 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WG11-0005-~~071200~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/13/2000 1108 hours (military) Duplicate: _____ hours
Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: K. Lundgren (Signature)
H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Saturated organic matter with decayed leaves

SAMPLE DATA/REMARKS: pH 5.92 units ORP -181.3 mV

water at 1 inch below surface

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WG01-0005-~~071200~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322

QC Information: _____ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 (W) 1000 (military) hours

Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
moist mucky organic matter with lots of root and leafmatter

SAMPLE DATA/REMARKS: pH 6.03 units ORP -298.5 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WG02-C005-~~071200~~ 071300 (KW) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322

QC Information: _____ (if applicable)

Sample Method: SCOOP

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 (KW) 953 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
moist organic leafy matter

SAMPLE DATA/REMARKS: pH 5.28 units ORP 51.5 mV

not much water in area

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**

Sample ID: IP-SD-WG10-0005-~~071300~~ 07130(W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0372

QC Information: _____ (if applicable)

Sample Method: SCOOP

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/~~12~~13(W)/2000 845 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Organic muck

SAMPLE DATA/REMARKS: pH 6.32 units ORP -41.3 mV

2 inches of standing water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSD-WG09-0005-071300

Tetra Tech NUS Job No./PMS 0564-0372
QC Information: IPSD-WGDUP07-005-071300 (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/~~12~~ 13/2000 853 hours (military) Duplicate: 857 hours
Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: K. Lundgren (Signature)
H&S Monitor Reading: ___ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
moist, not saturated, organic muck

SAMPLE DATA/REMARKS: pH 6.59 units ORP -64 mV

did not reach water until 4 inches below grade

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-W608-0005-07~~17~~13 00 (W) 7/10/00

Tetra Tech NUS Job No./PMS 0564-0322

QC Information: _____ (if applicable)

Sample Method: SCOOP

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/~~12~~13/2000 906 (military) hours Duplicate: _____ hours

Sampler(s): (B. Irwin) K. Lundgren / (K. O'Neill) (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck

SAMPLE DATA/REMARKS: pH 5.71 units ORP -91.1 mV

2 inches of standing water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WG07-0005-071300

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: SCOOP
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 915 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ✓ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic saturated MUCK

SAMPLE DATA/REMARKS: pH 6.44 units ORP -155 mV 2 inches of water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WG006-0005-071300 (7/13/00)

Tetra Tech NUS Job No./PMS 0564-0322

QC Information: _____ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 (7/13/00) 922 (military) hours

Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) moist organic muck with leaf debris

SAMPLE DATA/REMARKS: pH 5.08 units ORP -77.6 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX 071300 (KW) 7/13/00

Sample ID: IP-SD-WG05-0005-~~071700~~

Tetra Tech NUS Job No./PMS 0564-0322

QC Information: _____ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/~~12~~ 13 (KW) 7/13/00 /2000 930 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) Organic muck, moist, with leaf debris

SAMPLE DATA/REMARKS: pH 5.95 units ORP -240.2 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX

Sample ID: IP-SD-WG04-0005-~~071200~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0372

QC Information: _____ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/13/2000 (W) 940 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: B. Lundy (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Moist organic muck w/leaf debris

SAMPLE DATA/REMARKS: pH 5.62 units ORP -101.6 mV

water 2 inches below grade

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-W603-0005-~~071200~~ 071300 (W) 7/13/00

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: ~~B~~ (W) Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/~~12~~ 13 (W)/2000 945 hours (military) Duplicate: _____ hours
Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: K. Lundgren (Signature)
H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Saturated organic muck w/ leaf debris

SAMPLE DATA/REMARKS: pH 5.23 units ORP -102.2 mV water 3 inches below grade

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX (W) 7/12/00
Sample ID: IP-SD-~~WH~~ WH/10-0005-071200

Tetra Tech NUS Job No./PMS 0564-C3.22
QC Information: IPSD-DUP00-071200 (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/12/2000 1054 hours (military) Duplicate: 1058 hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: B Lundgren (Signature)

H&S Monitor Reading: ___ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ✓ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
saturated organic muck

SAMPLE DATA/REMARKS: pH 5.84 units ORP -94.2 mV

3 inches standing water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-WH09-0006-071200

Tetra Tech NUS Job No./PMS 0564-0372
QC Information: _____ (if applicable)

Sample Method: SCOOP
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/12/2000 1045 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
leafy organic muck

SAMPLE DATA/REMARKS: pH 5.23 units ORP -130.4 mV

3-4 inches of standing water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-WH08-0005-071200

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/12/2000 1036 (military) hours Duplicate: _____ hours

Sampler(s): (B. Irwin) / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck

SAMPLE DATA/REMARKS: pH 5.20 units ORP -111.2 mV

2 inches standing water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-WH07-0005-071200

Tetra Tech NUS Job No./PMS 0564-03222
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/12/2000 1030 (military) hours Duplicate: _____ hours
Sampler(s): (B. Irwin) / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: B. Irwin (Signature)
H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic MUCK

SAMPLE DATA/REMARKS: pH 6.22 units ORP -158 mV

collected in 1-inch of standing water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP-SD-WH06-0005-071200

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: SCOOP
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/12/2000 1020 hours (military) Duplicate: _____ hours

Sampler(s): (B. Irwin) / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organic muck w/ leaf matter

SAMPLE DATA/REMARKS: pH 5.74 units ORP -98.0 mV

2 inches standing water

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WHOS-0005-071200

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: SCOOP
Depth Sampled: 0-0.5 feet
Sample Date & Time: 7/12/2000 1012 hours (military) Duplicate: _____ hours
Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)
Data Recorded By: K. Lundgren (Signature)
H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Organic muck

SAMPLE DATA/REMARKS: pH 6.49 units ORP -104.7 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-0(10)WH04-0005-071200

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/12/2000 1003 hours (military) Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Organic Muck

SAMPLE DATA/REMARKS: pH 5.62 units ORP -35.3 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WH03-0005-071200

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/12/2000 955 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Moist organic + roots muck

SAMPLE DATA/REMARKS: pH 5.81 units ORP -98.6 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WH02-0005-071200

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/12/2000 945 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
moist, organic muck w/ leaf debris

SAMPLE DATA/REMARKS: pH 5.64 units ORP -78.0 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SD-WH01-0005-071200

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet

Sample Date & Time: 7/12/2000 931 (military) hours Duplicate: _____ hours

Sampler(s): B. Irwin / K. Lundgren / K. O'Neill (circle appropriate)

Data Recorded By: K. Lundgren (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- X Sediment
- ___ Lagoon/Pond
- ___ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Moist organic muck w/ leaf debris

SAMPLE DATA/REMARKS: pH 5.67 units ORP -55.4 mV

ANALYSIS	Check
TAL METALS	✓
CYANIDE	✓
Hex. CHROMIUM	✓
SULFIDES	✓

NOTES/SKETCH:

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

FIELD INSTRUMENT CALIBRATION LOG

INSTRUMENT NAME: pH / ORP probe

MODEL NO.: Orion 250 A

SERIAL NO.: U.S. Env.

DECAL NO.: RENTAL

TETRA TECH NUS JOB NO./PMS C5W4

CALIBRATION DATE	INITIAL READING	PROCEDURE	FINAL READING	SIGNATURE	COMMENTS
7/10/00	pH 4.01, 7.00	pH: 4.0 + 7.0 buffer solution		[illegible]	
7/11/00	pH 7.08, 10.01 ORP 100.1	pH: 7.0 + 10.0 buffer ORP: 100 mV		[illegible]	
7/12/00	ORP 172 pH 4.01, 7.00	pH: 4.0 + 7.0 buffer ORP: 100 mV	ORP 100 pH 4.00, 7.00	[illegible]	
7/13/00	ORP: 166.4 pH 4.01, 7.00	pH: 4.0 + 7.0 buffer ORP: 100 mV	ORP: 100 pH 4.01, 7.00	[illegible]	
7/17/00	pH 4.01, 7.00 ORP: 168.4	pH: 4.0 + 7.0 buffer ORP: 100 mV	pH: 4.01, 7.00 ORP: 100.0	[illegible]	
7/18/00	pH 7.00, 10.03 ORP: 544	pH: 7.0 + 10.0 buffer ORP: 465 mV	pH: 7.00, 10.00 ORP: 465	[illegible]	

Tt NUS Form 0007

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

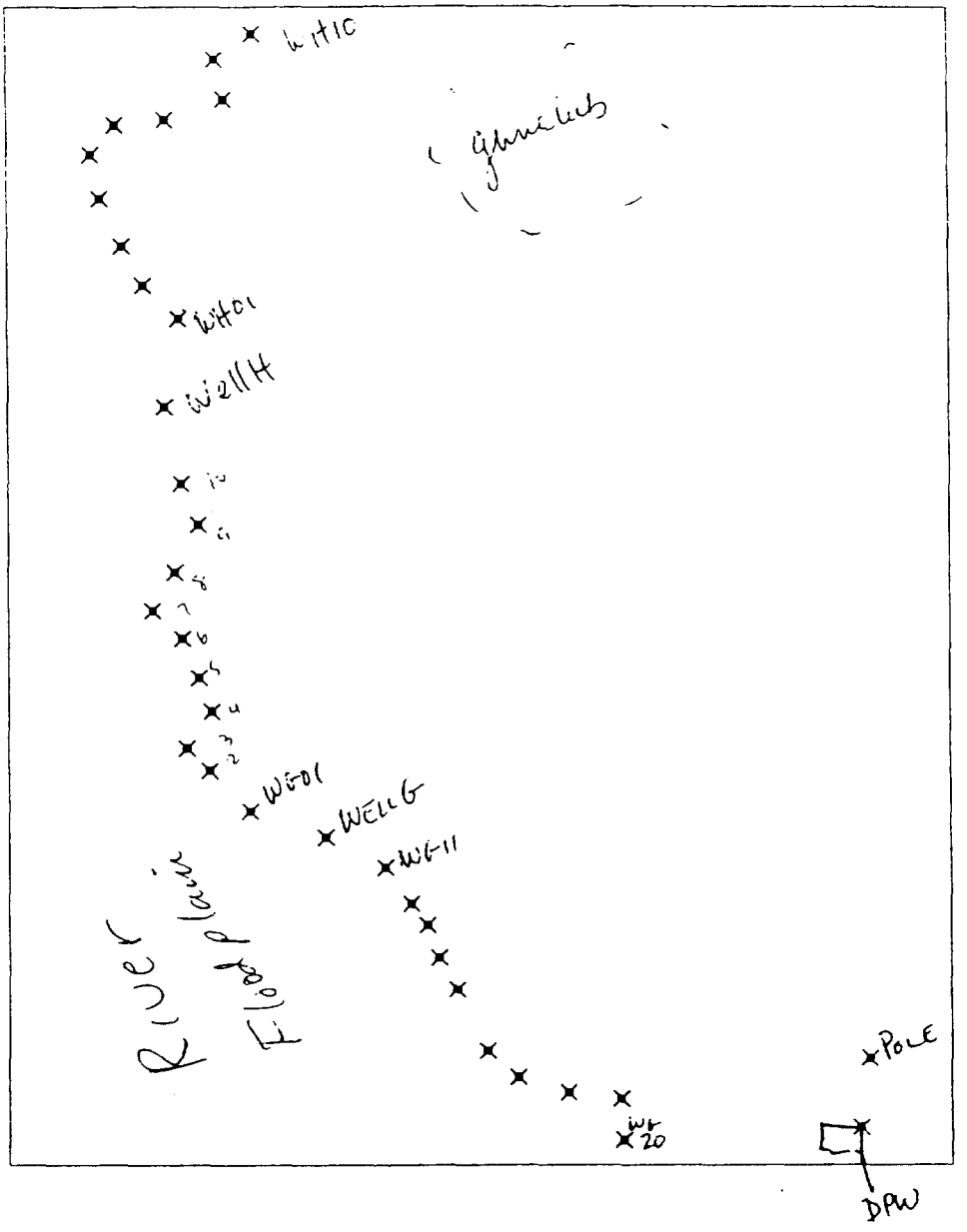
PHOTOIONIZATION DETECTOR FIELD CALIBRATION LOG

Serial No.: EDITK 339 Model No.: Photovac 2000 Decal No.:

Site Name/Location: Industri Plex Tetra Tech NUS Job No./PMS: 05104

CALIBRATION DATE	STANDARD GAS-ISOBUTYLENE	CALIBRATION READING Isobutylene Equiv. (ppm)	CALIBRATION CHECK Isobutylene Equiv. (ppm)	SIGNATURE	COMMENTS
7/10/00	Lot # 92499 Conc. = 101 ppm	101 ppm Starting 0 ppm	101 ppm Cal 101 ppm	[illegible]	
7/11/00	Lot # 92499 Conc. = 100 ppm	100 ppm Starting 0 ppm		[illegible]	
7/12/00	Lot # ~~2100~~ Conc. = ppm				
	Lot # Conc. = ppm				
	Lot # Conc. = ppm				
	Lot # Conc. = ppm				
	Lot # Conc. = ppm				
	Lot # Conc. = ppm				
	Lot # Conc. = ppm				

Tt NUS Form 0006



Lat/Long
WGS 1984

N

Scale 1:2000
0 0.060
Kilometers

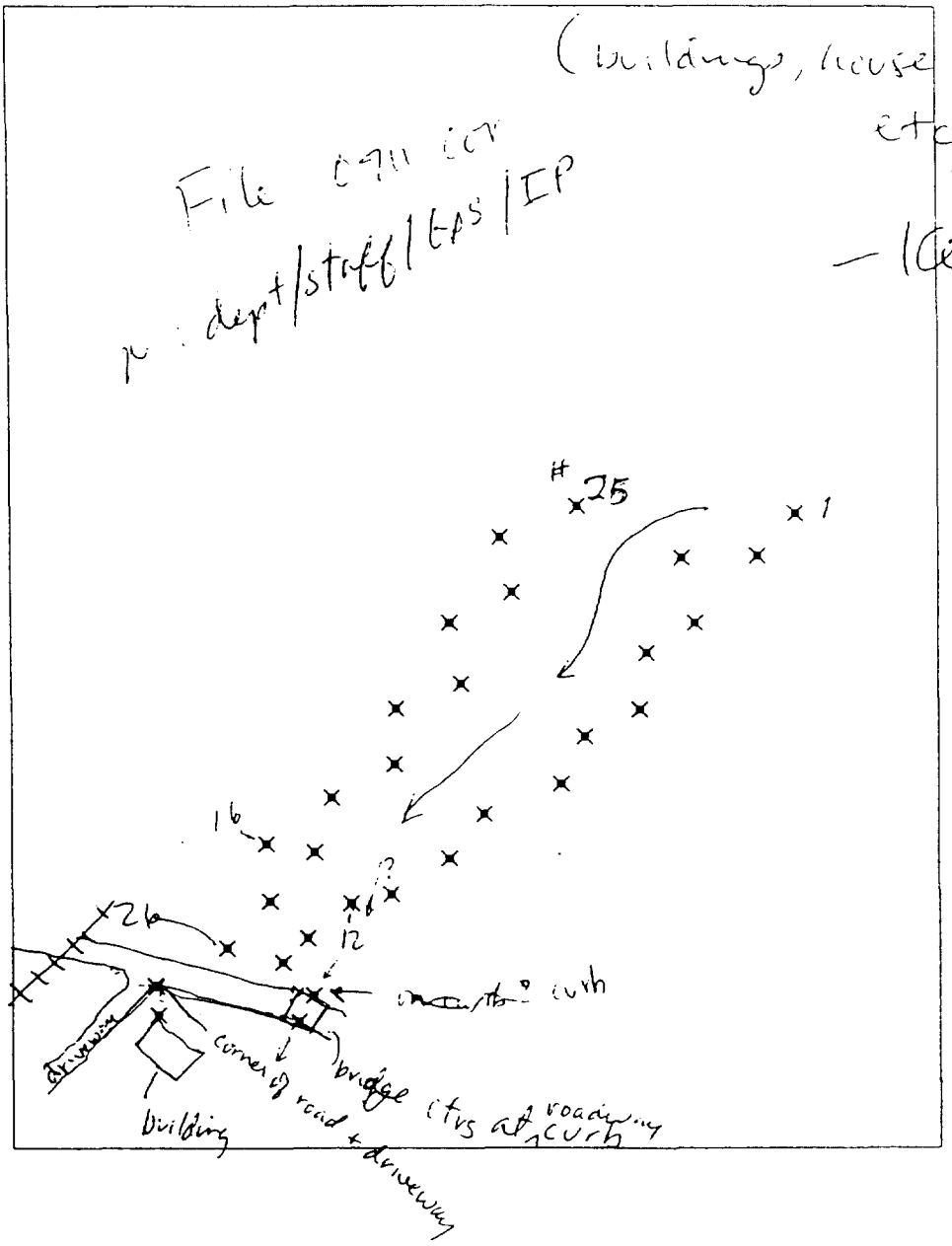
ip0713.cor
7/13/2000
Pathfinder Office
Trimble

US EPA ARCHIVE DOCUMENT

F/I Grain SAVE - provide details of local points I used to check coordinates (buildings, house bridge etc)

File ip711.cor
p: dept/staff/GPS/IP

— lee



Lat/Long
WGS 1984

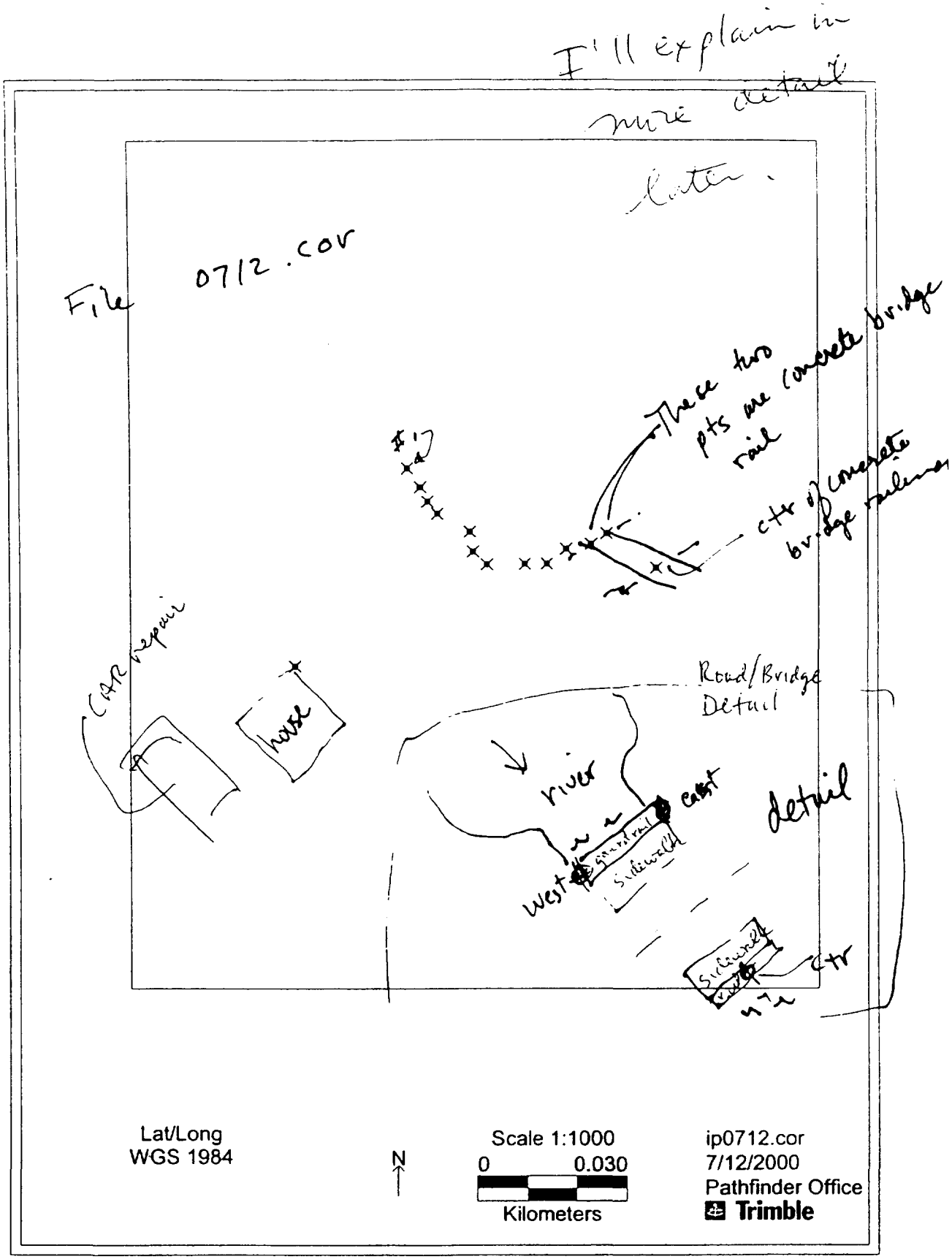
N

Scale 1:2000
0 0.060
Kilometers

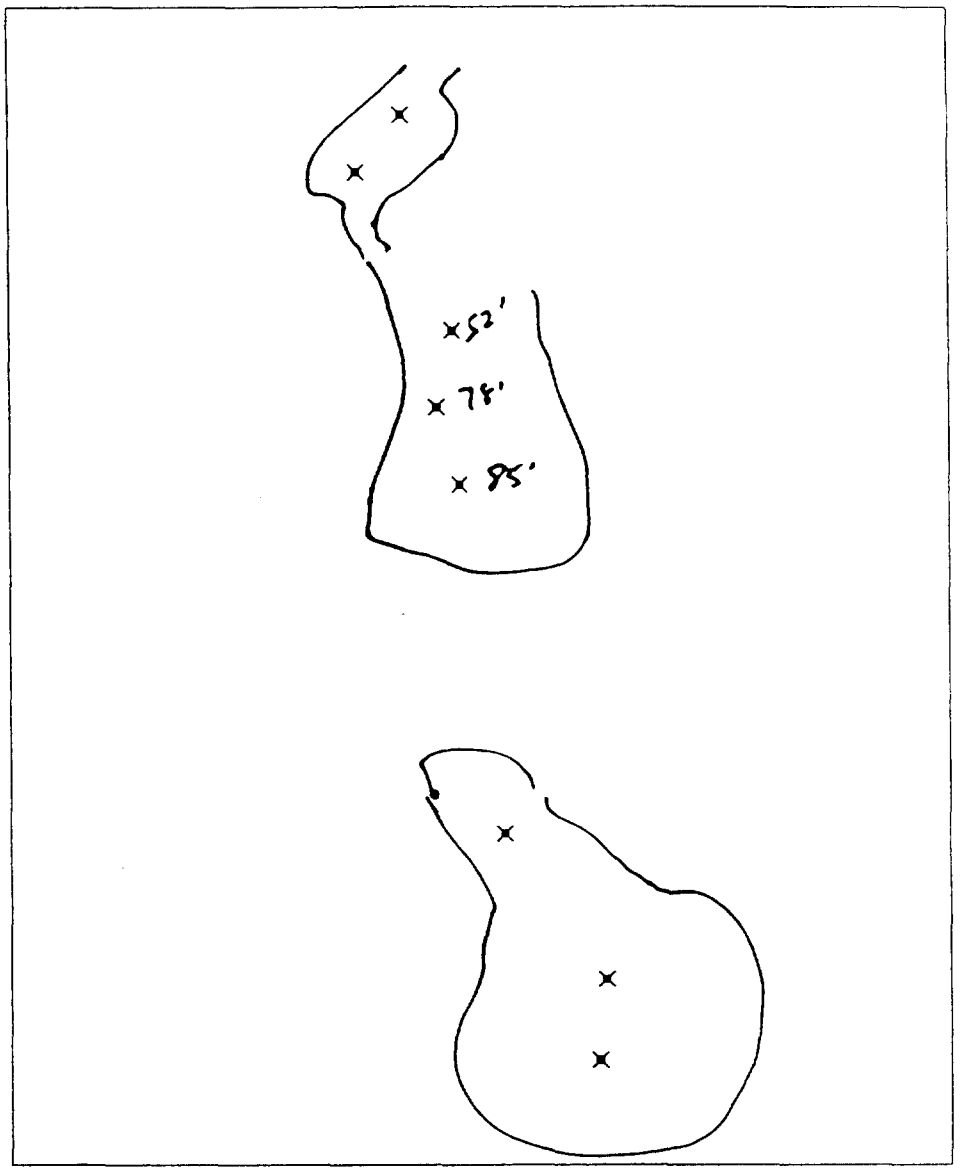
ip0711.cor
7/12/2000
Pathfinder Office
Trimble

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT



US EPA ARCHIVE DOCUMENT



MYSTIC LAKES

Lat/Long
WGS 1984

N

Scale 1:10000
0 0.300
Kilometers

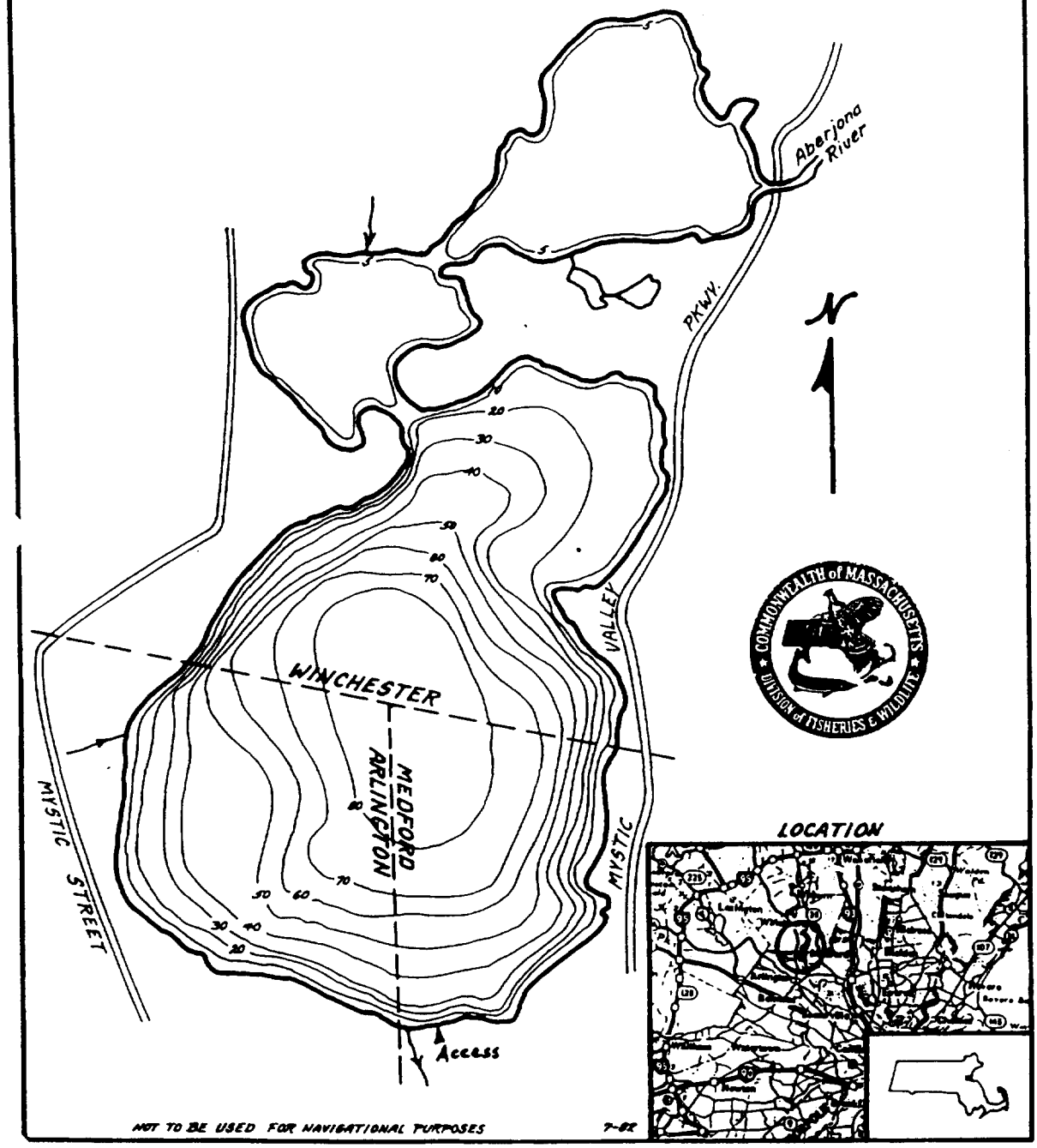
ip0717.cor
7/17/2000
Pathfinder Office
Trimble

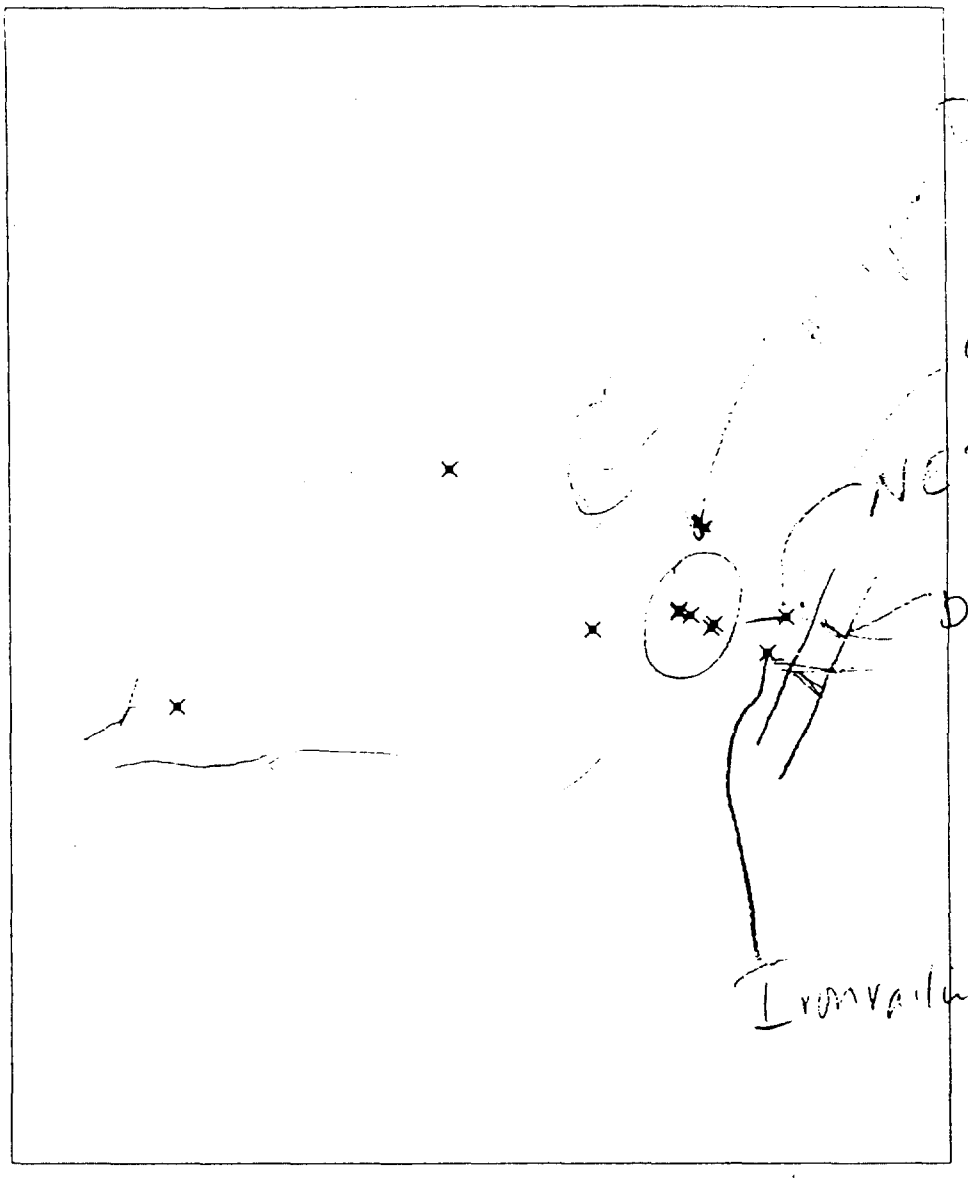
US EPA ARCHIVE DOCUMENT

UPPER MYSTIC LAKE

ARLINGTON-MEDFORD-WINCHESTER

200 Acres





Lat/Long
WGS 1984

N

Scale 1:5000
0 0.150
Kilometers

ip0718.cor
7/19/2000
Pathfinder Office
Trimble

US EPA ARCHIVE DOCUMENT

SAMPLE LOG SHEETS

AUGUST 2000

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50 - A601 - 0001 - 082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: IP50-DP01 - 082800 Matrix Spike (if applicable)

Sample Method: Hand Auger
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8 / 28 /2000 0930 hours (military) Duplicate: 0940 hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Sand, Dry

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

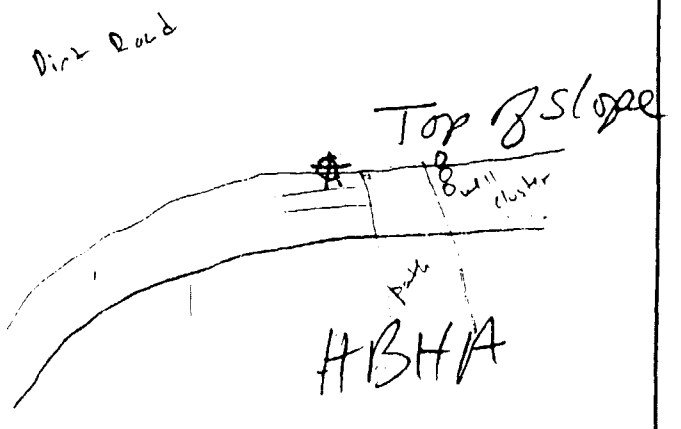
NOTES/SKETCH:

0 ← Surface light brown, dry Fine to med. Sand (SM) trace gravel some organic material (roots)

1 light brown, dry fine to med sand

2 light brown, dry, fine to med sand, some gravel, some coarse sand

3



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SO-A601-0102-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Hand Auger
Depth Sampled: 1 - 2 feet

Sample Date & Time: 8 / 28 /2000 1000 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

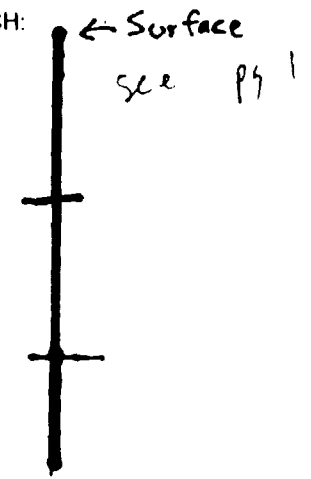
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SO-A601-0203-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Hand Auger
Depth Sampled: 2 - 3 feet

Sample Date & Time: 8/28/2000 1005 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly (E. Paddleford) T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

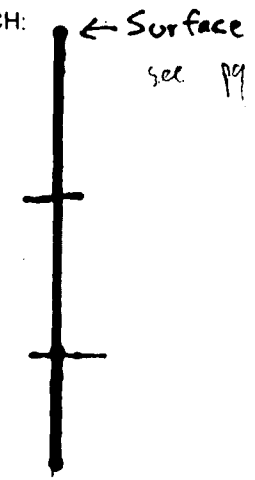
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A602-0001-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: hand auger
Depth Sampled: 0-1 feet

Sample Date & Time: 8/28/2000 1015 (military) hours Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA — ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

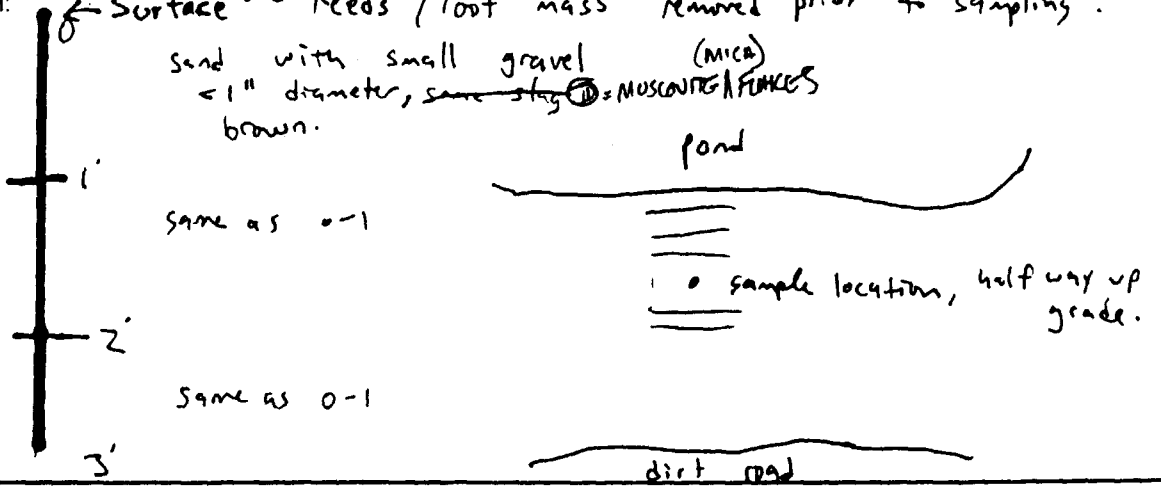
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A602-0102-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 8 / 28 /2000 1025 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA — ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

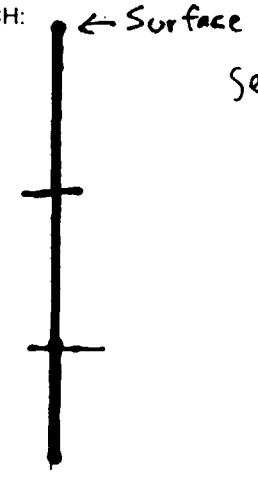
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A602-0203-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: Hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 8/28/2000 1045 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

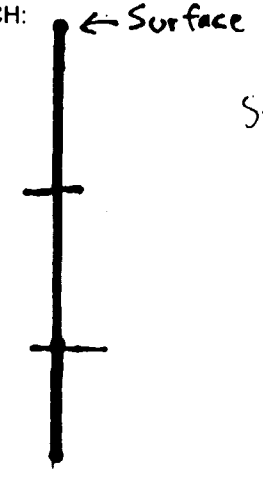
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP- SO -A603 - 0001-082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: _____ (if applicable)

Sample Method: Hand Auger
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8 / 28 /2000 1015 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E Paddleford (Signature)

H&S Monitor Reading: N/A ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

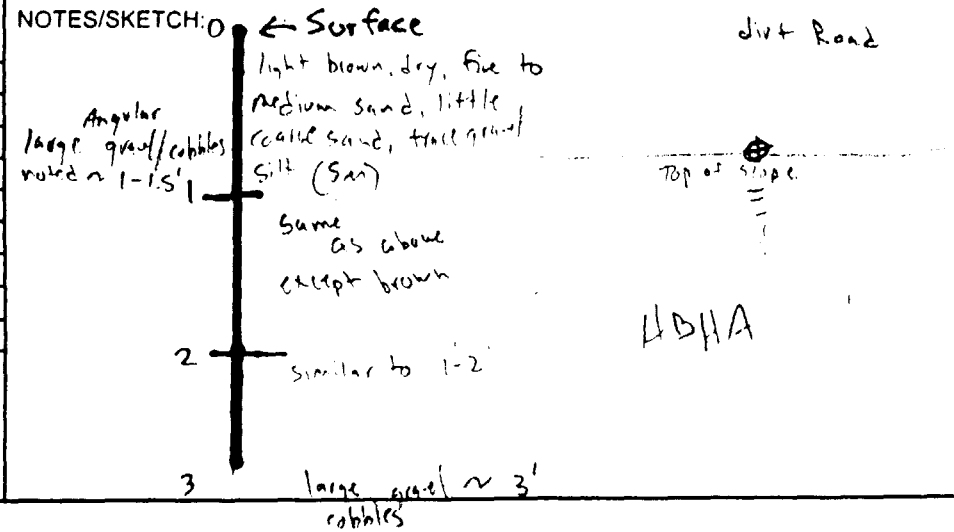
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SO-A603-0102-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HAND AUGER
Depth Sampled: 1 - 2 feet

Sample Date & Time: 8/28/2000 1030 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly (E. Paddleford) T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

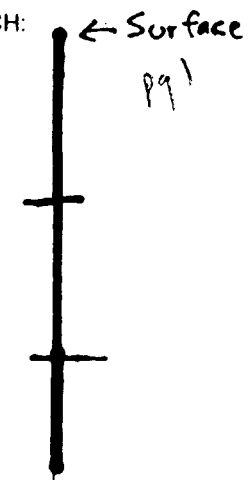
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP- SO -A603 -0203 -0808000

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: _____ (if applicable)

Sample Method: HAND AUGER
Depth Sampled: _____ - _____ feet

Sample Date & Time: 8 / 28 /2000 1045 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

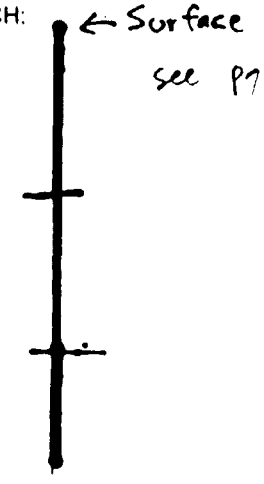
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



see pg 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP- S0 - A1004 - 0001 - 082806

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: ~~EPSO - 0102 - 082806~~ EP (if applicable)

Sample Method: N/A
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8/28/2000 1105 hours (military) Duplicate: N/A hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

0 ← Surface
Brown, dry, fine to coarse sand, some silt, trace gravel (SM) some rocky organic material noted

1 Brown, dry, fine to coarse sand and gravel some silt - larger gravel removed by hand

2 similar to 1-2' sample gravel/(cobbles)

3

Used pick-axe + shovel to get to 3'

Dr. + hand

~~Top of~~ slope

~~Top~~ Alone midway down slope

HBH4

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SO-4604-0102-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: IPSO-DP02-082800 (if applicable)
Dupe for metals only

Sample Method: HA
Depth Sampled: 1 - 2 feet

Sample Date & Time: 8/28/2000 1120 hours (military) Duplicate: 1125 hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

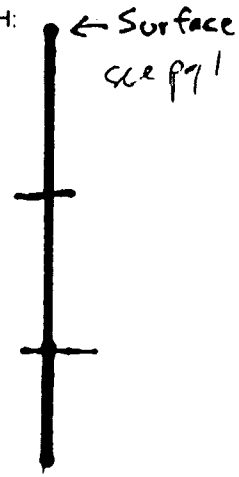
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:

SAMPLE, BUT NOT DP02.



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP- SO-A604-0202-082400

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: _____ (if applicable)

Sample Method: HA & SHOVEL & PICK
Depth Sampled: 2 - 3 feet

Sample Date & Time: 8/28/2000 1200 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

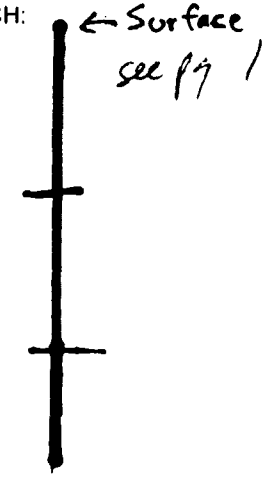
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP30 - A605 - 0001 - 082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 0-1 feet

Sample Date & Time: 8 / 28 /2000 1135 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA — ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
see below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

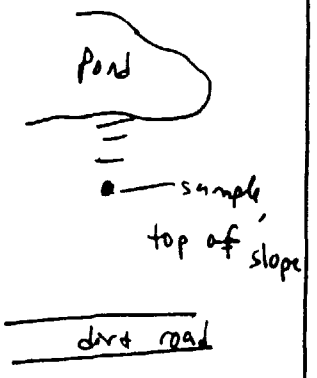
NOTES/SKETCH:

0 ← Surface fine sand, light brown (0-1)

1 fine sand, light brown (1-2')

2 sand with approx 10% gravel (2-3') brown.

3



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A605-0102-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 8 / 28 /2000 1145 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

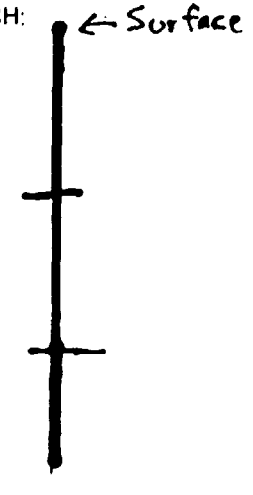
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
fine sand, light brown

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A605-0203-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 8 / 28 /2000 1200 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA — ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

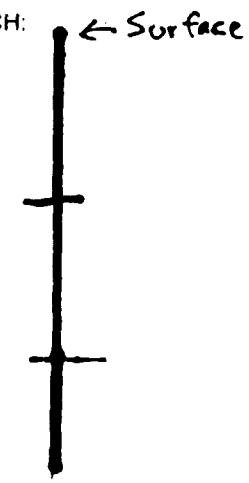
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Sand with approx. 10% gravel.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPX50 -A606 - 0001-082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8/28/2000 1230 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:

← Surface - clear off 2" of plant matter at surface

Dark brown, moist, fine to medium sand and silt, trace gravel, organic material plant matter, roots etc... also noted

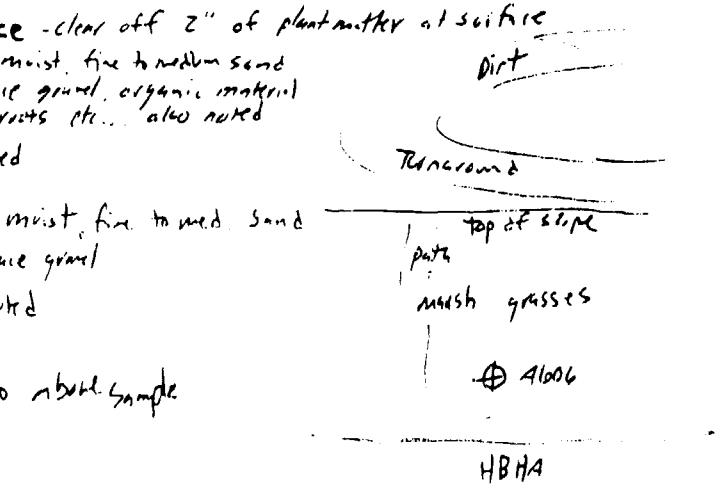
cobbles noted

difficult augering due to cobbles use pick-axe and shovel

Dark brown, moist, fine to med sand and silt, trace gravel

cobbles noted

Similar to above sample



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-50-4606-0102-082400

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 1 - 2 feet

Sample Date & Time: 8/28/2000 1245 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly (E. Paddleford) T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

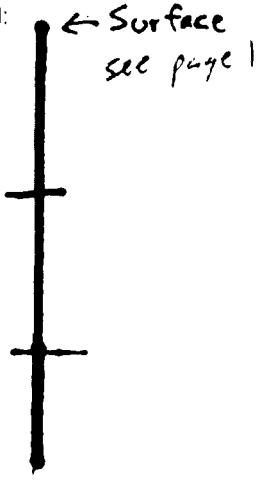
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-~~1050~~-A606-0203-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 2 - 3 feet

Sample Date & Time: 8/28/2000 1255 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly (E. Paddleford) T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

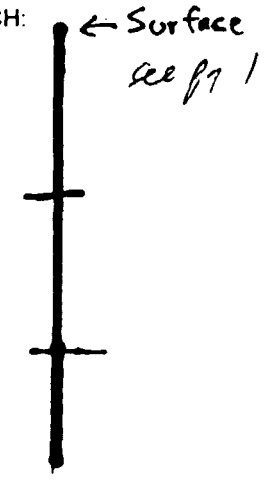
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPS0 - A607 - 0001 - 082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8 / 28 /2000 1240 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Bri Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

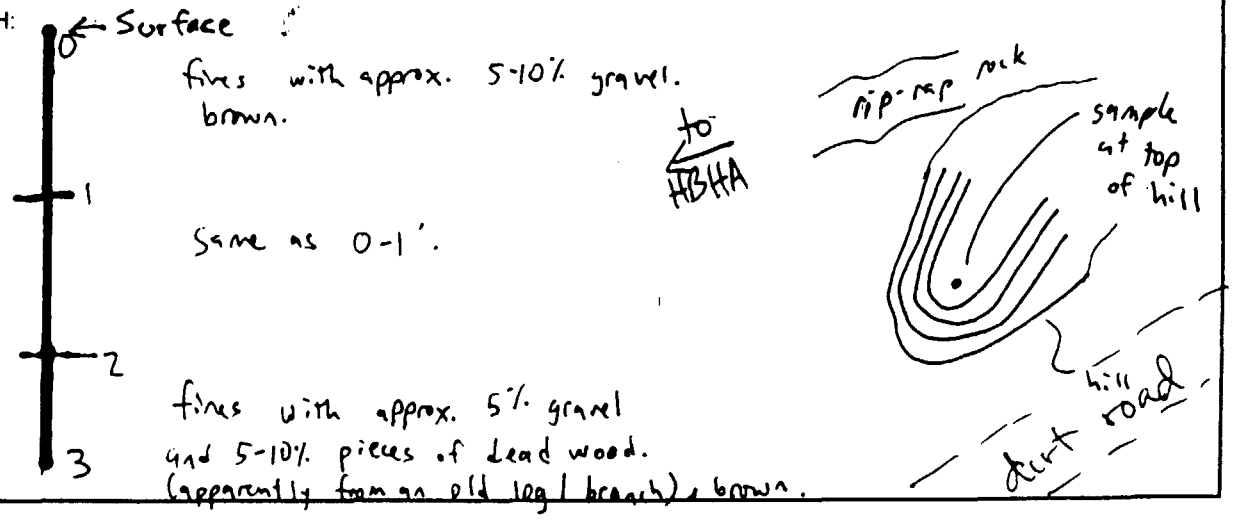
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
See below.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX 8.28.00

Sample ID: IP50- ~~A807~~ A607 - 0102 - 082800

Tetra Tech NUS Job No./PMS 0564- 0322

QC Information: — (if applicable)

Sample Method: hand auger

Depth Sampled: 1-2 feet

Sample Date & Time: 8/28/2000 1255 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

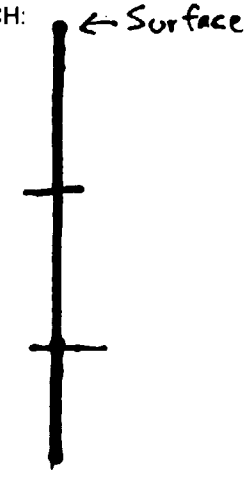
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) fines with approx. 5-10% gravel. bomb.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX 8-28-00 BRF

Sample ID: IP50 - ~~AP07~~ A607 - 0203 - 082300

Tetra Tech NUS Job No./PMS 0564- 0322

QC Information: IP50 - DP03 - 082800 (if applicable)

Sample Method: hand auger

Depth Sampled: 2-3 feet

Sample Date & Time: 8/28/2000 1305 hours (military) Duplicate: 1310 hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Kurth (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

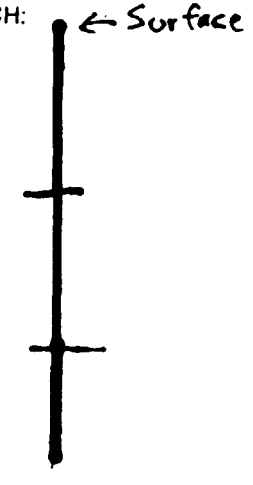
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) fines with approx. 5% gravel and 5-10% pieces of dead wood. brown.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:



see p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPS0 - AG08 - 0001 - 082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8 / 28 /2000 1420 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA — ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
See below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

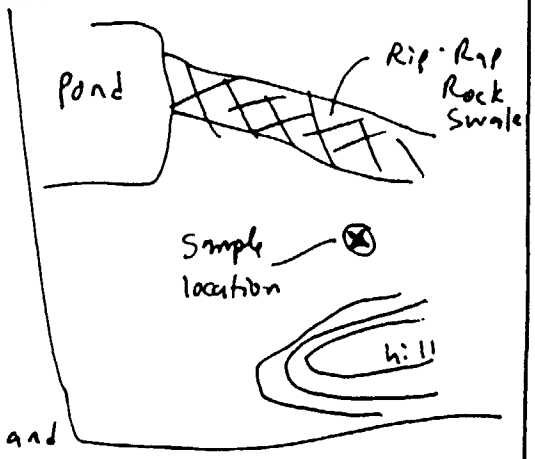
← Surface

0 fines with 15-20% gravel. brown.

1 same as 0-1'.

2

3 fines with approx. 15% gravel and cobbles. signs of fill (brick, glass, porcelin, rebar and potential Asbestos containing material)
Also trace of charcoal..



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A608-0102-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 8 / 28 /2000 1445 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

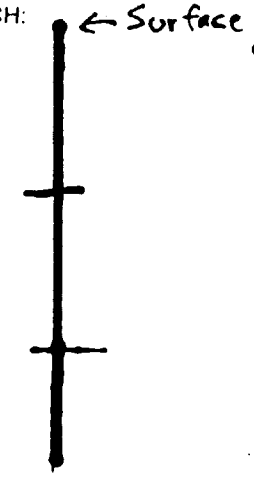
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
fine with 15-20% gravel, brown

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



see p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A608-0203-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 8/28/2000 1515 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

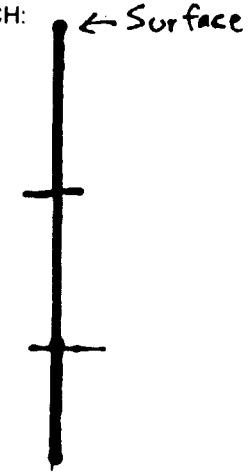
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
fines with 15% gravel and cobbles.
signs of fill.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SO-A1009-0001-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8/28/2000 1425 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Brown, dry, fine to med sand gravel/cobbles organic material also noted

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

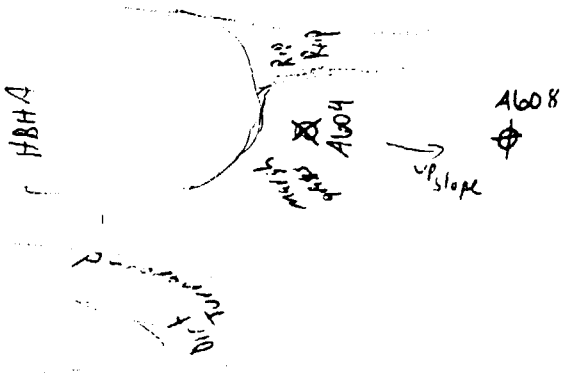
ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:

← Surface
Brown, dry, fine to medium sand and gravel/cobbles, organic material also noted

Reddish-brown, dry, fine to coarse sand and gravel, some silt. Cobbles noted, used pickaxe + shovel to remove overburden

EOB @ 2'



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-4609-0102-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 1 - 2 feet

Sample Date & Time: 8/28/2000 1500 (military) hours Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

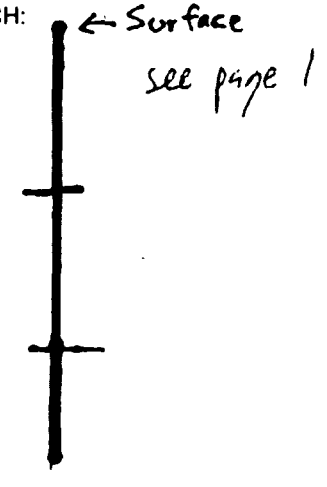
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Reddish-brown, dry, fine to coarse sand and gravel, some silt, cobbles also noted

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:



see page 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A00-0001-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8/28/2000 1530 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly, E. Paddleford, T. Dorgan, K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Brown, dry fine to med sand and silt, some gravel, little coarse sand, cobbles noted

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

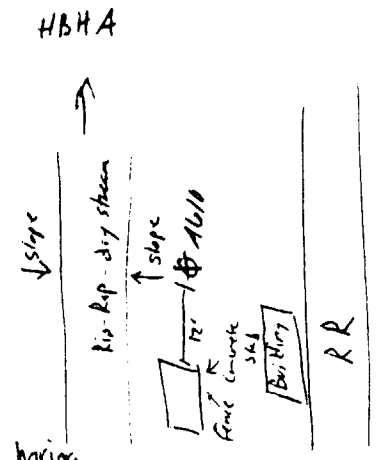
NOTES/SKETCH:

← Surface
Brown, dry, fine to med sand and silt, little coarse sand some gravel. Cobbles noted while augering from 0-1' pieces of brick

brown, dry, fine to coarse sand and silt with cobbles and gravel. brick fragments

Similar to 1-2' interval
cobbles throughout - used shovel to advance boring

EOB @ 3'



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A616-0102-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 1 - 2 feet

Sample Date & Time: 8/28/2000 1610 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

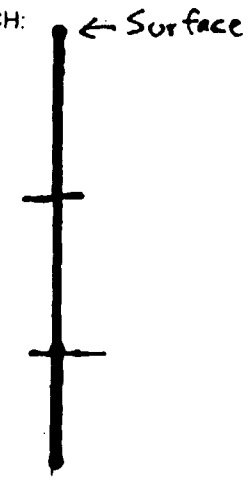
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Brown, dry fine to coarse sand and silt, with cobbles and gravel. Brick fragments also noted

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPS0-A610-0203-082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: _____ (if applicable)

Sample Method: H4
Depth Sampled: 2 - 3 feet

Sample Date & Time: 8/28/2000 1625 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

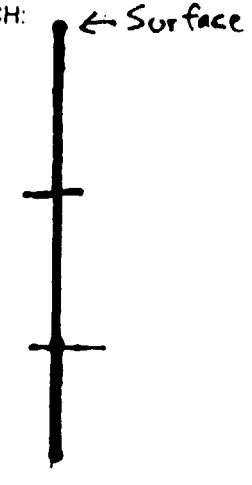
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Similar to ~~0207~~ 0102 sampling interval

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A611-0001-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 0-1 feet

Sample Date & Time: 8/28/2000 1550 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

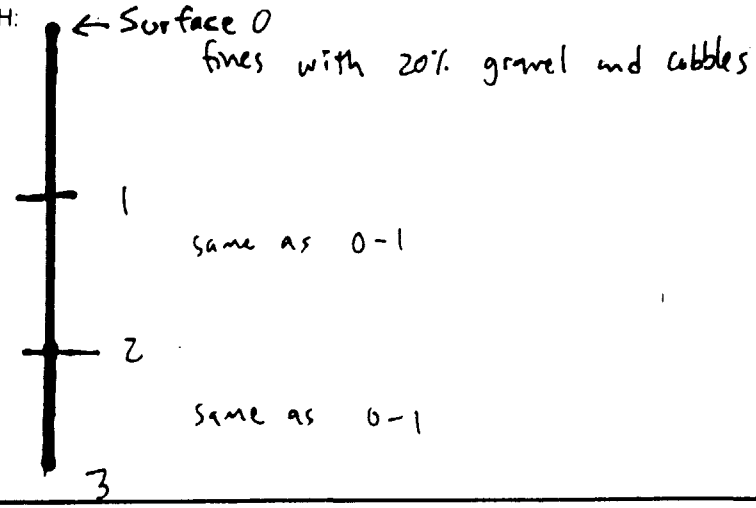
Other ___

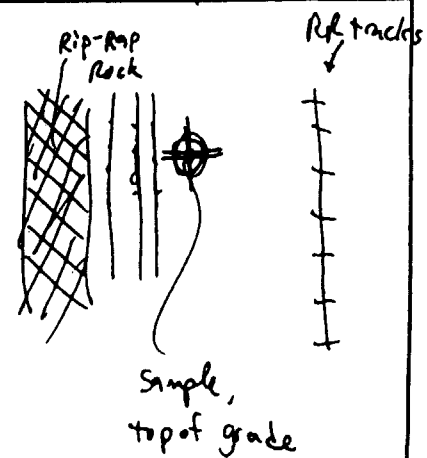
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:





US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO - A611 - 0102 - 082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: IPSO - DP04 - 082800 (if applicable)
(METALS ONLY)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 8 / 28 /2000 1605 hours (military) Duplicate: 1610 hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- x Field Duplicate collected
- ___ Composite

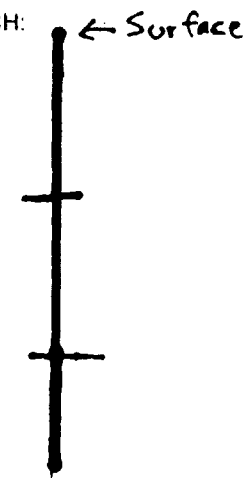
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
fines with 20% gravel and cobbles

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:



See p. 1

NOTE: DUPLICATE FOR METALS ONLY.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSOA611-022.5-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger / pick-axe
Depth Sampled: 2 - 2.5 feet

Sample Date & Time: 08/28/2000 1620 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: ~~NA~~ NA — ppm
BAC 08.28.00

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

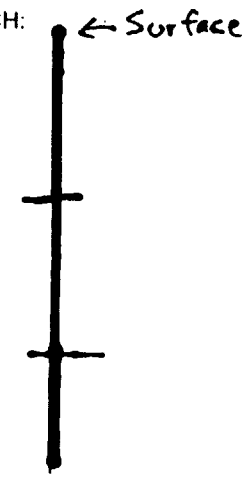
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
fines with 20% gravels and cobbles

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV could not advance auger below 2.5'. Made 3 attempts and used pick-axe to remove boulders.

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP-SO-A612-0001-082908

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8/29/2000 0855 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Brown, dry, fine to med sand and coarse sand with gravel and silt. Brick + Tar fragments noted - used shovel to advance boring

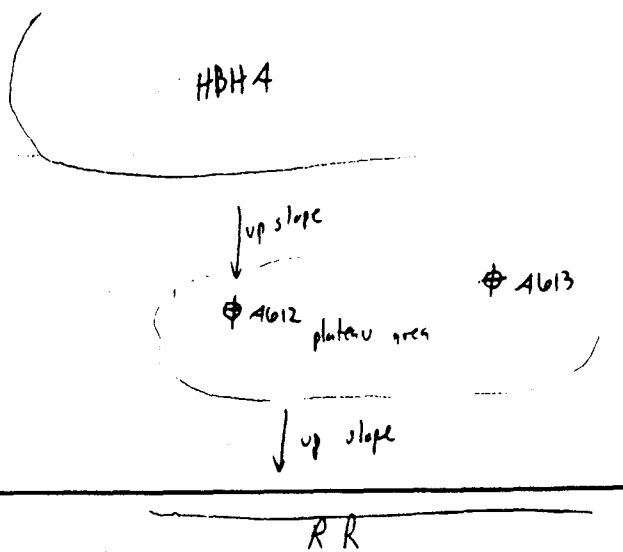
SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:
cobbles noted at ground surface - very rocky material
0.5" roots, large piece of tar @ 6"
large tar fragments difficult augering use shovel to advance boring due to cobbles + tar fragments would not advance boring beyond 2'

0 ← Surface
Brown, dry, fine to medium sand, and coarse sand with gravel, some silt (5m) Brick frags
Rip Rap (stream swale)
1
Similar to above
2
EOB @ 2'
3

NOTE: TAR = ASPHALT



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPS0A6/2-0102-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 1 - 2 feet

Sample Date & Time: 8/29/2000 0925 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

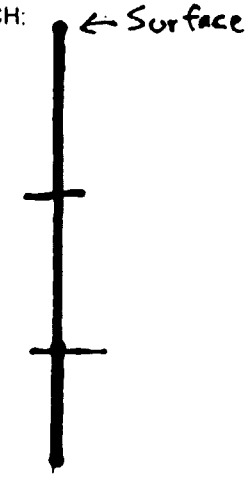
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Brown, dry, fine to med sand, some gravel and silt (SM) used shovel to advance boring

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A613-0001-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8/29/2000 0850 (military) hours Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
See below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

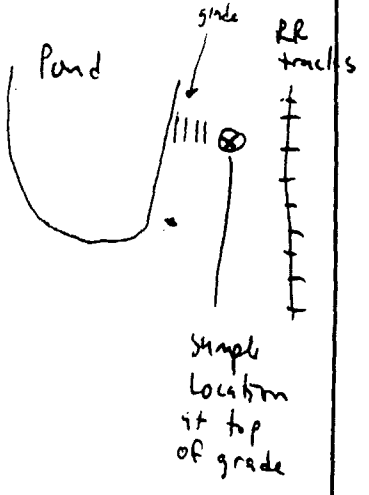
ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

silty sand with approx. 5% gravel. brown.

Same as 0-1', also traces of glass.

silty sand with approx. 15-20% gravel.



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO - A613 - 0102 - 082900

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 8 / 29 /2000 0905 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA — ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

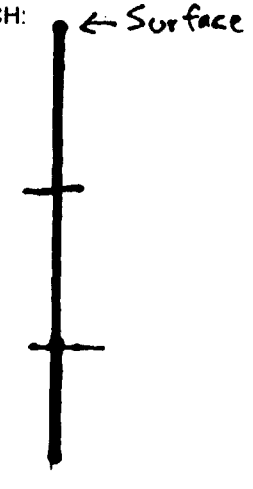
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Silty sand with approx. 5% gravel

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-AG13-0203

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 8/29/2000 0925 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Robin Fennelly (Signature)

H&S Monitor Reading: N/A ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

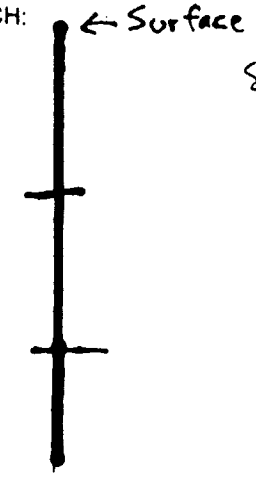
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
silty sand with approx. 20% gravel

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IPS0-A501-0001-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: IPS0-DP05-082900 (if applicable)
Duplicate taken for metals only

Sample Method: HA
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8/29/2000 1010 hours (military) Duplicate: 1015 hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Brown, dry, fine to med sand, poorly graded, with little silt and trace gravel (SP)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

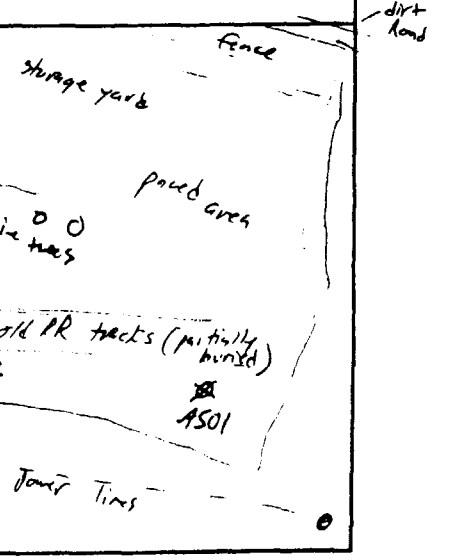
0 ← Surface
Fine sand at surface ~ 6" followed by crusted stone (near the RR tracks)
Sample consists of brown, dry fine to med sand, little silt, trace gravel (SP)

Difficult Augering due to crusted stone layer
Used shovel to get through crusted stone layer

1 — Light brown, dry, medium to coarse sand, little gravel (clean fill material) (SP)

2 — Similar to 1-2' sample

3 — eob @ 3'



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPS0-A501-~~0001~~ 0102 JE-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 1 - 2 feet

Sample Date & Time: 8/29/2000 1030 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

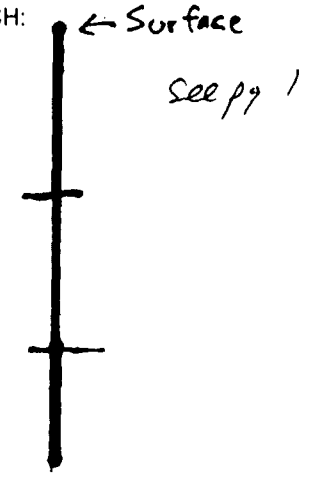
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) light brown, dry, med to coarse sand, little gravel (SP)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See pg 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPS0-A501-~~0001~~ 0203 EP-082900

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: _____ (if applicable)

Sample Method: HA
Depth Sampled: 2 - 3 feet

Sample Date & Time: 8/29/2000 1040 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly (E. Paddleford) T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: E. Paddleford (Signature)

H&S Monitor Reading: NR ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

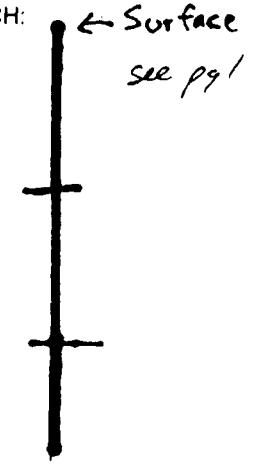
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
light brown, dry, med to coarse sand, little gravel (SP)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A502-0001-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: LAB QC sample - spike (if applicable)

Sample Method: hand auger
Depth Sampled: 0-1 feet

Sample Date & Time: 8/29/2000 1000 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Smith (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other MATRIX SPIKE/MSD

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
See below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

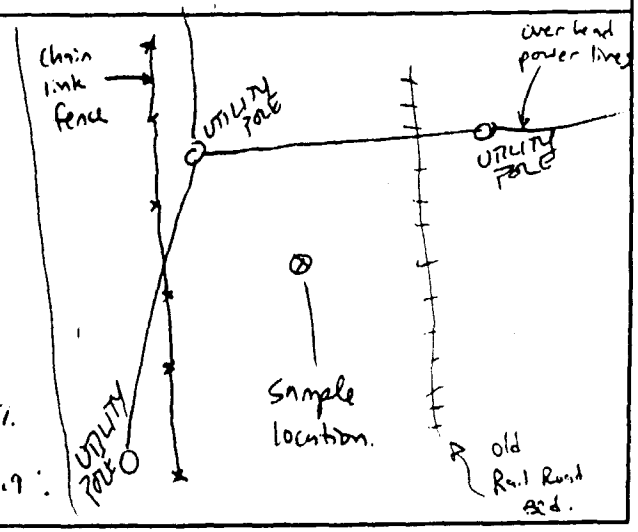
NOTES/SKETCH:

poorly graded fine sand. tan.

same as 0-1'.

fine sand with approx. 5-10% gravel asphalt like material encountered at approximately 2.9'. light brown.

EOB: 3' bgs.



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A5D2-0102-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 8/29/2000 1010 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

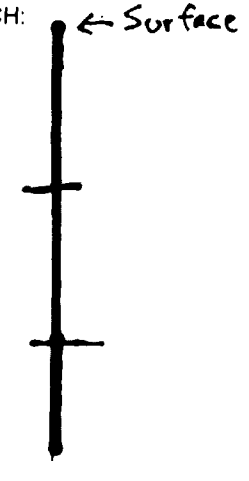
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
poorly graded fine sand.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



see p.1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A502-0203-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 8/29/2000 1020 hours (military)
Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

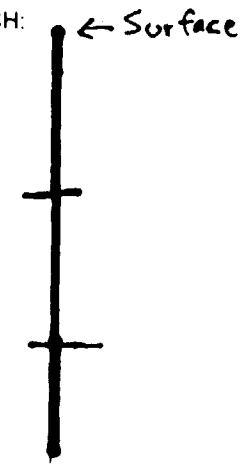
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
fine sand with 5-10% gravel

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A503-0001-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 0 - 1 feet

Sample Date & Time: 8/29/2000 1045 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
See below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

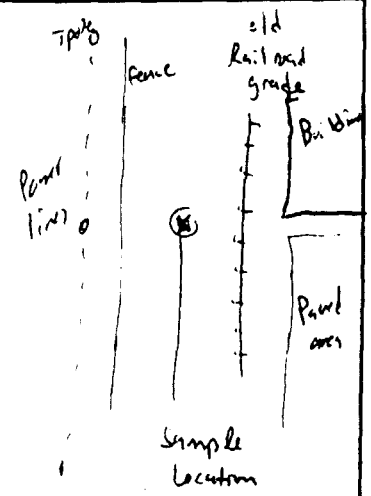
← Surface

0 — poorly graded fine sand with 5% gravel and traces of wood pieces. light brown.

1 — Same as 0-1

2 — fine sand with traces of wood and traces of gravel.

3 — EOB: 3' bgs.



US EPA ARCHIVE DOCUMENT

gef 8/29/00

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A503-0102-0829 00

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 8/29/2000 1050 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

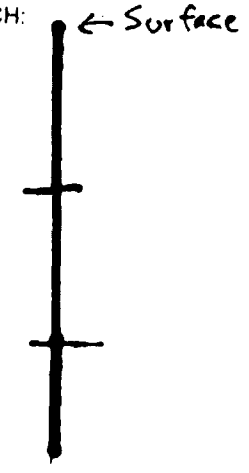
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Poorly graded fine sand with 5% gravel and traces of wood pieces.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A503-0203-082900

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: ——— (if applicable)

Sample Method: hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 8/29/2000 1100 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Ron Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

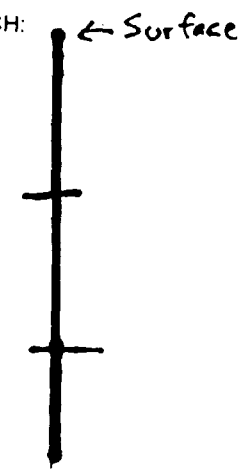
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
fine sand with traces of wood and traces of gravel

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50- A201 -0001 -090100

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: — (if applicable)

Sample Method: Hand auger
Depth Sampled: 0-1 feet

Sample Date & Time: 9 / 1 /2000 0810 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Ron Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
see below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

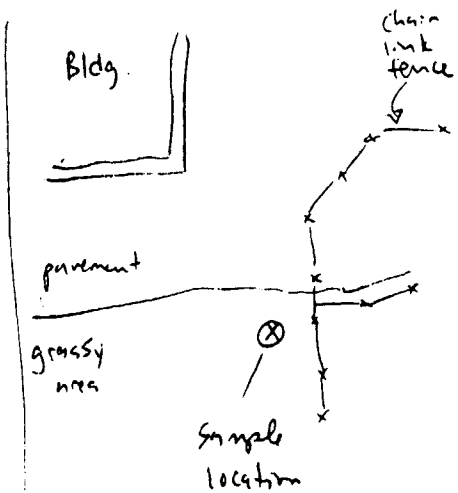
NOTES/SKETCH:

silty sand with traces of gravel. light brown.

poorly graded sand. tan

silty sand with approx. 5-10% gravel and traces of what appears to be animal fur. slight moisture. brown.

EOB: 3 ft bgs.



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A201-0102-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 9/1/2000 0825 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

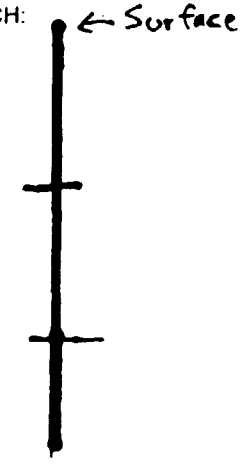
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
poorly graded sand, tan.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A201-0203-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 9/1/2000 0845 (military) hours Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

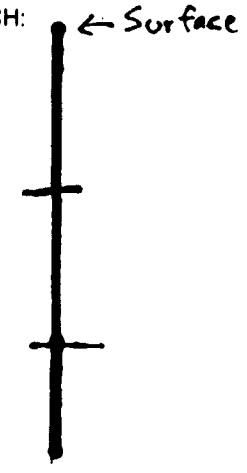
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
silty sand with approx 5-10% gravel and traces of animal fur. brown, moist.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A202-0001-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: DP06-090100 (if applicable)
DUP BOTH METALS & HEX. CHROME/SULFIDES

Sample Method: HAND AUGER
Depth Sampled: 0-1 feet
Sample Date & Time: 9/01/2000 0850 hours (military) Duplicate: 0855 hours
Sampler(s): B. Fennelly E. Paddleford (T. Dorgan) K. O'Neill (circle appropriate)
Data Recorded By: T. Dorgan (Signature)
H&S Monitor Reading: N/A ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:

0 ← Surface
<0.1' LEAF LITTER/ORGANIC DEBRIS. LIGHT BROWN GRAVELLY, SAND. MOSTLY F-C WELL GRADED SAND, LITTLE-SOME F-C GRAVEL, TRACE COBBLES. DRY, LOOSE. (SW) TRACE FILL INCLUDING STYROFOAM, VELCRO FABRIC, & CONCRETE.

1 GRAVELLY, SAND. SIMILAR TO ABOVE WITH INCREASED GRAVEL & COBBLES. FILL = BRICK & PLASTIC (TRACE). DARK BROWN.

2 SIMILAR TO ABOVE, DAMP.

EOB @ 3' BGS.

SEE P. 2 FOR SKETCH.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A2OZ-0102-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: HAND AUGER
Depth Sampled: 1-2 feet
Sample Date & Time: 9/01/2000 0945 hours (military) Duplicate: — hours
Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)
Data Recorded By: T. Dorgan (Signature)
H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

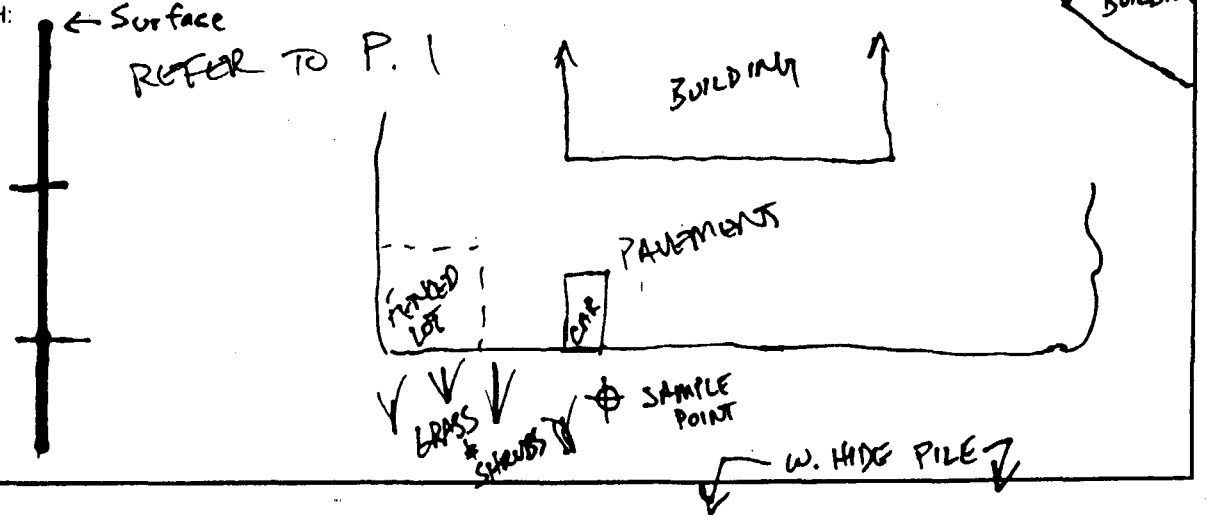
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
GRAVELLY SAND. (SW)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSD-A202-0203-090100

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: _____ (if applicable)

Sample Method: HAND AUGER
Depth Sampled: 2-3 feet
Sample Date & Time: 9/1/2000 1005 (military) hours Duplicate: _____ hours
Sampler(s): B. Fennelly E. Paddleford (T. Dorgan) K. O'Neill (circle appropriate)
Data Recorded By: T. Dorgan (Signature)
H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

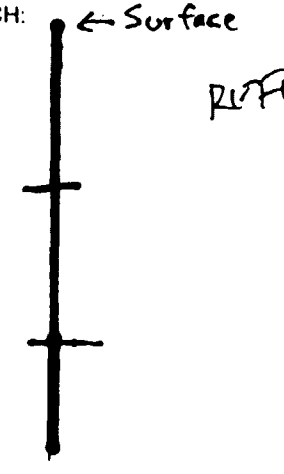
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
GRAVELLY, SAND. DAMP.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



REFER TO P. 1 OF 3

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A203-0001-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: hand auger
Depth Sampled: 0-1 feet

Sample Date & Time: 9/1/2000 0930 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
See below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

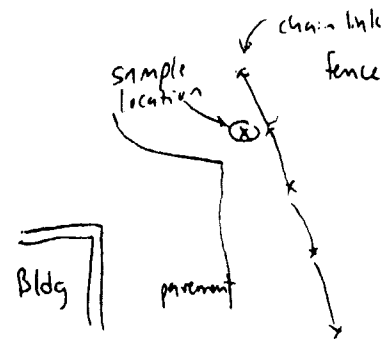
NOTES/SKETCH:

0 Silty sand with approx. 10% gravel. dark tan.

1 organically rich soil with approx. 10% sand. brown.

2 organically rich soil. dark brown.

EOB: 3' bgs.



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A203-0102-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: -- (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 9/1/2000 0945 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

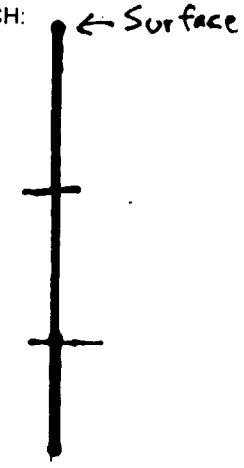
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organically rich soil with approx. 10% sand. dark brn.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



see p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPS0-A203-0203-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 9/1/2000 1000 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: Brian Fennelly (Signature)

H&S Monitor Reading: N/A ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

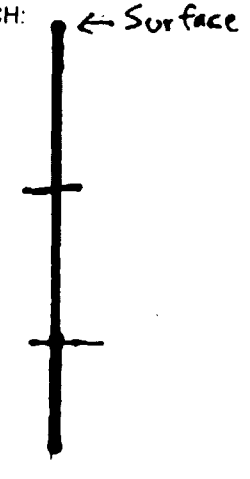
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
organically rich soil
dark brown

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A204-0001-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: — (if applicable)

Sample Method: hand auger.
Depth Sampled: 0-1 feet
Sample Date & Time: 9/1/2000 1110 (military) hours
Duplicate: — hours
Sampler(s): B. Fennelly E. Paddleford T. Morgan K. O'Neill (circle appropriate)
Data Recorded By: Brian Fennelly (Signature)
H&S Monitor Reading: N/A ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- Sediment
- Lagoon/Pond
- X Grab
- Trip Blank*
- Rinsate Blank*
- Field Duplicate collected
- Composite

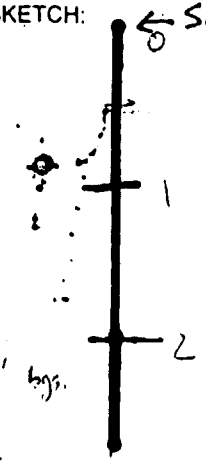
Other —

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) See below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV bits of asphalt removed from sampled soil.

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:



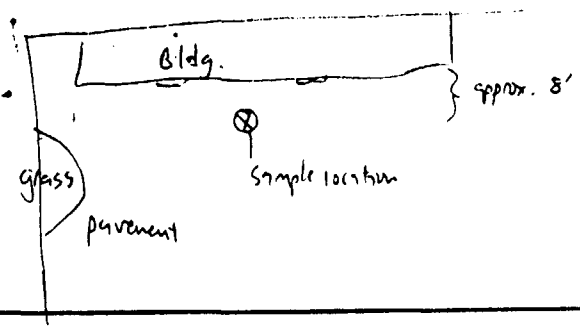
← Surface } 3" asphalt pavement. } removed before sampling.
} approx. 3" road base, sand.

0.5-1: silty sand with approx. 5-10% gravel. brown.

mix of silty sand, gravel: sand: fine to coarse, gravel: dense and angular: brown.

EOB: 2' bgs.

Could not advance auger below 2'. Used dig bar to break rocks but not effective after 2'.



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A204-0102-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: hand auger
Depth Sampled: 0-2 feet

Sample Date & Time: 9/1/2000 1145 (military) hours Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

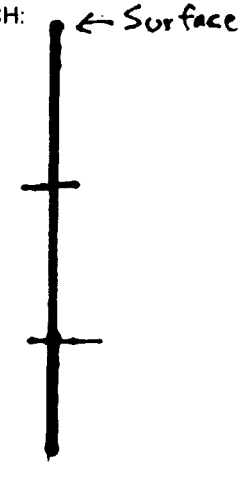
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Silt, sand, gravel. sand: fine to coarse
gravel: dense and angular. brown.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p.1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A205-0001-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: LAB QC (if applicable)

Sample Method: HAND AUGER
Depth Sampled: 0-1 feet
Sample Date & Time: 9/1/2000 1055 (military) hours Duplicate: — hours
Sampler(s): B. Fennelly E. Paddleford (T. Dorgan) K. O'Neill (circle appropriate)
Data Recorded By: T. Dorgan (Signature)
H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other LAB QC - METALS ONLY

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

SEE P. 2 FOR LOCATION SKETCH.

← Surface
0.3' - ASPHALT
0.2-0.3' - SAND & GRAVEL W/ CONCRETE FILL ROAD-BASE
SAND. MOSTLY F-C WELL GRADED SAND. TRACE FINE GRAVEL, TRACE SILT DK. BROWN, MOIST, CLOSE TO SATURATED.
1 GRAVELLY, SAND. MOSTLY F-C SAND (SW) SOME ROUNDED GRAVEL. OLIVE BROWN
1.5 = TILL. SILTY, SANDY, GRAVEL MIX. UNSORTED, GRAY - OLIVE GRAY, VERY DENS GRAVEL IS ANGULAR TO SUBANGULAR.
2 EOB @ 2' BGS. USED SHOVEL, PRY-BAR & CHISLE & HAND TOOL TO ADVANCE FROM 1.5-2' BGS.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A205-0102-090100

Tetra Tech NUS Job No./PMS 0564-C322
QC Information: _____ (if applicable)

Sample Method: HAND AUGER, PRY-BAR & HAND TOOLS
Depth Sampled: 1-2 feet

Sample Date & Time: 9/1/2000 1145 (military) hours Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford (T. Dorgan) K. O'Neill (circle appropriate)

Data Recorded By: J. Dorgan (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

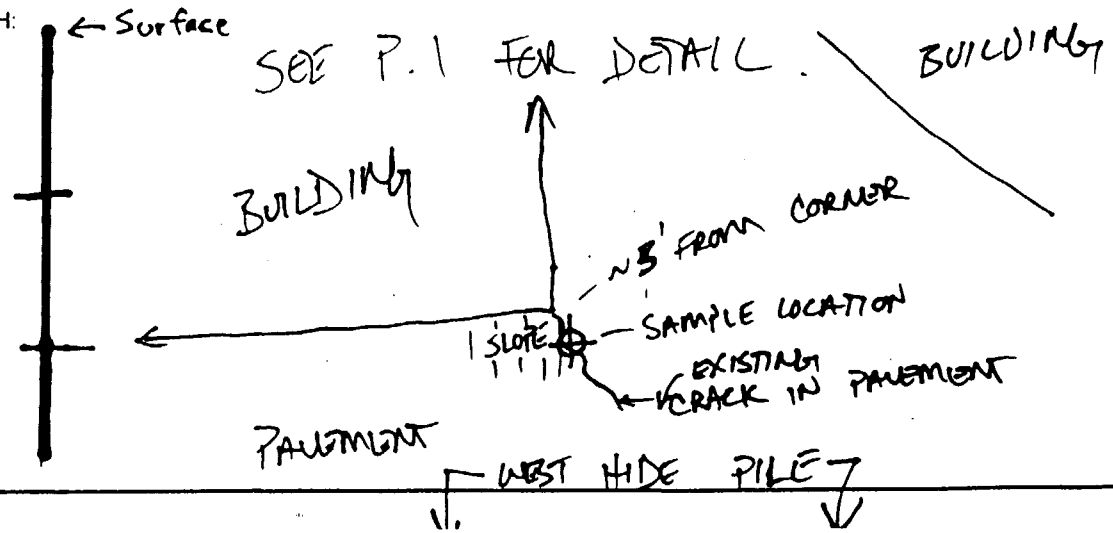
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
GRAVELLY SAND & TILL.
SEE P.1

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IP50-A206-0001-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: hand auger
Depth Sampled: 0-3 feet

Sample Date & Time: 9 / 1 /2000 1125 (military) hours Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

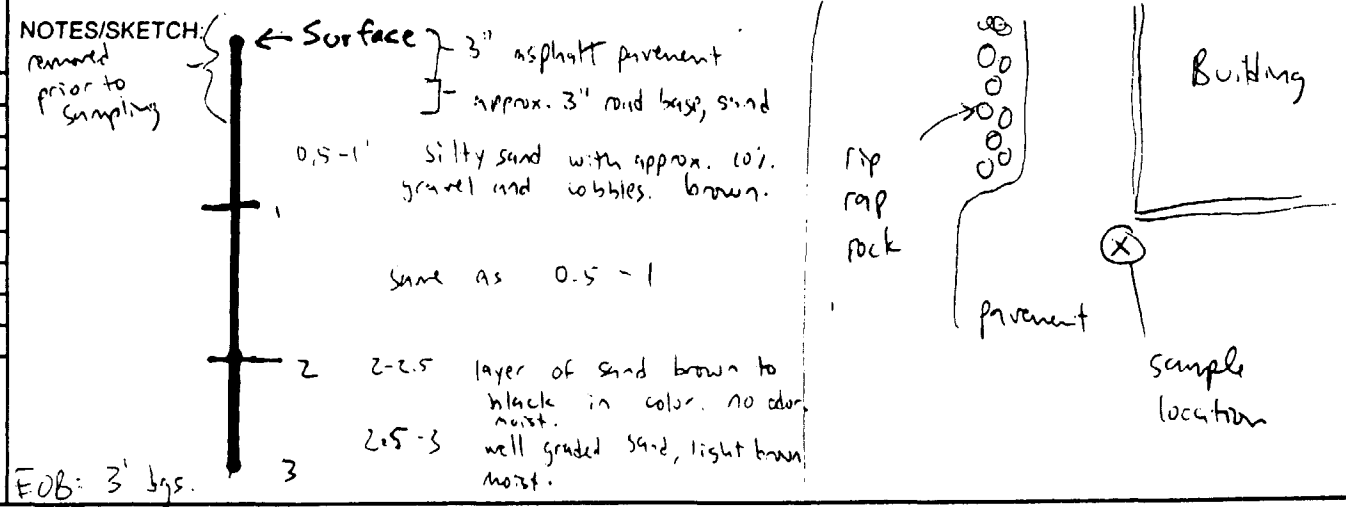
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
see below

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A206-0102-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: hand auger
Depth Sampled: 1-2 feet

Sample Date & Time: 9/1/2000 1240 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

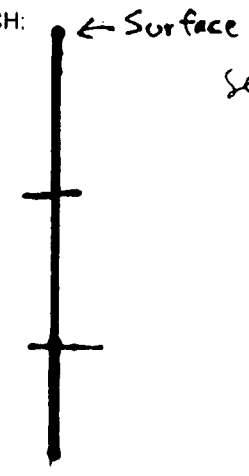
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) Silty sand with approx. 10% gravel and cobbles. hours

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



see p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: **INDUSTRI-PLEX**
Sample ID: IPSO - A206 - 0203 - 090100

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: — (if applicable)

Sample Method: hand auger
Depth Sampled: 2-3 feet

Sample Date & Time: 9/1/2000 1300 hours (military) Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: [signature] (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

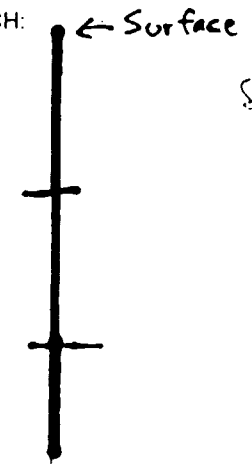
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
well graded sand. 2-2.5 brown to black. 2.5-3 light brown. moist.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



See p. 1

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50-A207-0001-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: _____ (if applicable)

Sample Method: HAND AUGER
Depth Sampled: 0 - _____ feet
Sample Date & Time: 9/1/2000 1300 (military) hours Duplicate: _____ hours
Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)
Data Recorded By: T. Dorgan (Signature)
H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	X
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:

0 ← Surface
ASPHALT = 0.4' THICK
0.4 – 0.2' – SAND & GRAVEL ROAD BASE – TAN, DRY, LOOSE
0.6 BROWN. GRAVELLY, SAND (SW) MOSTLY F-C SAND, SOME ROUNDED GRAVEL
1
1.25 TILL? – SILT, SAND, & GRAVEL MIX. VERY DENSE & UNSORTED. GRAVELS ARE SUBANGULAR – ANGULAR. COBBLES UP TO 0.5' DIAM.
2 EOB @ 2.1' BGS.

SEE P. 2 FOR SKETCH.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-A207-0102-090100

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: DP07-090100 (if applicable)

Sample Method: HAND AUGER & HAND TOOLS (SCOOP'S)
Depth Sampled: 1-2 feet

Sample Date & Time: 9/1/2000 1315 (military) hours Duplicate: 1320 hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: T. Dorgan (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate collected
- ___ Composite

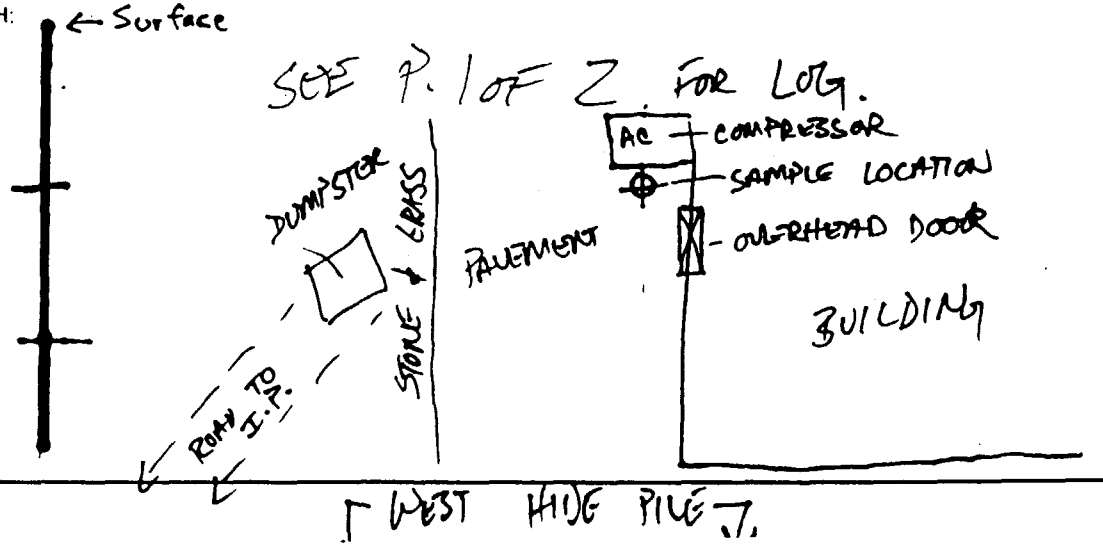
Other DUPLICATE - METALS ONLY.

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
GRAVELLY, SAND. BROWN.
TILL? - OLIVE GRAY. DENSE
SILT, SAND & GRAVEL w/ COBBLES.

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	X
SULFIDES	X

NOTES/SKETCH:



US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP- RB06 -090100

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: RINSATE (if applicable)

Sample Method: Direct pour S/S bowl
Depth Sampled: N/A feet
Sample Date & Time: 9 / 1 /2000 0820 hours (military) Duplicate: _____ hours
Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)
Data Recorded By: Kevin O'Neill (Signature)
H&S Monitor Reading: N/A ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

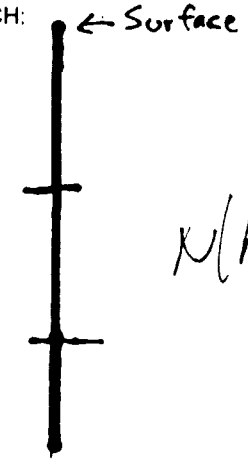
Other DUE 60TH 0203180

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



N/A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP- RB07 - 090100

Tetra Tech NUS Job No/PMS 0564- 0322
QC Information: RINSATE (if applicable)

Sample Method: Direct pour / Hand Auger
Depth Sampled: ___ - NA feet

Sample Date & Time: 9 / 1 /2000 1250 hours (military) Duplicate: ___ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: KMull (Signature)

H&S Monitor Reading: N/A ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

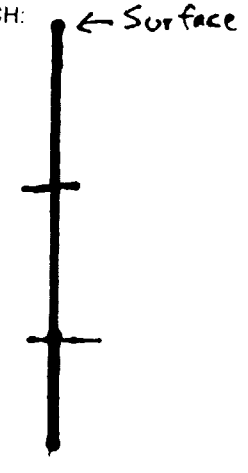
Other DIWF Lot# 0203180

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



N/A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-RB01-082800

Tetra Tech NUS Job No./PMS 0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR
Depth Sampled: ___ feet

Sample Date & Time: 8/28/2000 1200 (military) hours Duplicate: — hours

Sampler(s): B. Fennelly E. Paddleford (T. Dorgan) K. O'Neill (circle appropriate)

Data Recorded By: T. Dorgan (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

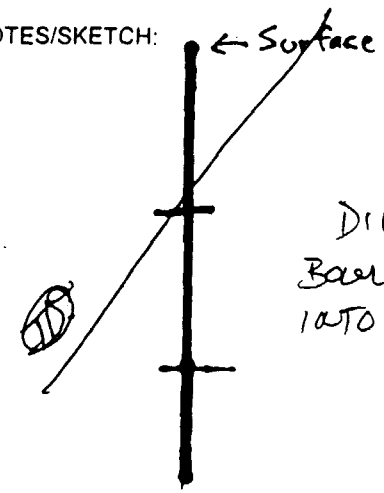
Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



NOTE: WATER SOURCE = NERL REAGENT GRADE DI UF WATER. LOT 0203180 EXP. 02/2001

DIRECT POUR DI UF WATER INTO STAINLESS-STEEL BOWL FOLLOWING DECON. DIRECT POUR FROM BOWL INTO POLY BOTTLE THEN ACIDIFY.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO-RB02-082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR
Depth Sampled: _____ feet

Sample Date & Time: 8/28/2000 1400 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: T. Dorgan (Signature)

H&S Monitor Reading: N/A ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

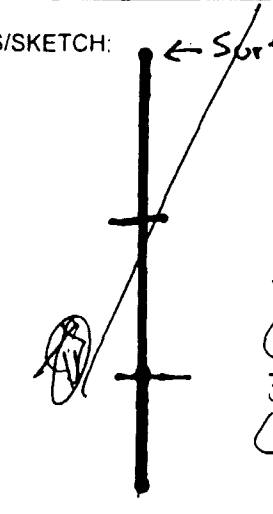
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



NOTE: WATER SOURCE = NERL REAGENT GRADE DI UF WATER. LOT 0203180 EXP. 02/2001.

DIRECT POUR WATER INTO DECONTAMINATED STAINLESS STEEL BOWL WITH A DISPOSABLE (STERILEWARE) TROWL. DIRECT POUR WATER FROM BOWL INTO POLY BOTTLE & PRESERVE WITH ACID. (HNO_3).

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO - RB03 - 082800

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR
Depth Sampled: — feet

Sample Date & Time: 8/25/2000 1645 hours (military) Duplicate: _____ hours

Sampler(s): B. Fennelly E. Paddleford (T. Dorgan) K. O'Neill (circle appropriate)

Data Recorded By: _____ (Signature)

H&S Monitor Reading: _____ ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- Sediment
- Lagoon/Pond
- X Grab
- Trip Blank*
- X Rinsate Blank*
- Field Duplicate collected
- Composite

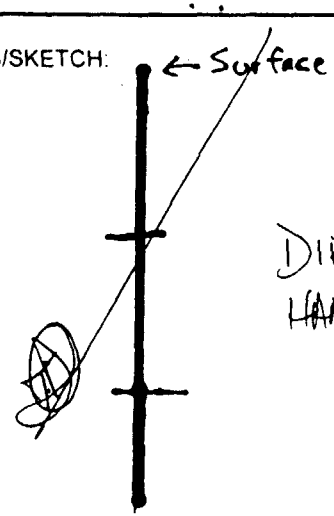
Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:



WATER SOURCE = NERL REAGENT GRADE DIUF WATER
LOT - 0203180 EXP. 02/2001

DIRECT POUR DIUF WATER THROUGH DECONTAMINATED HAND AUGER INTO POLY BOTTLE THEN ACIDIFY.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IP50 - RB04 - 082900

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR
Depth Sampled: ___ ___ feet

Sample Date & Time: 8/29/2000 0900 hours (military) Duplicate: ___ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: T. Dorgan (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH:

WATER SOURCE: NERL REAGENT GRADE DIVF WATER. LOT: 0203180 EXP. 02/2001

DIRECT POUR DIVF WATER THROUGH HAND AUGER BUCKET INTO BOTTLE & PRESERVE WITH HNO_3.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SOLID PHASE

Site Name: INDUSTRI-PLEX
Sample ID: IPSO - RB05 - 082900

Tetra Tech NUS Job No./PMS 0564- 0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR
Depth Sampled: ____ feet

Sample Date & Time: 8/29/2000 1100 (military) hours Duplicate: ____ hours

Sampler(s): B. Fennelly E. Paddleford T. Dorgan K. O'Neill (circle appropriate)

Data Recorded By: T. Dorgan (Signature)

H&S Monitor Reading: NA ppm

TYPE OF SAMPLE: (Check all that apply)

- X Soil
- ___ Sediment
- ___ Lagoon/Pond
- X Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

SAMPLE DATA/REMARKS: pH N/A units ORP N/A mV

ANALYSIS	Check
TAL METALS	X
CYANIDE	
Hex. CHROMIUM	
SULFIDES	

NOTES/SKETCH: ← Surface

WATER SOURCE = NERL REAGENT GRADE DI UF WATER. LOT=0203180 EXP. 02/2001

DIRECT POUR WATER THROUGH HAND AUGER BUCKET INTO BOTTLE & PRESERVE W/ HNO_3.

SAMPLE LOG SHEETS

FEBRUARY 2001

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-#2702-020601

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: DUP02 (if applicable)
IPSD-DP02-020601

Sample Method: Scoop / Shovel

Depth Sampled: 0-03 feet

Sample Date & Time: 2/6/2001 1255 hours (military) Duplicate: 1300 hours

Sampler(s): C. Rousseau/ J. Daniel / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Daniel (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____ Soil	____ Trip Blank*
__x__ Sediment	____ Rinsate Blank*
____ Lagoon/Pond	__X__ Field Duplicate collected
__x__ Grab	____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
muck - Black wet abundant organics (roots, twigs, leaves)

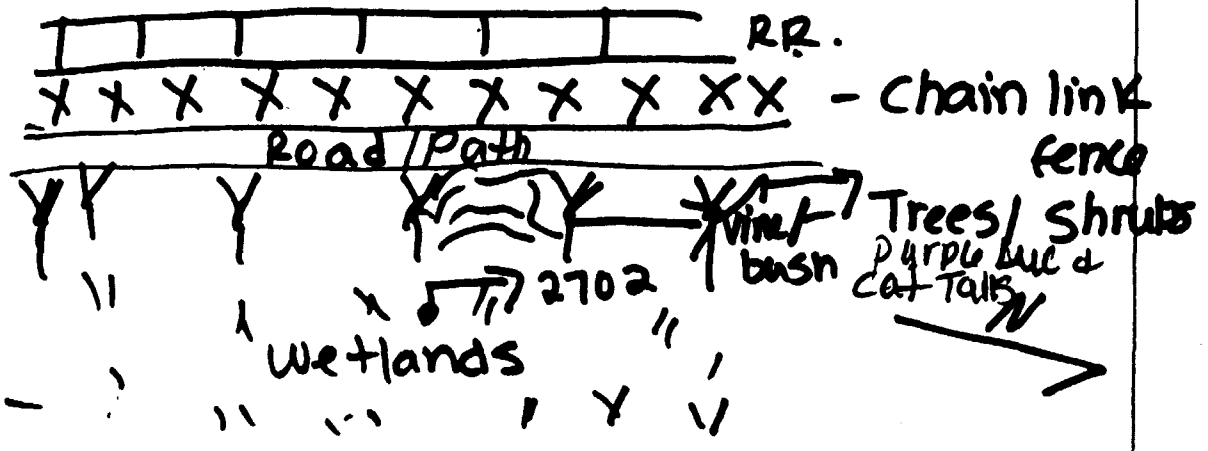
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 11.4 °C pH 6.14 Std. Units ORP 80.5 mV

* ~4" of water over sed.
* ~6" of snow + ice over water.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT-2703-020601

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop / Shovel

Depth Sampled: 0 - 0.5 feet

Sample Date & Time: 2 / 6 /2001 1330 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Daniell / H. O'Neil D.MacDougal (circle appropriate)

Data Recorded By: J. Daniell (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - abundant organics/roots + twigs - Brown - Wet. Sulfur odor noted.

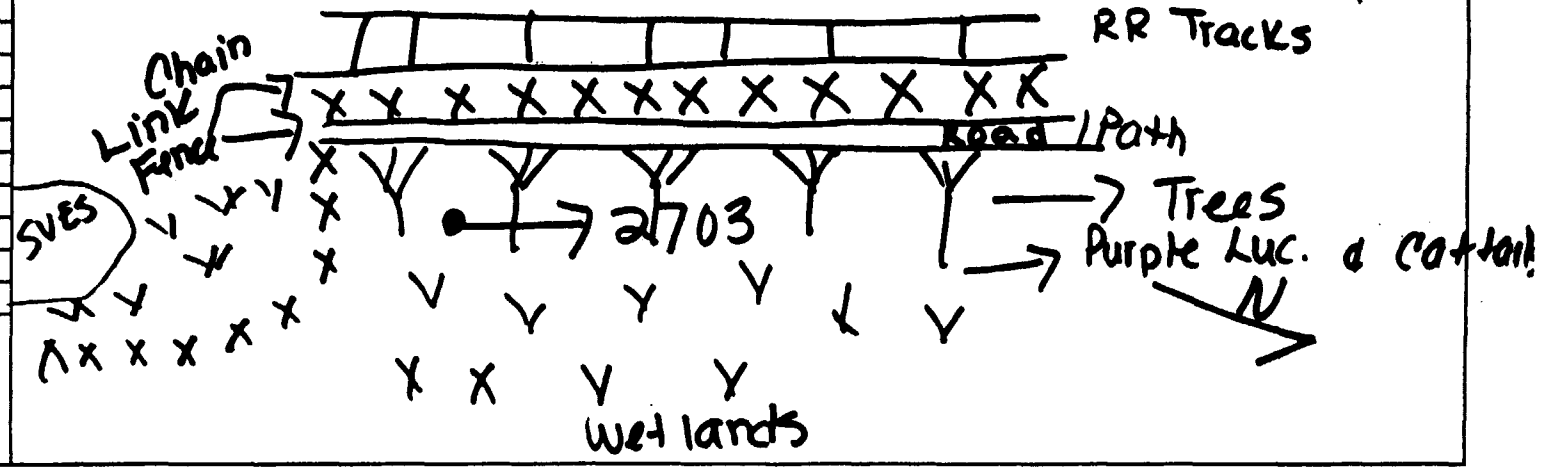
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

+ 6" of Ice over sed. - ~1.0ft of snow over ice.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT2701-020601

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop / Shovel

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/6/2001 1500 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau / J. Danieli / K. O'Neill / D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Black w/ Trace Organics

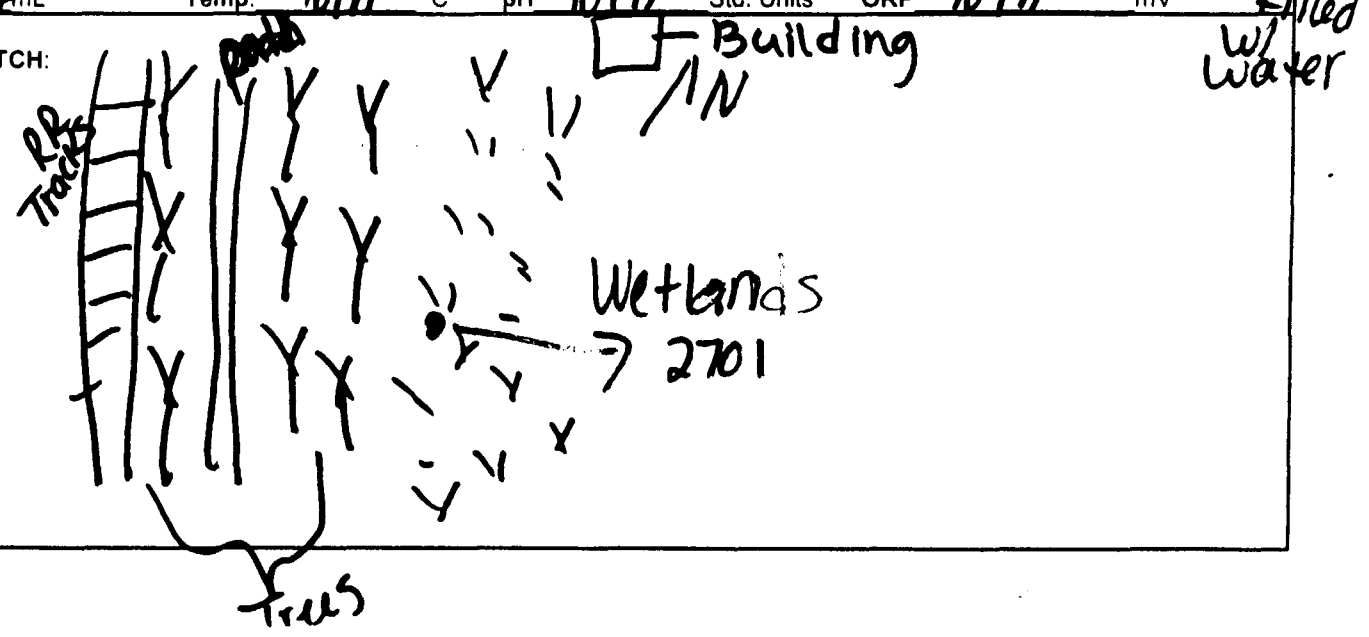
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~1.0' of snow over ice.
* 8" of water over ice
sediment back filled w/ water

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT2202-020701

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: SCOOP

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/7/2001 0930 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

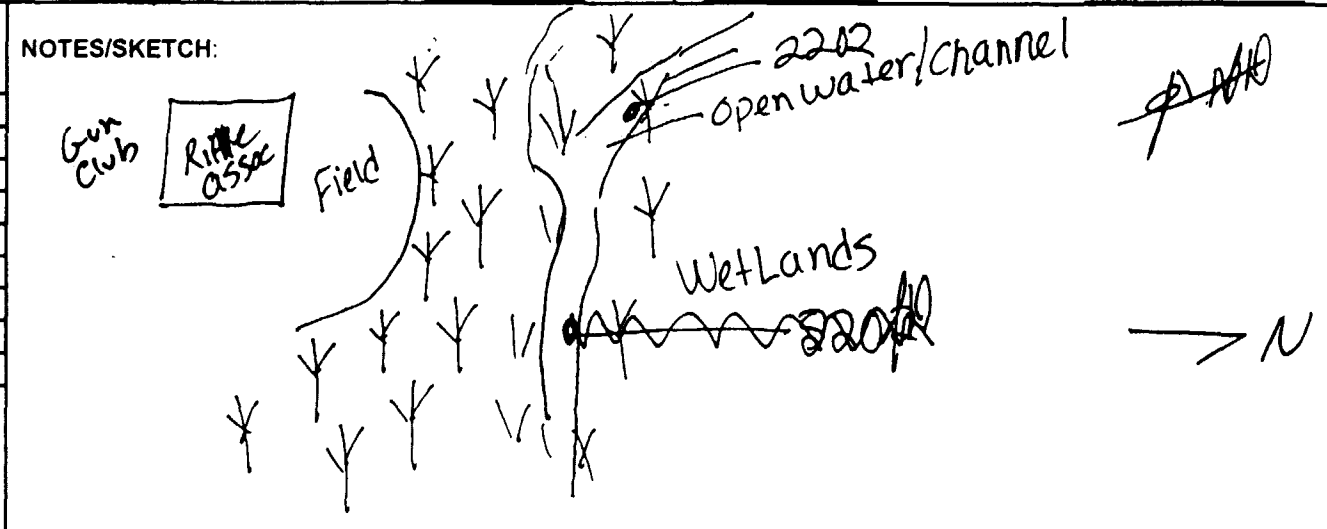
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Black, Wet, Trace organics - roots -
* Sheen noted.
*include DIUF lot # in "other"

Method 9045B
Field Data: Sediment wgt. N/A g (Performed at hexavalent chromium stations only)
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 0.5ft of Surface water over Sed.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-II 2201-020701
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/7/2001 0945 (military) hours Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: L. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Dk Brown, Wet, Abundant Organics (leaves, roots, twigs)

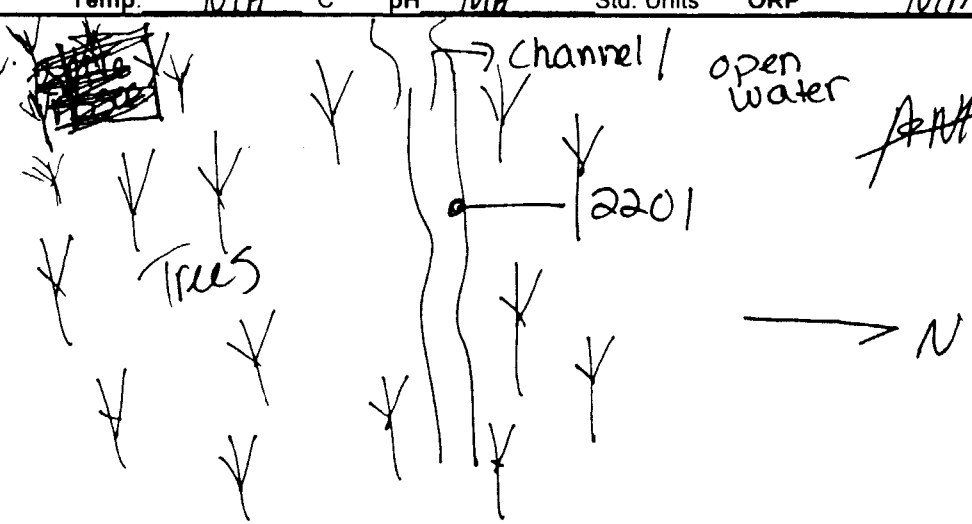
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

*~0.5 ft of Surface water oversed.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT-2203-020701

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/7/2001 1000 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Dk Brown, Wet, Trace Organics (roots)

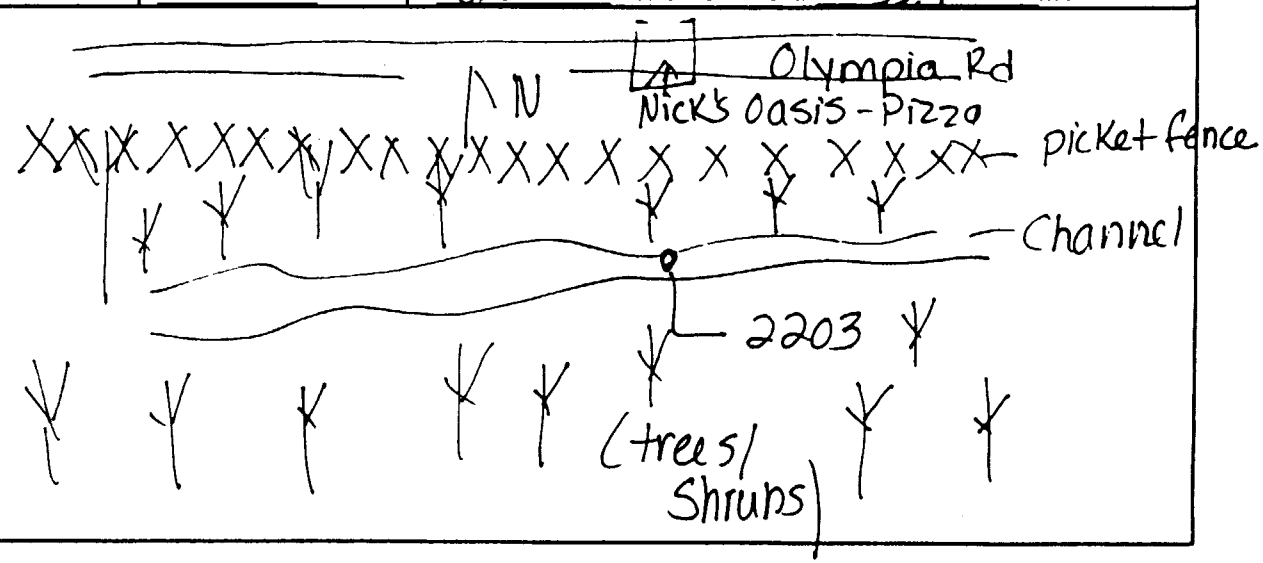
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 10.4 °C pH 6.04 Std. Units ORP 55.7 mV

* ~ 1.0 ft of Surface water over Sed. and Organic Leave Layer over sed.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD ~~FB~~803-020701

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/7/2001 1203 hours (military) Duplicate: _____ hours

Sampler(s): C. Rousseau/ J. Daniell/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Daniell (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- __x__ Sediment
- ____ Lagoon/Pond
- __x__ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) Muck - Black, wet, no organics noted

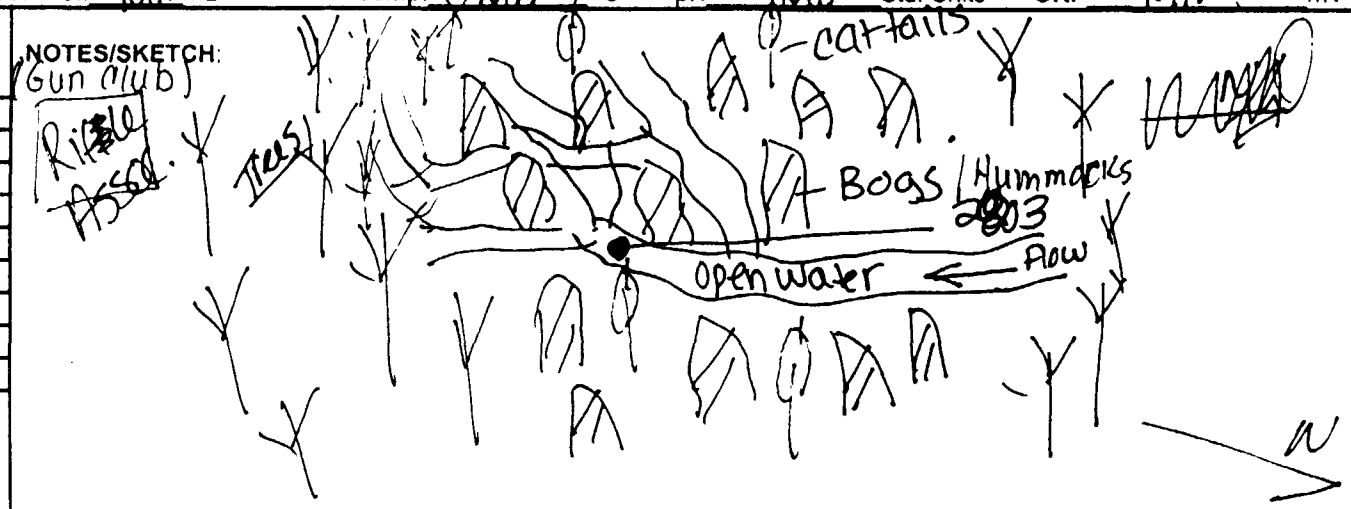
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 1.0 ft of surface water overlying sediment
* Flow in surface water

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-112802 C20701

Tetra Tech NUS Job No./PMS N0564-0322 ~~N/A~~
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 6 - 0.5 feet

Sample Date & Time: 2 / 7 /2001 1227 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- _x_ Sediment
- ____ Lagoon/Pond
- _x_ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Black, Wet. No organics noted.

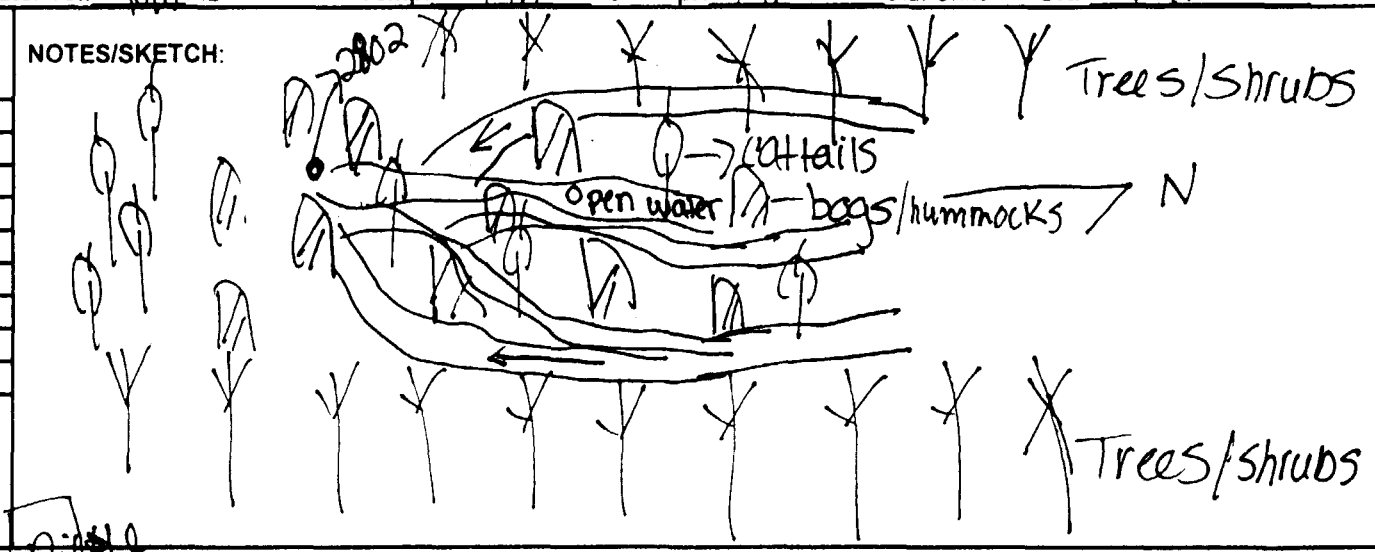
*include DIUF lot # in "other"

Method 9045B
Field Data: (Performed at hexavalent chromium stations only)
Sediment wgt. N/A g
DIUF Water vol: N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~1.0 ft of surface water over sed.
* Flow in surface water.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A
(Gun Club) Riffle Assoc.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - ~~TT2802~~ TT2801 DX 2-5 020701

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/7/2001 1255 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
x	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
x	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Black, Wet, no organics noted

*include DIUF lot # in "other"

Method 9045B
Field Data: Sediment wgt. N/A g (Performed at hexavalent chromium stations only)
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~1.0 ft of Surface Water over sed.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT2704-020701

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A MS/MSD (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/7/2001 1450 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
MUCK - Black, Wet, Organics noted - (roots + twigs)

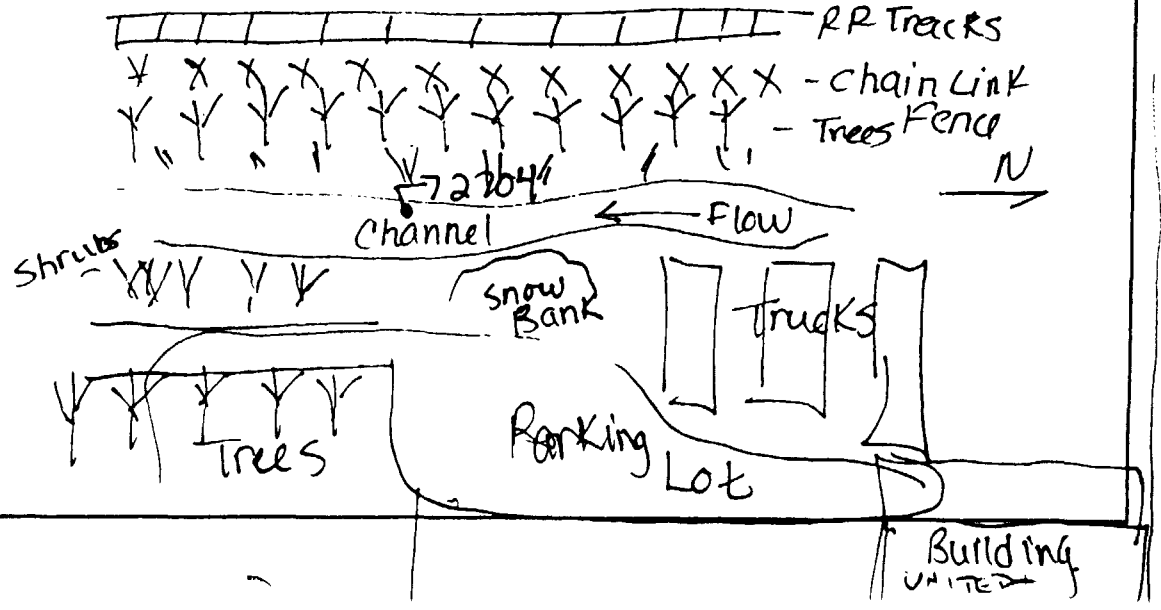
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

X ~ 1 oft of surface water over sediment - sheen noted on surface water

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

WILDWOOD A.C.

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0210-020801

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2 / 8 /2001 0845 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
x	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
x	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
muck: wet, Brown, Organics noted - twigs, leaves, roots

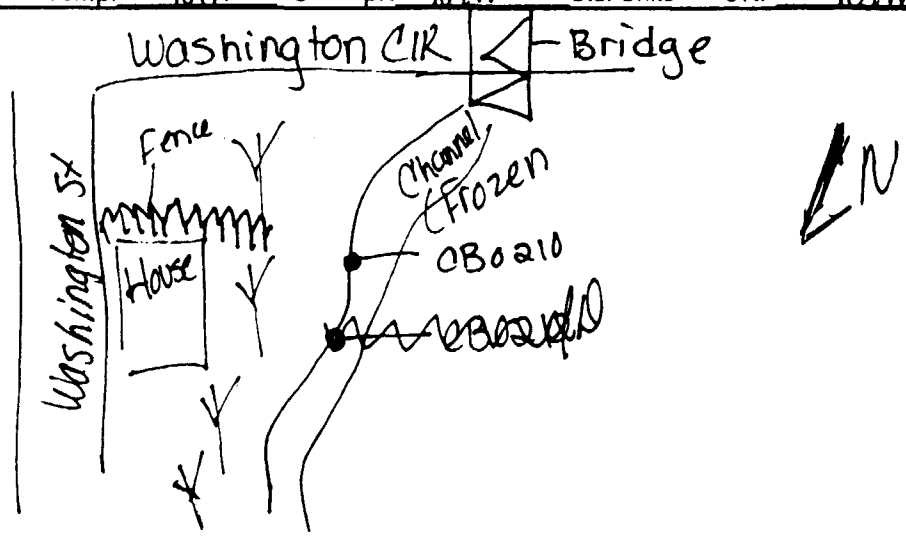
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* 8" of ice over surface water
* 6" of water over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0209-020801
Tetra Tech NUS Job No./PMS: N0564-0322
QC Information: DUP 03 (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/8/2001 0905 hours (military) Duplicate: 0910 hours
Sampler(s): C. Rousseau/ J. Daniel / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Daniel (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____ Soil	____ Trip Blank*
_x_ Sediment	____ Rinsate Blank*
____ Lagoon/Pond	X Field Duplicate collected
_x_ Grab	____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Brown, Wet, Trace organics

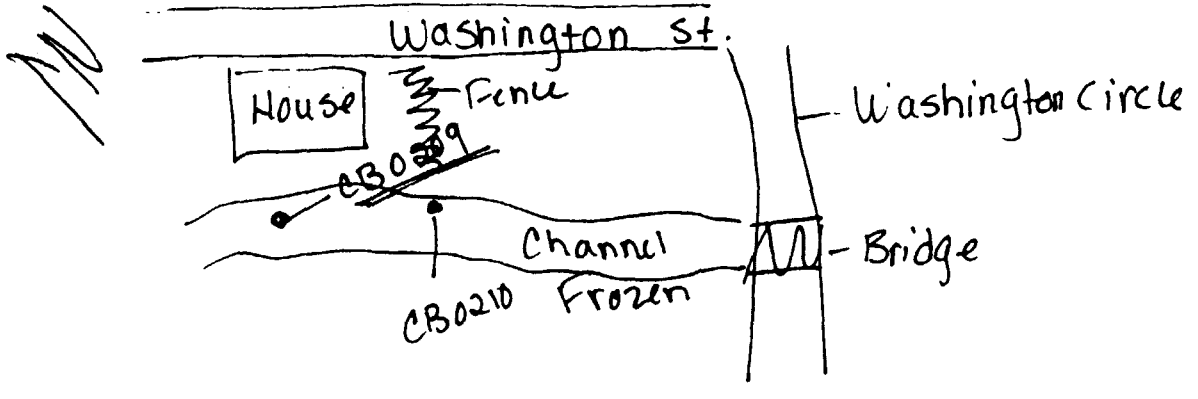
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 7.0 °C pH 7.14 Std. Units ORP 104.5 mV

* ~ 5" of ice over surface water
* ~ 6" of water over sediment.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT-33-02-020801

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: hand trowel

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/8/2001 0820 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill / D.MacDougal (circle appropriate)

Data Recorded By: K. O'Neill (Signature)

PID Monitor Reading: _Not Used_ppm

water depth = 0.5'

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

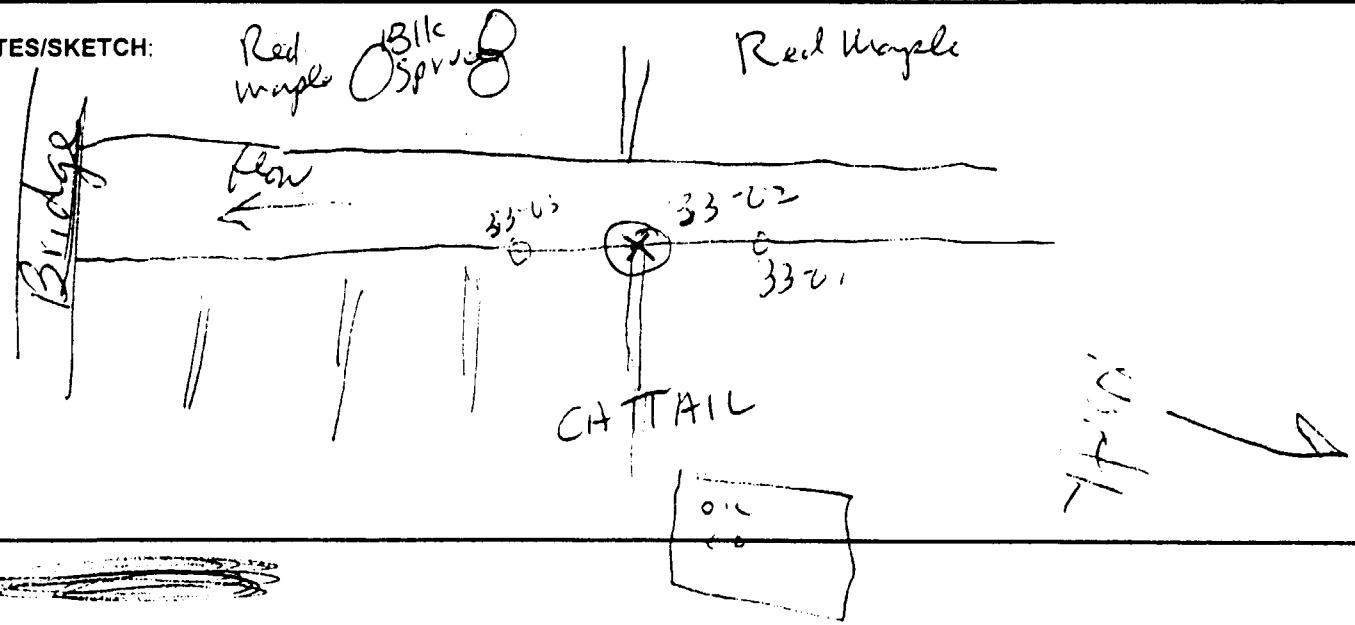
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
blk organic muck w/some sand + decayed leaf litter

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 5.7 °C pH 6.24 Std. Units ORP -55.8 mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	X

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT-33.03-020801

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: hand trowel

Depth Sampled: 0-0.5' feet

Sample Date & Time: 2/8/2001 0937 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Daniel/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: Kevin O'Neill (Signature)

PID Monitor Reading: _Not Used_ppm

Collected at edge of River channel water = 4" deep

4" deep water

TYPE OF SAMPLE: (Check all that apply)

____ Soil	____ Trip Blank*
_x_ Sediment	____ Rinsate Blank*
____ Lagoon/Pond	____ Field Duplicate collected
_x_ Grab	____ Composite

Other ____

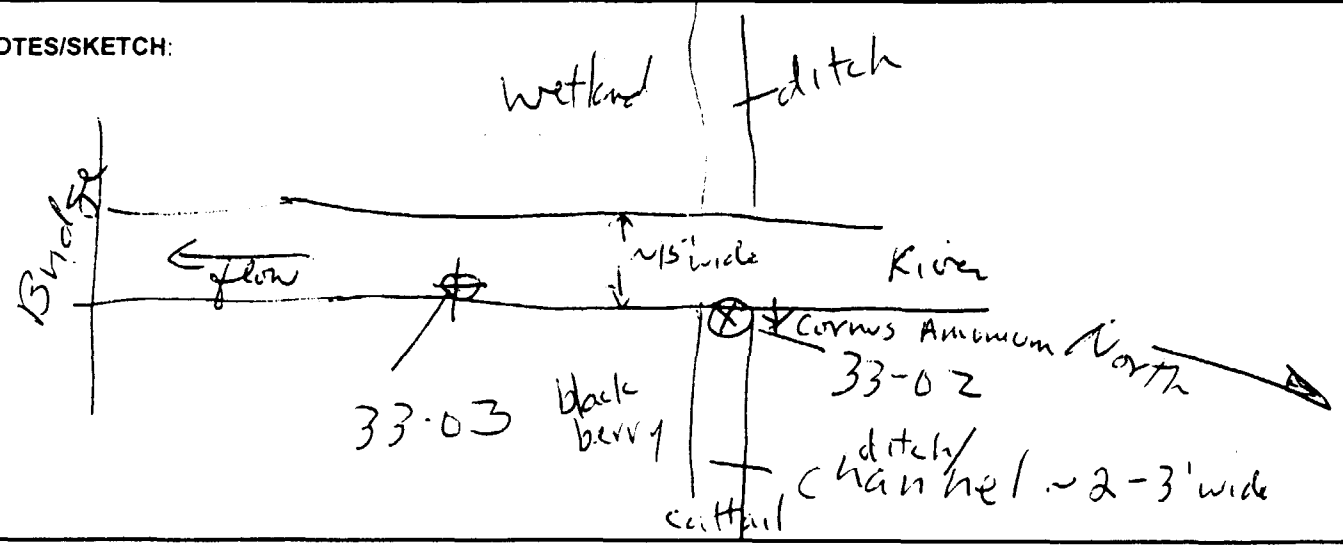
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
black organic muck w/ med sand + plant fibers

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD- CB0208- 020801

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/8/2001 0940 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danielli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danielli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Brown, Wet, Abundant Organics (roots, leaves, twigs).

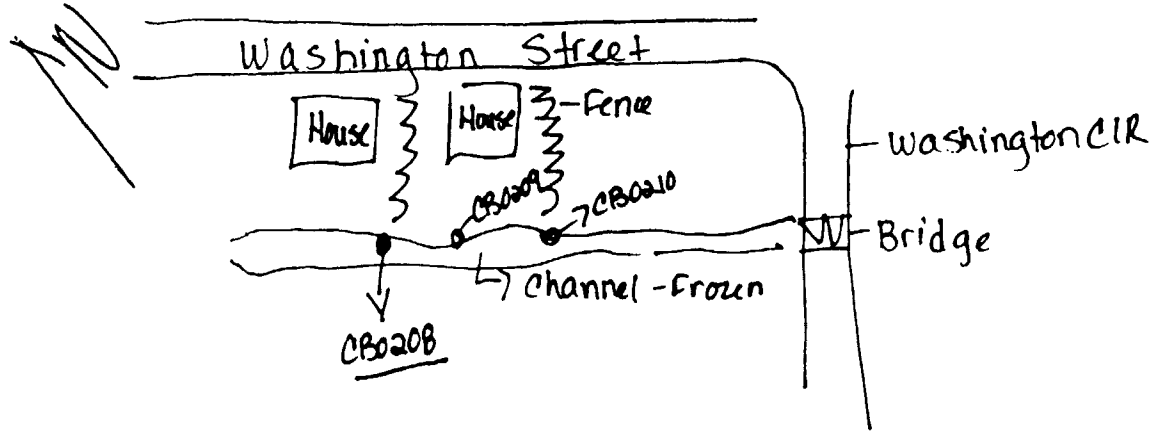
*include DIUF lot # in "other"

Method 9045B
Field Data: (Performed at hexavalent chromium stations only)
Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 5" of ice over surface water
* ~ 0.5 ft of water over sediment.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD -TT -33-01 -020801

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: hand trowel

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/8/2001 0950 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: Kevin O'Neill (Signature)

PID Monitor Reading: _Not Used_ppm

Water depth 4"

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

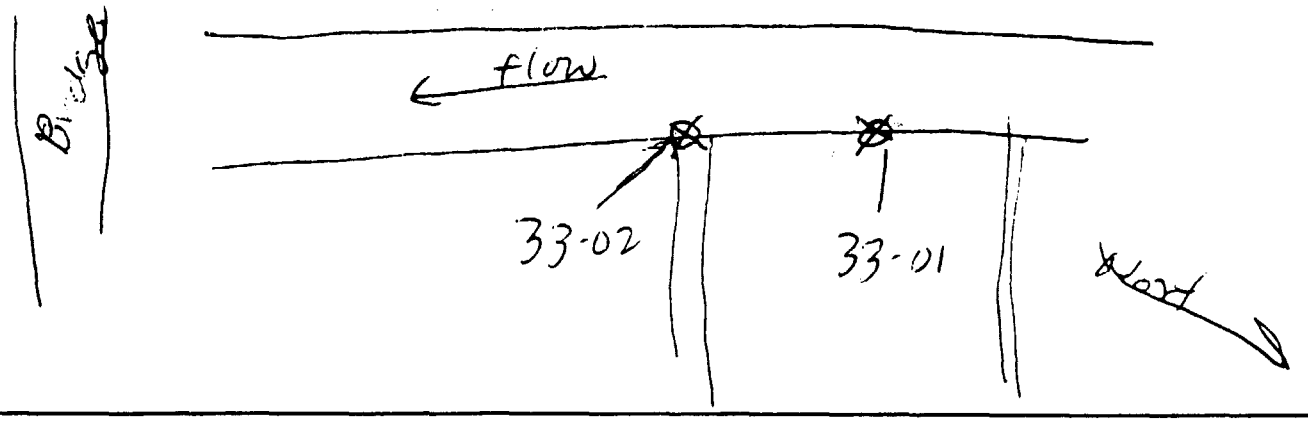
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Organic black mucky w/ fine sand + plant fibers

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH: Collected at edge of river channel



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0207-020801
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop
Depth Sampled: 0 - 0.5 feet
Sample Date & Time: 2/8/2001 0945 hours (military) Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Wet, Brown, Trace Organics

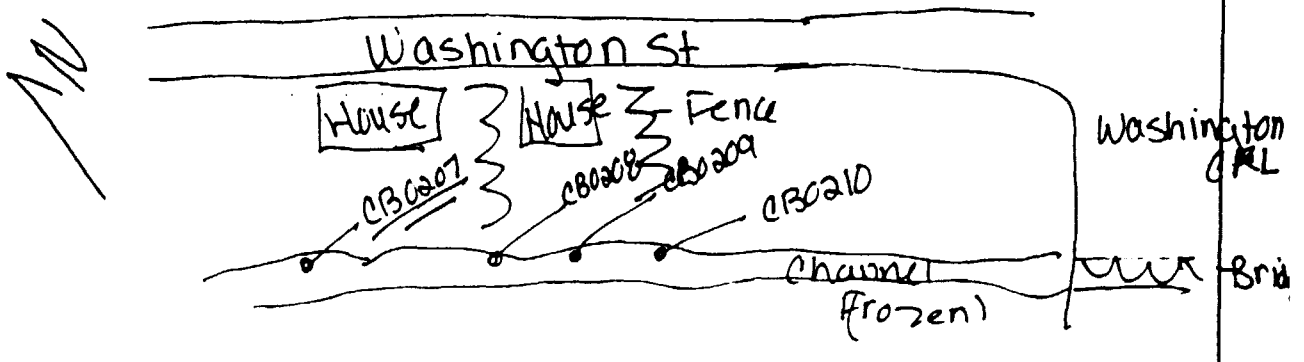
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~8" of ice over surface water.
* ~6" of surface water over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0322
Sample ID: IPSD-CBC206-020801
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/8/2001 1000 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- x Sediment
- ____ Lagoon/Pond
- x Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
MUCK - Brown, Wet, Abundant Organics (roots, leaves, twigs) Sulfur odor noted, 2" leaver layer over sediment

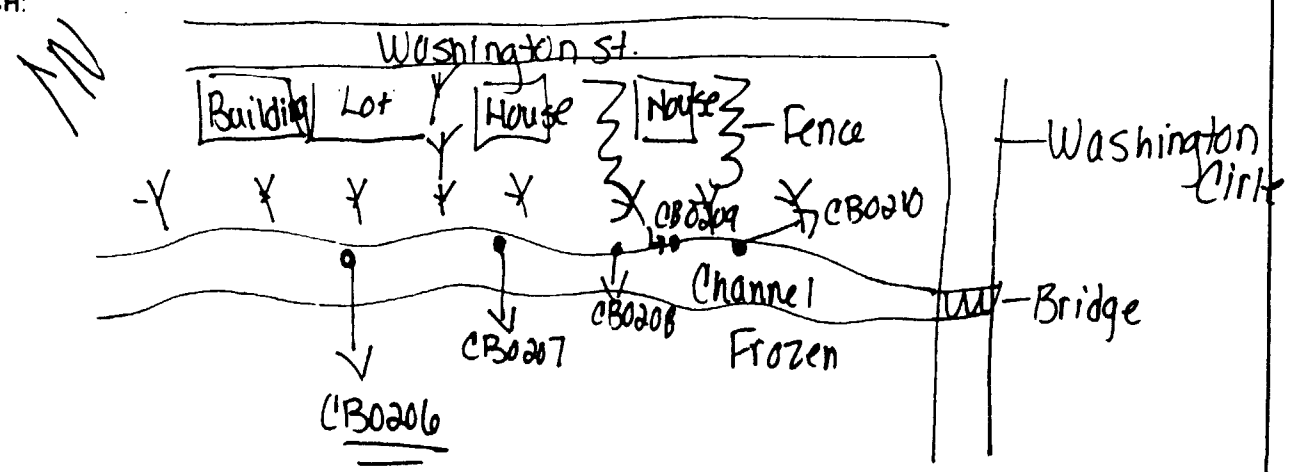
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~4" of ice over surface water
* ~4" of surface water over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0322
Sample ID: IPSD-CB0204-020801 QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0.0.5 feet

Sample Date & Time: 2 / 8 /2001 1057 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

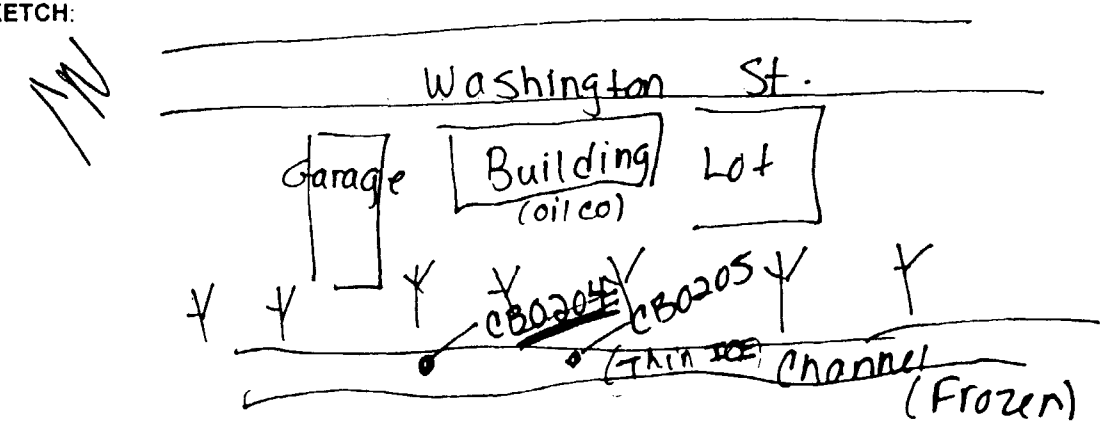
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Brown, Wet, abundant Organics (Twigs, leaves, roots)

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0205-C2080
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0 - 0.5 feet

Sample Date & Time: 2 / 8 /2001 1045 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
MUCK- Wet, Brown, abundant Organics (roots, leaves, twigs).

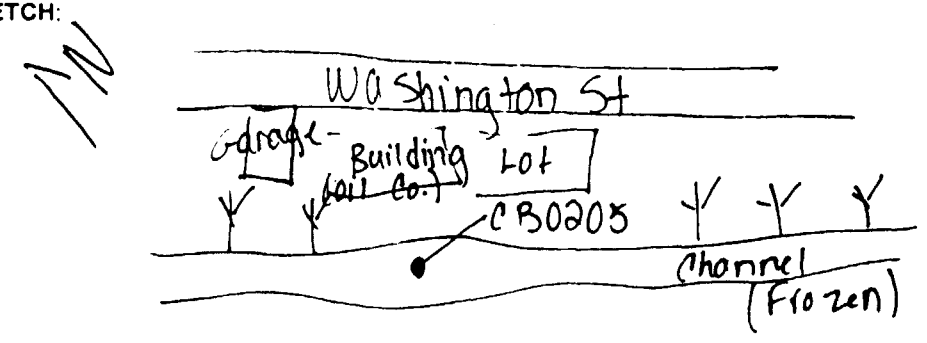
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* thin layer of ice over surface water
* 0.5ft of water over sediment.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0322
Sample ID: IPSD-CB0203-020801 QC Information: DUP04 (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/6/2001 1120 hours (military) Duplicate: 1125 hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Brown, Wet, abundant organics

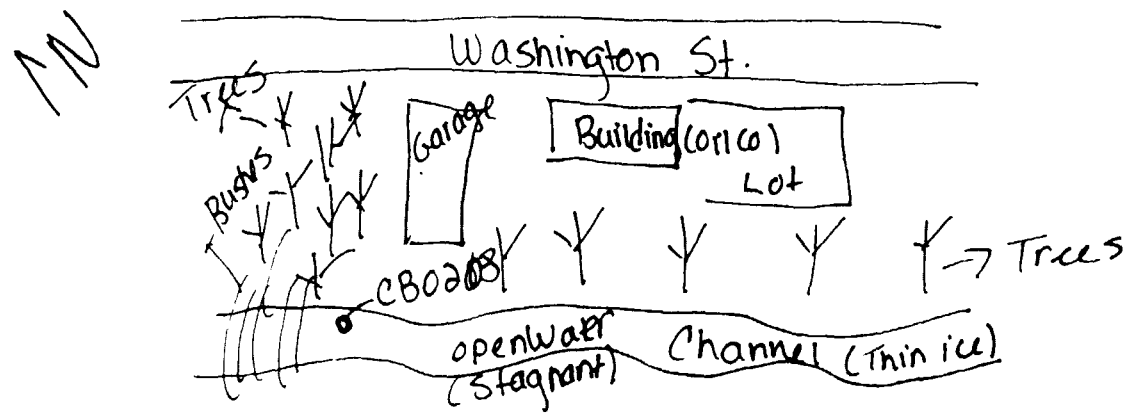
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 6.4 °C pH 6.43 Std. Units ORP 86.5 mV

*~ 0.5ft of Surface Water over Sediment
no ice over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - CB0202 - 020801
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: SCOOP

Depth Sampled: 0 - 0.5 feet

Sample Date & Time: 2/8/2001 1133 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
BLACK - Brown, Wet, abundant organics (roots, leaves, twigs)

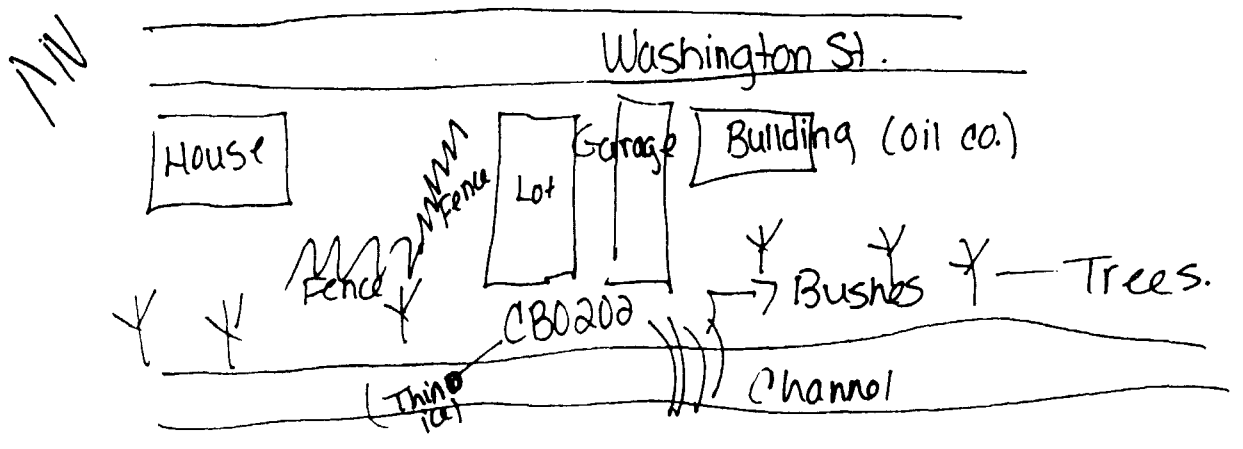
*include DIUF lot # in "other"

Method 9045B
Field Data: (Performed at hexavalent chromium stations only)
Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 0.5 ft of surface water over sed. thin layer of ice on surface wat

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS: N0564-0322
Sample ID: IPSD-CB0201-C20801
QC Information: N/A (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/8/2001 1150 (military) hours Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Daniel / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: D. Daniel (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- _x_ Sediment
- ___ Lagoon/Pond
- _x_ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck-Wet, Brown, Abundant Organics (leaves, twigs, roots)

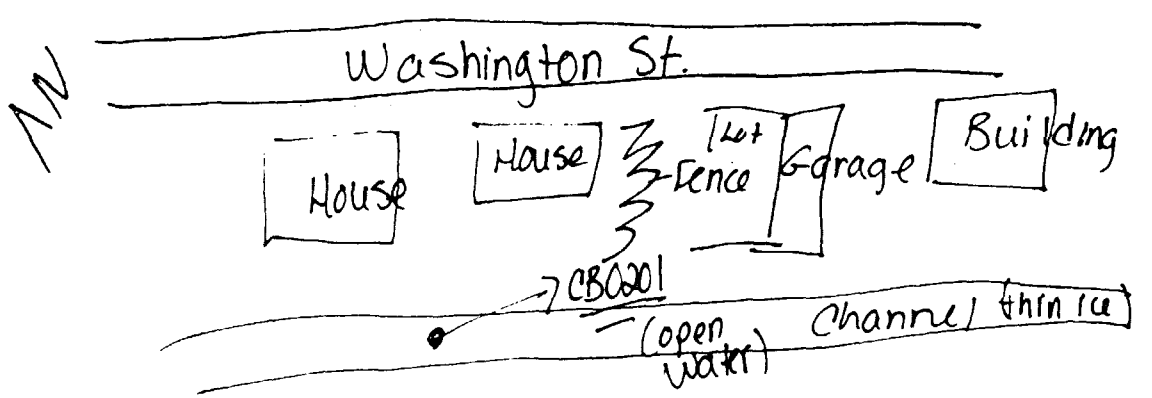
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 0.5 ft of surface water over sed.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - CB0308 - 020801
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method:

Depth Sampled: 0 - 0.5 feet

Sample Date & Time: 2/8/2001 1345 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- __x__ Sediment
- ____ Lagoon/Pond
- __x__ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
MUCK - Brown, Wet, trace organics (roots, twigs, + leaves)

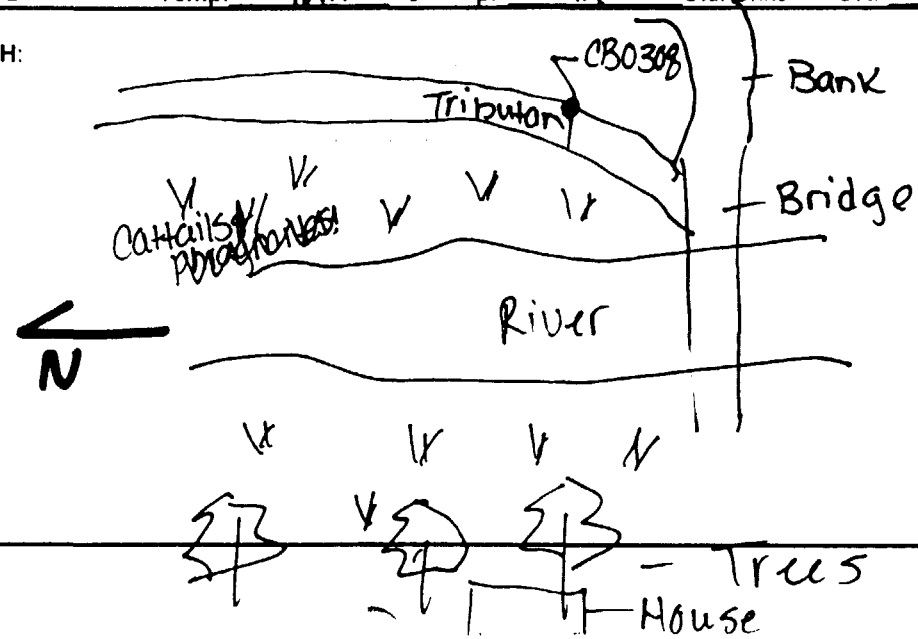
*include DIUF lot # in "other"

Method 9045B
Field Data: (Performed at hexavalent chromium stations only)
Sediment wgt. N/A g
DIUF Water vol: N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~3" of snow & ice over surface water
* ~3" of water over sed.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD- CB0307 ~~CB0307~~ 020801
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop IAW
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/8/2001 1413 (military) hours Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

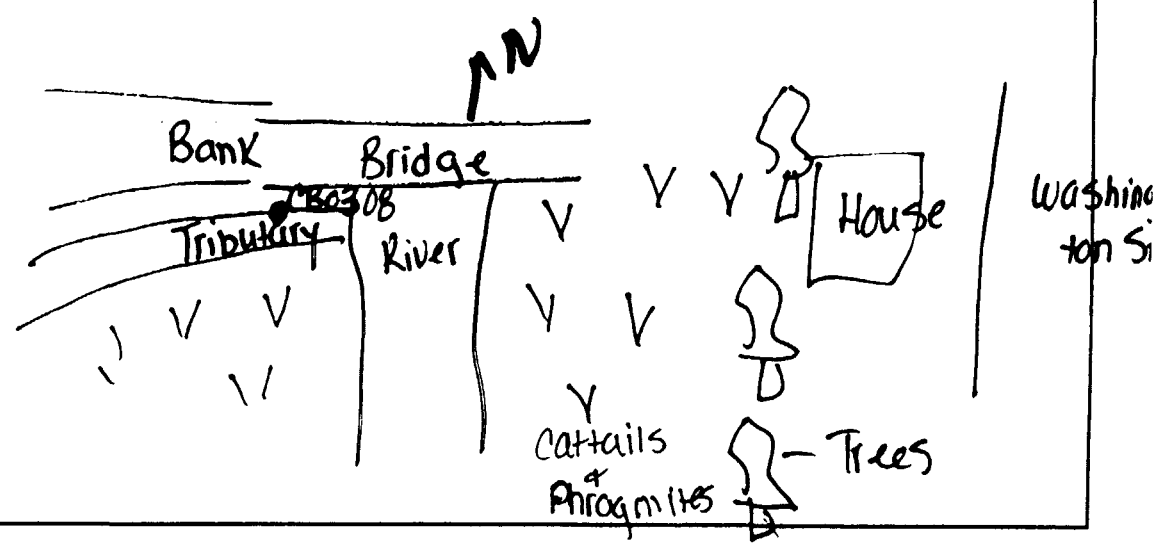
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Fibric Peat w/ Silt and Sand, moist.
Sulfide odor noted.
*include DIUF lot # in "other"

Method 9045B
Field Data: (Performed at hexavalent chromium stations only)
Sediment wgt. N/A g
DIUF Water vol: N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 8" of ice over sediment.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0309-02080
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2 / 8 /2001 1420 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- __x__ Sediment
- ____ Lagoon/Pond
- __x__ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) Muck- Brown, Wet, Trace organics (roots)

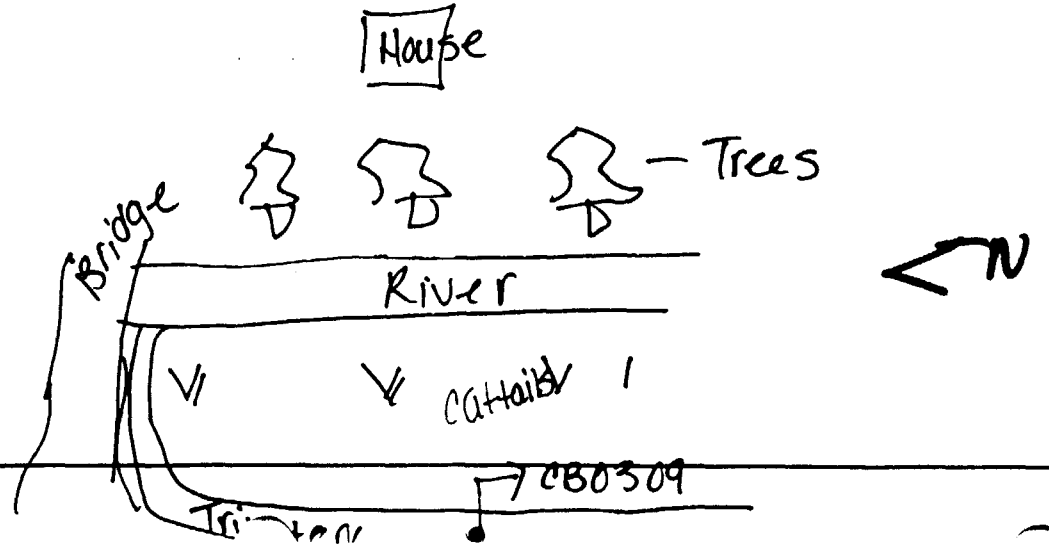
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 0.5ft of Surface water over sed

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - CB0310- 020801

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/ 8 /2001 1424 hours (military) Duplicate: _____ hours

Sampler(s): C. Rousseau/ J. Daniel / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Daniel (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- _x_ Sediment
- ____ Lagoon/Pond
- _x_ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other _____

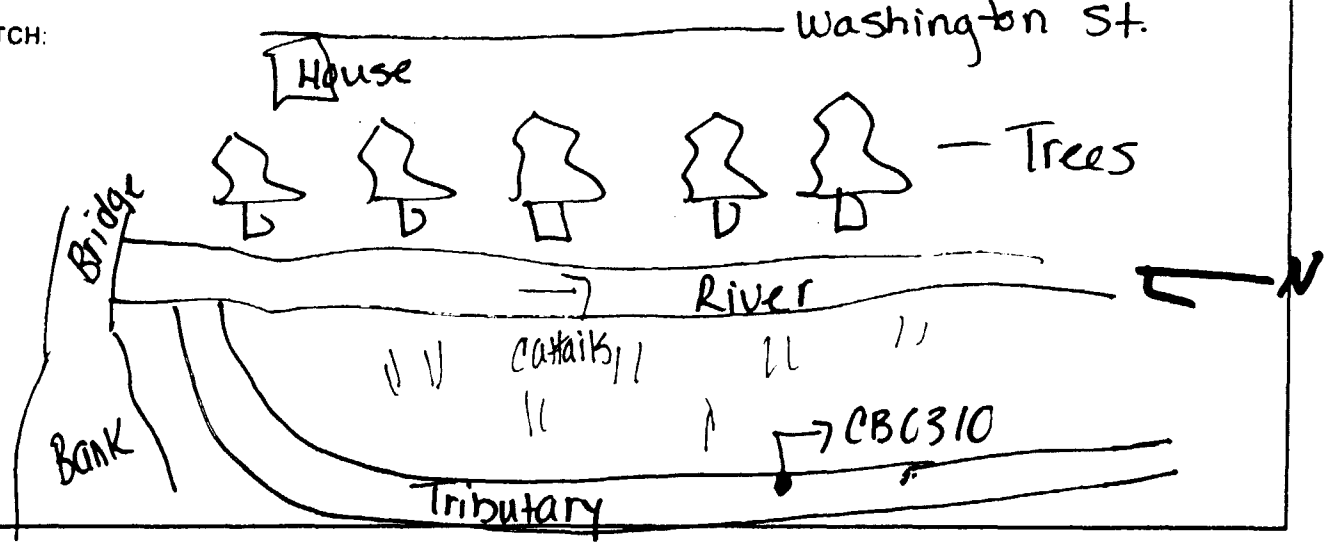
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) Muck - DK Brown, no organics noted

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 6.3 °C pH 6.43 Std. Units ORP 73.4 mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB030[illegible]-020801
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/8/2001 1435 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
x	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
x	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
muck - Black, wet, minor organics

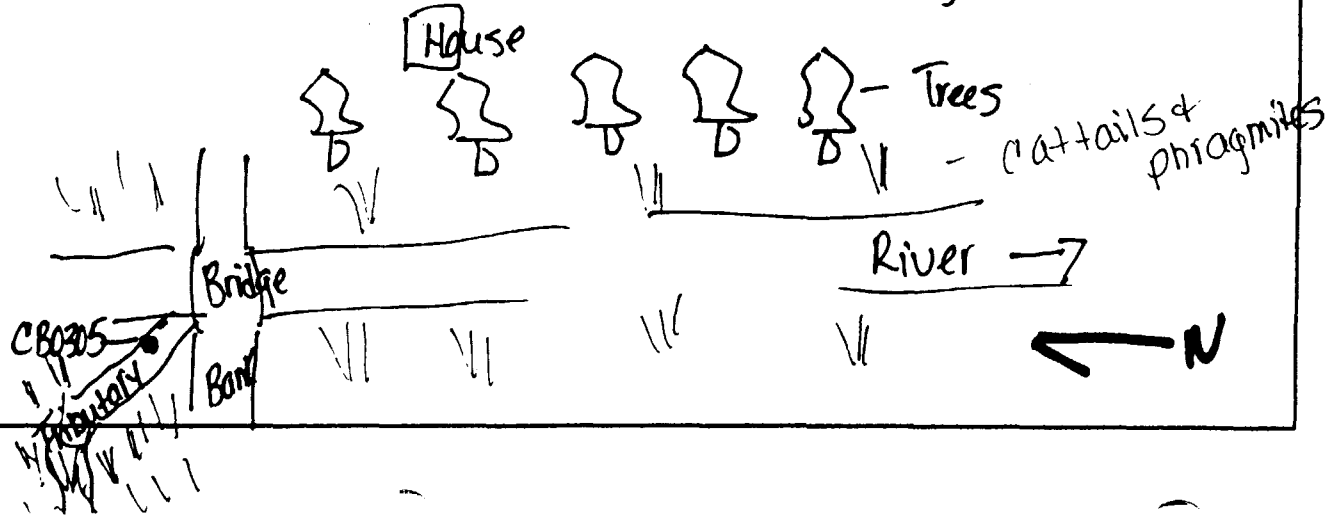
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 3" of ice and snow over sediment.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0322

Sample ID: IPSD-CB03N-(2)
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/8/2001 1450 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- __x__ Sediment
- ____ Lagoon/Pond
- __x__ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Dk Brown, Wet, Trace organics (Roots)

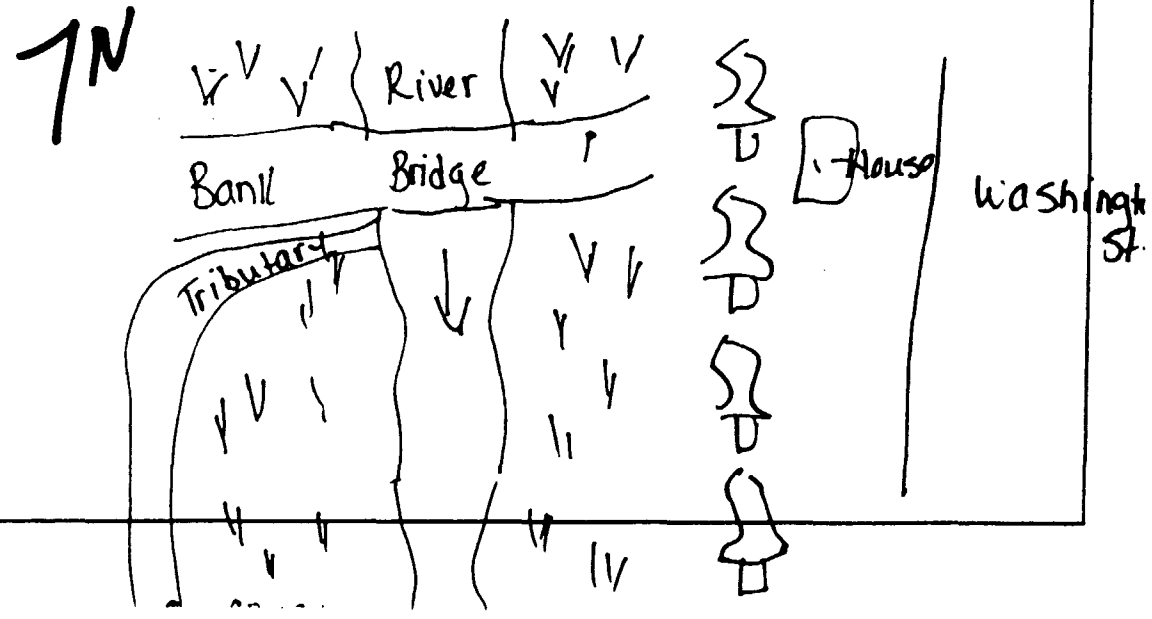
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 0.3 ft of water over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0322
Sample ID: IPSD-CB0305-020801 QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-05 feet

Sample Date & Time: 2/8/2001 1510 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck/Peat - Wet, Brown, abundant Organics (root fiber)

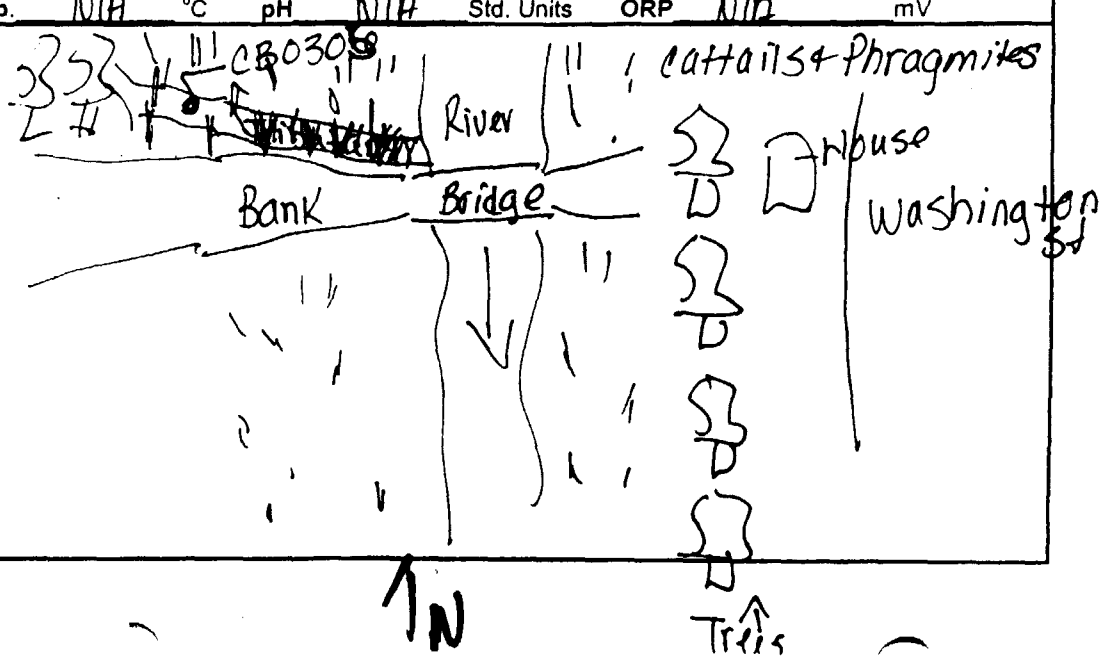
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ ~~[illegible] of Snow~~ * ~8" of Snow and ice

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0322
Sample ID: IPSD-CB0304-020801
QC Information: DUP05 (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/8/2001 1622 (military) hours
Duplicate: ~~N/A~~ 1525 hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ___ Soil
- _x_ Sediment
- ___ Lagoon/Pond
- _x_ Grab
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate collected
- ___ Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Fibric Peat w/ Root Fiber, Trace Silt and Sand - moist - Brown.

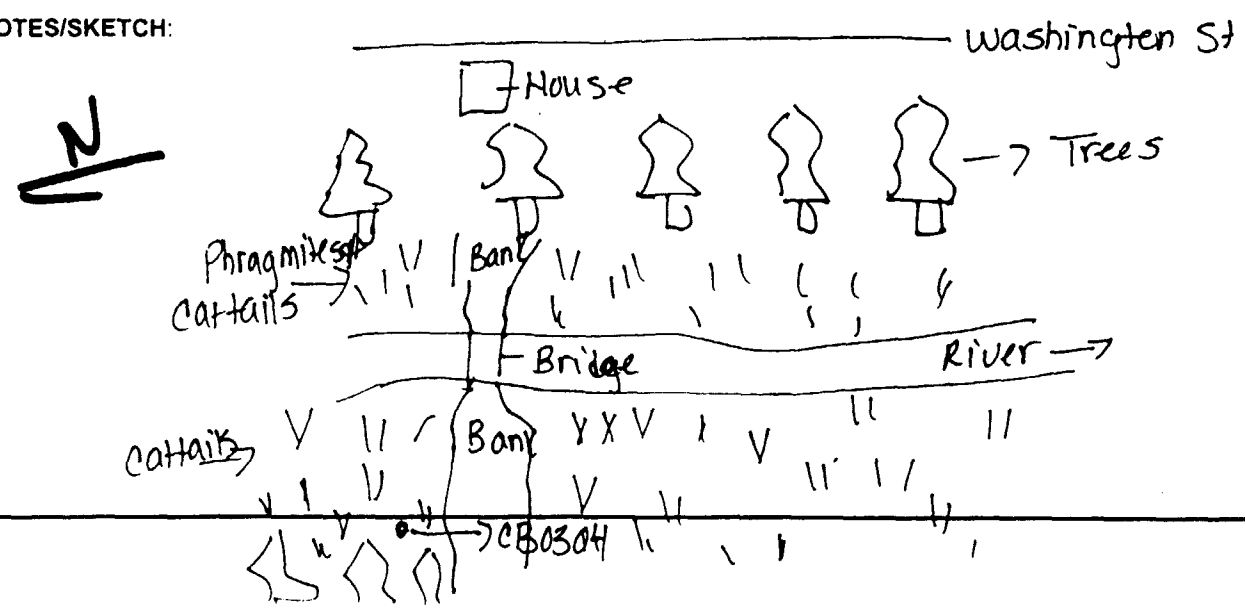
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 5.4 °C pH 7.47* Std. Units ORP 121.8 mV

*~1.0 ft of Snow and ice over sediment Location

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB03 12-020801
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/8/2001 1530 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____ Soil
_x_ Sediment
____ Lagoon/Pond
_x_ Grab
____ Trip Blank*
____ Rinsate Blank*
____ Field Duplicate collected
____ Composite

Other____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Fibric Peat - Root Fibers - Moist - Brown; Trace Silt

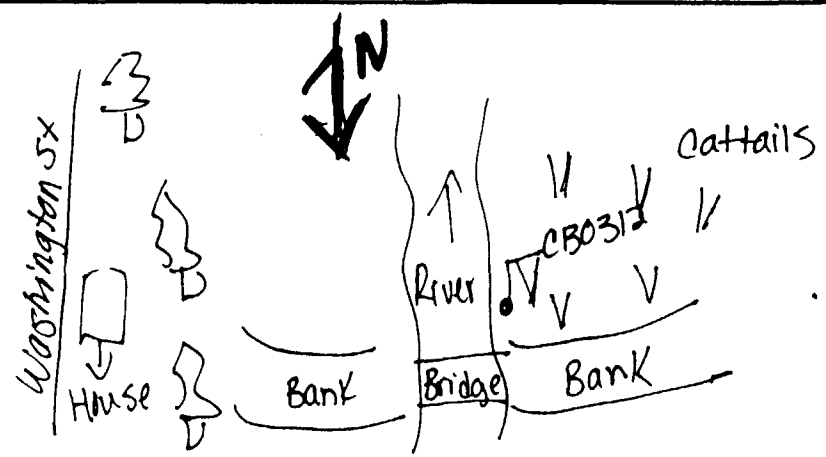
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

+ ~8" of snow & ice over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD- CB0303-020901

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A ~~Matrix Spike~~ (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2 / 9 /2001 0850 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Fibric Peat - trace Sand + Silt, moist, abundant roots, Brown

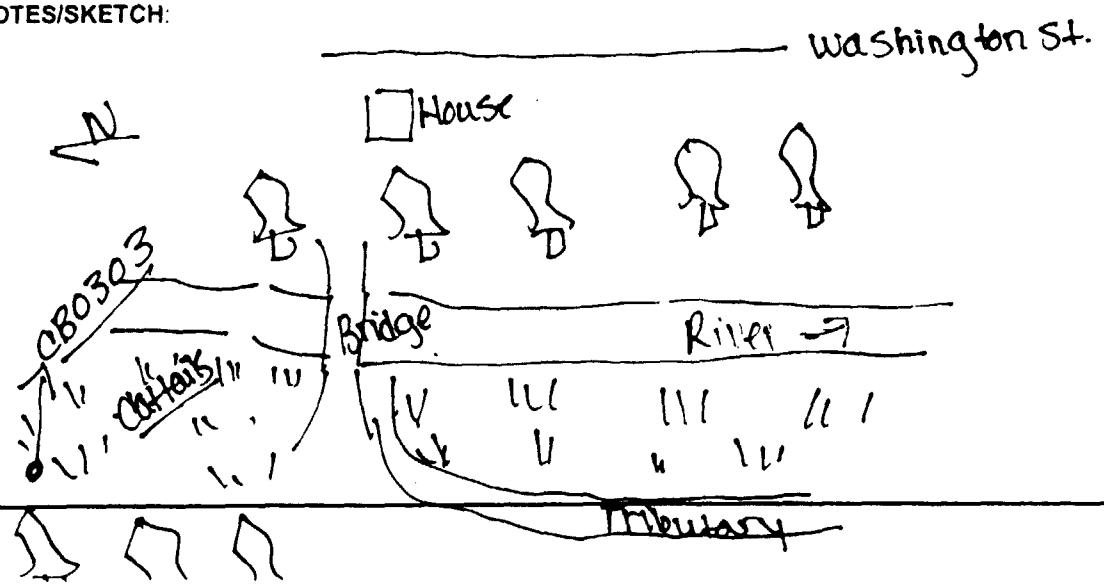
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~1 ft of snow over sediment
* ~ 2" of ice over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0502-020201
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop
Depth Sampled: 0-05 feet
Sample Date & Time: 2/9/2001 0902 hours (military) Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____ Soil	____ Trip Blank*
_x_ Sediment	____ Rinsate Blank*
____ Lagoon/Pond	____ Field Duplicate collected
_x_ Grab	____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Fibrous Peat, Trace Sand + Silt
Abundant Roots, Brown, Moist

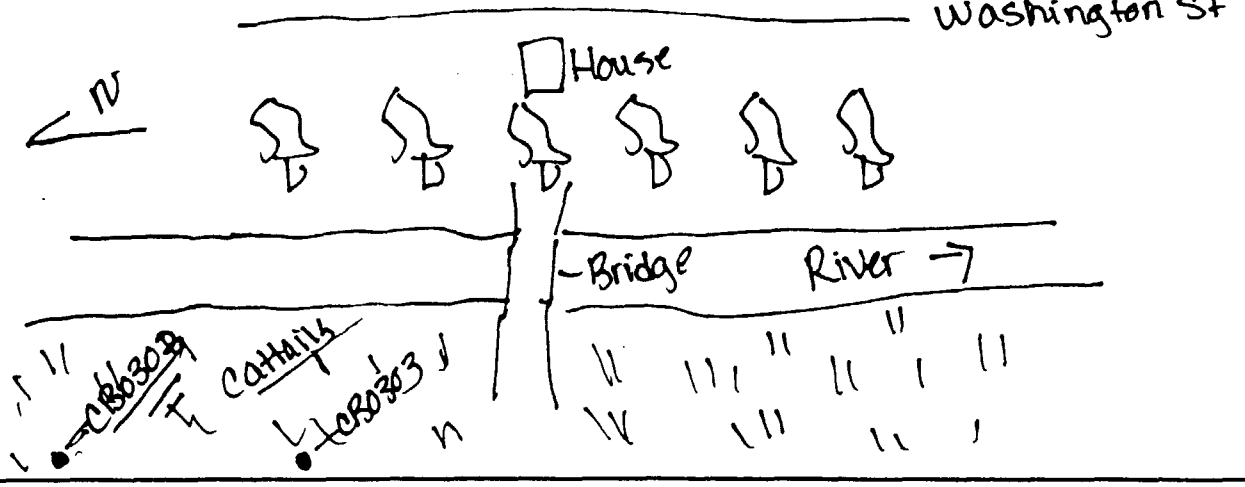
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

Y ~1.0 ft of snow over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0322

Sample ID: IPSD-080301-~~020901~~ 020901

QC Information: ~~MS/MSD/Duplicate Sample~~ (if applicable)

Sample Method: scoop

Depth Sampled: 0 - 0.5 feet

Sample Date & Time: 2 / 9 /2001 0915 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danielli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danielli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
~~Dry~~
Muck - wet, dark brown, abundant organics (roots, twigs, leaves)

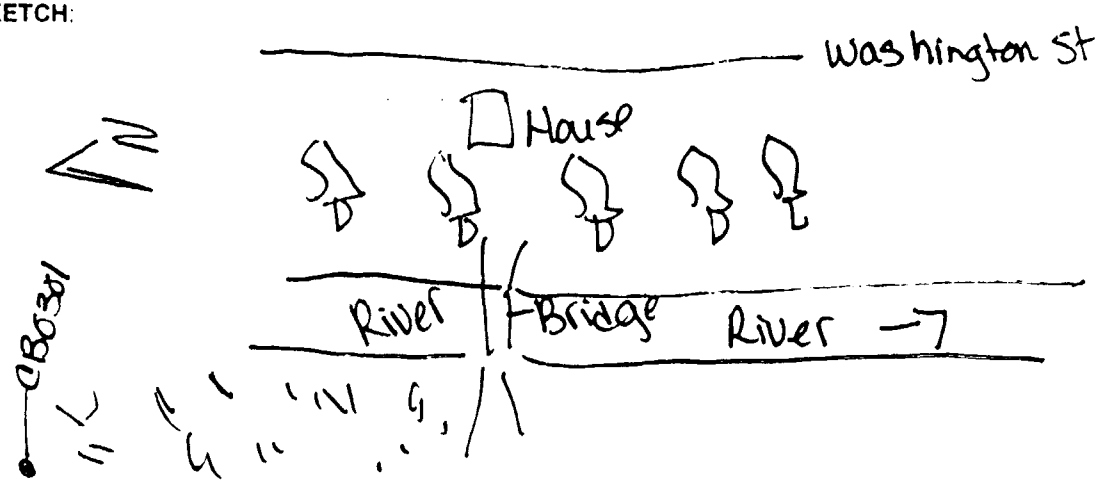
*include DIUF lot # in "other"

* ~1" of leaves over sed.
* ~6" of snow over sediment
* ~2" of water over sediment

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSP-CB0109-020901 (CB0109)
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/9/2001 1015 hours (military) Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

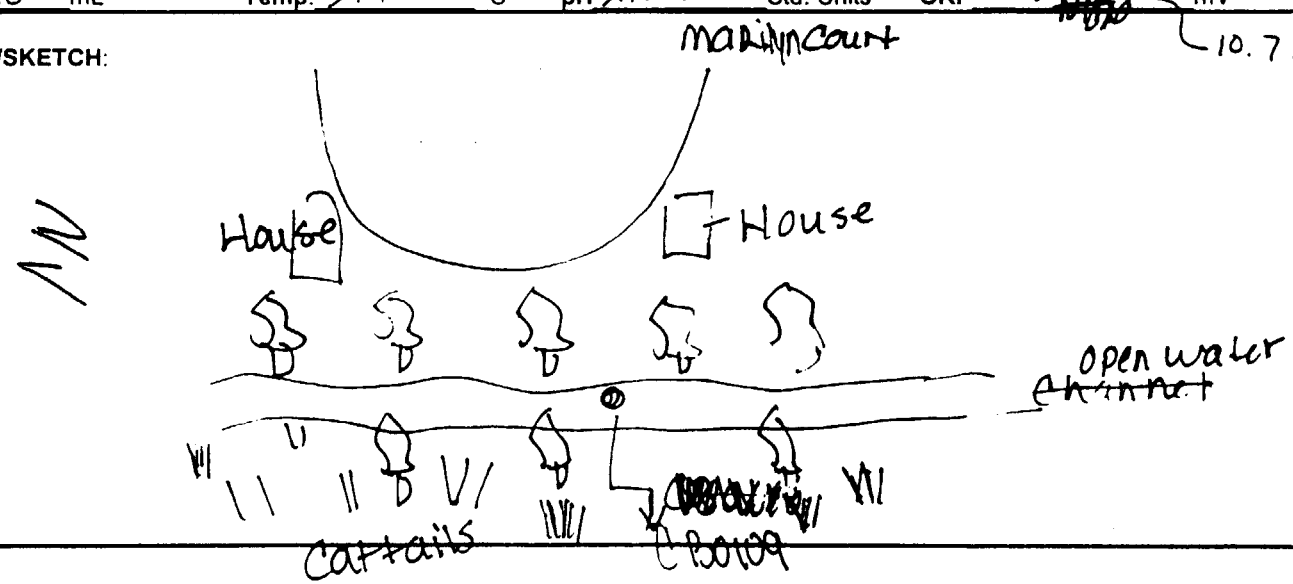
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Brown, wet, abundant organics (roots, leaves) sulfide odor noted
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 5.7 °C pH 5.70 Std. Units ORP 10.7 mV

* ~6" of surface water over sediment
* ~2" of leaf layer over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB016-020901
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-05 feet

Sample Date & Time: 2 / 9 /2001 1027 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

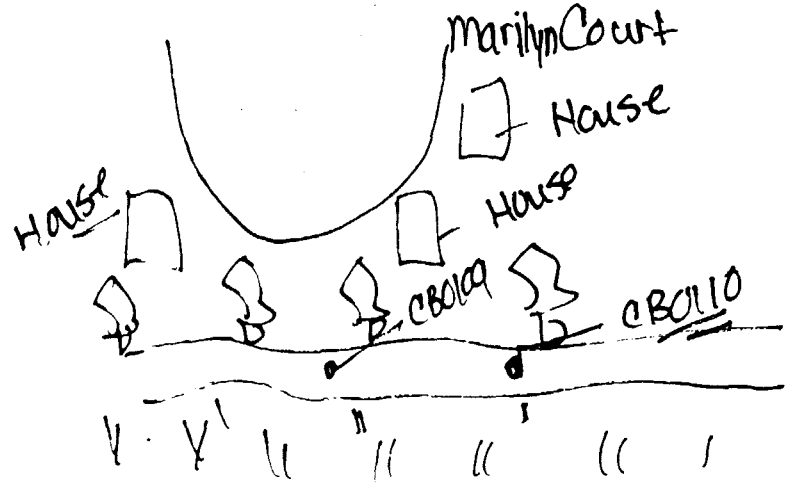
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Wet, Brown, Abundant Organics (roots + leaves)

*include DIUF lot # in "other" ¼ ~ 8" of surface water over sed.

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: PSD-CB0108-[illegible] 02090!

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9/2001 1055 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- _x_ Sediment
- ____ Lagoon/Pond
- _x_ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
MUCK- Dk Brown, wet, abundant organics (leaves & roots)

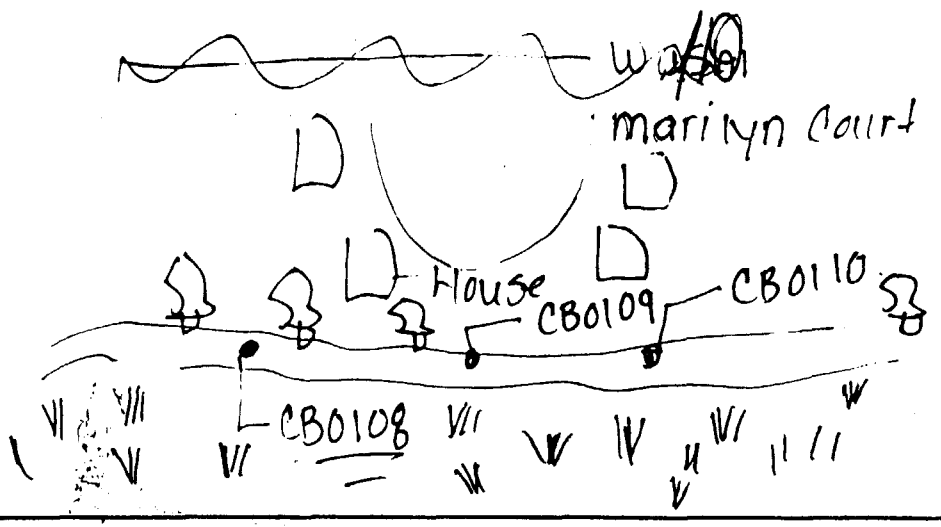
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

7 ~ 8" of ice over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT3203-020901

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: hand trowel

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9/2001 1106 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: [signature] (Signature)

raining

PID Monitor Reading: _Not Used_ppm

>2' deep in ctr channel water 4" deep

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
x	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
x	Grab	____	Composite

Other ____

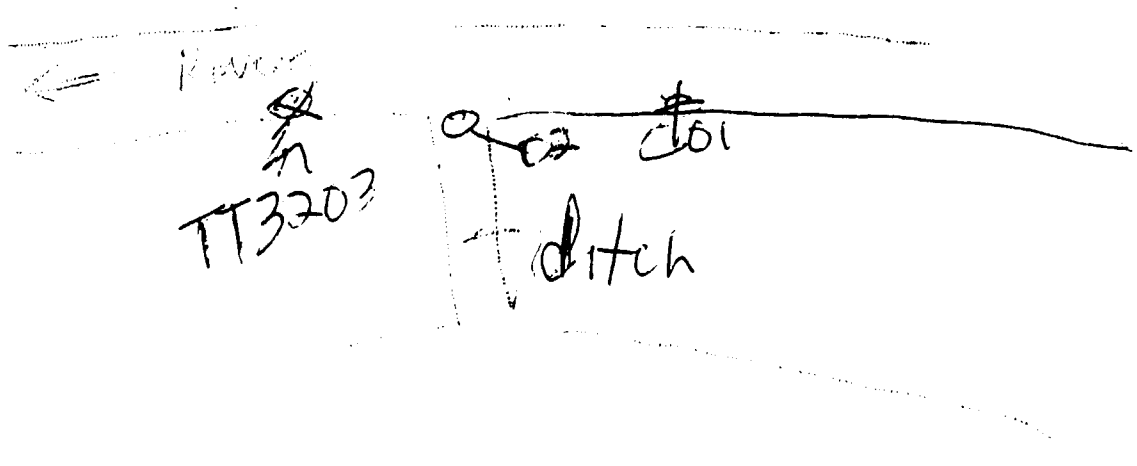
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
brn/blk organic
MUCK W/ [illegible]

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD TT 3202 -020901

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: hand trowel

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9 /2001 1110 hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill (military) D.MacDougal (circle appropriate)

Data Recorded By: Kerri O'Neill (Signature)

PID Monitor Reading: _Not Used_ppm

water depth 6"

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.) black muck with leaves + plant fibers potetsis

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)

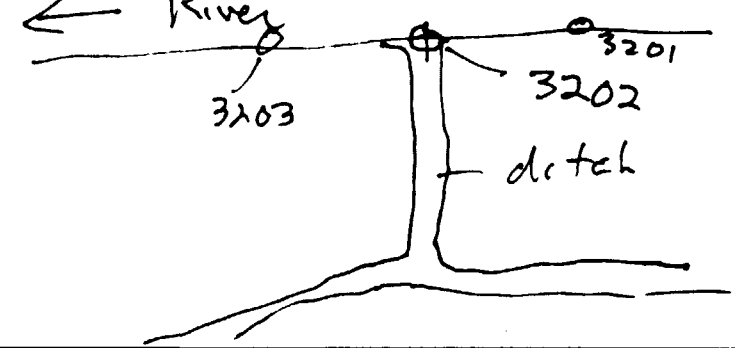
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. ~~N/A~~ 5.5 °C pH ~~N/A~~ 6.02 Std. Units ORP ~~N/A~~ -59.6 mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	X

NOTES/SKETCH:

raining

collected at junction of river + ditch



Hex chrome

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0106-020901
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9/2001 1120 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- _x_ Sediment
- ____ Lagoon/Pond
- _x_ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Wet, DK Brown
Abundant Organics (roots)
Trace Sand.

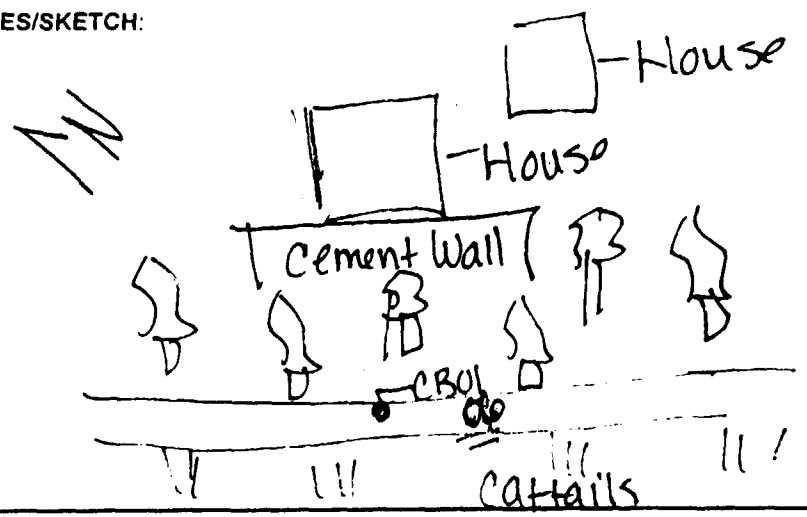
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A
DIUF Water vol: N/A mL Temp. N/A °C pH Std. Units ORP N/A mV

* ~2" of snow over sediment
* ~6" of roots + leaves sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD TT 3201 020901

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: _____ (if applicable)

Sample Method: hand trowel

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9/2001 1132 (military) hours Duplicate: _____ hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal, (circle appropriate)

Data Recorded By: Kevin O'Neill
(Signature)

PID Monitor Reading: _Not Used_ppm

water depth 10"

TYPE OF SAMPLE: (Check all that apply)

____ Soil
_x_ Sediment
____ Lagoon/Pond
_x_ Grab
____ Trip Blank*
____ Rinsate Blank*
____ Field Duplicate collected
____ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
brn/blk organic muck w/some sand

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol. N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	

NOTES/SKETCH: See 32-02 sketch

training

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0105-020901 (CB0105)
Tetra Tech NUS Job No./PMS: N0564-0322
QC Information: DUP06 (if applicable)

Sample Method: Scoop.
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/9/2001 1300 hours (military) Duplicate: 1305 hours
Sampler(s): C. Rousseau/ J. Daniel / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Daniel (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - trace Silt, Black, Wet
Oranges noted (Roots)

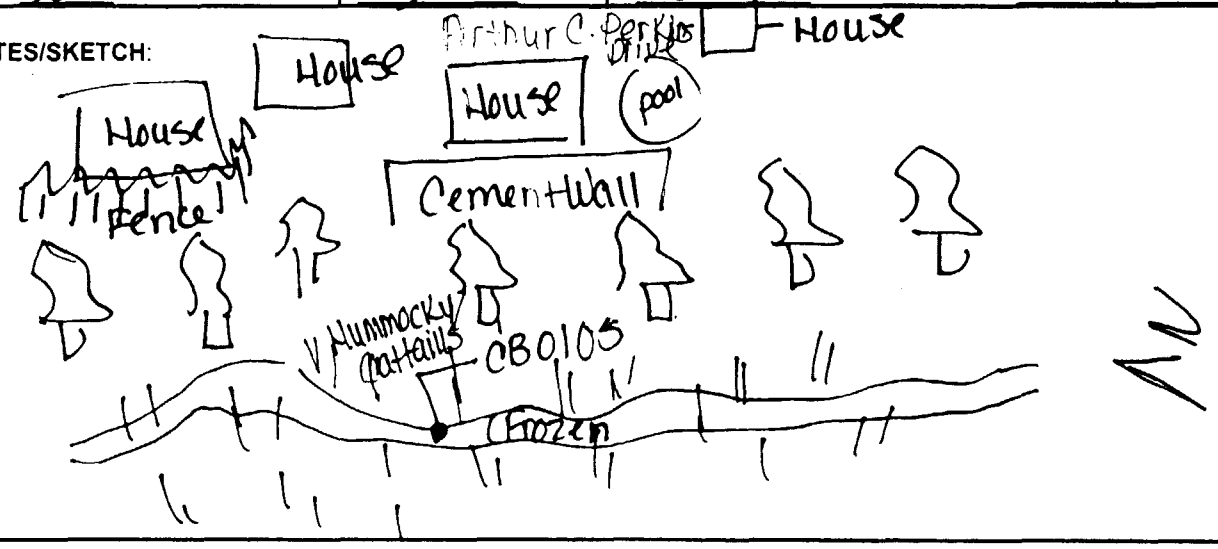
*include DIUF lot # in "other"

* ~4" of ice over Sed. Location
* ~4" of surface water over sediment.

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL
Temp. 62 °C pH 6.29 Std. Units ORP -50.1 mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB01CH-020901

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9/2001 1315 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
muck - wet, Brown, abundant organics (roots, twigs)

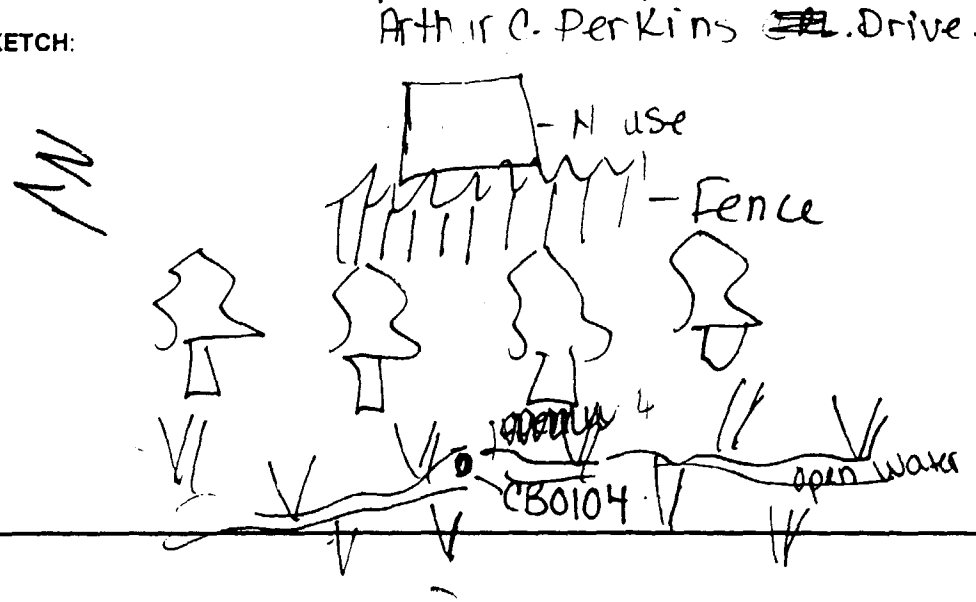
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 3" of surface water over sediment.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD CB0103020900
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9/2001 1325 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

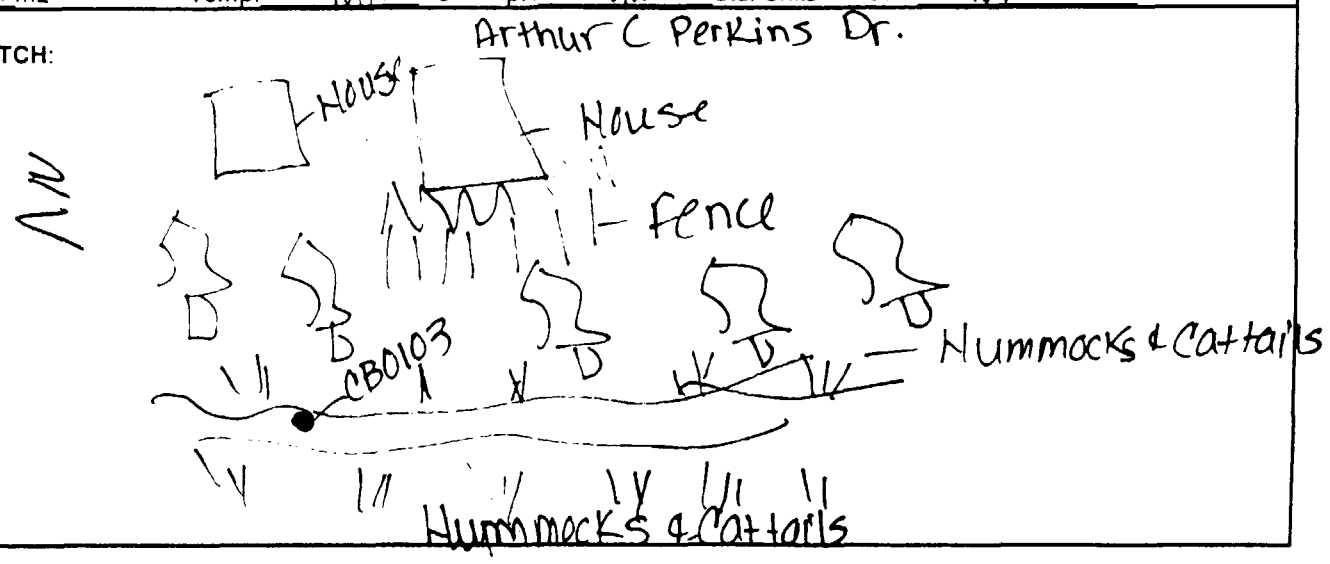
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Wet DK Brown, Abundant Organics (roots & leaves)

*include DIUF lot # in "other" ~3" of Surface water over Sediment

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-CB0102-0209-01

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9/2001 1335 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

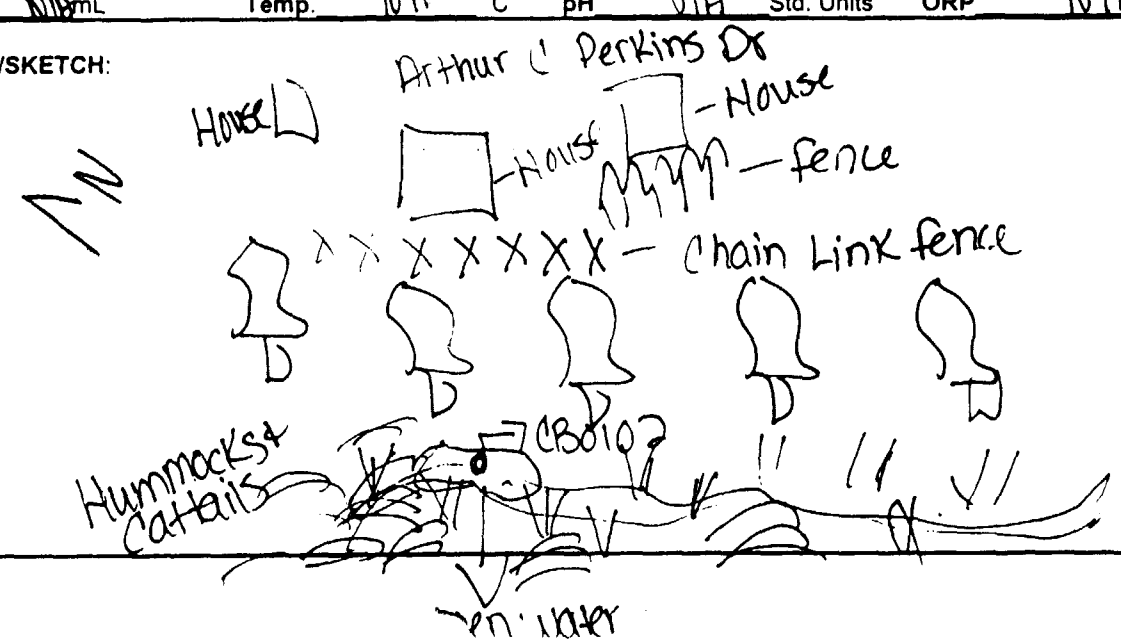
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Dk Brown, Wet, Organics (Roots) note ~ 0.5 ft of surface water over sediment

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0322
Sample ID: IPSD-CB0101-0209
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/9/2001 1345 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- __x__ Sediment
- ____ Lagoon/Pond
- __x__ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

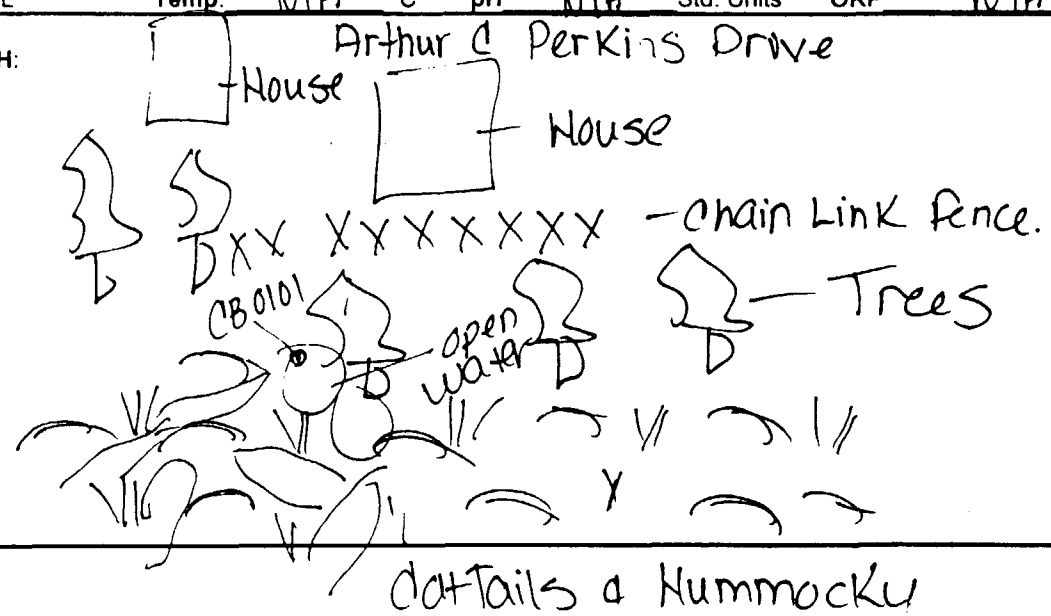
Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - DK Brown, abundant organics (roots & leaves)
* Sulfide odor noted
*include DIUF lot # in "other" ~0.5 ft of water over sediment

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



✓ * purple Loosestri

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT 29 03-02120
Tetra Tech NUS Job No./PMS: N0564-0322
QC Information: N/A (if applicable)

Sample Method: Hand Auger
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/12/2001 0955 (military) hours Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Black, Wet, Trace Organics

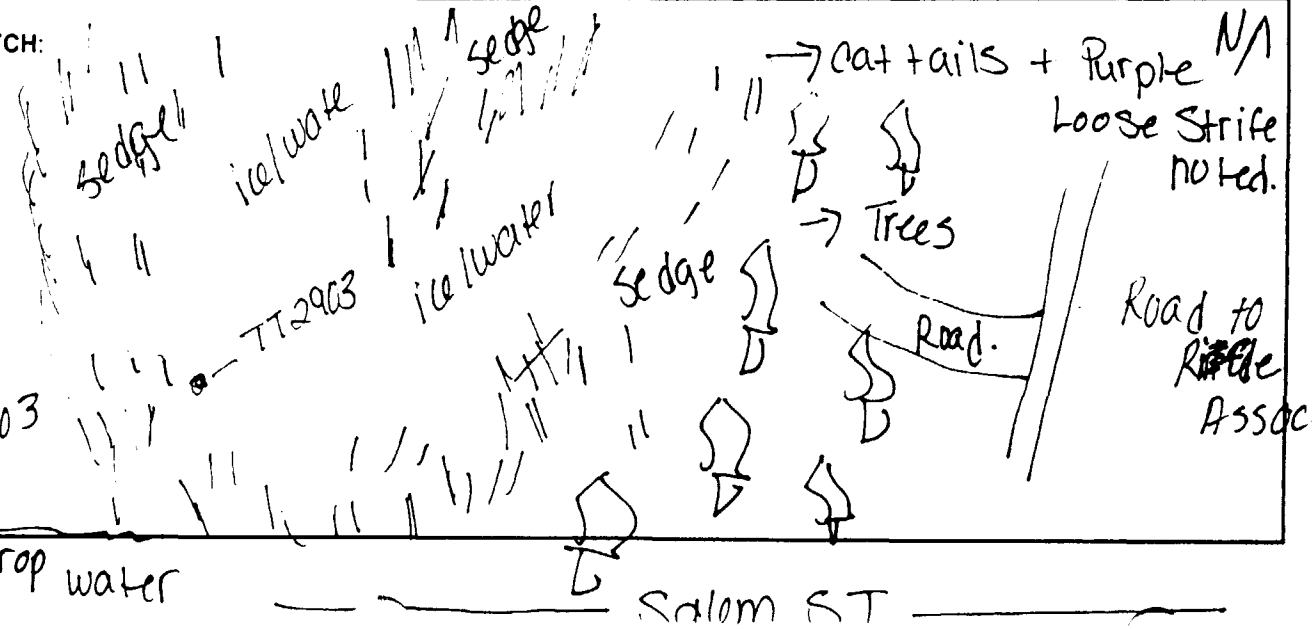
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~18" of water over sediment
* ~6" of ice over water

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT2902-021201 (2902 KO 2-12-01)
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Hand Auger
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/12/2001 0905 (military) hours Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
x	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
x	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Black, Wet, Trace organics

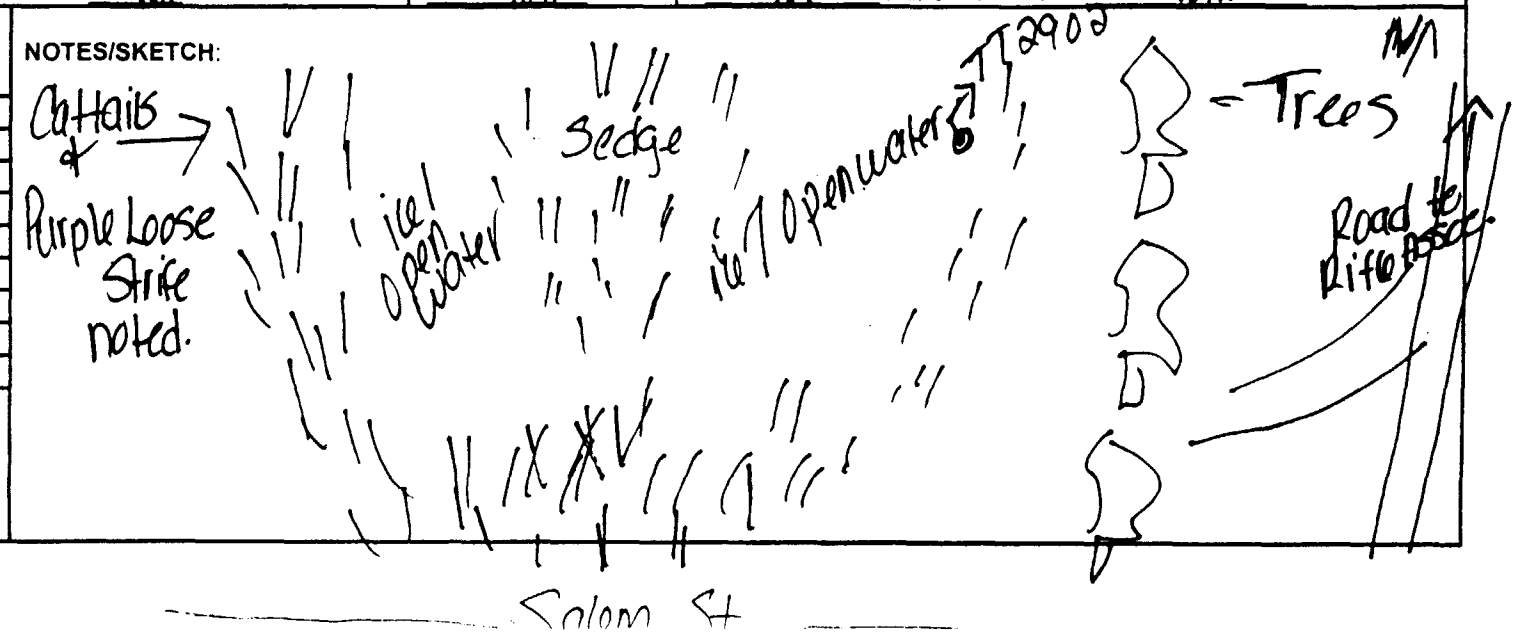
*include DIUF lot # in "other"

Method 9045B
Field Data: (Performed at hexavalent chromium stations only)
Sediment wgt. N/A g
DIUF Water vol: N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

≈ 12" of water over sediment
≈ 6" of ice

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - TT2901-021201
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: DUP07 (if applicable)

Sample Method: Hand Auger
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2 / 12 /2001 0920 (military) hours Duplicate: 0925 hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Black, Wet, Trace Organics

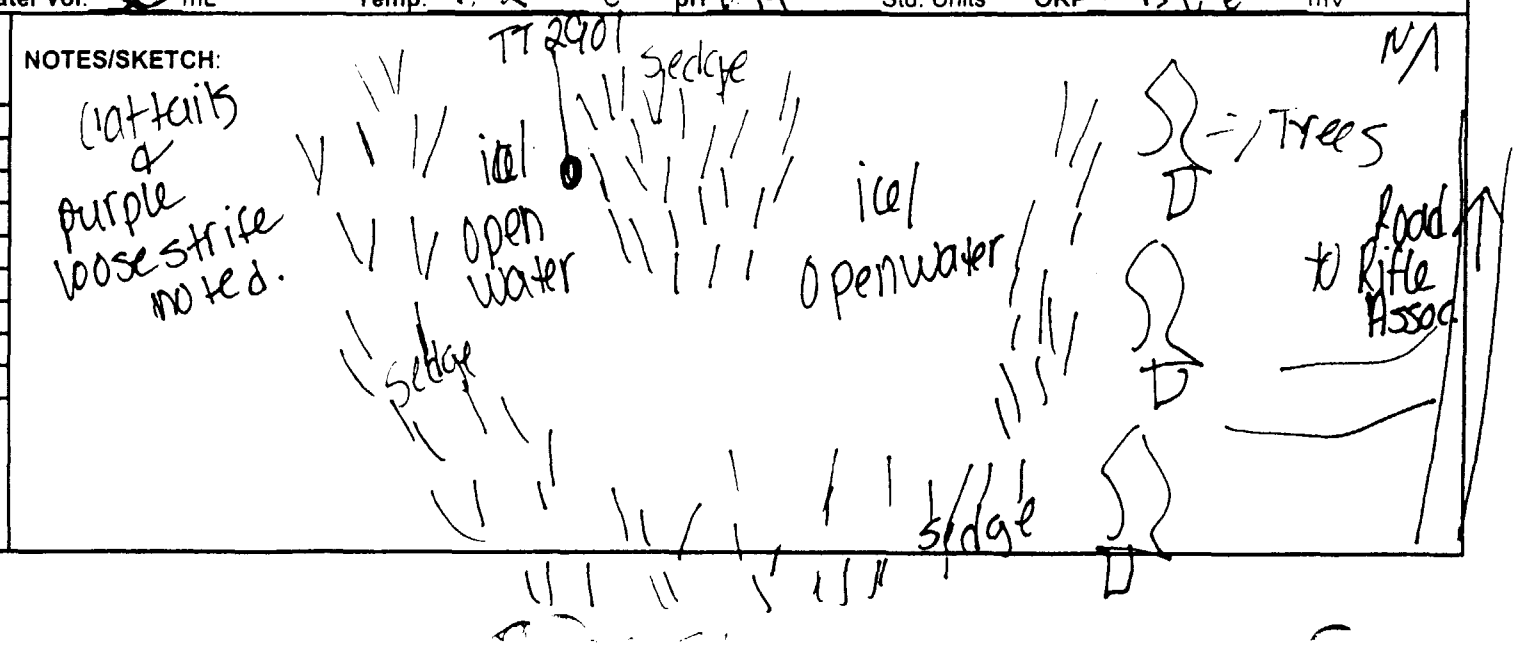
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 1.2 °C pH 6.14 Std. Units ORP - 134.6 mV

~ 12-18" of Surface water overse
~ 6" of ice

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT3003-021201
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2 / 12 /2001 1055 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Black - DK Brown, Wet, Trace Organics (roots)

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 4" of surface water over sediment
* ~ 2" of ice over surface water.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT3001-021201
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/12/2001 1110 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- __x__ Sediment
- ____ Lagoon/Pond
- __x__ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Brown, Wet, Trace Organics

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

*~6" of surface water over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-TT3002-0201
Tetra Tech NUS Job No./PMS N0564.0322
QC Information: N/A (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/12/2001 1125 hours (military) Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
MUCK - Black - DK Brown, Wet, Trace organics (Roots)

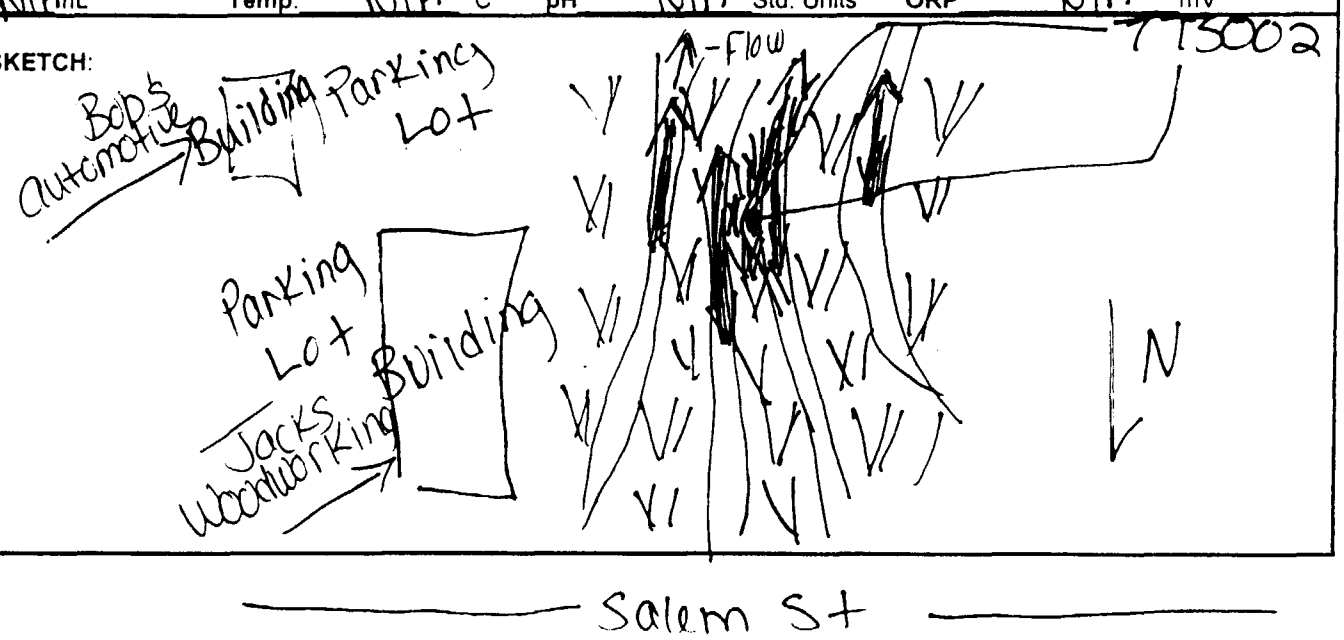
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

+ ~6" of Surface water over sediment.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - TT3102-021201

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0 - 0.5 feet

Sample Date & Time: 12/12/2001 1315 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau / J. Danielli / K. O'Neill / D.MacDougal (circle appropriate)

Data Recorded By: J. Danielli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
muck - DK Brown, Wet, Trace organics

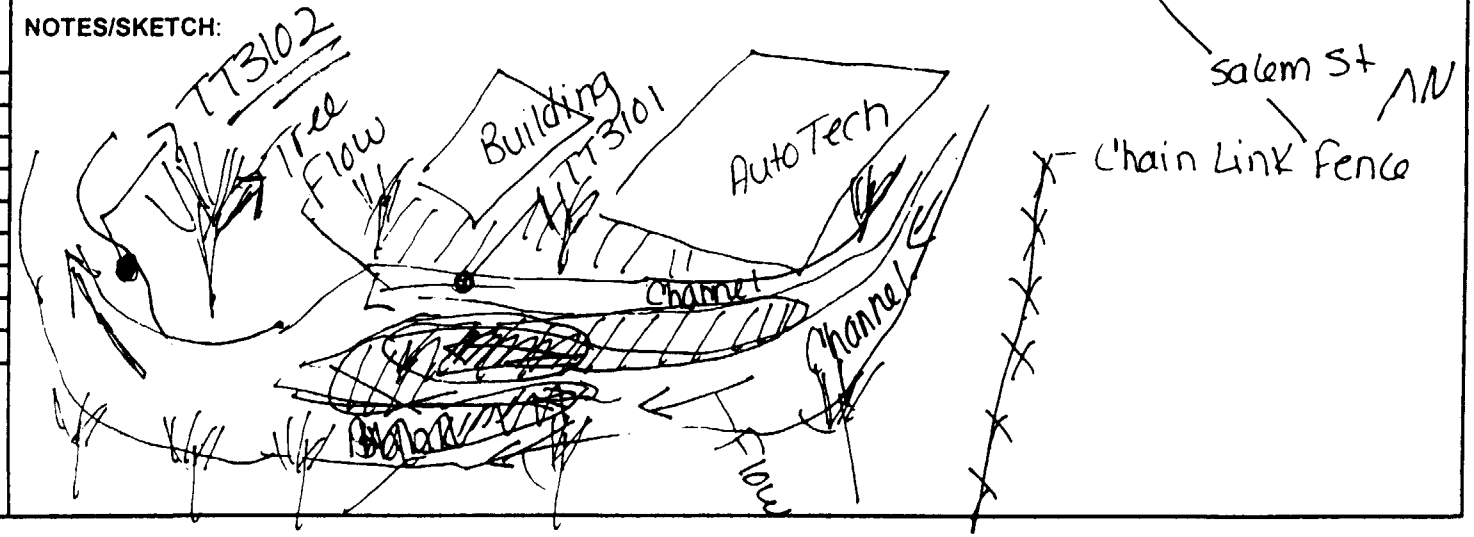
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~0.5 ft. of water over sediment
* 3" of ice over surface water.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - ~~TT3003~~ TT3103 021201
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/12/2001 1318 (military) hours Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Brown, Wet, Trace organics (roots)

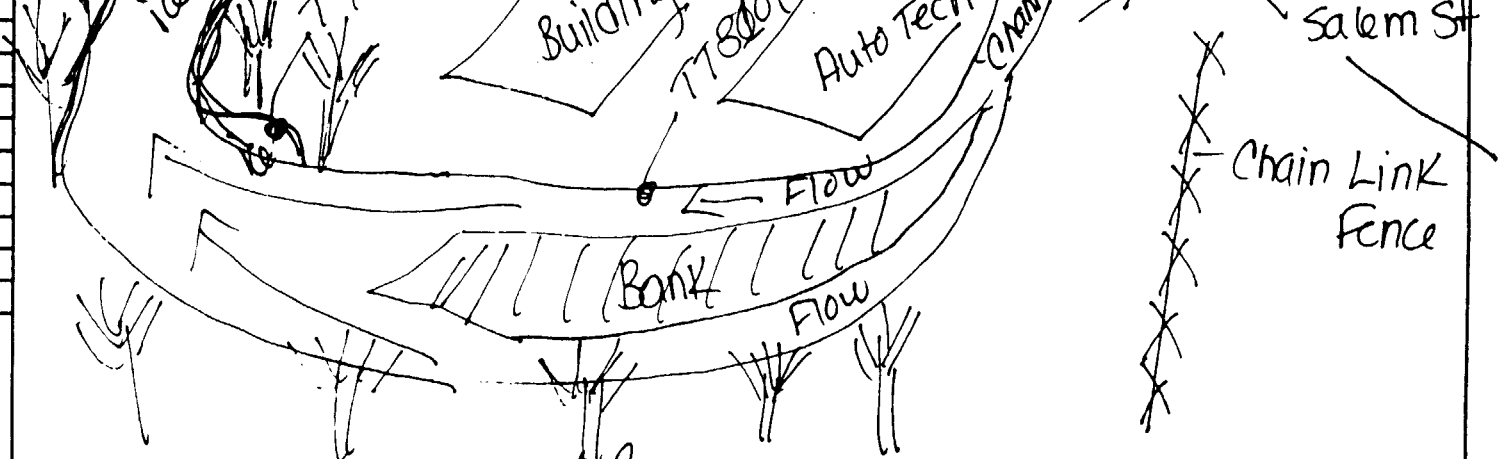
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. ~~NA~~ 10.4 °C pH ~~NA~~ 6.32 Std. Units ORP ~~NA~~ 43.4 mV

+ A office * ~2" ~~of~~ of Surface water over Sedim
* removed ~1" of undecayed leaves

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

~~PHOTOS: 3002~~ 3001 2/19/01
~~3002~~ 2/19/01

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - ~~TT3001~~ TT3101 021201

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/12/2001 1323 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- _x_ Sediment
- ____ Lagoon/Pond
- _x_ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Brown, Wet, Trace Organics (Roots)

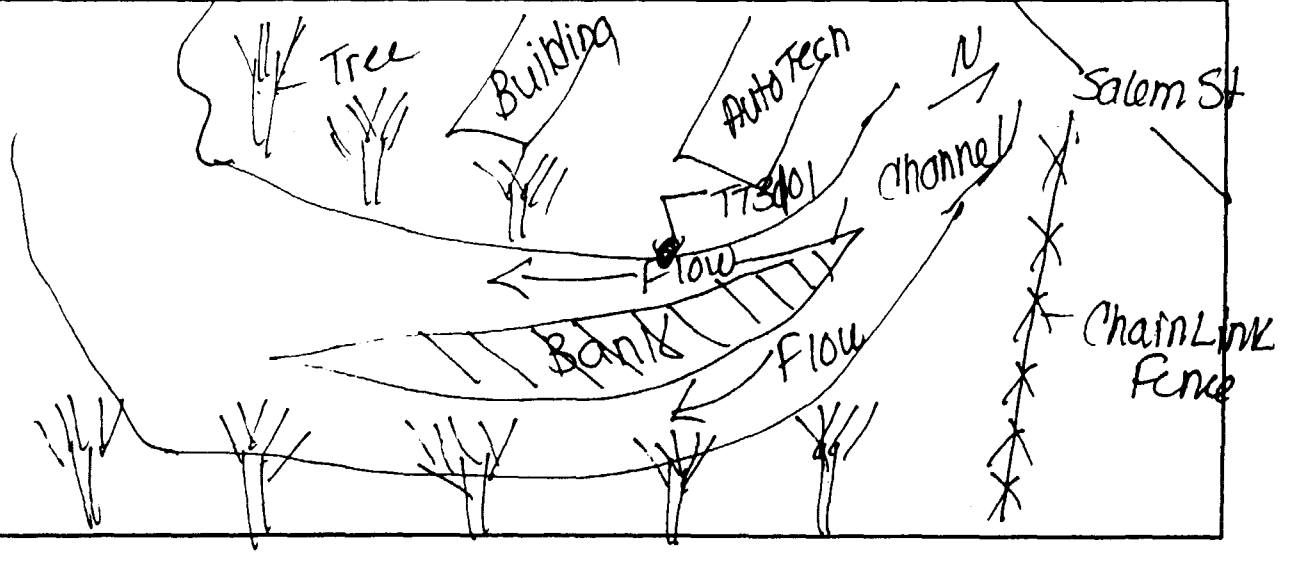
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 4" of Surface Water over Sediment
* Flow noted in Surface water - Low Flow

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD RB01 - 020601

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR OVER EQUIPMENT

Depth Sampled: N/A feet

Sample Date & Time: 2 / 6 /2001 1600 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: [signature] (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	X	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
RINSATE TAKEN FROM STEEL BOWL

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-RB02-020701

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR OVER EQUIPMENT

Depth Sampled: N/A feet

Sample Date & Time: 2/7/2001 1600 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ T. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: [signature] (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	__X__	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
RINSATE TAKEN FROM STEEL SCOOP

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-RB03-020801

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: ~~IPSD-RB03-020801~~ DIRECT POUR

Depth Sampled: N/A feet

Sample Date & Time: 2/8/2001 1700 (military) hours Duplicate: N/A hours

Sampler(s): C. Roussead/ J. Daniell/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: _____ (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	__x__	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other_____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH: USED A BOWL

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - RB04 - 020901

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR

Depth Sampled: N/A feet

Sample Date & Time: 2/1/2001 0800 (military) hours Duplicate: — hours

Sampler(s): C. Rousseau/ J. Danieli/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: [signature] (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	_x_	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH: USED A TROWEL

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - RBOH - CROOT01

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR OVER OBJECT

Depth Sampled: N/A feet

Sample Date & Time: 2/9/2001 0800 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: [signature] (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____ Soil	____ Trip Blank*
_x_ Sediment	X Rinsate Blank*
____ Lagoon/Pond	____ Field Duplicate collected
_x_ Grab	____ Composite

Other_____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	

NOTES/SKETCH: RINSATE FROM STEEL SCOOP

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - RB05 - 020101

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR OVER OBJECT

Depth Sampled: N/A feet

Sample Date & Time: 2 / 1 /2001 1500 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Daniell / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: _____ (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- __x__ Sediment
- ____ Lagoon/Pond
- __x__ Grab
- ____ Trip Blank*
- __X__ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other_____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	

NOTES/SKETCH: RINSATE FROM STEEL BOWL

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD TTRB06-021201

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR OVER OBJECT

Depth Sampled: N/A feet

Sample Date & Time: 2/12/2001 0800 hours (military) Duplicate: — hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: [signature] (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

___	Soil	___	Trip Blank*
_x_	Sediment	_X_	Rinsate Blank*
___	Lagoon/Pond	___	Field Duplicate collected
_x_	Grab	___	Composite

Other ___

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. — g
DIUF Water vol: — mL Temp. — °C pH — Std. Units ORP — mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	

NOTES/SKETCH:

SAMPLE POURED OVER STEEL SCOOP

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-RB07-021201

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: RINSATE BLANK (if applicable)

Sample Method: DIRECT POUR OVER OBJECT

Depth Sampled: N/A feet

Sample Date & Time: 2/12/2001 1600 hours (military) Duplicate: — hours

Sampler(s): C. Rousseau / J. Danieli / K. O'Neill / D.MacDougal (circle appropriate)

Data Recorded By: [signature] (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	X	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	X
Hex. Cr/Sulfides	

NOTES/SKETCH:
SAMPLE POURED OVER STEEL BOWL

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-ED08-020501

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: Matrix Spike MS/MSD (metals only) (if applicable)

Sample Method: Scoop

Depth Sampled: 0 - 0.5 feet

Sample Date & Time: 2/5/2001 0905 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Black, Wet, Twigs & roots noted

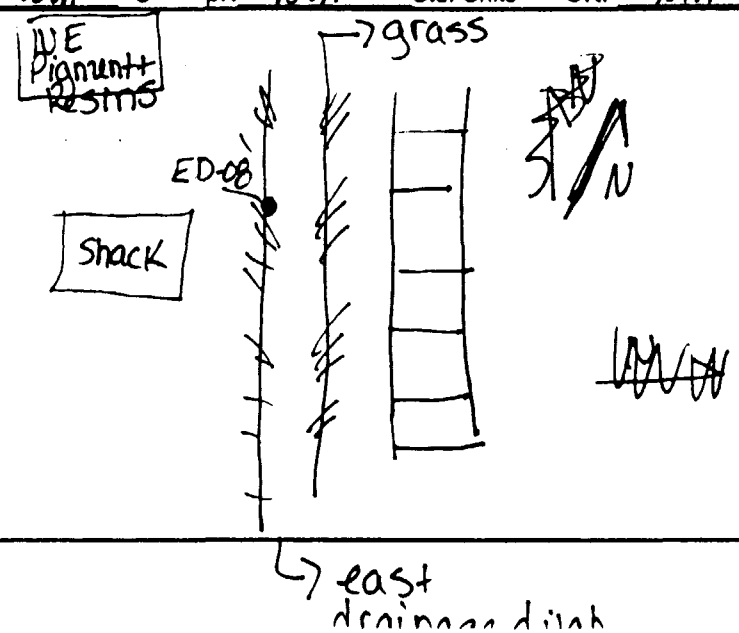
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

+ ~ 0.5 ft of surface water over sediment

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-ED09-020501

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: MS/MSD (HexChrom/Sulfides) (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/5/2001 0920 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Black, Wet, Trace Sand, leaves and twigs noted.

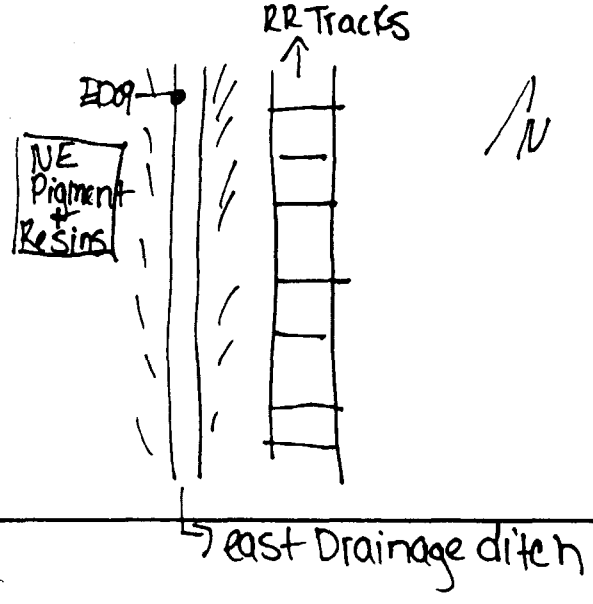
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 40 g
DIUF Water vol: 40 mL Temp. 8.8 °C pH 7.40 Arc Std. Units ORP 150.7 mV

* ~0.5 ft of surface water over sediment
* Sheen noted.
Δ -1/sec

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-ED10-020501

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/5/2001 0955 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau / J. Danieli / K. O'Neill / D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____ Soil	____ Trip Blank*
__x__ Sediment	____ Rinsate Blank*
____ Lagoon/Pond	____ Field Duplicate collected
__x__ Grab	____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Black, Wet, Roots, leaves and Twigs noted.

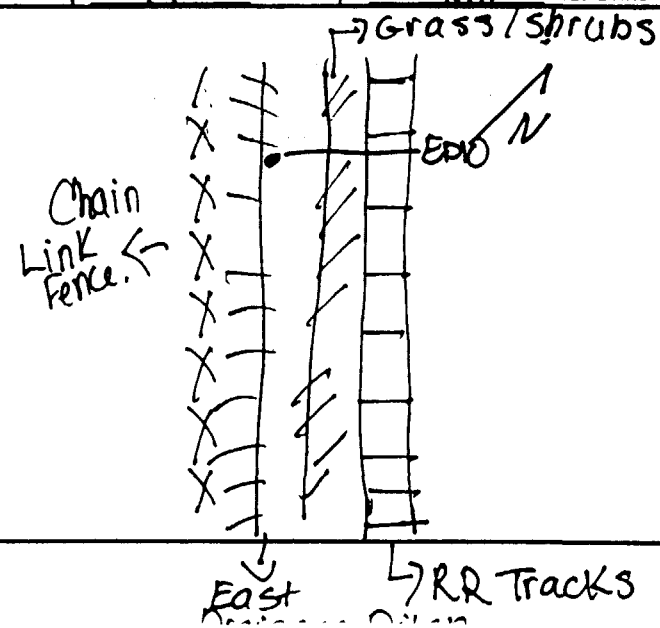
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~ 0.5ft of Surface water over Sed
* water standing * Sheen noted.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Veg on: grey dogwood cattail 40% cover

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - ED05 - 020501

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0 - 0.5 feet

Sample Date & Time: 2 / 5 /2001 1137 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Sandy SILT, Black, Wet, trace Leaves, Roots.

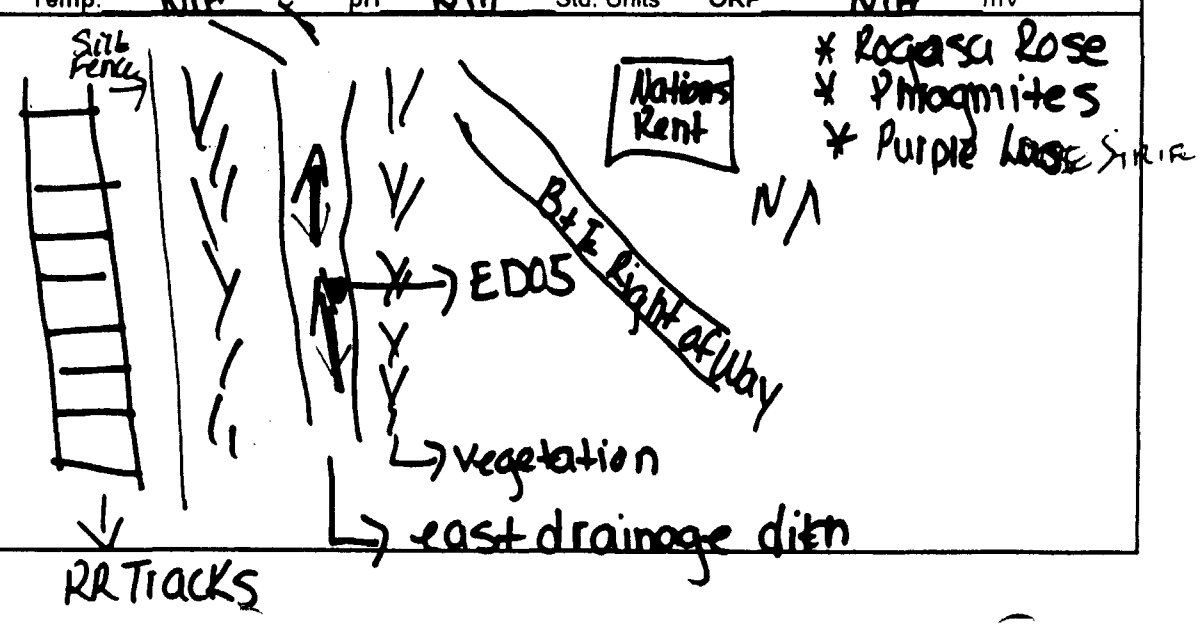
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~0.5 ft surface water oversed.
* minor flow in surface water.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



* Rosa rosa Rose
* Phragmites
* Purple Loose Strife

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-ED04-020501

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0.0-0.5 feet

Sample Date & Time: 2/5/2001 1150 hours (military) Duplicate: _____ hours

Sampler(s): C. Rousseau/ J. Danieli/ K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- _x_ Sediment
- ____ Lagoon/Pond
- _x_ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other _____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Black, Wet, Organics = Twigs/Leaves, Sheen noted

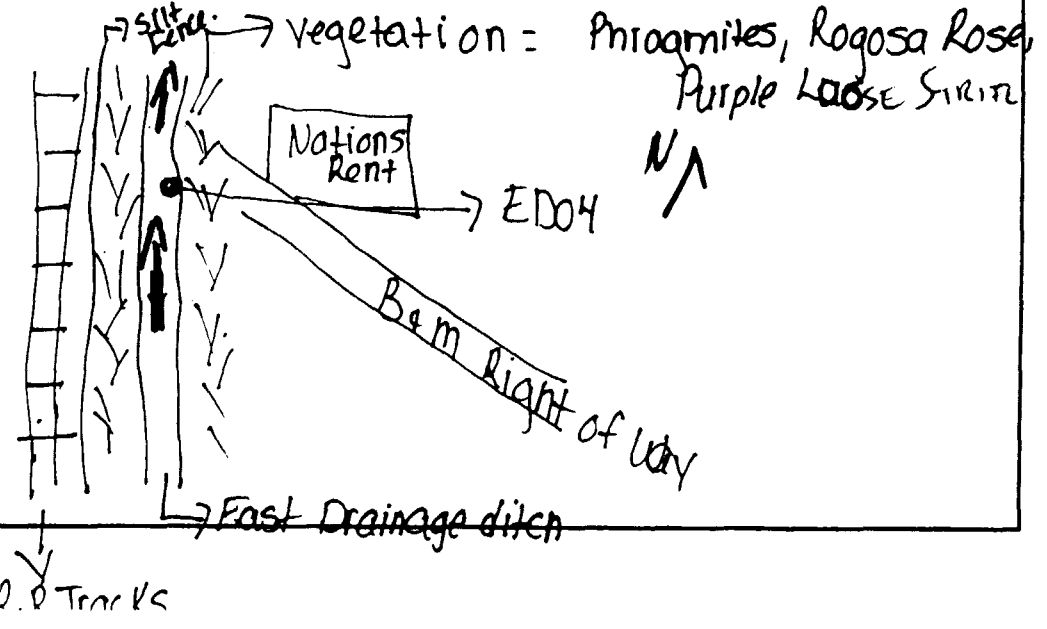
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~1.0ft of Surface water over sed.
* minor flow of surface water.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-ED03-020501
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: DUP01 IPSD-DP01-020501 (if applicable)
(metals + hexCr/Sulfides)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2 / 5 /2001 1205 hours (military) Duplicate: 1210 hours
Sampler(s): C. Rousseau/ J. Daniel / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Daniel (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
x	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	X	Field Duplicate collected
x	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck- Black, wet, Trace Organics.

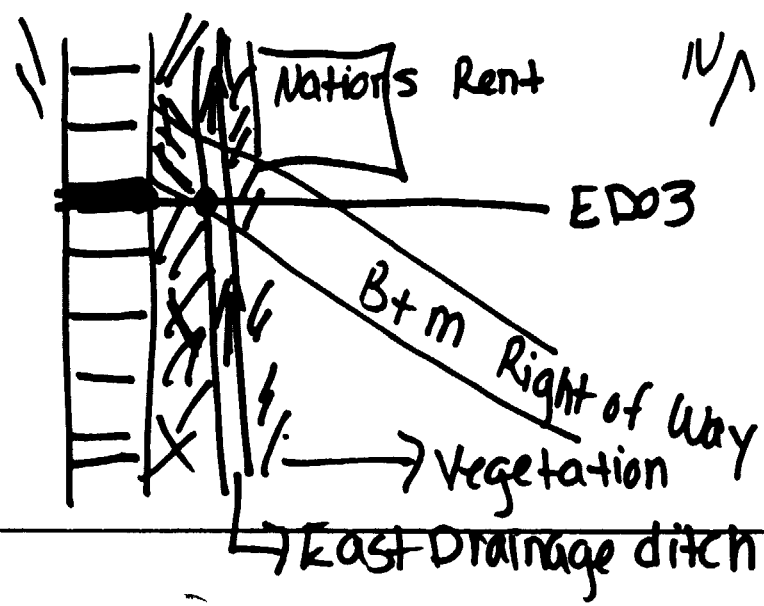
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL
Temp. ~~9.8~~ 6.1 °C pH 6.26 Arc Std. Units ORP - 440.9 mV

* ~1cft of surface water over sed.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



* Phragmites
* Purple Loosestrife
* Rogosa Rose

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-ED07-020501
Tetra Tech NUS Job No./PMS: N0564-0322
QC Information: N/A (if applicable)

Sample Method: SCOOP
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2/5/2001 1222 hours (military) Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Daniel / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Daniel (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

- ____ Soil
- __x__ Sediment
- ____ Lagoon/Pond
- __x__ Grab
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate collected
- ____ Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - Trace Sand, Wet, Dk. Brown, Trace organics.

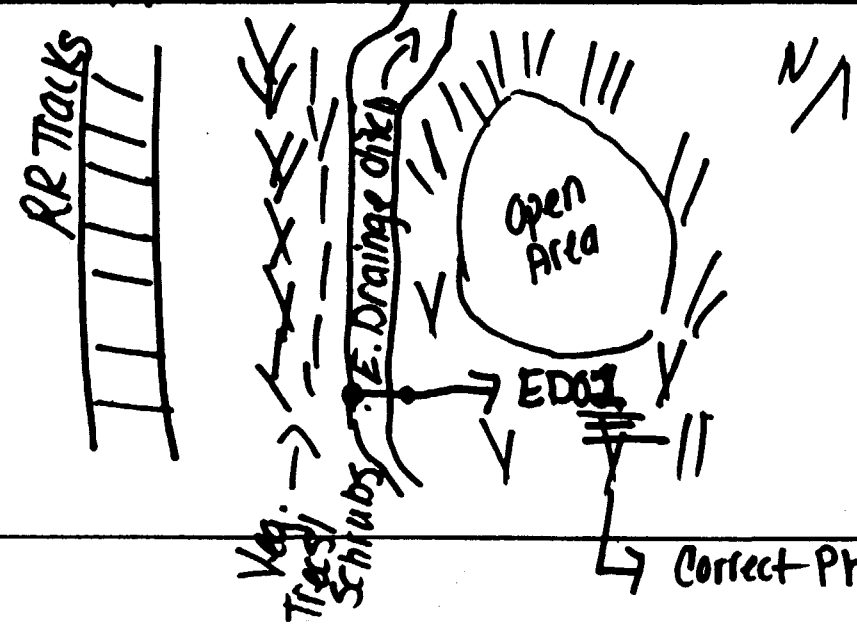
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~1.0ft of Surface water over Sed.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Correct Photo ED07

Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-ED02-020501
Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2 / 5 /2001 1245 hours (military) Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Sandy SILT- Wet, Dk. Brown, Organics noted.

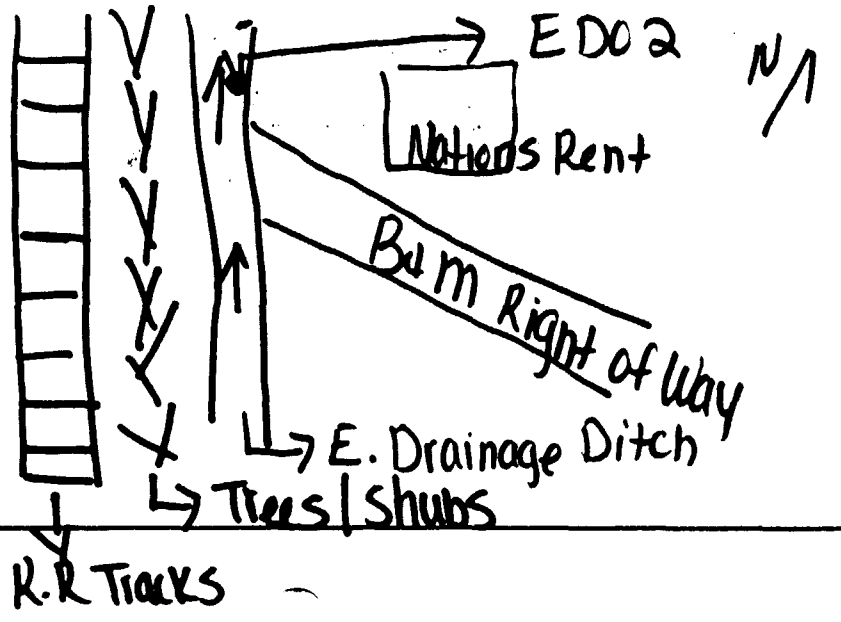
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL
Temp. N/A °C pH N/A Std. Units ORP N/A mV

* ~1.0 ft of water over sed. Flowing

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD - EDOG - 020501

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: NA (if applicable)

Sample Method: Scoop
Depth Sampled: 0-0.5 feet
Sample Date & Time: 2 / 5 /2001 1435 hours (military) Duplicate: N/A hours
Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)
Data Recorded By: J. Danieli (Signature)
PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other ____

Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck w/ Sand - Black - wet
Organics Noted.

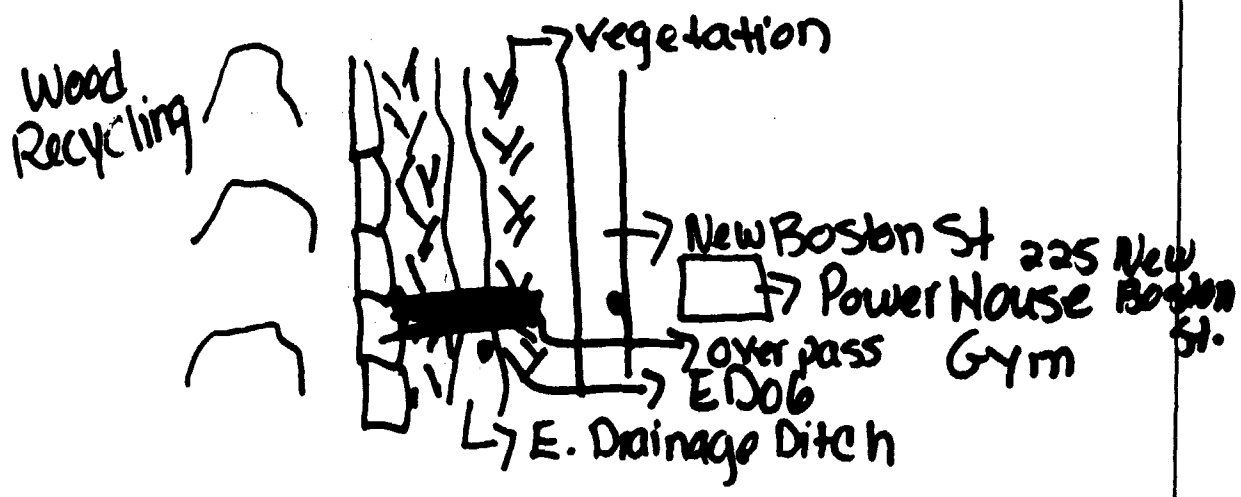
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. NA g
DIUF Water vol: NA mL Temp. NA °C pH NA Std. Units ORP NA mV

~0.5ft of Surface water over Sed

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IDSD-ED07-020501

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2 / 5 /2001 1450 (military) hours Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
_x_	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
_x_	Grab	____	Composite

Other ____

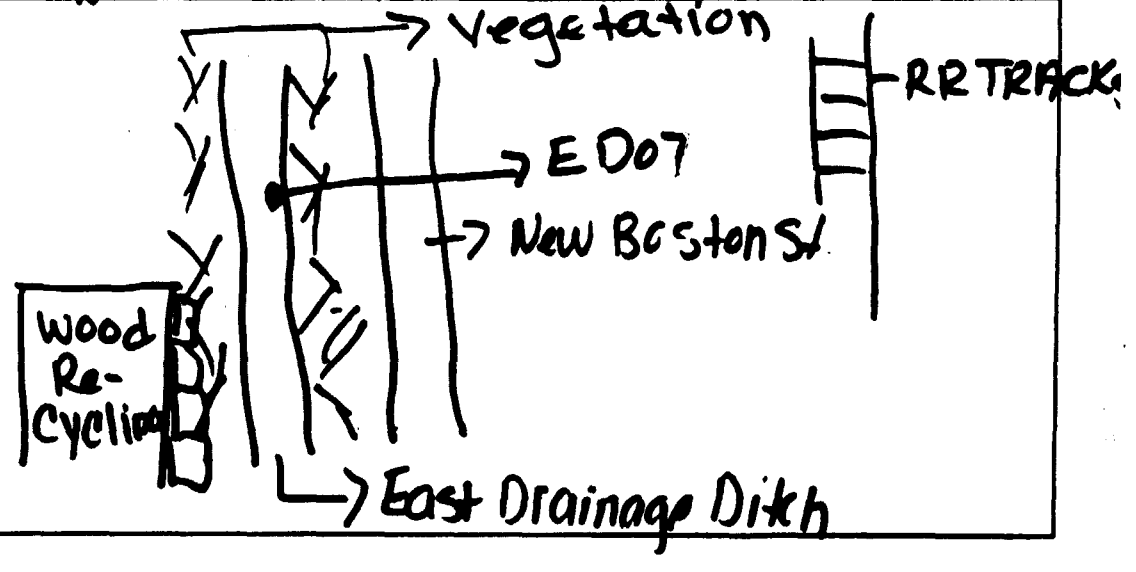
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck w/ Sand, Black, Wet, organics Noted.

*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. N/A g
DIUF Water vol: N/A mL Temp. N/A °C pH N/A Std. Units ORP N/A mV

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - SEDIMENT

Site Name: Industri-Plex
Sample ID: IPSD-WW08-020601

Tetra Tech NUS Job No./PMS N0564-0322
QC Information: N/A (if applicable)

Sample Method: Scoop

Depth Sampled: 0-0.5 feet

Sample Date & Time: 2/6/2001 1120 hours (military) Duplicate: N/A hours

Sampler(s): C. Rousseau/ J. Danieli / K. O'Neill/ D.MacDougal (circle appropriate)

Data Recorded By: J. Danieli (Signature)

PID Monitor Reading: _Not Used_ppm

TYPE OF SAMPLE: (Check all that apply)

____	Soil	____	Trip Blank*
__x__	Sediment	____	Rinsate Blank*
____	Lagoon/Pond	____	Field Duplicate collected
__x__	Grab	____	Composite

Other_____

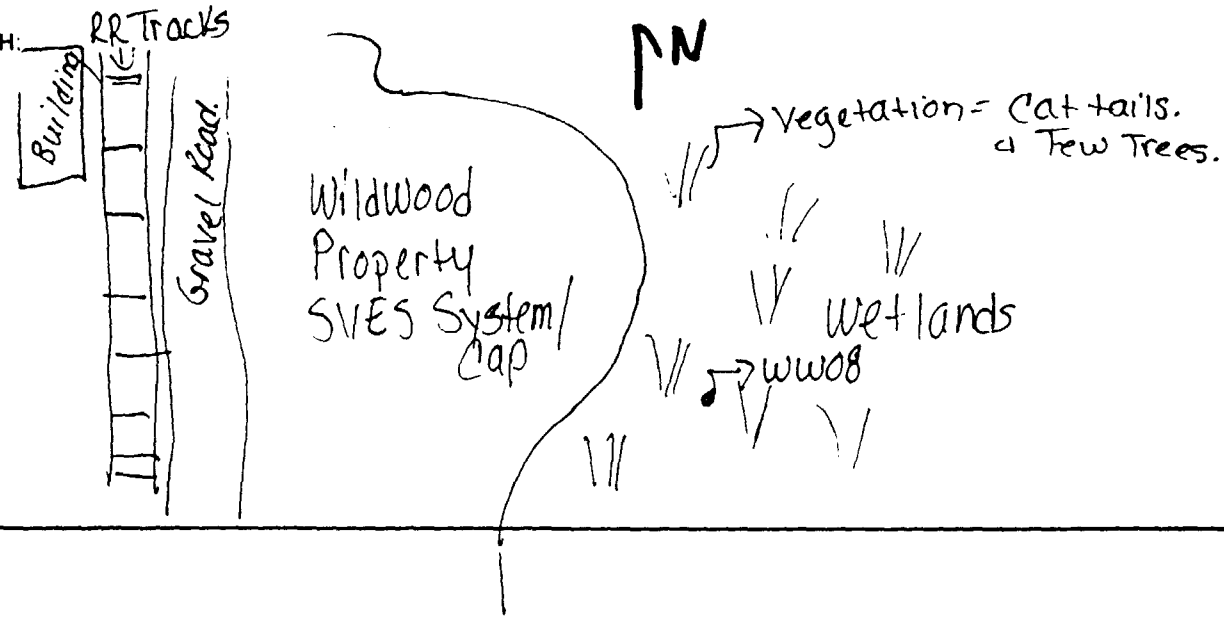
Description: (Sand, Clay, Muck, Peat, Dry, Moist, Wet, Etc.)
Muck - abundant Organics (roots + twigs), wet, DK Brown
Sulfur odor noted.
*include DIUF lot # in "other"

Method 9045B (Performed at hexavalent chromium stations only)
Field Data: Sediment wgt. 30 g
DIUF Water vol: 30 mL Temp. 11.2 °C pH 5.14 Std. Units ORP 261.3 mV

* ~ 1.0 ft of Snow over Sediment
* ~ 3in of surface water over Sediment.

ANALYSIS	Check
TAL Metals	✓
Hex. Cr/Sulfides	✓

NOTES/SKETCH:



Tt NUS Form 0005A

US EPA ARCHIVE DOCUMENT

TARGET SHEET

THE MATERIAL DESCRIBED BELOW
WAS NOT SCANNED BECAUSE:

(X) OVERSIZED MAP

() NON-PAPER MEDIA

() OTHER:

DOC ID: 214593
DATE: 09/01/2004
TITLE: BASELINE HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT REPORT, ABERJONA RIVER STUDY, VOLUME 4 OF 6, APPENDIX A [PART 2 OF 2]
DESCRIPTION: FIGURE X-X: IP MSGRP - SEDIMENT SAMPLE LOCATIONS - FEBRUARY 2001, CRANBERRY BOG AREA

THE OMITTED MATERIAL IS AVAILABLE FOR REVIEW
BY APPOINTMENT
AT THE EPA NEW ENGLAND SUPERFUND RECORDS CENTER,
BOSTON, MA

US EPA ARCHIVE DOCUMENT

TARGET SHEET

THE MATERIAL DESCRIBED BELOW
WAS NOT SCANNED BECAUSE:

(X) OVERSIZED MAP

() NON-PAPER MEDIA

() OTHER:

DOC ID: 214593
DATE: 09/01/2004
TITLE: BASELINE HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT REPORT, ABERJONA RIVER STUDY, VOLUME 4 OF 6, APPENDIX A [PART 2 OF 2]
DESCRIPTION: FIGURE X-X: IP MSGRP - SEDIMENT SAMPLE LOCATIONS - FEBRUARY 2001, WELLS G&H WETLAND

THE OMITTED MATERIAL IS AVAILABLE FOR REVIEW
BY APPOINTMENT
AT THE EPA NEW ENGLAND SUPERFUND RECORDS CENTER,
BOSTON, MA

US EPA ARCHIVE DOCUMENT

APPENDIX A.5

M&E 2001 TRIAD SAMPLING INFORMATION

Metcalf & Eddy

30 Harvard Mill Square
Wakefield, MA 01880-5371
P.O. Box 4071
Wakefield, MA 01880-5371

Tel: 781-246-5200
Fax: 781-245-6293
www.m-e.com

August 6, 2001

Mr Joseph Lemay
Remedial Project Manager
USEPA Region I
1 Congress Street
Suite 1100 (HBO)
Boston, MA 02114-2023

Subject: Contract No. 68-W6-0042
Work Assignment No. 004-RICO-0146
Wells G&H - RI/FS Risk Assessment
Triad Field Sampling Information

Dear Joe:

Enclosed are the following field information from the Triad Field Sampling Effort of June 2001.

- Sampling Locations Table
- Habitat Assessment Field data sheets (Background Text)
- Low gradient Stream Habitat Assessment Scores (Summary Table)
- Habitat Assessment Field Data sheets and Physical Characterization/Water Quality Field Data Sheets
- Field Notes (e-mailed on June 29, 2001 by D. Roberts)
- Station Photographs
- CD ROM of photographs

If you have any questions or comments, or are in need of any additional information, please do not hesitate to contact me (781) 224-6022.

Very truly yours,
METCALF & EDDY, INC.

Deborah M. Simone
Project Manager

cc: D. King, USEPA (letter only)
C. Hagger, M&E (letter only)
G. Bullard, TTNUS
B. Hoskins, Lockheed-Martin
WA#004-RICO-0146

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Wells G&H, Sediment Triad Sampling Locations
June 18-27, 2001

TTNUS Sampling Number June 2001	Previous Sample Number[1]	Location	Habitat Type	Date Sampled	Comment[2]
IPSD-WH07-061801	WH-07 (TT)	23-acre wetland, near well H	wetland	6/18/01	PFO
IPSD-TT2201-061801	SD-22-01(TT)	23-acre wetland, near rifle range	wetland	6/18/01	PFO
IPSD-TT1203-061901	SD-12-03 (M&E)	23-acre wetland	stream	6/19/01	
IPSD-TT2903-061901	SDTT-29-03 (TT)	23-acre wetland	stream	6/19/01	
IPSD-TT1901-061901	SD-19-01 (FW)	23-acre wetland	wetland	6/19/01	PEM
IPSD-TT3302-062001	SDTT-33-02 (TT)	Cranberry Bog	wetland	6/20/01	PEM
IPSD-TT3202-062001	SDTT-32-02 (TT)	Cranberry Bog	wetland	6/20/01	PEM
IPSD-WW06-062101	WW-06 (TT)	23-acre wetland, near Wildwood	wetland	6/21/01	PFO
IPSD-TT1802-062101	SD-18-02 (M&E)	23-acre wetland	stream	6/21/01	
IPSD-TT1002-062201	SD-10-01 (M&E)	North of Salem Street	stream	6/22/01	
IPSD-TT1301-062201	SD-13-01 (FW)	23-acre wetland	wetland	6/22/01	PEM
IPSD-TT3001-062201	SDTT-30-01 (TT)	Cranberry bog	stream	6/22/01	
IPSD-PP03-062501	IP-SD-03 (MC)	Phillips Pond	reference pond	6/25/01	
IPSD-TTSA01-062501	new station	S. Branch Aberjona River, Arcadia Rd.	reference wetland	6/25/01	PFO
IPSD-TTSD01-062501	IP-SD-01 (MC)	S. Branch Aberjona River, Willow St.	reference stream	6/25/01	
IPSD-TT04-062601	IP-SD-04 (MC)	Hall's Brook, Third Road	reference stream	6/26/01	
IPSD-HB00-062601	new station	Hall's Brook, Danforth St.	reference wetland	6/26/01	PEM
IPSD-TT0603-062601	SD-06-03 (M&E)	Judkins Pond	pond	6/26/01	
IPSD-TTUF02-062701	UF-02 (TT)	Upper Forebay, Mystic Lake	pond	6/27/01	
IPSD-TTAO03-062701	AO-03 (TT)	Upper Forebay, Mystic Lake	pond	6/27/01	

[1] TT = Tetra Tech NUS, M&E = Metcalf & Eddy, FW = Foster Wheeler, MC = Menzie Cura
[2] PFO - Palustrine forested wetland, PEM - Palustrine emergent wetland

WELLS G&H TRIAD SAMPLING
June 2001
Habitat Assessment Field Data Sheets -
Low Gradient Stream Forms

Habitat Assessment Field Data Sheets- Low Gradient Stream Forms (HAFDS) were filled out at each station used as a sampling location for the June 2001 sediment triad sampling. In addition, a Physical Characterization/Water Quality Field Data Sheet (PC/WQFDS) and a Sample Log Sheet (TTNUS) were also completed for each station. Filed notes were recorded in the field by D. Roberts and were summarized in Attachment A.

The HAFDS forms were filled out based on consensus of the professional judgement of three biologists. Team members participating included: D. Roberts (M&E), K. O'Neill (TTNUS), and either Bart Hoskins (Lockheed-Martin/ESAT) or Cornell Rosiu (EPA).

To try to achieve consistency in the numeric rankings given (0-20) for each of the 10 habitat parameters, some assumptions or interpretations were applied to the assessments. These assumptions are presented below.

Habitat Parameters: Habitat Assessment Field Data Sheets -Low Gradient Stream Forms

1. Epifaunal Substrate/ Available Cover
It was assumed for this parameter to rank in the optimal (16-20) category, there would be a mix a of substrate types present. In the majority of the depositional stations the substrate was 100% soft muck and the did not show evidence of the substrate being frequently disturbed or removed (marginal, 6-10). IF woody debris or undercut banks were present, the station was rated as higher sub-optimal.

2. Pool Substrate Characterization
The selected stations generally did not have a mixture of substrate materials and were therefore rated as less than optimal (<16). Depending on the presence or absence of root mats and submerged vegetation the stations were rated as marginal (6-10) or sub-optimal (11-16).

3. Pool Variability
The majority of the sampling locations were in areas of consistent depth, and were formed essentially in one small or large pool. Pool variability was consequently ranked consistently marginal (6-10) or poor (1-5), based on the depth of the pools. The parameter was assigned a value of NA (not applicable) in the pond locations.

4. Sediment Deposition
The sample locations were selected to be in areas of higher deposition of fine material. The stations were ranked as poor (0-5) unless deposition of sand was present, and a ranking of marginal (6-10).

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5. Channel Flow Status
Since depositional areas and wetland locations were selected, most of the stations had little or no detectable water flow. This parameter was interpreted to mean that channel flow would be poor if water levels were very low and only found in isolated pool in a channel. Since the June sampling was conducted during a period of relatively high water levels, all of the locations had water reaching the base of both lower banks, with a minium of substrate exposed (optimal, 16-20). The ranking for this parameter may vary depending on the season during which the survey was conducted. Slightly lower rankings were given at locations where there was evidence of higher water levels than the existing water elevation at the time of sampling.

6. Channel Alteration
Channel alteration characterized how much the stream reach has been channelized or disrupted. Except in a few areas, such ass the Cranberry Bog and the forebay of Upper Mystic Lake, bank evidence of bank alteration was minimal or absent (Optimal, 16-20). In areas with historic dredging (Cranberry Bog, Phillips Pond, Judkins Pond), a ranking of sub-optimal was applied.

7. Channel Sinuosity
For the stream locations, channel sinuosity was evaluated based on the proportion of bends in the stream in the reach where the sample was taken. This parameter was not easily applied to wetland and pond locations. For the pond locations, values between 0 and 5 were assigned (poor) because all of the ponds represented impoundments in the river. At the wetland locations channel sinuosity only applied to locations where the adjacent channel could be rated. To be consistent, all of the values were converted to N/A (not applicable) because the condition of the adjacent channel was not relevant to habitat at the sampling station in the wetland. This results in essentially assigning the channel sinuosity a value of 0 for the wetland in the over-all score.

8. Bank Stability
Bank stability was generally rated as optimal (9-10) if the banks werer natural and fully vegetated. In areas where human disturbance resulted in small areas of erosion, values of 6-8 (sub-optimal) were assigned.

9. Vegetative Protection
The value of the bank stability was closely related to the bank stability parameter. The majority of the sites had banks that were more than 90% vegetated, with the exception of the pond locations. At the pond locations were vegetation had been removed or mowed, the vegetation protection was rated as sub-optimal or marginal.

10. Riparian Vegetative Zone Width
The riparian vegetative zone width was evaluated as optimal (9-10) if there was an undisturbed buffer of at least 18 m in width. Based on the thresholds in the condition categories, the width of undisturbed buffer was used to evaluate the condition of the riparian zone. Where mowing or pavement came within 6 m of the edge of water, the condition rating of poor was assigned.

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Low Gradient Stream Habitat Assessment Scores for Wells G&H, Woburn, Massachusetts

Station:	WH07	TT-2201	TT-1203	TT-2903	TT-1901	TT-3302	TT-3202	WW06	TT-1802	TT-1002	TT-1301	TT-3001	PP03	TT-SA01	TT-SD01	TT04	HB00	TT-0603	TT-UF02	TT-AO03
1. Epifaunal Substrate/ Available Cover	11	12	14	14	14	11	11	13	15	13	13	11	11	13	16	13	15	11	11	11
2. Pool Substrate Characterization	13	10	12	11	12	14	12	14	6	14	10	14	8	10	11	14	10	8	8	8
3. Pool Variability	5	4	0	5	6	2	2	5	5	11	5	6	N/A	5	8	6	3	N/A	N/A	N/A
4. Sediment Deposition	2	3	5	5	5	8	8	5	8	5	4	5	2	5	10	8	5	2	3	3
5. Channel Flow Status	18	16	20	20	20	16	17	17	20	17	18	18	20	19	16	19	20	20	18	18
6. Channel Alteration	20	20	20	20	20	13	13	20	20	16	15	17	15	19	18	19	20	15	12	12
7. Channel Sinuosity	N/A	N/A	18	15	N/A	N/A	N/A	N/A	16	6	N/A	15	5	N/A	10	10	N/A	2	2	2
8. Bank Stability (Left Bank)	10	10	10	10	10	9	10	10	10	10	6	9	8	10	9	10	10	7	8	8
Bank Stability (Right Bank)	10	10	10	10	10	9	10	10	10	7	7	9	8	10	9	10	10	7	8	8
9. Vegetative Protection (Left Bank)	9	10	10	10	10	10	10	10	10	10	9	10	9	10	9	10	10	5	8	6
Vegetative Protection (Right Bank)	9	10	10	10	10	10	10	10	10	6	7	10	9	10	9	10	10	5	7	7
10. Riparian Vegetative Zone Width (Left Bank)	10	10	10	10	10	10	10	10	10	7	9	6	3	5	9	10	10	1	5	5
Riparian Vegetative Zone Width (Right Bank)	10	10	10	10	10	10	10	4	10	6	5	10	4	10	9	10	10	1	5	5
TOTAL SCORE	127	125	149	150	137	122	123	128	150	128	108	140	102	126	143	149	133	84	95	93

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Abergavenny River	LOCATION IPSD- WH07
STATION # WH07 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Hoskins, O'Neill	
FORM COMPLETED BY Roberts	DATE 6/18/01 TIME 1:00 AM (PM) / REASON FOR SURVEY Triad sampling

WEATHER CONDITIONS
Light breeze
Sunny
85°

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___%☐	%cloud cover	☐___%
☒	clear/sunny	☐

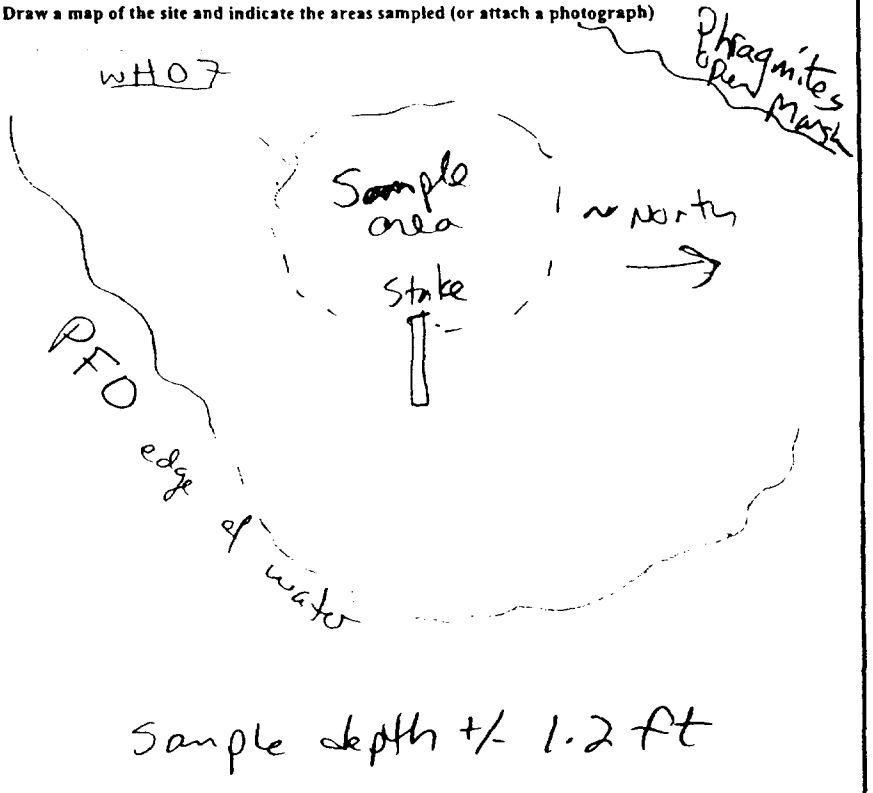
Has there been a heavy rain in the last 7 days? ☒Yes ☐No ~2.5" rain ~1.in 24hrs

Air Temperature 85°F

Other_____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☐ Perennial ☒ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☒ Mixture of origins
☐ Swamp and bog ☐ Other_____

Catchment Area_____km²

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WH07-2

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☒ Forest (1) ☒ Commercial - Primary ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☒ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources no evidence in immediate area (100 m) **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy w/in 100m
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☒ Shrubs ☐ Grasses ☒ Herbaceous (sparse) **dominant species present** Red maple, swamp azalea, sensitive fern
INSTREAM FEATURES	**Estimated Reach Length** — m **Estimated Stream Width** — m **Sampling Reach Area** 125 sq ft **Area in km² (m²x1000)** — km² **Estimated Stream Depth** 1.2 ft **Surface Velocity (at thalweg)** 0 m/sec **Canopy Cover** ☐ Partly open ☒ Partly shaded ☐ Shaded **High Water Mark** — m at or near high water level for June **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ____ % ☐ Run ____ % ☒ Pool 100 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** ____ m² 5% bottom cover **Density of LWD** ____ m²/km² (LWD/ reach area)
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☐ Rooted emergent ☐ Rooted submergent ☒ Rooted floating ☒ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** Moss, duckweed **Portion of the reach with aquatic vegetation** 85 %
WATER QUALITY	**Temperature** 19.03 °C **Specific Conductance** 294.00 **Dissolved Oxygen** 3.44 **pH** 6.95 ORP -83.mV **Turbidity** 4.4 **WQ Instrument Used** YSI **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other _____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other _____ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☒ Other NONE **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	80%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	20%
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD-WH07
STATION # WH07 RIVERMILE _____	~~STREAM CLASS~~ Palustrine forested wetland
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Hoskins, O'Neill, Roberts	
FORM COMPLETED BY Roberts/Hoskins/O'Neill	DATE 6/18/01 TIME 12:30 AM (PM) / REASON FOR SURVEY Triad sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor	
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	homogeneous substrate not optimal habitat
SCORE 11	[redacted]	[redacted]	[redacted]	[redacted]	
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.	organic poor. Moss
SCORE 13	[redacted]	[redacted]	[redacted]	[redacted]	
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.	All shallow pools
SCORE 5	[redacted]	[redacted]	[redacted]	[redacted]	
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	No flow. Depositional area. Leaf litter prevalent
2 SCORE	[redacted]	[redacted]	[redacted]	[redacted]	
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	No flow
18 SCORE	[redacted]	[redacted]	[redacted]	[redacted]	water level high

WH07 - p2

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor	
6. Channel Alteration 20 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	upper edge of bordering veg. wetla No chann No altera
7. Channel Sinuosity ~~20~~ NA SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.	No distinc channel
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.	No erosi evident
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 9 (LB) SCORE 9 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	overstory Shrub + emergent layer prese Emergent vegetat. sparse
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 10 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.	

Total Score 127

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PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION IP SD-TT 2001
STATION # TT220 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Hoskins, O'Neil	
FORM COMPLETED BY Roberts	DATE 6/18/01 TIME 3:30 AM (PM)
REASON FOR SURVEY Triad Sampling	

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☒
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
____%☐	%cloud cover	☐____%
☒	clear/sunny	☐

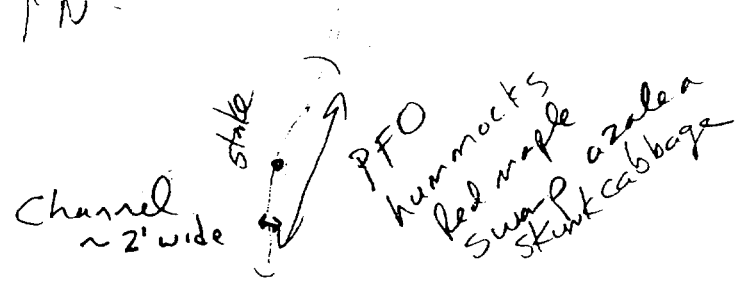
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No ~2.5" rain in past 24 h

Air Temperature 85°F

Other _____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☐ Perennial ☒ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☒ Other_____

Catchment Area_____km²

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PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

TT 2201

WATERSHED FEATURES

Predominant Surrounding Landuse
☒ Forest ☒ Commercial
☐ Field/Pasture ☐ Industrial
☐ Agricultural ☐ Other _____
☒ Residential

Local Watershed NPS Pollution
☒ No evidence ☐ Some potential sources
☐ Obvious sources

Local Watershed Erosion
☒ None ☐ Moderate ☐ Heavy Low grade vegetated locally

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
☒ Trees ☒ Shrubs ☐ Grasses ☒ Herbaceous

dominant species present Red maple, swamp azalea, skunk cabbage

INSTREAM FEATURES

Estimated Reach Length — m

Estimated Stream Width 2ft m

Sampling Reach Area 16 ft m²

Area in km² (m²x1000) _____ km²

Estimated Stream Depth 0.2 ft m

Surface Velocity (at thalweg) low flow ~~m/sec~~ visible

Canopy Cover
☐ Partly open ☐ Partly shaded ☒ Shaded

High Water Mark _____ m
water level high for June

Proportion of Reach Represented by Stream Morphology Types
☐ Riffle _____ % ☐ Run _____ %
☒ Pool 100 %

Channelized ☐ Yes ☒ No

Dam Present ☐ Yes ☒ No

LARGE WOODY DEBRIS

LWD _____ m² <590

Density of LWD _____ m²/km² (LWD/ reach area)

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating
☐ Floating Algae ☐ Attached Algae

dominant species present _____

Portion of the reach with aquatic vegetation 0 % all veg. bordering channel

WATER QUALITY

Temperature 18.5 °C

Specific Conductance 950.00

Dissolved Oxygen 2.96

pH 5.36

Turbidity 40 NTU

WQ Instrument Used YSI 610DM

Water Odors
☒ Normal/None ☐ Sewage
☐ Petroleum ☐ Chemical
☐ Fishy ☐ Other _____

Water Surface Oils
☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
☒ None ☐ Other _____

Turbidity (if not measured)
☐ Clear ☐ Slightly turbid ☐ Turbid
☐ Opaque ☐ Stained ☐ Other _____

SEDIMENT/ SUBSTRATE

Odors
☒ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic ☐ None
☐ Other _____

Oils
☒ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits
☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand
☐ Relict shells ☒ Other None

Looking at stones which are not deeply embedded, are the undersides black in color?
☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	80 %
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	20 %
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0 *	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100 %			
Clay	< 0.004 mm (slick)	0			

* lead shot in some samples

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION TPSD-TT 2201
STATION # 2201 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Hoskins	
FORM COMPLETED BY Roberts	DATE 6/18/01 TIME 3:30 AM (PM) / REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 12	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, ~~with gravel and firm sand~~ prevalent; root mats and submerged vegetation common.	Mixture ~~of soft sand~~, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; ~~little or no root mat; no~~ submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 10	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 4	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 3	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

CPOM Roots No submerg aquatic veg.

Low flow Leaf litter prevalent

Slow flow channel filled

TT 2201

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 20 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity NA SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas.. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 10 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0

distinct minor meander

Total Score 125

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PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION TS DM1203
STATION # 1203 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill,	
FORM COMPLETED BY Roberts	DATE 6/19/01 TIME 9:30 (AM) PM / REASON FOR SURVEY Triad sampling

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___%☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

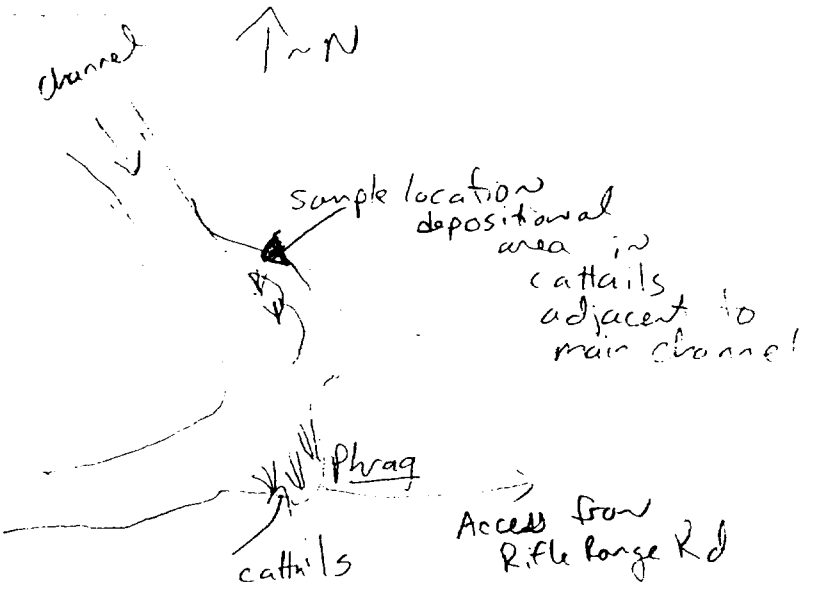
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No 6/17/01 heavy rain

Air Temperature ~80°C F

Other water levels high

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☒ Mixture of origins
☐ Swamp and bog ☐ Other_____

Catchment Area_____km²

US EPA ARCHIVE DOCUMENT

TT1203

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other ____ ☐ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources No evidence locally visible **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy None
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☐ Trees ☒ Shrubs ☐ Grasses ☒ Herbaceous **dominant species present** Cattail, loosestrife, tussock sedge. Shrubs - but ~~specified also~~ elderberry
INSTREAM FEATURES	**Estimated Reach Length** ____ m **Estimated Stream Width** 5-8 m **Sampling Reach Area** ____ m² **Area in km² (m²x1000)** 8.5 km² **Estimated Stream Depth** ~4.5' m Center channel **Surface Velocity** ____ ~~m/sec~~ (at thalweg) Low flow **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded Open **High Water Mark** ____ m water at high level for June **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle 0 % ☐ Run 80 % - main channel ☐ Pool 20 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** ____ m² **Density of LWD** 0/0 m²/km² ~~(LWD/ reach area)~~
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** cattail, loosestrife **Portion of the reach with aquatic vegetation** 10 % in channel, 100% bordering
WATER QUALITY	**Temperature** 20.9 °C **Specific Conductance** 359.00 **Dissolved Oxygen** 2.76 **pH** 7.14 **Turbidity** 3.5 NTU **WQ Instrument Used** YSI ORP - 3.4 mV **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other ____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other ____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other ____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other ____ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	40
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	60
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IBD TT1203	
STATION # 1203 RIVERMILE _____	STREAM CLASS	
LAT _____ LONG _____	RIVER BASIN	
STORET #	AGENCY	
INVESTIGATORS Hoskins, Roberts, O'Neill, Finkelstein		
FORM COMPLETED BY Roberts	DATE 6/19/01 TIME 8:45 AM PM	REASON FOR SURVEY Triad

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 14 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Pool Substrate Characterization 12 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
3. Pool Variability 0 SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
4. Sediment Deposition 5 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status 20 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

No pools

US EPA ARCHIVE DOCUMENT

TT1203

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 20 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity 18 SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 10 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank: 10 9	8 7 6	5 4 3	2 1 0
	Right Bank: 10 9	8 7 6	5 4 3	2 1 0

Total Score 149

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION TPSDTT 2903
STATION # SD2903 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS O'Neill, Roberts, Haskins, Finlestein	
FORM COMPLETED BY Roberts	DATE 6/19/01 TIME 11:30 (AM) PM / REASON FOR SURVEY Triad Sampling

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

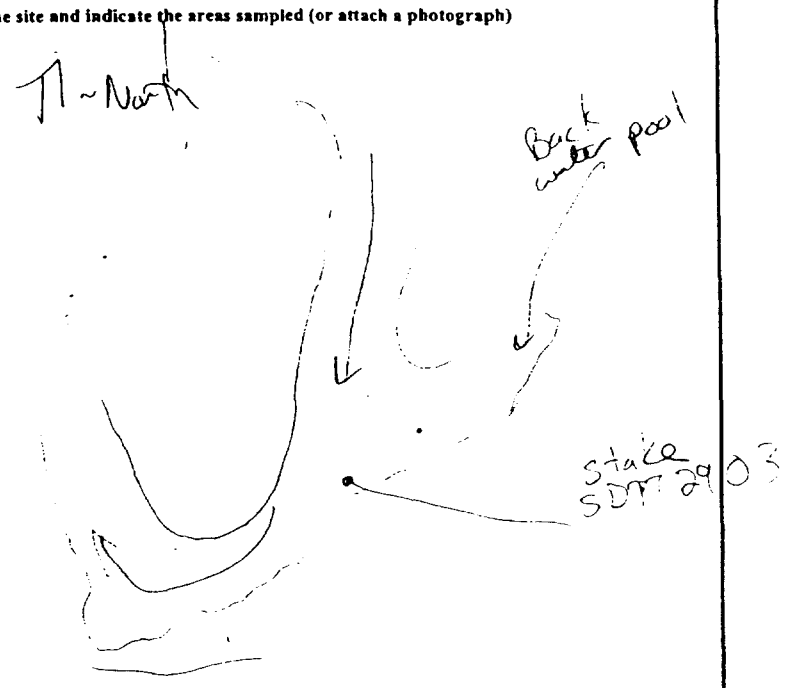
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No 6/17/01 heavy rain

Air Temperature ~85° F

Other_____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☒ Other_____

Catchment Area_____ km^2

US EPA ARCHIVE DOCUMENT

TT2903

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES

Predominant Surrounding Landuse: ☒ Forest ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☐ Residential

Local Watershed NPS Pollution: ☒ No evidence ☐ Some potential sources ☒ Obvious sources

Local Watershed Erosion: ☒ None ☐ Moderate ☐ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present: ☐ Trees None ☒ Shrubs ☐ Grasses ☒ Herbaceous

dominant species present: buttonbush, cattails, loosestrife, tussock sedge

INSTREAM FEATURES

Estimated Reach Length _____ m

Estimated Stream Width 10-12 m

Sampling Reach Area 8 ft² m²

Area in km² (m²x1000) _____ km²

Estimated Stream Depth 0.8-1.2 ft

Surface Velocity (at thalweg) _____ m/sec — no flow

Canopy Cover: ☐ Partly open ☐ Partly shaded ☐ Shaded open

High Water Mark _____ m — water high for June

Proportion of Reach Represented by Stream Morphology Types: ☐ Riffle 0 % ☐ Run 10 % ☒ Pool 90 %

Channelized: ☐ Yes ☒ No

Dam Present: ☐ Yes ☒ No

LARGE WOODY DEBRIS

LWD _____ m² 0%

Density of LWD _____ m²/km² (LWD/ reach area)

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present: ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae

dominant species present: tussock sedge, purple loosestrife

Portion of the reach with aquatic vegetation _____ % 0% in channel, 100% along bank

WATER QUALITY

Temperature 23.23 °C

Specific Conductance 342.00

Dissolved Oxygen 4.44 ppm

pH 7.06

Turbidity 5.1

WQ Instrument Used YSI

ORP -21.8 mV

Water Odors: ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____

Water Surface Oils: ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other _____

Turbidity (if not measured): ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____

SEDIMENT/ SUBSTRATE

Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other _____

Oils: ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits: ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other NONE

Looking at stones which are not deeply embedded, are the undersides black in color? ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	50%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	50%
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IPSDTT2903
STATION #_____ RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Hoskins, Finkelstein	
FORM COMPLETED BY Roberts	DATE 6/19/01 TIME 11:50 AM PM; REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 14 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Pool Substrate Characterization 11 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
3. Pool Variability 5 SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
4. Sediment Deposition 5 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status 20 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

No flow
water level high

US EPA ARCHIVE DOCUMENT

TT2903

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 20 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity 15 SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 10 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank: 10 9 8 7 6	5 4 3	2 1 0	
	Right Bank: 10 9 8 7 6	5 4 3	2 1 0	

Total Score 150

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD - TT1901
STATION # 501901 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Adrman	
FORM COMPLETED BY Roberts	DATE 6/19/01 TIME 2:30 AM (PM) / REASON FOR SURVEY Triad sampling

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

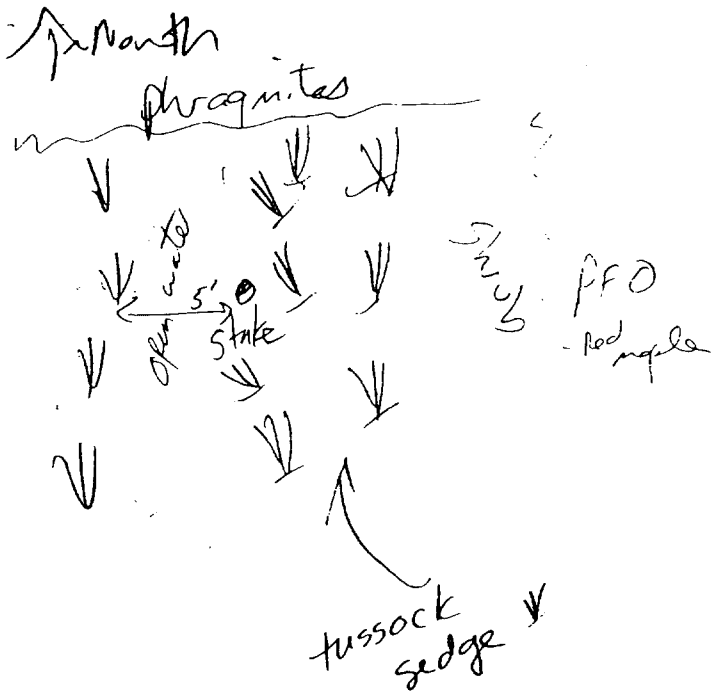
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No 6/17/01 ~2.5" Rain

Air Temperature 90°F

Other_____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☐ Perennial ☒ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☒ Other_____

Catchment Area_____ km²

US EPA ARCHIVE DOCUMENT

TT901

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES

Predominant Surrounding Landuse
☒ Forest ☒ Commercial
☐ Field/Pasture ☐ Industrial
☐ Agricultural ☐ Other _____
☐ Residential

Local Watershed NPS Pollution
☒ No evidence ☐ Some potential sources
☐ Obvious sources locally

Local Watershed Erosion
☒ None ☐ Moderate ☐ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
☐ Trees none ☒ Shrubs ☐ Grasses ☒ Herbaceous
dominant species present buttonbush, tussock sedge, purple loosestrife

INSTREAM FEATURES

Estimated Reach Length ____ m
Estimated Stream Width 5-6' m
Sampling Reach Area 16 SF m²
Area in km² (m²x1000) ____ km²
Estimated Stream Depth 0.8 ft m
Surface Velocity (at thalweg) 0 m/sec NO flow

Canopy Cover
☐ Partly open ☐ Partly shaded ☐ Shaded open

High Water Mark water level high for June - heavy rain 6/17/01 ____ m
Proportion of Reach Represented by Stream Morphology Types
☐ Riffle 0 % ☐ Run 0 %
☒ Pool 100 %

Channelized ☐ Yes ☒ No
Dam Present ☐ Yes ☒ No

LARGE WOODY DEBRIS

LWD ____ m² 0%
Density of LWD ____ m²/km² (LWD/ reach area)

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating
☐ Floating Algae ☐ Attached Algae
dominant species present tussock sedge, loosestrife along borders
Portion of the reach with aquatic vegetation ____ % <5% in pool / 100% bordering

WATER QUALITY

Temperature 25.83 C
Specific Conductance 397.00
Dissolved Oxygen 4.90
pH 7.22
Turbidity 9.6 NTU
WQ Instrument Used YSI
ORP -59.8

Water Odors
☒ Normal/None ☐ Sewage
☐ Petroleum ☐ Chemical
☐ Fishy ☐ Other _____

Water Surface Oils
☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
☒ None ☐ Other _____

Turbidity (if not measured)
☐ Clear ☐ Slightly turbid ☐ Turbid
☐ Opaque ☐ Stained ☐ Other _____

SEDIMENT/ SUBSTRATE

Odors
☒ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic ☐ None
☐ Other _____

Oils
☒ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits
☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand
☐ Relict shells ☒ Other None
Iron deposits on sed floc

Looking at stones which are not deeply embedded, are the undersides black in color?
☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	25%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	75%
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD-TT19 01
STATION # 1901 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS O'Neill, Roberts, Adelman	
FORM COMPLETED BY Roberts	DATE 6/19/01 TIME 2:30 AM (PM)
REASON FOR SURVEY Triad sampling	

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 14				
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 12				
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 6				
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 5				
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 20				

No flow
Water level high

TT1901

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 20 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity ~~20~~ N/A SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 10 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.

No distinct Channel

Bordering vegetation ~100% Emergent margin

Total Score 137

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION Cranberry Bog IPSD-TT3302
STATION # TT3302 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS O'Neill, Roberts, Huskins	
FORM COMPLETED BY Roberts	DATE 6/20/01 TIME 11:00 AM PM
REASON FOR SURVEY Triad Sampling	

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___%☐	%cloud cover	☐___%
☒	clear/sunny	☒

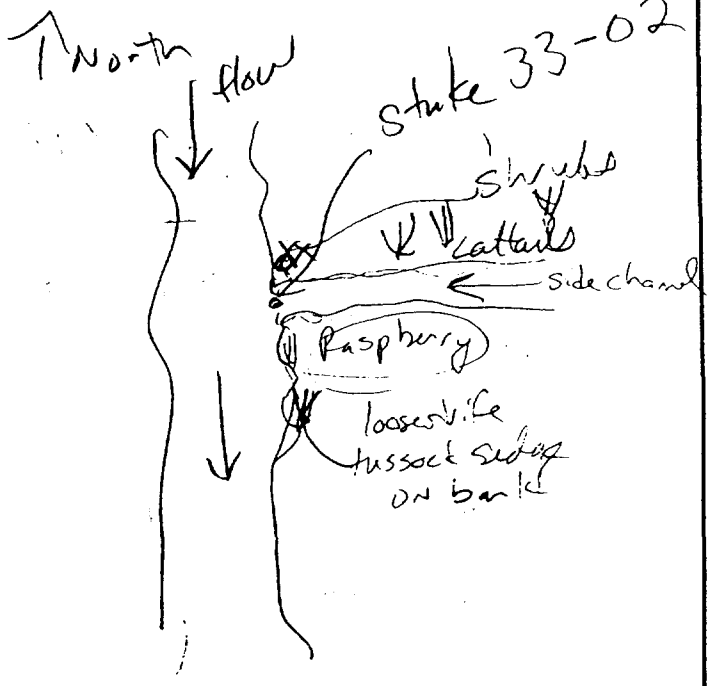
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No 6/17/01 .25" rain

Air Temperature 80 °F

Other_____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☒ Other_____

Catchment Area_____km²

US EPA ARCHIVE DOCUMENT

TT3302

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☒ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☐ Trees ☒ Shrubs ☐ Grasses ☐ Herbaceous **dominant species present** silkwood, tussock sedge, loosestrife
INSTREAM FEATURES	**Estimated Reach Length** 4ft ~~m~~ **Estimated Stream Width** 1ft ~~m~~ **Sampling Reach Area** 4x1.5 ~~m²~~ = 6sf **Area in km² (m²x1000)** ____ ~~km²~~ **Estimated Stream Depth** 3"-6" ~~m~~ **Surface Velocity (at thalweg)** ____ ~~m/sec~~ No flow **Canopy Cover** ☐ Partly open ☒ Partly shaded ☐ Shaded **High Water Mark** ____ ~~m~~ water high stage for June **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ____% ☐ Run ____% ☒ Pool 100% **Channelized** ☐ Yes ☐ No **Dam Present** ☐ Yes ☐ No
LARGE WOODY DEBRIS	**LWD** ____ 20 sticks, partially degraded leaf litter **Density of LWD** ____ ~~m²/km² (LWD/reach area)~~
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** tussock sedge, **Portion of the reach with aquatic vegetation** 20%
WATER QUALITY	**Temperature** 23.67 °C **Specific Conductance** 444.00 **Dissolved Oxygen** 4.55 **pH** 7.22 **Turbidity** 2.4 NTU **WQ Instrument Used** YSI ORP -14.1 mV **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____ **Water Surface Oils** ☐ Slick ☒ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other _____ after sampling **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other _____ **Oils** – sheen ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other N/A **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☒ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	40
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	60
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	50	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	50			
Clay	< 0.004 mm (slick)	0			

Substrate sandier

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD-TT3302	
STATION # 3302 RIVERMILE _____	STREAM CLASS	
LAT _____ LONG _____	RIVER BASIN	
STORET #	AGENCY	
INVESTIGATORS Roberts, O'Neil, Hoskins		
FORM COMPLETED BY D. Roberts	DATE 6/20/01 TIME 11:30 AM PM	REASON FOR SURVEY Triad

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 11	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 14	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 8	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

TT3302

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 13	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity 5 N/A	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 9 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 9 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 10 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 10 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 10 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 10 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score 122

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Anacostia River	LOCATION Cranberry Bay, TPSD-TT3202
STATION # TT32-02 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET#	AGENCY
INVESTIGATORS O'Neill, Roberts, Hoskins	
FORM COMPLETED BY Roberts	DATE 6/20/01 TIME 2:00 AM PM
REASON FOR SURVEY Triad Sampling	

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

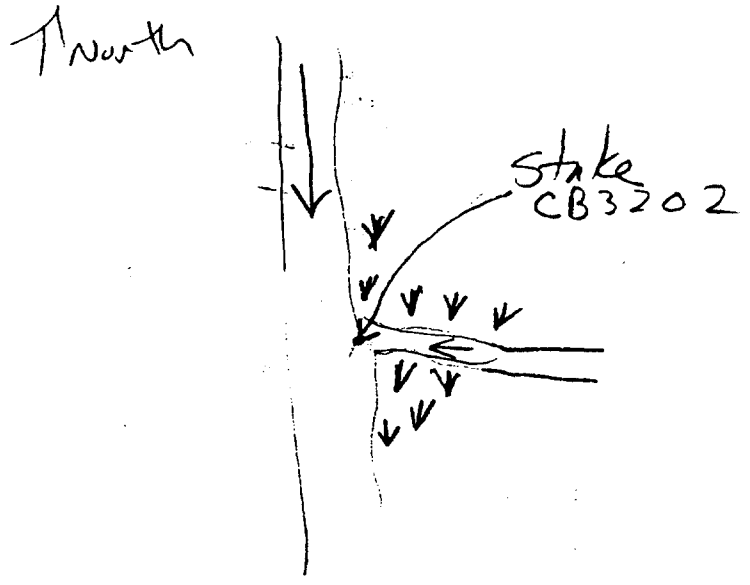
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No 6/17/01

Air Temperature 90°F

Other _____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem ☐ Perennial ☒ Intermittent ☐ Tidal

Stream Type ☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☐ Mixture of origins
☒ Other _____

Catchment Area _____ km²

TT3202

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☒ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☐ Trees ☐ Shrubs ☒ Grasses ☐ Herbaceous **dominant species present** grass collected - Panicum sp?
INSTREAM FEATURES	**Estimated Reach Length** _____ m **Estimated Stream Width** 1' ~~m~~ **Sampling Reach Area** 7 ~~m~~ ft² **Area in km² (m²x1000)** ~~km²~~ **Estimated Stream Depth** 0.4-0.8' **Surface Velocity** _____ ~~m/sec~~ (at thalweg) Very slow almost no flow **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded open **High Water Mark** _____ ~~m~~ stage high for June **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle _____ % ☐ Run _____ % ☒ Pool 100 % **Channelized** ☒ Yes ☐ No - channel Boy **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** _____ m² **Density of LWD** <5% ~~m²/km² (LWD/ reach area)~~ Leaf litter small sticks Not much large WD
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** Grass* Juncus sp. *collected on banks - little in channel **Portion of the reach with aquatic vegetation** ~~5%~~ 10%
WATER QUALITY	**Temperature** 25.84 **Specific Conductance** 436.00 **Dissolved Oxygen** 8.23 **pH** 7.20 **Turbidity** 1.3 **WQ Instrument Used** YSI ORP - 10.3 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other _____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____
SEDIMENT/ SUBSTRATE	**Odors** ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☒ Anaerobic ☐ None ☐ Other _____ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other _____ **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	60
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	40
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	60			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD-TT3202
STATION # TT3202 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Huskins (earlier)	
FORM COMPLETED BY Roberts	DATE 6/20/01 TIME 2:00 AM (PM) / REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 11				
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 12				
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 2				
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 8				
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 17				

TT3202

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 13 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity 8 N/A SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 10 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.

Total Score 123

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD-WW06
STATION # WW06 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Rosiu	
FORM COMPLETED BY Roberts	DATE 6/21/01 TIME 8:55 AM PM — REASON FOR SURVEY Triad Sampling

WEATHER CONDITIONS high thin cloud cover

Now		Past 24 hours
☐	storm (heavy rain)	☒
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
80 %	%cloud cover	☐ ___ %
☐	clear/sunny	☐

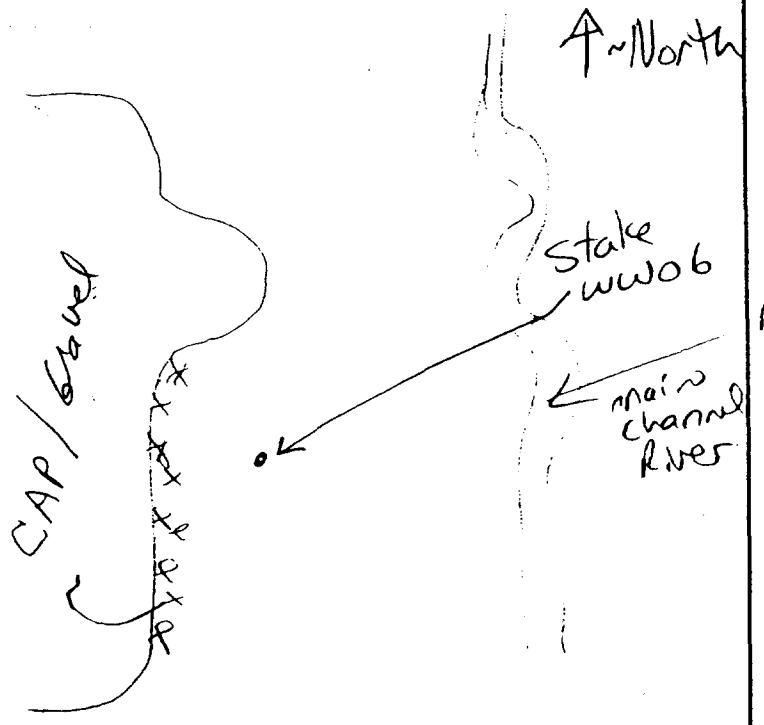
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No T-storm last night heavy rain 6/17/01

Air Temperature 70°F

Other _____ T-storms

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem: ☐ Perennial ☒ Intermittent ☐ Tidal — seasonally inundated wetland

Stream Type: ☐ Coldwater ☒ Warmwater

Stream Origin: ☐ Glacial ☐ Non-glacial montane ☐ Swamp and bog ☐ Spring-fed ☐ Mixture of origins ☒ Other_____

Catchment Area _____ km²

IPSD-WW06

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☒ Commercial ☐ Field/Pasture ☒ Industrial ☐ Agricultural ☐ Other RR tracks WW Treatment system ☐ Residential **Local Watershed NPS Pollution** ☐ No evidence ☒ Some potential sources ☐ Obvious sources GW extraction system **Local Watershed Erosion** ☐ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☒ Shrubs ☐ Grasses ☒ Herbaceous **dominant species present** red maple, arrowwood, sensitive fern, loosestrife
INSTREAM FEATURES	**Estimated Reach Length** ___ m **Estimated Stream Width** ___ m **Sampling Reach Area** 864 m² **Area in km² (m²x1000)** ___ km² **Estimated Stream Depth** 0.5 m = 1.0 ft **Surface Velocity (at thalweg)** 0 m/sec No flow **Canopy Cover** ☐ Partly open ☒ Partly shaded ☐ Shaded **High Water Mark** ___ m Water at high stage **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ___ % ☐ Run ___ % ☐ Pool 100 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** ___ m² 10% **Density of LWD** ___ m²/km² (LWD/ reach area)
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** Sens. fern, purple loosestrife, Ludwigia? **Portion of the reach with aquatic vegetation** ___ %
WATER QUALITY	**Temperature** 20.83 °C **Specific Conductance** 177.00 µMHOS **Dissolved Oxygen** 3.74 ppm **pH** 7.30 **Turbidity** 2.4 NTU **WQ Instrument Used** YSI 610DM ORP - 23.6 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other ___ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other ___ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other ___
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☒ None ☐ Other ___ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☒ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	30%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	70%
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0%
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD-WW06
STATION # WW06 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Rosin, Hoskins	
FORM COMPLETED BY Roberts	DATE 6/21/01 TIME 9:15 AM PM / REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e.; logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 13				
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 14				
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE				
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 5				
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 17	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

All shallow pool

No flow, edge PFO

No flow standing water - But Banks full

WW06

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 20	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE				
7. Channel Sinuosity ~~20~~ N/A	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance. ✓
SCORE				
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 10 (LB)				
SCORE 10 (RB)				
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 10 (LB)				
SCORE 10 (RB)				
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. ✓	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 10 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 4 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

No chann

Total Score 128

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION EPSD - TT1802
STATION # 1802 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS O'Neill, Hosking, Roberts	
FORM COMPLETED BY Roberts	DATE 6/21/01 TIME 21:36 AM (PM)
REASON FOR SURVEY Triad Sampling	

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☒
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
100 % ☐	%cloud cover	☐ ___ %
☐	clear/sunny	☒

Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No 6/17 heavy rain. Rain again on 6/20

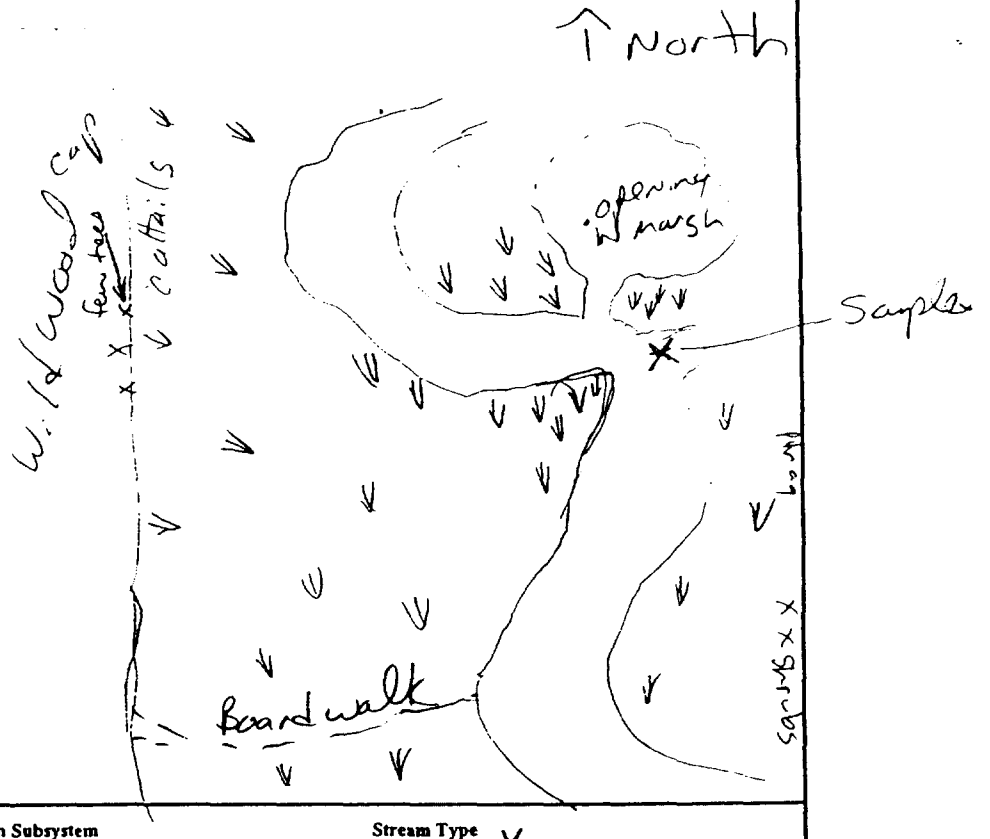
Air Temperature 75 °F

Other _____

T-storm yesterday 7pm

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☒ Mixture of origins
☐ Swamp and bog ☒ Other _____

Catchment Area _____ km²

US EPA ARCHIVE DOCUMENT

TT1802

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☒ Other RR ☐ Residential Wild Wood Treatment **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources — Wildwood **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☐ Trees ☐ Shrubs ☐ Grasses ☒ Herbaceous **dominant species present** tussock sedge, loosestrife,
INSTREAM FEATURES	**Estimated Reach Length** — m **Estimated Stream Width** 20' m **Sampling Reach Area** 65f m² **Area in km² (m²x1000)** — km² **Estimated Stream Depth** 1.1 ft m **Surface Velocity (at thalweg)** — m/sec Moderate flow **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded open **High Water Mark** — m Water level high stage **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle — % ☒ Run — % ☐ Pool — % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** — m² **Density of LWD** — m²/km² (LWD/ reach area) 0%
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** rooted at borders not in channel **Portion of the reach with aquatic vegetation** 0 %
WATER QUALITY	**Temperature** 22.11°C **Specific Conductance** 358.00 µS/cm **Dissolved Oxygen** 4.92 ppm **pH** 7.55 **Turbidity** 5.0 NTU **WQ Instrument Used** YSI ORP -54.0 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other
SEDIMENT/ SUBSTRATE	**Odors** ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☒ Anaerobic ☐ None ☐ Other **Oils** Sheen ☐ Absent ☒ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	20
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	80
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Alyeska River	LOCATION IPSD-TT1802
STATION # 18-02 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Hoskins	
FORM COMPLETED BY Roberts	DATE 6/21/01 TIME 2:30 AM (PM) REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 15 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Pool Substrate Characterization 6 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
3. Pool Variability 5 SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
4. Sediment Deposition 8 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status 20 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

TT1802

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 20 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20	16	12	0
7. Channel Sinuosity 16 SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
	20	16	12	0
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
	10	8	6	0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	10	8	6	0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 10 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank 10	9 8 7	6 5 4 3	2 1 0
	Right Bank 10	9 8 7	6 5 4 3	2 1 0

Total Score 150

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD - TT1002
STATION # SD10-02 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Hoskins	
FORM COMPLETED BY	DATE 6/22/01 TIME 8:45 (AM) PM
REASON FOR SURVEY Triad Survey	

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
100% ☐	%cloud cover	☐ ___%
☐	clear/sunny	☐

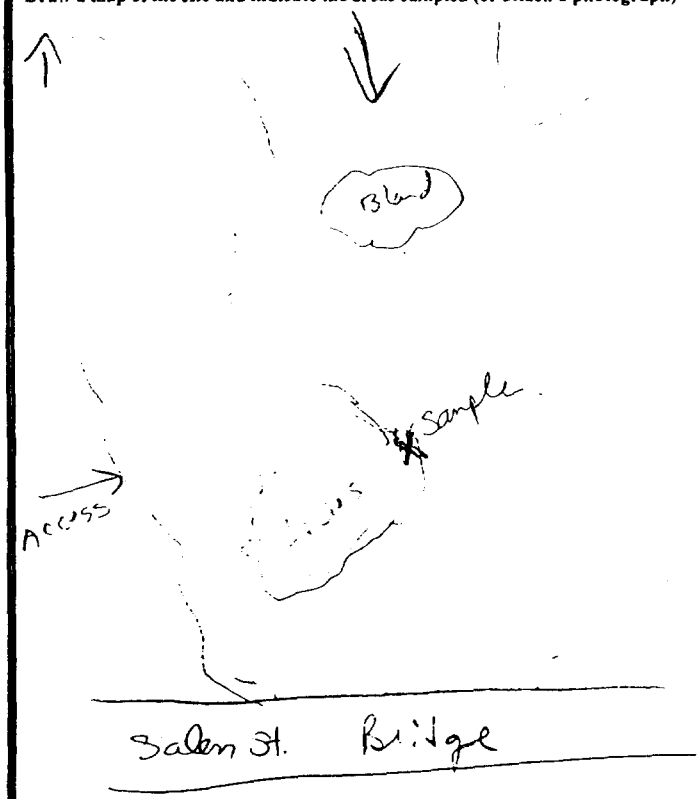
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No

Air Temperature 66°F

Other_____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☒ Other_____

Catchment Area_____ km^2

US EPA ARCHIVE DOCUMENT

TT 1002

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☒ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☐ Shrubs ☐ Grasses ☒ Herbaceous **dominant species present** willow, purple loosestrife, cattails
INSTREAM FEATURES	**Estimated Reach Length** _____ m **Estimated Stream Width** 150' ~~m~~ **Sampling Reach Area** 6 SF ~~m²~~ **Area in km² (m²x1000)** _____ km² **Estimated Stream Depth** 1.4 ft **Surface Velocity** _____ ~~m/sec~~ (at thalweg) No to very minimal flow **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded open **High Water Mark** _____ m water level high **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle _____ % ☐ Run _____ % ☒ Pool 100 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** _____ m² 0% **Density of LWD** _____ m²/km² (LWD/ reach area)
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☐ Rooted emergent ☐ Rooted submergent ☒ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** Nuphar lutetum (spatterdock) **Portion of the reach with aquatic vegetation** 20%
WATER QUALITY	**Temperature** 19.15°C **Specific Conductance** 331.00 **Dissolved Oxygen** 3.73 **pH** 7.09 **Turbidity** 6.0 NTU **WQ Instrument Used** YSI ORP -53.4 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other _____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other Slight sulfide **Oils** ☐ Absent ☒ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☒ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	80
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	20
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0%
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aboriginal River	LOCATION TT1002 Salem Street
STATION # TT1002 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Hoskins	
FORM COMPLETED BY Roberts	DATE 6/22/01 TIME 9:10 AM PM / REASON FOR SURVEY Third sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 13 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Pool Substrate Characterization 14 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
3. Pool Variability 11 SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
4. Sediment Deposition 5 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status 17 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

Station 1002 deep pools

No flow water level

TT1002

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 16	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18	17 16 15	14 13 12	11 10 9
7. Channel Sinuosity 6	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18	17 16 15	14 13 12	11 10 9
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 10 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 7 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) *Note: determine left or right side by facing downstream.*	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 10 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 6 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 7 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 6 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score 128

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Abercrombie River	LOCATION TPSD - TT1301
STATION # SD1301 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Hoskins	

FORM COMPLETED BY	DATE / TIME	REASON FOR SURVEY
Roberts	DATE 6/22/01 TIME 10:45 (AM) PM	Triad sampling

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
100% ☒	%cloud cover	☒ ___%
☐	clear/sunny	☐

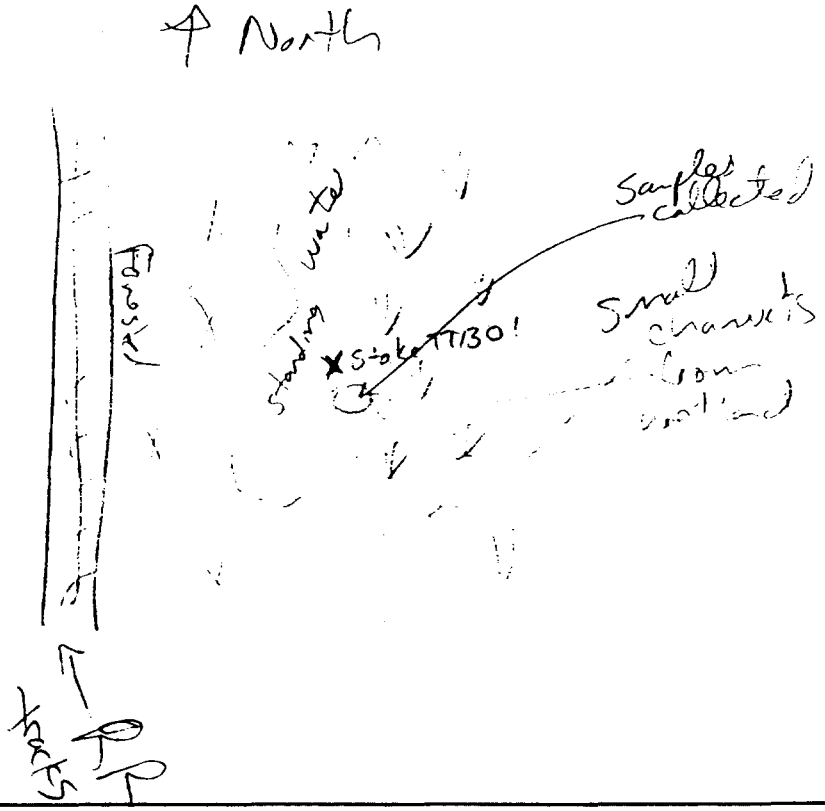
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No 6/17 heavy rain

Air Temperature 70°F 6/20 T-storms

Other_____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ? ☐ Intermittent ☐ Tidal
maybe intermittent

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☒ Other_____

Stream Type
☐ Coldwater ☒ Warmwater

Catchment Area_____km²

US EPA ARCHIVE DOCUMENT

TI1301

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☒ Other RR Track ☐ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☐ Shrubs ☐ Grasses ☐ Herbaceous **dominant species present** White oak, Arrowwood, elderberry, loosestrife, jewelweed
INSTREAM FEATURES	**Estimated Reach Length** ___ m **Estimated Stream Width** 15' m **Sampling Reach Area** 6 m² ft² **Area in km² (m²x1000)** ___ km² **Estimated Stream Depth** 0.3 – 0.4' **Surface Velocity (at thalweg)** ___ m/sec very low flow **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded open **High Water Mark** ___ m water level, just below high water mark on bank **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ___ % ☐ Run ___ % ☐ Pool 100 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** ___ m² 590 **Density of LWD** ___ ~~m²/km² (LWD/reach area)~~
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae No vegetation in pool only on banks **dominant species present** ___ **Portion of the reach with aquatic vegetation** 0 %
WATER QUALITY	**Temperature** 19.38 °C **Specific Conductance** 225.00 **Dissolved Oxygen** 4.10 **pH** 7.21 **Turbidity** 4.3 NTU **WQ Instrument Used** YSI OAK-58.5 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other ___ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other ___ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other ___
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other ___ **Oils** Sheen ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☒ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	20
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	80
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

raccoon track
Goose in open channel under trees to north

US EPA ARCHIVE DOCUMENT

IPSO-TT1301

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IPSO-TT1301	
STATION # 5013-01 RIVERMILE_____	STREAM CLASS	
LAT _____ LONG _____	RIVER BASIN	
STORET #	AGENCY	
INVESTIGATORS Roberts, Hodgins, O'Neill		
FORM COMPLETED BY Roberts	DATE 6/22/01 TIME 10:55 (AM) PM	REASON FOR SURVEY Triad

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 13 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Pool Substrate Characterization 10 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
3. Pool Variability 5 SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
4. Sediment Deposition 4 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status 16 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

area consists of one large pool

Part silty, peaty, Part muck – no emergent vegetation and sample but into along banks

Very little flow

Jewelweed, Arrowarum in wetland

TT1301

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 15 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity ~~18~~ N/A SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 6 (LB) SCORE 7 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 9 (LB) SCORE 7 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 9 (LB) SCORE 5 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.

No distinct channel area - flooded wetland

RB, little veg layer

RBank clearing w/in 12 meters: garbage, wells,

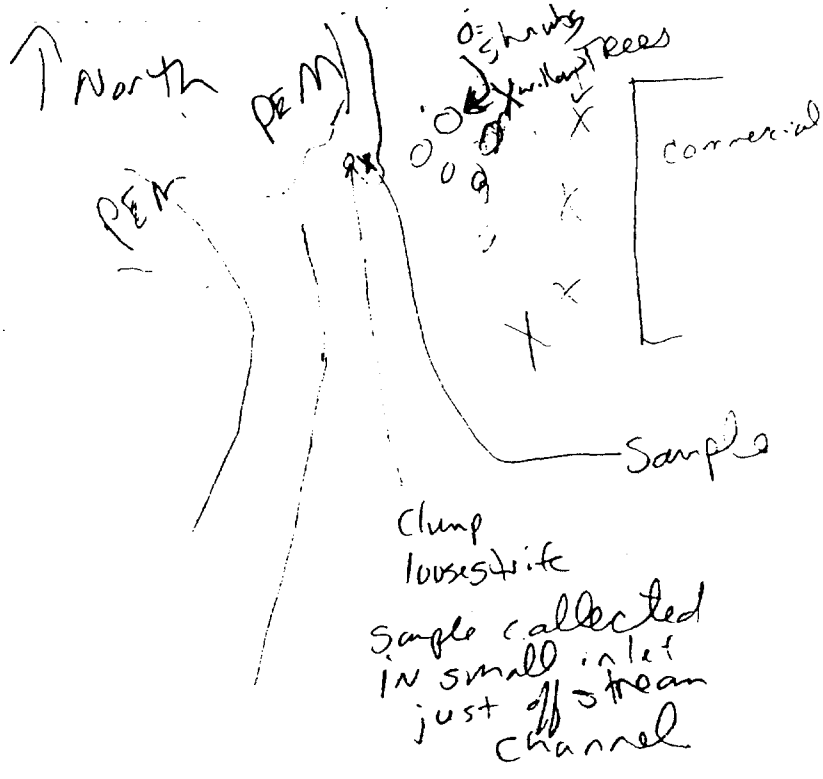
Total Score 108

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Aberjona River	LOCATION JPSD - TT3001
STATION # TT3001 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill	
FORM COMPLETED BY Roberts	DATE 6/22/01 TIME 1:10 AM PM — REASON FOR SURVEY Triad sampling

WEATHER CONDITIONS	Now: ☐ storm (heavy rain) ☐ rain (steady rain) ☐ showers (intermittent) 40 % ☐ % cloud cover ☐ clear/sunny. Past 24 hours: ☐ ☐ ☐ ☐ ☐ 100 % ☐. Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No — Heavy rain 6/17, T-storm 6/20. Air Temperature 75°F. Other _____
SITE LOCATION/MAP	Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION	Stream Subsystem: ☒ Perennial ☐ Intermittent ☐ Tidal. Stream Type: ☐ Coldwater ☒ Warmwater. Stream Origin: ☐ Glacial ☐ Non-glacial montane ☐ Swamp and bog ☐ Spring-fed ☒ Mixture of origins ☒ Other _____. Catchment Area _____ km²

US EPA ARCHIVE DOCUMENT

TT3001

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☒ Industrial (light) ☐ Other ____ **Local Watershed NPS Pollution** ☐ No evidence ☐ Some potential sources ☐ Obvious sources **Local Watershed Erosion** ☐ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☒ Shrubs ☐ Grasses ☐ Herbaceous **dominant species present** willow, red maple, elderberry, purple loosestrife, tussock sedge
INSTREAM FEATURES	**Estimated Reach Length** ____ m **Estimated Stream Width** 5 ft m **Sampling Reach Area** 10 ft² m² **Area in km² (m²x1000)** ____ km² **Estimated Stream Depth** 3-10" m **Surface Velocity (at thalweg)** ____ m/sec moderate flow main chan. Low flow @ sample **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded open **High Water Mark** ____ m water level high **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle 0 % ☒ Run 50 % ☒ Pool 50 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** ____ m² 5% **Density of LWD** ____ m²/km² (LWD/ reach area)
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** few Ludwigia palustris **Portion of the reach with aquatic vegetation** 10 %
WATER QUALITY	**Temperature** 21.65 °C **Specific Conductance** 346.00 **Dissolved Oxygen** 5.46 **pH** 7.49 **Turbidity** 5.0 NTU **WQ Instrument Used** YSI ORP -49.1 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other ____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other ____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other ____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other ____ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	50
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	50
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	10 %	Marl	grey, shell fragments	60%
Silt	0.004-0.06 mm	90 %			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona River	LOCATION IPSD-TT3001 - South of Salem St
STATION # 30-01 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Hoskins on 6/21	
FORM COMPLETED BY Roberts	DATE 6/22/01 TIME 1:30 AM (PM) REASON FOR SURVEY Triad sampling Stream

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 11 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization 14 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability 6 SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition 5 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status 18 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Some Shallow pools more [illegible]

Sample [illegible] deposits: black muck deposits and [illegible] with [illegible] /peat

TT3001

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 17 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity 15 SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 9 (LB) SCORE 9 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 6 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7	6 5 4 3	2 1 0
	Right Bank 10 9	8 7	6 5 4 3	2 1 0

Total Score 140

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Phillips Pond	LOCATION IPSD-PP03
STATION # PP03 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill	
FORM COMPLETED BY Roberts	DATE 6/25/01 TIME 10:10 (AM) PM — REASON FOR SURVEY Triad Sampling

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
20% ☐	%cloud cover	☒ 90%
☐	clear/sunny	☐

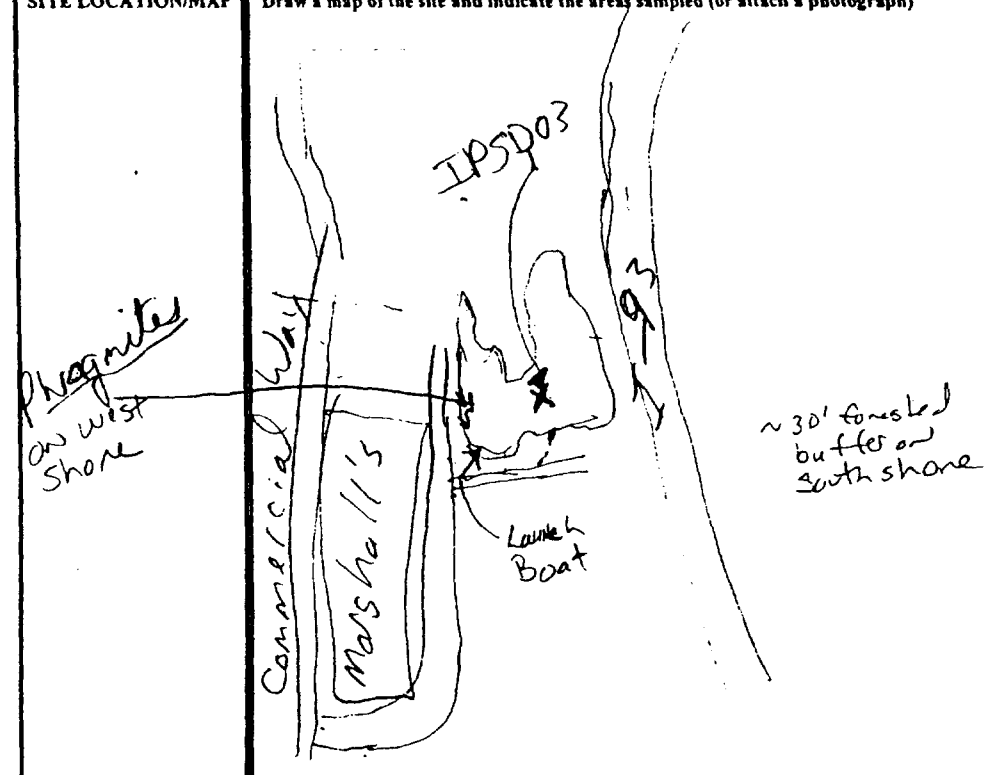
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No 5 showers 6/25

Air Temperature 76°F

Other_____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☒ Other_____

Catchment Area_____km²

US EPA ARCHIVE DOCUMENT

PP03

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☒ Forest buffer ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☒ Other Highway ☐ Residential **Local Watershed NPS Pollution** ☐ No evidence ☒ Some potential sources highway/commercial facilities ☐ Obvious sources **Local Watershed Erosion** ☐ None ☐ Moderate ☐ Heavy potential sources
RIPARIAN VEGETATION (18 meter buffer) ~80m wide	**Indicate the dominant type and record the dominant species present** ☒ Trees ☒ Shrubs ☐ Grasses ☒ Herbaceous **dominant species present** Red maple, buckthorn (collected), jewelweed
INSTREAM FEATURES meas. from map width of pond	**Estimated Reach Length** — m **Estimated Stream Width** 200 ft m **Sampling Reach Area** 205 ft m **Area in km² (m²x1000)** — km² **Estimated Stream Depth** 13.9 ft m **Surface Velocity (at thalweg)** 0 m/sec **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded open **High Water Mark** Near high water level m **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ___% ☐ Run ___% ☒ Pool 100 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No Beaver dam at outlet
LARGE WOODY DEBRIS	**LWD** — m² **Density of LWD** — m²/km² (LWD/ reach area) 0% None
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** None **Portion of the reach with aquatic vegetation** — % 0%
WATER QUALITY Taken at -6' or @ 7ft above sed.	**Temperature** 17.0 °C **Specific Conductance** 476.0 µS/cm **Dissolved Oxygen** 0.74 mg/L **pH** 6.68 **Turbidity** 2.3 NTU **WQ Instrument Used** YSI -87.6mV **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other___ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other___ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other___
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other___ **Oils** ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	10%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	90%
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Phillips Pond	LOCATION IPSD - PP03
STATION # IPS004 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill	
FORM COMPLETED BY Roberts	DATE 6/25/01 TIME 10:10 (AM) PM — REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 11				
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 8				
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE N/A				
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; ~~pools almost absent due to substantial sediment deposition.~~
SCORE 2				
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 20				

Pond

7 15

Go large of investigator [illegible] final [illegible]

PP03

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 15 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity ~~15~~ N/A SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 8 (LB) SCORE 8 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 9 (LB) SCORE 9 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 3 (LB) SCORE 4 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 (3)	2 1 0
	Right Bank 10 9	8 7 6	5 (4) 3	2 1 0

Pond created 25 yrs

Ponded Islands created stream not flow through

Total Score 102

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PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME So. Bl. Aberjona R	LOCATION IPSD-TTSA01
STATION # TTSA01 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Mumpney, Rosin, deMay	
FORM COMPLETED BY Roberts	DATE 6/25/01 TIME 2pm AM (PM) / REASON FOR SURVEY Triad Sampling

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
10 % ☐	%cloud cover	☐ ___ %
☐	clear/sunny	☐

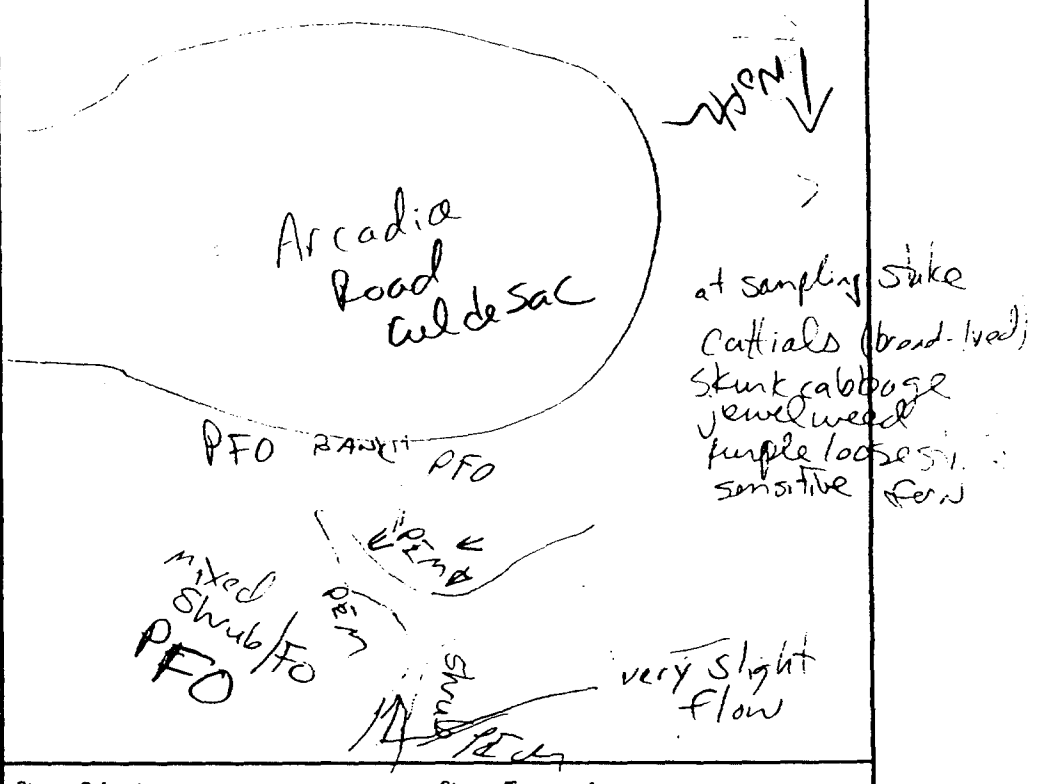
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No Showers yesterday

Air Temperature ____ °F 80-85 °F

Other _____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem: ☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type: ☐ Coldwater ☒ Warmwater

Stream Origin: ☐ Glacial ☐ Spring-fed ☐ Non-glacial montane ☐ Mixture of origins ☐ Swamp and bog ☒ Other _____

Catchment Area _____ km²

US EPA ARCHIVE DOCUMENT

TTSA01

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☒ Forest ☐ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other ____ ☒ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources Road run-off? **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☒ Shrubs ☐ Grasses ☒ Herbaceous **dominant species present** Red maple, Northern hardwood, cattails (broad leaf)
INSTREAM FEATURES	**Estimated Reach Length** ____ ~~m~~ **Estimated Stream Width** 5 ft ~~m~~ **Sampling Reach Area** 5 ft² ~~m²~~ **Area in km² (m²x1000)** ____ ~~km²~~ **Estimated Stream Depth** 0.7 ~~m~~ ft **Surface Velocity (at thalweg)** ____ ~~m/sec~~ 0 to very low flow **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded open **High Water Mark** ____ m **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ____ % ☐ Run ____ % ☒ Pool 100 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** ____ ~~m²~~ <590 **Density of LWD** ____ ~~m²/km²~~ (LWD/ reach area) few small branches chunks wood
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** None in sample area **Portion of the reach with aquatic vegetation** 0 %
WATER QUALITY	**Temperature** 25.0° C **Specific Conductance** 277.00 **Dissolved Oxygen** 5.73 **pH** 6.91 **Turbidity** ~~24.8~~ NTU 11.7 NTU **WQ Instrument Used** YSI ORP -58.2 mV **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other ____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other ____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other ____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other ____ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☒ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	50
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	50
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	70			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME So. Bl. Aberjona Riv	LOCATION TPSD - TTSA01
STATION # TTSA01 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Murney	
FORM COMPLETED BY Roberts	DATE 6/25 TIME 2pm AM (PM) REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 13	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed. NO	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE				
2. Pool Substrate Characterization 10	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE				
3. Pool Variability 5	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE				
4. Sediment Deposition 5	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE				
5. Channel Flow Status 19	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE				

US EPA ARCHIVE DOCUMENT

TTSA01

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 19 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity ~~14~~ N/A SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 5 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank: 10 9	8 7 6	(5) 4 3	2 1 0
	Right Bank: (10) 9	8 7 6	5 4 3	2 1 0

advanced channel (wound wetland)

Zone 6-8m wide No visible impacts other than Road

Total Score 126

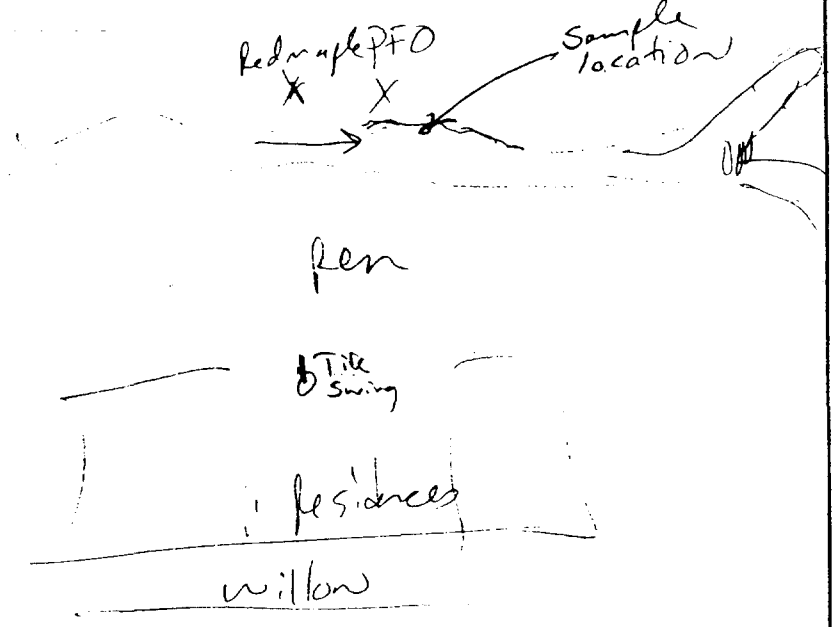
US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Sob. Aborona	LOCATION IPSD-TTSD01
STATION # TTSD01 RIVERMILE_____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Rosin, de May	
FORM COMPLETED BY Roberts	DATE 6/25/01 TIME 9pm AM PM / REASON FOR SURVEY Triad Sampling

WEATHER CONDITIONS	Now	Past 24 hours	Has there been a heavy rain in the last 7 days? ☐ Yes ☐ No
	☐ storm (heavy rain)	☐	Air Temperature_____° C
	☐ rain (steady rain)	☐	
	☐ showers (intermittent)	☐	Other_____
	5 % ☒ %cloud cover	☒ 100%	
	☐ clear/sunny	☐	

SITE LOCATION/MAP — Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION	**Stream Subsystem** ☒ Perennial ☐ Intermittent ☐ Tidal **Stream Type** ☐ Coldwater ☒ Warmwater **Stream Origin** ☐ Glacial ☐ Spring-fed ☐ Non-glacial montane ☐ Mixture of origins ☐ Swamp and bog ☒ Other other **Catchment Area**_____km²

US EPA ARCHIVE DOCUMENT

TTSD01

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☒ Forest ☐ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☒ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☒ Shrubs ☐ Grasses ☒ Herbaceous **dominant species present** Red maple, dogwood, jewelweed, sensitive fern
INSTREAM FEATURES	**Estimated Reach Length** ____ m **Estimated Stream Width** 15 ft ~~m~~ **Sampling Reach Area** 355 ft ~~m²~~ **Area in km² (m²/1000)** ____ km² **Estimated Stream Depth** 3-4" ~~m~~ **Surface Velocity (at thalweg)** Low flow ~~m/sec~~ adjacent to stream **Canopy Cover** ☐ Partly open ☒ Partly shaded ☐ Shaded **High Water Mark** ____ m **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ____ % ☒ Run ____ % ☐ Pool ____ % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** 10% ~~m~~ **Density of LWD** ____ m²/km² ~~(LWD/ reach area)~~
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** Ludwigia palustris **Portion of the reach with aquatic vegetation** ____ %
WATER QUALITY	**Temperature** 24.7 °C **Specific Conductance** 87.00 **Dissolved Oxygen** 4.47 ppm **pH** 6.93 **Turbidity** 7.5 NTU **WQ Instrument Used** YSI ORP -64.4 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other _____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____
SEDIMENT/ SUBSTRATE	**Odors** ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☒ Anaerobic ☐ None ☐ Other _____ Some sulfide odors **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☒ Other NONE **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	50
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	50
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	90			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME So. Bi. Aberdeen	LOCATION IPSD-TT SD 01
STATION # _____ RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Rosin, O'Neill, (LeMay)	
FORM COMPLETED BY Roberts	DATE 6/25/01 TIME 4:15 AM (PM) / REASON FOR SURVEY Trial Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 16 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization 11 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability 8 SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition 10 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status 16 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

US EPA ARCHIVE DOCUMENT

TTSD01

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 18 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity 10 SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 9 (LB) SCORE 9 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 9 (LB) SCORE 9 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 9 (LB) SCORE 9 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 9 (LB)	Left Bank 10 (9)	8 7 6	5 4 3	2 1 0
SCORE 9 (RB)	Right Bank 10 (9)	8 7 6	5 4 3	2 1 0

Total Score 143

US EPA ARCHIVE DOCUMENT

TTA003

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Abrajena R/Upper Mystic L	LOCATION TPSD-TTA003
STATION # TTA003 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Rosin, O'Neill	
FORM COMPLETED BY Roberts	DATE 6/27/01 TIME 11:30 (AM) PM — REASON FOR SURVEY Triad Sampling

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

Has there been a heavy rain in the last 7 days? ☐ Yes ☐ No

Showers 6/29

Air Temperature 75-80 °F

Other _____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)

See map for UF02

STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☒ Other UPR

Catchment Area _____ km²

US EPA ARCHIVE DOCUMENT

TTA003

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☐ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☒ Residential **Local Watershed NPS Pollution** ☐ No evidence ☒ Some potential sources ☐ Obvious sources Residential, Lawns, Roads **Local Watershed Erosion** ☐ None ☐ Moderate ☐ Heavy possible - Slight
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☐ Shrubs ☐ Grasses ☐ Herbaceous **dominant species present** Oaks, dogwood
INSTREAM FEATURES 5' deep - WQ meas. 2" Above sediment	**Estimated Reach Length** ____ m **Estimated Stream Width** ____ m **Sampling Reach Area** 12 ~~m²~~ ft² **Area in km² (m²x1000)** ____ km² **Estimated Stream Depth** 5' m **Surface Velocity (at thalweg)** 0 m/sec Low/no flow **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded Open **High Water Mark** ____ m level just below high mark (2 1/2") **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ____ % ☐ Run ____ % ☒ Pool 100 % **Channelized** ☐ Yes ☐ No **Dam Present** ☐ Yes ☐ No
LARGE WOODY DEBRIS	**LWD** ____ m² **Density of LWD** ____ m²/km² (LWD/ reach area) No
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** None **Portion of the reach with aquatic vegetation** ____ % None
WATER QUALITY	**Temperature** 24.6 °C **Specific Conductance** 477.00 uS/cm **Dissolved Oxygen** 7.18 ppm **pH** 7.54 **Turbidity** 6.4 NTU **WQ Instrument Used** YSI ORP -99.1 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other _____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____
SEDIMENT/ SUBSTRATE	**Odors** ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☒ Anaerobic ☐ None ☐ Other _____ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other None **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	25%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	95%
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

Some leaf matter

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Aberjona Outlet Upper Mystic Lake	LOCATION IPSD-TTA003	See INFO
STATION # TTA003 RIVERMILE _____	STREAM CLASS	
LAT _____ LONG _____	RIVER BASIN	
STORET #	AGENCY	
INVESTIGATORS Roberts, Rosin, O'Neill		
FORM COMPLETED BY Roberts	DATE 6/27/01 TIME 11:30 (AM) PM	REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 11 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Pool Substrate Characterization 8 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
3. Pool Variability N/A SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
4. Sediment Deposition 3 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status 16 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

US EPA ARCHIVE DOCUMENT

TTA003

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 12 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity 2 SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 6 (LB) SCORE 2 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 6 (LB) SCORE 7 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 5 (LB) SCORE 5 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank: 10 9	8 7	6 5 4 3	2 1 0
	Right Bank: 10 9	8 7	6 5 4 3	2 1 0

Total Score 93

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Hall's Brook	LOCATION IPSD-TT04
STATION # SDTT04 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Hoskins	
FORM COMPLETED BY Roberts	DATE 6/26 TIME 9:30 AM PM / REASON FOR SURVEY Triad Sampling

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☒ 10%
☒	clear/sunny	☐

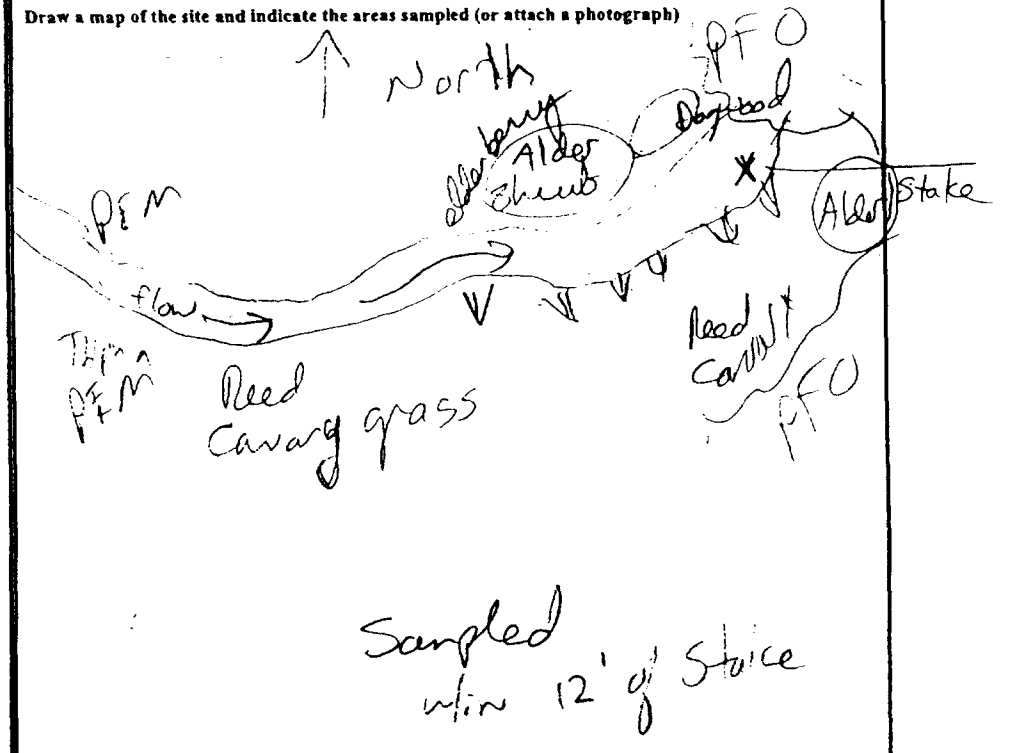
Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No Showers 6/24

Air Temperature 80°F

Other _____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☒ Mixture of origins
☐ Swamp and bog ☒ Other Urban

Catchment Area _____ km²

US EPA ARCHIVE DOCUMENT

TT04

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☒ Forest ☐ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☒ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☒ Shrubs ☒ Grasses ☐ Herbaceous **dominant species present** Red maple, speckled alder, reed canary grass,
INSTREAM FEATURES	**Estimated Reach Length** ____ ~~m~~ **Estimated Stream Width** 5 ~~m~~ ft **Sampling Reach Area** 12 ft² ~~m²~~ **Area in km² (m²x1000)** ____ ~~km²~~ **Estimated Stream Depth** 0.3-.5 ~~m~~ ft **Surface Velocity** ____ m/sec **(at thalweg)** Noticeable, slow flow **Canopy Cover** ☐ Partly open ☒ Partly shaded ☐ Shaded **High Water Mark** ____ ~~m~~ water treeline **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ____% ☐ Run ____% ☒ Pool 100 % **Channelized** ☐ Yes ☐ No **Dam Present** ☐ Yes ☐ No center channel 1.3-1.6ft run above [illegible] water 100/@ 5ft
LARGE WOODY DEBRIS	**LWD** ____ m² <5% sticks, frozen **Density of LWD** ____ m³/km² (LWD/ reach area)
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** reed canary grass **Portion of the reach with aquatic vegetation** ____%
WATER QUALITY	**Temperature** 20.62 °C **Specific Conductance** 405.0 µS/cm **Dissolved Oxygen** 5.90 ppm **pH** 7.46 **Turbidity** 6.1 NTU **WQ Instrument Used** YSI ORP -55.4 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other _____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____
SEDIMENT/ SUBSTRATE	**Odors** ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☒ Anaerobic ☐ None ☐ Other dredge anaerobic others odorless **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other none **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	15
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	85
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	20%	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	80%			
Clay	< 0.004 mm (slick)	0			

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Hall's Brook	LOCATION IPSD-TT04
STATION # SOTT04 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Hoskins, O'Neill	
FORM COMPLETED BY Roberts	DATE 6/26 TIME 9:30 AM PM / REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 13	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE				
2. Pool Substrate Characterization 14	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE				
3. Pool Variability 6	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE				
4. Sediment Deposition 8	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE				
5. Channel Flow Status 19	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE				

recent rains, high water level
high precip in June

TT04

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 19 SCORE	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Channel Sinuosity 10 SCORE	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length ~~1 to~~ 2 times longer than if it was in a straight line. 2 to 3	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
8. Bank Stability (score each bank) SCORE 10 (LB) SCORE 10 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 10 (LB) SCORE 10 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 10 (LB) SCORE 10 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score 149

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Upper Mystic Lake	LOCATION Upper forebay IPSD-TTUF02
STATION # TTUF02 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Rosin	
FORM COMPLETED BY Roberts	DATE 6/27/01 TIME 9:30 (AM) PM — REASON FOR SURVEY Triad Survey

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☐ ___%
☒	clear/sunny	☒

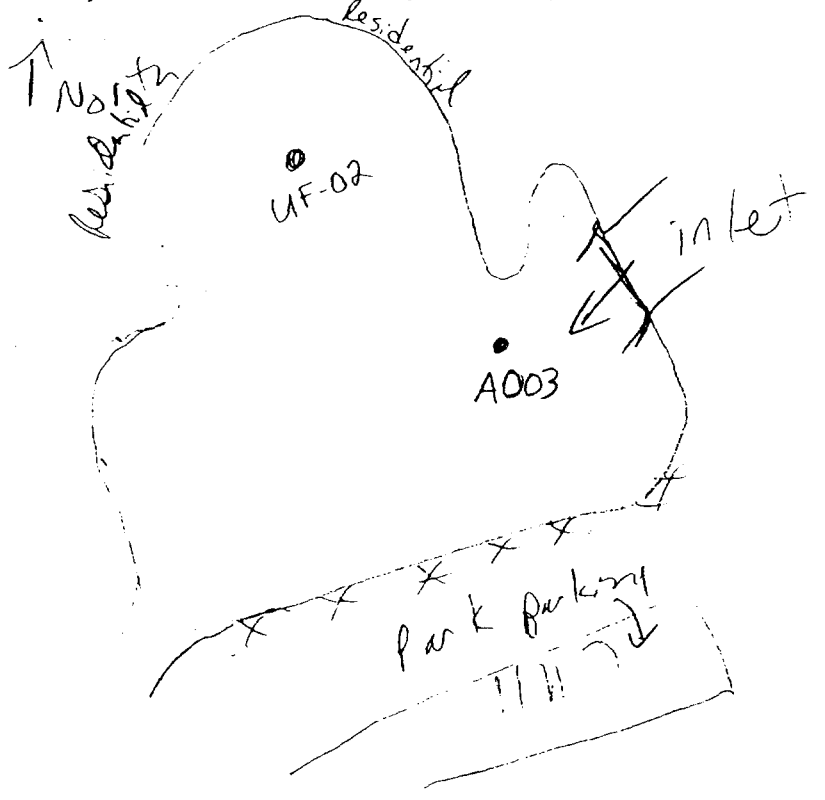
Has there been a heavy rain in the last 7 days? ☐ Yes ☐ No showers 6/24

Air Temperature 75 °F

Other Light breeze

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☐ Other unknown

Catchment Area _____ km²

US EPA ARCHIVE DOCUMENT

TTUF02

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES

Predominant Surrounding Landuse
☐ Forest ☐ Commercial
☐ Field/Pasture ☐ Industrial
☐ Agricultural ☐ Other _____
☒ Residential

Local Watershed NPS Pollution
☐ No evidence ☒ Some potential sources
☐ Obvious sources lawns, driveways, roadways

Local Watershed Erosion
☒ None ☐ Moderate ☐ Heavy
slight

RIPARIAN VEGETATION (18 meter buffer)
eastshore

Indicate the dominant type and record the dominant species present
☒ Trees ☒ Shrubs ☒ Grasses ☐ Herbaceous
dominant species present Silver maple, buckthorn, mowed grass

west shore forest / lawn

INSTREAM FEATURES
8 globs

Estimated Reach Length ___ m
Estimated Stream Width ___ m
Sampling Reach Area 107 ft² m²
Area in km² (m²x1000) ___ km²
Estimated Stream Depth 7.1 ft m
Surface Velocity (at thalweg) 0 m/sec
No flow

Canopy Cover
☐ Partly open ☐ Partly shaded ☐ Shaded open

High Water Mark ___ m
water just below high mark

Proportion of Reach Represented by Stream Morphology Types
☐ Riffle ___ % ☐ Run ___ %
☒ Pool 100 %

Channelized ☐ Yes ☒ No

Dam Present ☒ Yes ☐ No downstream

LARGE WOODY DEBRIS
LWD ___ m²
NONE
Density of LWD 0 m²/km² (LWD/ reach area)

AQUATIC VEGETATION
Indicate the dominant type and record the dominant species present
☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating
☐ Floating Algae ☐ Attached Algae
dominant species present none in sample area
Portion of the reach with aquatic vegetation 0 %
Lilies N 2m away

WATER QUALITY
@ 6'

Temperature 22.9 °C
Specific Conductance 369.00 µS/cm
Dissolved Oxygen 2.57 ppm
pH 7.34
Turbidity 6.7 NTU
WQ Instrument Used YSI
ORP - 90.6

Water Odors
☒ Normal/None ☐ Sewage
☐ Petroleum ☐ Chemical
☐ Fishy ☐ Other _____

Water Surface Oils
☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
☒ None ☐ Other _____

Turbidity (if not measured)
☐ Clear ☐ Slightly turbid ☐ Turbid
☐ Opaque ☐ Stained ☐ Other _____

SEDIMENT/ SUBSTRATE

Odors
☐ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☒ Anaerobic ☐ None
☐ Other _____

Oils
☒ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits
☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand
☐ Relict shells ☐ Other None

Looking at stones which are not deeply embedded, are the undersides black in color?
☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	<5%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	95%
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	—
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

swans, robert, cormorant

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Upper Mystic Lake	LOCATION Upper Gorge IPSD-TTUF02
STATION # TTUF02 RIVERMILE	STREAM CLASS
LAT LONG	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Rosie	
FORM COMPLETED BY Roberts	DATE 6/27/01 TIME 9:30 AM PM — REASON FOR SURVEY Triad Sampling

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 11 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed. ← NO	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Pool Substrate Characterization 8 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation. All mud
3. Pool Variability N/A SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent. fond
4. Sediment Deposition 3 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; ~~pools almost absent due to substantial sediment deposition.~~
5. Channel Flow Status 18 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

TTUF02

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 12	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity 2	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 6 (LB)	10 9	8 7	6 5	4 3 2 1 0
SCORE 6 (RB)	10 9	8 7	6 5	4 3 2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 8 (LB)	10 9	8 7	6 5	4 3 2 1 0
SCORE 7 (RB)	10 9	8 7	6 5	4 3 2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 5 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 5 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

See well on shore dam down stream

Total Score 95

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Judkins Pond	LOCATION IPSD-TT0603
STATION # TT0603 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Hoskins, O'Neill	
FORM COMPLETED BY Roberts	DATE 7/26/01 TIME 3pm AM PM
REASON FOR SURVEY Triad Sampling	

WEATHER CONDITIONS

Now		Past 24 hours
☐	storm (heavy rain)	☐
☐	rain (steady rain)	☐
☐	showers (intermittent)	☐
___% ☐	%cloud cover	☒ ___%
☒	clear/sunny	☐

Has there been a heavy rain in the last 7 days? ☐ Yes ☐ No showers 6/24

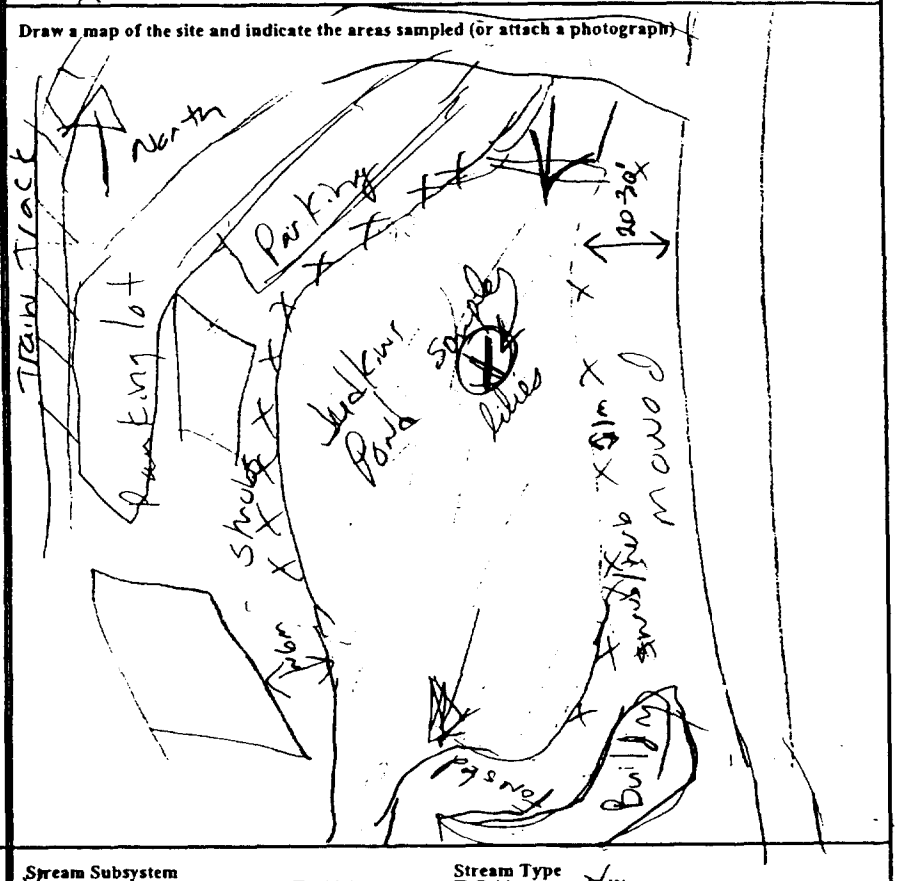
Air Temperature 90 °C

Other _____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)

Sampled around edge lily pads



STREAM CHARACTERIZATION

Stream Subsystem
☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☒ Warmwater

Stream Origin
☐ Glacial ☐ Spring-fed
☐ Non-glacial montane ☐ Mixture of origins
☐ Swamp and bog ☒ Other unk

Catchment Area _____ km²

US EPA ARCHIVE DOCUMENT

TT0603

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☐ Forest ☒ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other roads ☐ Residential **Local Watershed NPS Pollution** ☐ No evidence ☒ Some potential sources ☐ Obvious sources road/stormwater **Local Watershed Erosion** ☐ None ☒ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☐ Shrubs ☒ Grasses ☒ Herbaceous **dominant species present** cottonwood, dogwood, loosestrife, mowed grass
INSTREAM FEATURES	**Estimated Reach Length** ____ m **Estimated Stream Width** 250' m **Sampling Reach Area** 12 ft² m² **Area in km² (m²x1000)** ____ km² **Estimated Stream Depth** 35-4 ft m **Surface Velocity (at thalweg)** 0 m/sec standing water **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded ☒ Open **High Water Mark** ____ m water level high **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle ____ % ☐ Run ____ % ☒ Pool 100 % **Channelized** ☐ Yes ☒ No only at outlet **Dam Present** ☐ Yes ☒ No dam at Mill Pond
LARGE WOODY DEBRIS	**LWD** 590 m² - Large sticks in dredge **Density of LWD** ____ m²/km² (LWD/ reach area)
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** Spatterdock (Nuphar lutea) **Portion of the reach with aquatic vegetation** ____ %
WATER QUALITY WQ meas. @ 3.5 ft deep meas @ 3.2 ft	**Temperature** 24.79 °C **Specific Conductance** 492.00 µS/cm **Dissolved Oxygen** 7.67 ppm **pH** 7.45 **Turbidity** 16.1 NTU **WQ Instrument Used** YSI ORP -78.5 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other ____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other ____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other ____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other ____ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☒ Other plastic debris **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	<10%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	90% many fine roots
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	80			
Clay	< 0.004 mm (slick)	0			

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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Jidkins Pond	LOCATION IPSD - TT0603
STATION # TT0603 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, Hakins, O'Neill,	
FORM COMPLETED BY Roberts	DATE 6/26/01 TIME 2:30 AM (PM) — REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover 11 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Pool Substrate Characterization 8 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
3. Pool Variability N/A SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
4. Sediment Deposition 2 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status 20 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

pond

TT0603

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 15	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity 2	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 7 (LB)	10 9	8 7 6	5 4 3	2 1 0
SCORE 7 (RB)	10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 5 (LB)	10 9	8 7 6	5 4 3	2 1 0
SCORE 5 (RB)	10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 1 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 1 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

created ponds >25 year old,

Bank veg. 1 m. mowed >1 m

Total Score 84

US EPA ARCHIVE DOCUMENT

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

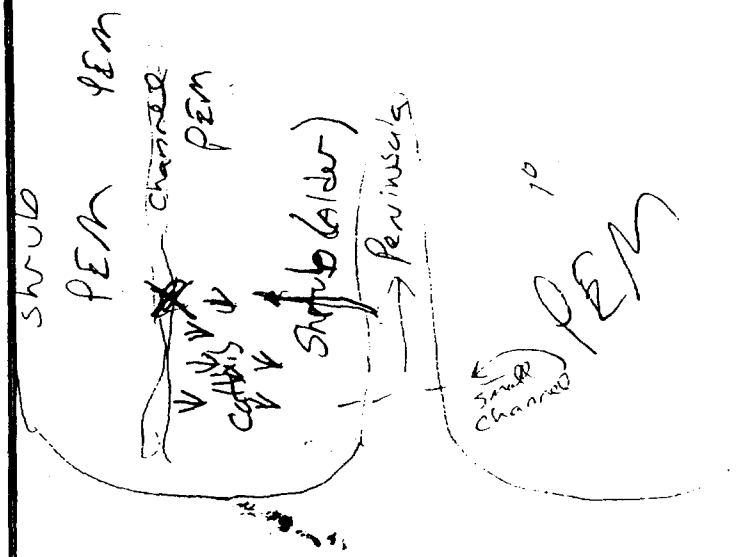
Ref Wetland

STREAM NAME Hall's Brook	LOCATION IPSD-HB00
STATION # IPSDHB00 RIVERMILE _____	STREAM CLASS
LAT _____ LONG _____	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS Roberts, O'Neill, Hoskins	
FORM COMPLETED BY Roberts	DATE 6/26/01 TIME 11:50 (AM) PM) / REASON FOR SURVEY Triad Sampling

WEATHER CONDITIONS	Now	Past 24 hours	Has there been a heavy rain in the last 7 days? ☒ Yes ☐ No showers 6/24
	☐ storm (heavy rain)	☐	Air Temperature 90 °C
	☐ rain (steady rain)	☐	
	☐ showers (intermittent)	☐	Other _____
	___%☐ %cloud cover	☐___%	
	☒ clear/sunny	☐	

SITE LOCATION/MAP — Draw a map of the site and indicate the areas sampled (or attach a photograph)

Access from Dorfarth Street



STREAM CHARACTERIZATION

Stream Subsystem: ☒ Perennial ☐ Intermittent ☐ Tidal

Stream Type: ☐ Coldwater ☒ Warmwater

Stream Origin: ☐ Glacial ☐ Non-glacial montane ☐ Swamp and bog ☐ Spring-fed ☐ Mixture of origins ☒ Other unknown

Catchment Area _____ km²

US EPA ARCHIVE DOCUMENT

HB00

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	**Predominant Surrounding Landuse** ☒ Forest ☐ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other _____ ☒ Residential **Local Watershed NPS Pollution** ☒ No evidence ☐ Some potential sources ☐ Obvious sources **Local Watershed Erosion** ☒ None ☐ Moderate ☐ Heavy
RIPARIAN VEGETATION (18 meter buffer)	**Indicate the dominant type and record the dominant species present** ☒ Trees ☒ Shrubs ☐ Grasses ☒ Herbaceous **dominant species present** Red maple, speckled alder, cattails
INSTREAM FEATURES	**Estimated Reach Length** _____ m **Estimated Stream Width** 3' m **Sampling Reach Area** 842 m² **Area in km² (m²x1000)** _____ km² **Estimated Stream Depth** 0.5-1.0' **Surface Velocity** _____ m/sec (at thalweg) low but detectable flow **Canopy Cover** ☐ Partly open ☐ Partly shaded ☐ Shaded open **High Water Mark** _____ m water level high **Proportion of Reach Represented by Stream Morphology Types** ☐ Riffle _____ % ☐ Run _____ % ☒ Pool 100 % **Channelized** ☐ Yes ☒ No **Dam Present** ☐ Yes ☒ No
LARGE WOODY DEBRIS	**LWD** _____ m² 10% Branches in channel. **Density of LWD** _____ m²/km² (LWD/reach area)
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ☒ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae **dominant species present** not in channel, bordering cattails **Portion of the reach with aquatic vegetation** 0 % duckweed
WATER QUALITY	**Temperature** 24.8C **Specific Conductance** 341.00 **Dissolved Oxygen** 6.92 **pH** 7.01 **Turbidity** 0.5 **WQ Instrument Used** YSI ORP - 72.7 **Water Odors** ☒ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other _____ **Water Surface Oils** ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☒ None ☐ Other _____ **Turbidity (if not measured)** ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other _____
SEDIMENT/ SUBSTRATE	**Odors** ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☒ None ☐ Other _____ **Oils** ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse **Deposits** ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☒ Other none **Looking at stones which are not deeply embedded, are the undersides black in color?** ☐ Yes ☐ No N/A

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	40%
Boulder	> 256 mm (10")	0			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic (FPOM)	60%
Gravel	2-64 mm (0.1"-2.5")	0			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	100%			
Clay	< 0.004 mm (slick)	0			

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1

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

wetland Ref

STREAM NAME Hall's Brook	LOCATION IPSD-HB00	
STATION # HB00 RIVERMILE _____	STREAM CLASS	
LAT _____ LONG _____	RIVER BASIN	
STORET #	AGENCY	
INVESTIGATORS Roberts, O'Neill, Hoskins		
FORM COMPLETED BY Roberts	DATE 6/26/01 TIME 1155 AM PM	REASON FOR SURVEY Triad sampling

Parameters to be evaluated in sampling reach	Habitat Parameter	Condition Category			
		Optimal	Suboptimal	Marginal	Poor
	1. Epifaunal Substrate/ Available Cover 15 SCORE	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	2. Pool Substrate Characterization 10 SCORE	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	3. Pool Variability 3 SCORE	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	4. Sediment Deposition 5 SCORE	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	5. Channel Flow Status 20 SCORE	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.

100% mud many snags sticks CPOM

mud some [illegible]

all shallow emergent

high stage

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HB00

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category: Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration 1 20	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity ~~8~~ N/A	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length ~~1 to 2~~ times longer than if it was in a straight line. 2-3	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 10 (LB)	10 9	8 7	6 5	4 3 2
SCORE 11 (RB)	10 9	8 7	6 5	4 3 2
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 10 (LB)	10 9	8 7	6 5	4 3 2
SCORE 11 (RB)	10 9	8 7	6 5	4 3 2
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 11 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 7 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score 133

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Attachment 1

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FIELD NOTES FOR JUNE 2001 WELLS G&H TRIAD SAMPLING

The following field notes were compiles in order to detail the sampling activities in support of the triad sampling at Wells G&H between June 18 and June 27, 2001. These notes are organized in chronological order. Physical Characterization and Habitat Assessment Field Data Sheets for each of these locations were also completed for each station.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location:IP-SD-WH-07
Date: June 18, 2001
Time: 11:10 am
Weather: Sunny, 80°F, light breeze

Sampling team met at the MA Rifle Association parking log, at the end of Rifle Range Road in Woburn, at 9:15 am. The first station sampled, west of the rifle range, was the TTNUS sample location WH07. The station is located at the edge of the red maple swamp along the eastern border of the Well G& H 23-acre wetland. There had been heavy rains (estimated at 2.5 inches) in the last 24-hours. Water levels in the wetland were high for June due to this rain event, as evidenced by the depth of water around emergent vegetation including sensitive ferns. The site appears to be a seasonally inundated palustrine forested wetland. The open emergent marsh, dominated by common reed (*Phragmites australis*) is located approximately 50 ft to the west.

The sediment samples were collected in 1.2 ft of water, just west of the WH07 stake. The sediment was dark muck with a high content of coarse particulate organic matter. The three samples sieved for benthic community analysis were composed predominantly of leaf litter. A layer of moss was present floating just above the sediment surface. There was no observable flow of water at the site.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SDTT-22-01
Date: June 18, 2001
Time: 3:30 pm
Weather: Sunny, 85°F, light breeze

Station SDTT 22-01 was access through the northern fence of the Rifle Association property. The former stake marking TTNUS's sampling location was located. The area in the vicinity of the sample site is a palustrine forested wetland, dominated by red maple (*Acer rubrum*), swamp azalea (*Rhododendron viscosum*), and skunk cabbage (*Symplocarpus foetidus*).

The sample was collected within a small channel (2 ft wide) with slow, but detectable flow, through the red maple swamp. The banks were densely vegetated with maples, shrubs, and a herb layer dominated by skunk cabbage, cinnamon fern (*Osmunda cinnamomea*), jewelweed (*Impatiens capensis*) and lurid sedge (*Carex lurida*). In the channel itself, emergent and submersed aquatic vegetation was absent. The sediment was composed of dark highly organic muck with a high content of coarse particulate organic matter. In the samples sieved for benthic

community analysis, small beads, presumed to be lead shot from historic rifle range activity were found. The access road, which parallels the wetland to the east was covered in buck shot.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SDTT-12-03
Date: June 19, 2001
Time: 9:30 am
Weather: Sunny, 80°F, light breeze

Station SD 12-03 along the secondary channel of the Aberjona River near Well H in the 23-acre wetland. This location was characterized as a stream habitat and was collected in a depositional area of a side channel along the edge of the emergent marsh. The marsh vegetation was dominated by narrow-leaved cattail (*Typha angustifolia*), purple loosestrife (*Lythrum salicaria*) and tussock sedge. A few shrubs adjacent to the sampling location included button-bush and elderberry (*Sambucus canadensis*), although the area was generally open emergent marsh.

The sediment was composed of dark organic muck, with a high proportion of coarse particulate organic matter consisting mainly of cattail fragments. The main channel of the stream at this location was approximately 5-8 feet wide with moderate flow and 4 ft deep at the center. The small side channel where the sample was collected was 0.8 to 1.2 feet deep. The emergent marsh adjacent to the sample area is covered in dense vegetation and pockets of water.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SDTT29-03
Date: June 19, 2001
Time: 11:50 am
Weather: Sunny, 85°F, light breeze

SDTT-29-03 is south of Well H on the east branch of the river within the 23-acre wetland. This location was characterized as a stream habitat, and was collected adjacent to a small inlet in the wetland which forms a pool bordered by emergent wetland. The stream channel is distinct, deeper and wider than at SD-12-03. There is no canopy and few shrubs. The wetland vegetation is dominated by tussock sedge (*Carex stricta*), purple loosestrife and some cattails. The sediment was collected at a depth of 0.8 to 1.2 feet of water. The sediment was composed of dark organic muck with fine roots and slightly less undecomposed cattail fragments.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SDTT-19-01
Date: June 19, 2001
Time: 2:30 pm
Weather: Sunny, 90°F, light breeze

Station SD19-01 is in the 23-acre wetland west of Well G. This wetland sediment sample was

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located in a isolated pocket or channel in the emergent wetland among tussock sedge. This open channel in the emergent wetland is not directly connected to the main channel of the river. The sediment samples were collected at a depth of 0.8 feet. Sediment consisted of dark organic muck with a higher content of fine particulate organic matter. Some orange floc was noted on the surface of the sediment. There was no tree or shrub cover. A dense stand of *Phragmites* is located to the north, but in the vicinity of the sample, the vegetation was primarily sedges. The original Foster-Wheeler sample was taken near this location. The M&E (1997) sample was collected closer to the forested wetland to the east.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-TT33-02
Date: June 20, 2001
Time: 11:20 am
Weather: Sunny, 80°F, light breeze

Sample site TT33-02 is just off the main channel of the Aberjona River near the southern end of the former Cranberry Bog, south of Salem Street. This wetland habitat was located along a minor side channel (east-west). The substrate was difficult to sample with the dredge because of the fibrous roots and particulate organic matter. The sediment was black organic muck with a higher sand component than many of the wetland samples. The dominant vegetation in the vicinity of the sample station included tussock sedge and purple loosestrife. The emergent marsh was mainly open in this area, but a few shrubs, mainly silky dogwood (*Cornus amomum*) were located adjacent to the sample location.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-TT32-02
Date: June 20, 2001
Time: 2:00 pm
Weather: Sunny, 90°F, light breeze

Sample station TT32-02 was also located within the former Cranberry Bog, north of TT33-02. The station was very similar in character to the wetland sample collected at TT33-02. The sediment was collected at the mouth of one of the small side channels to the main stream. There was almost no flow in the channel and the sediment was collected in a depositional area 0.4-0.8 ft of water depth. The vegetation bordering the sampling location was dominated by emergent, hummock-forming grass, and purple loosestrife. The sediment consisted of organic muck and some sand. The organic content and fine root fraction was also high, making dredging difficult. The dredge pressed in 6 inches into the substrate and frequently recovered only 2-3 inches of material for the chemistry and toxicity samples.

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Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-WW-06
Date: June 21, 2001
Time: 8:55 am
Weather: Cloudy, 70°F, light breeze

Station WW-06 is located along the eastern edge of the Wildwood Property. The station is at the out edge of the narrow forested wetland that borders the gravel cap for the treatment system at Wildwood. The sample was collected among clumps of emergent wetland plants including sensitive fern (*Onoclea sensibilis*) and purple loosestrife. The location is partially shaded by red maple trees and a few shrubs (norther arrowwood) were located adjacent to the sampling area.

The sediment was black organic sediment with many fine roots and cohesive structure. In order to get a sample, the jaws of the dredge had to be manually pushed closed. Water depth was 0.5 - 1.0 feet. The area appears to be a seasonally inundated location.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-TT-18-02
Date: June 21, 2001
Time: 2:30 pm
Weather: Cloudy, 75°F, light breeze

The sample station was located on the east side of the Aberjona River and determined by the GPS co-ordinates for SD-18-02 recorded by M&E. The station was accessed by launching a boat from Wildwood. The location is a small inlet along the main river channel. The vegetation along the bank was dominated by tussock sedge and purple loosestrife. The banks of the stream are emergent marsh with a few red maple saplings present. The sediment was black organic muck, with a high content of fine particulate organic matter. Samples were collected in water 1.1 ft deep.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SDTT-10-02
Date: June 22, 2001
Time: 8:45 am
Weather: Cloudy, 75°F, light breeze

Sampling location SD-10-02 is located on the Aberjona River, just upstream of the bridge at Salem Street. This location is at the southern end of the 23-acre wetland and upstream of the Cranberry bog. Access was obtained through the backyard of a residence on Salem street to the west. A boat was used to collect the sample. GPS was used to locate the M&E co-ordinates for SD-10-03. This area is a wide point in the river with slow flow. The sample was collected in 1.4 feet of water at the northeast edge of a patch of water lilies (*Nuphar luteum*). The sediment was composed of black organic muck with a high content of coarse particulate organic matter. The

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riparian vegetative zone was limited on the western bank to a narrow shrub/tree border sloping up to a mowed residential lawn. The remainder of the surrounding banks were dominated by emergent vegetation including cattails and purple loosestrife.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SDTT-13-01
Date: June 22, 2001
Time: 10:45 am
Weather: Cloudy, 70°F, light breeze

The location of the stake for station SD13-01 (Foster Wheeler) was determined with GPS co-ordinates. The location of the former SD13-01 was in an area of a scoured channel at the western edge of the 23-acre wetland, north of Wildwood. The area was inundated with water, but a location about 15 feet to the east was selected to sample. This location was a small channel into the adjacent to the emergent wetland. The sample was collected in the open water, 0.3 - 0.4 feet deep, adjacent to clumps of purple loosestrife and jewelweed.

The western bank, about 100 feet from the railroad tracks, consisted of a disturbed forest, dominated by oak. Shrubs, including northern arrowwood (*Viburnum recognitum*), were prevalent along the bank. The open water channel was about 20 feet wide and up to 2 feet deep. The sediment consisted of black organic muck, with some of the dredge samples with a higher content of peaty material.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-TT30-01
Date: June 22, 2001
Time: 1:20 pm
Weather: Partly cloudy, 75°F

The sample was collected in a very small inlet on the east side of the stream channel south of Salem Street. The station was accessed from a parking lot off the south side of Salem Street. There was moderate flow in the channel and slow flow at the sampling location behind a small clump of purple loosestrife. The western shoreline was a narrow band of forest including willow, red maple and gray birch . The sample was collected in an open are of emergent marsh dominated by purple loosestrife, tussock sedge and sensitive fern at a depth of 3-10 inches. The sediment was composed of back organic muck, fibrous roots, and some peat.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SD-PP03
Date: June 25, 2001
Time:10:10 am
Weather: Partly cloudy, 76°F

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Phillips Pond was a reference location located on the South Branch of the Aberjona River between Commercial Way and Route 93. Access was obtained from road behind the Marshall's loading docks. The pond was sampled using an Ekman dredge from a boat. Station IPSD03 is located off the southern shore about halfway up the pond. The sediment was collected at a depth of about 13 feet. Soft black organic muck was collected at the location determined from GPS co-ordinates provided in Menzie-Cura's data. While anchored at the same location, in some areas there was little recovery in the dredge and it felt like it was hitting hard bottom.

The pond was create in the mid-1970's. There is an active beaver dam at the outlet, and the water levels appeared to be quite high. The bordering vegetated buffer is a narrow forest (red maple gray birch, glossy buckthorn (*Rhamnus frangula*) and dogwood), with the exception of the west side, with is *Phragmites* and a bank up to the roadway. Beaver activity, muskrat and Great Blue Heron were observed at the pond. Ken Munney reported that a large number of bass were collected from this pond during the fish sampling.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SD-TTSA01
Date: June 25, 2001
Time: 2:00 pm
Weather: Mostly sunny, 85°F

A new wetland reference station was selected in the Town of Reading, at the end of Arcadia Road. The station is located off the north side of the cul-de-sac at the edge of the forested wetland in a small open channel (no flow) in the emergent wetland. At the time of sampling the water depth was 0.7 ft. At the sampling location there was no canopy cover, however, to the south and west (upstream), a mix of shrub and forested wetland was dominated by red maple, and northern arrowwood. Vegetation at the TTSA01 included broad-leaved cattail, skunk cabbage, jewel weed, purple loosestrife and sensitive fern. This vegetative community was characteristic of the emergent marsh along the edges of the open channel in the wetland where the sample was taken. There was no rooted aquatic vegetation where the sediment was collected. The sediment consisted of black organic muck, on top of a sandier layer. There was a fairly high content of coarse particulate organic matter in the samples.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-TTSD01
Date: June 25, 2001
Time: 4:00 pm
Weather: Mostly sunny, 85°F

TTSD01 is a stream reference location on the South Branch of the Aberjona River. The station is located behind residences on Willow Street in Reading. Access to the site was obtained through the back yard of #118 Willow Road. The stream is 8-10 feet wide, with forested wetland along the east bank and emergent/shrub wetland along the west bank. Shrubs along both banks included

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silky dogwood and glossy buckthorn. Trees were predominately red maple. Along the banks, the dominant herbaceous species included jewelweed and sensitive fern.

The substrate on west side of the stream channel was scoured and sandy. The sample was collected in the depositional area on the east side of the channel. The sediment was black organic muck, with some sand, and a high content of coarse organic matter. There were numerous sticks and woody debris. A few rooted macrophytes (*Ludwigia palustris*) were observed in the area of the sample collection.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-TT04
Date: 6/26/01
Time: 9:30 am
Weather: Sunny, 85°F

This station was a reference stream location, on Hall's Brook accessed from a dead-end street (Third Road). This station was used by Menzie-Cura for a reference stream for the Industri-Plex triad sampling. There is a distinct stream channel present through a wide emergent marsh dominated by reed canary grass. The sample was taken on the western end of the marsh in an area where the stream is bordered by a few shrubs and then flows into a forested wetland.

The sediment was collected along the reed-canary grass bank and consisted of a black organic muck. The substrate toward the center of the channel (not sampled) was sandy. Dogwood, speckled alder (*Alnus rugosa*) and elderberry were present along the northern bank. Other emergent wetland species present in the area included purple loosestrife and broad-leaved cattail (*Typha latifolia*).

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-HB00
Date: June 26, 01
Time: 11:50 am
Weather: Sunny, 90°F

This reference wetland, along Hall's Brook, was accessed from a dead-end street (Danforth) off of School Street in Woburn. The wetland was reached by going down a steep bank from the residential area and west along the bank, out to a peninsula that runs north into the wetland. The station is on the west side of the wetland adjacent to an scrub/shrub wetland dominated by speckled alder. The sample was taken in a channel in the wetland with no flow, among cattails. The water depth at the sampling location was 0.5 to 1.0 feet. The sediment was deep (approximately 2 ft) dark organic muck with coarse organic matter. The was duckweed (*Lemna* sp.) on the surface of the water among the cattails, and other emergent vegetation included purple loosestrife and for-get-me-nots (*Myosotis scorpoides*).

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Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SD-TT06-03
Date: June 26, 2001
Time: 3:00 pm
Weather: Sunny, 90°F

The sample location for Judkins Pond was located using co-ordinates for the M&E SD-06-03 station. Judkins Pond is a small pond in the center of Winchester. The sampling location is on the east side of the pond near a patch of water lilies (*Nuphar luteum*). The sample was collected at a depth of 3.5 - 4 feet. The sediment consisted of dark black organic muck with many fine roots and some sand in the sieved benthic community samples. Undisturbed vegetation grows along the bank in a narrow buffer, but the majority of the riparian zone consists of mowed grass, buildings and roadways.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SD-TTUF-02
Date: June 27, 2001
Time: 9:30 am
Weather: Sunny, 75°F

This was one of two samples collected in the Upper Forebay of Upper Mystic Lake. The eastern shore of the pond is bordered by a park, and the western shore is residential. The samples were collected by boat, launched from the park on Mystic Valley Parkway. The first sample was collected in a bay on the western shore. Many of the residences on the shoreline have seawalls. The water depth at the station was 7.1 feet. The sediment consisted of black orgainc muck with little coarse organic matter. There was a patch of water lilies (*Nymphea odorata*) approximately 6 ft from the sample location. Lilies were prevalent elsewhere on the pond. Cormorants and geese were present on the pond. Bluegills were noted along the eastern shore, and larger fish were jumping near the center of the lake.

Project name: Wells G&H Sediment Triad Sampling 2001
Sample Location: IP-SD-TTAO-03
Date: June 27, 2001
Time: 11:30 am
Weather: Sunny, 85°F

The second station in the Upper Forebay was located closer to the inlet of the Aberjona River. The sample was collected at a water depth of 5 ft. The sediment was similar with some leaf matter in the samples.

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Station IPSD-WH07, Wells G&H Triad Sampling, June 18, 2001

Station IPSD-TT2201, Wells G&H Triad Sampling, June 18, 2001

Originals in color

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Station IPSD-TT1203, Wells G&H Triad Sampling, June 19, 2001

Station IPSD-TT2903, Wells G&H Triad Sampling, June 19, 2001

Originals in color.

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Station IPSD-TT1901, Wells G&H Triad Sampling, June 19, 2001

Station IPSD-TT3302, Wells G&H Triad Sampling, June 20, 2001

Originals in color.

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Station IPSD-TT3202, Wells G&H Triad Sampling, June 20, 2001

Station IPSD-WW06, Wells G&H Triad Sampling, sample collected June 21, 2001, photo July 18, 2001

Originals in color

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Station IPSD-TT1802, Wells G&H Triad Sampling, June 21, 2001

Station IPSD-TT1002, Wells G&H Triad Sampling, June 22, 2001

Originals in color.

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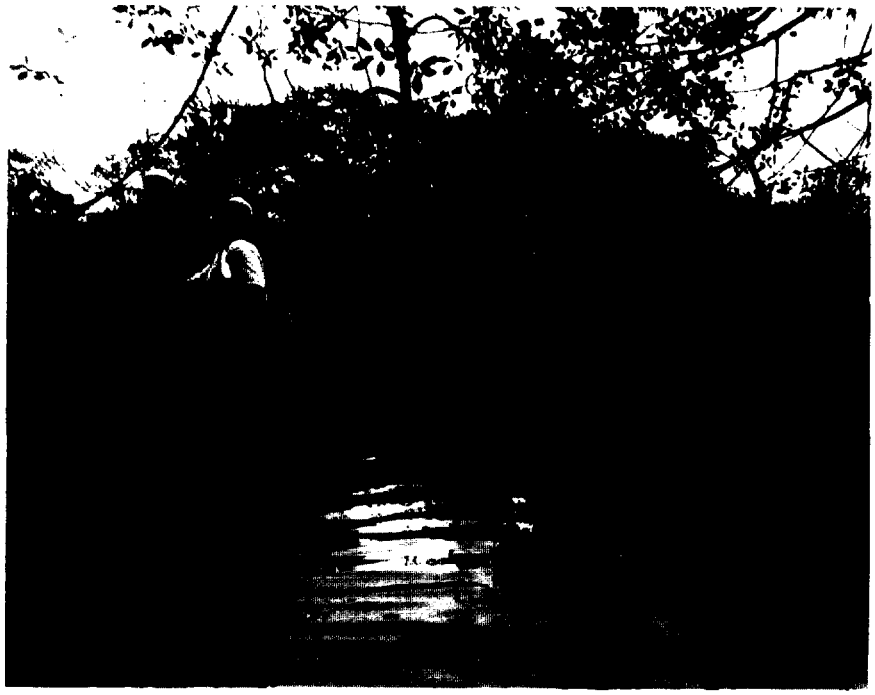

Station IPSD-TT1301, Wells G&H Triad Sampling, June 22, 2001

Station IPSD-TT3001, Wells G&H Triad Sampling, June 22, 2001

Originals in color.

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Station IPSD-PP03, Wells G&H Triad Sampling, June 25, 2001

Station IPSD-TTSA01, Wells G&H Triad Sampling, June 25, 2001

Originals in color

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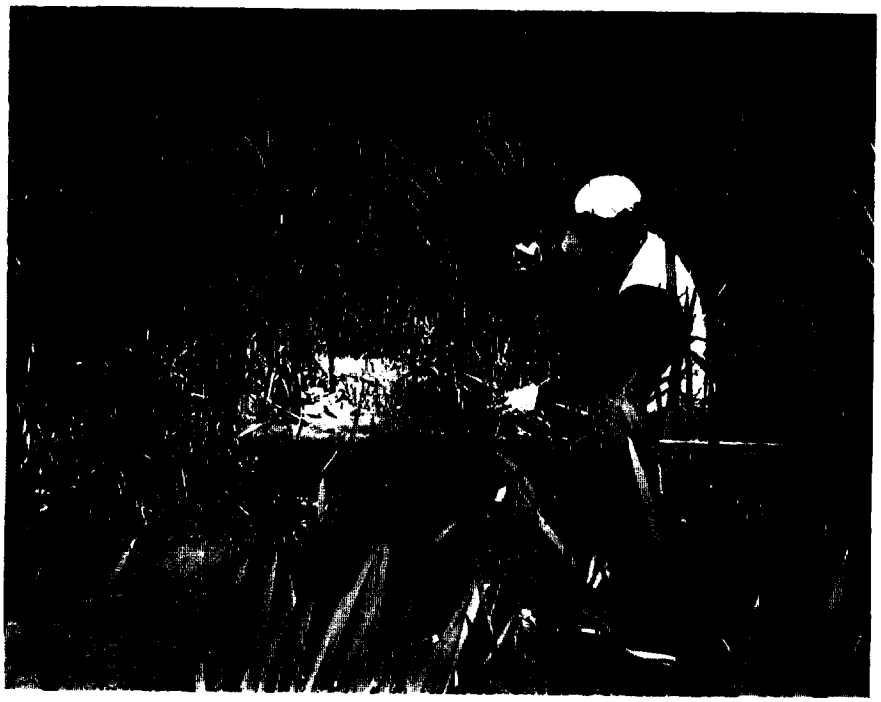
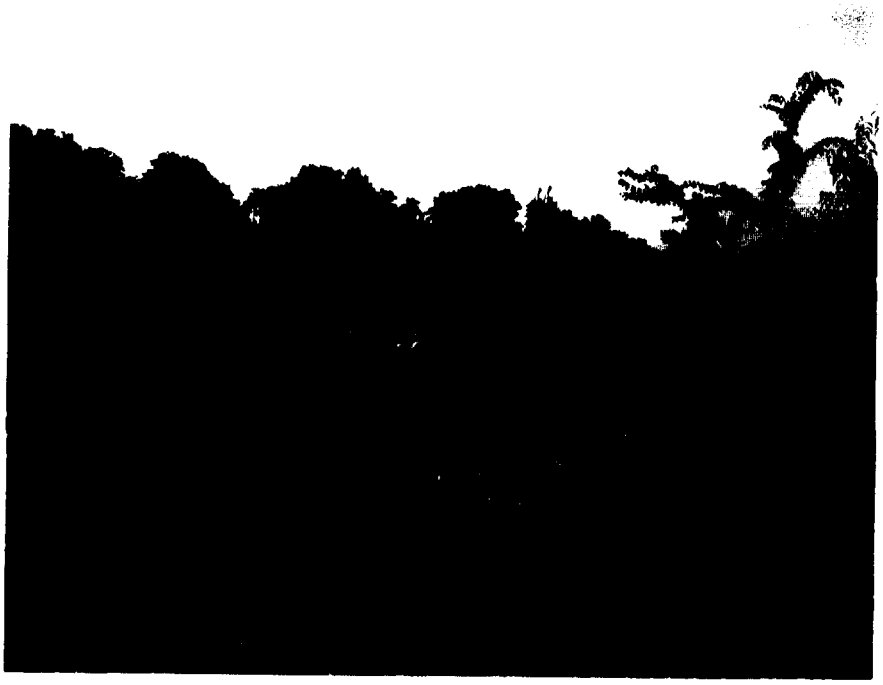
Station IPSD-TTSD01, Wells G&H Triad Sampling, June 25, 2001

Station IPSD-TT04, Wells G&H Triad Sampling, June 26, 2001

Originals in color



Station IPSD-HB00, Wells G&H Triad Sampling, June 26, 2001



Station IPSD-TT0603, Wells G&H Triad Sampling, June 26, 2001

Originals in color.

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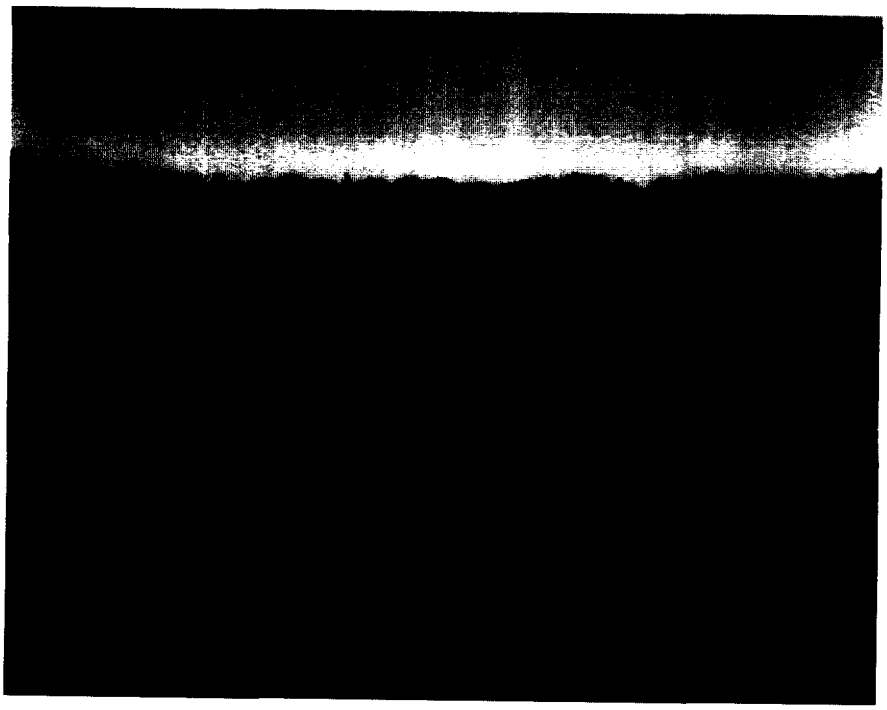
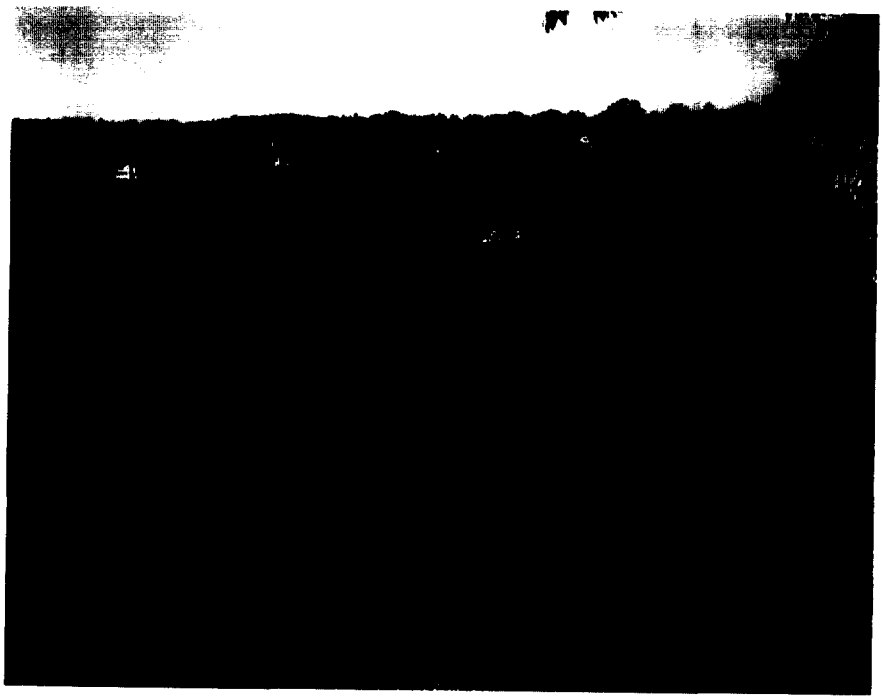


Station IPSD-TTUF02, Wells G&H Triad Sampling, June 27, 2001



Station IPSD-TTAO03, Wells G&H Triad Sampling, June 27, 2001

Originals in color.

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APPENDIX A.6

EPA 2002 SUMMARY OF FIELD LOG SHEET DATA

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
AR01	07/17/02	12:09	0-6"	Dark brown organic peat matter, w/ sticks, twigs, leaves, etc. Saturated, no odor.	In river channel, shaded/surrounded by brush, low trees.	
AR02	07/17/02	11:45	0-6"	Dark brown organic peat matter, w/ sticks, twigs, leaves, etc. Saturated, no odor.	At edge of river channel, surrounded by trees, brush, phragmites on banks.	
AR03	07/17/02	11:12	0-6"	Vegetative matter (twigs, etc.), silt. Dark brown/black color. Saturated, no odor.	On edge of river, next to open channel.	
AR04	07/17/02	11:26	0-6"	Vegetation, decaying matter - leaves, twigs. Overly saturated. Brown/black color. Low solids %.	In wetland near edge of river channel (~3' from river); surrounded by phragmites.	
AR05	07/17/02	11:00	0-6"	Many roots, organic material, twigs, etc. Dark brown color, no odor, saturated.	Adjacent to wetlands, near open area of river. Trees, purple loosestrife.	
AR06	07/17/02	10:45	0-6"	Silt, sand, twigs, saturated. 0-0.75" - brown color. 0.75-6" - dark brown. Some odor.	On edge of river channel. Thick brush, tree cover, some phragmites. In viscinity of Wells G&H.	Field duplicate taken here.
BE01	09/04/02	17:28	0-4"	Brown loam	Sample type: soil.	
BE02	09/04/02	17:17	0-3"	Brown peaty silt w/ detritus	Sample type: soil.	
BE03	09/05/02	15:00	Depth to bottom is 3.5'; 0-4" sediment	Blackish brown silt w/ organic odor; anaerobic	3.5' ft. from shore. Sample type: sediment.	
BE04	07/17/02	13:42	0-6"	Brown peat, thick, close to saturation, no odor.	In wetland, downslope from Boston Edison area [remediation] cap (covered in gravel)	
BE05	07/17/02	13:55	0-6"	Thick, dark brown/black peat. Close to saturation, no odor.	In marshy bog area, surrounded by brush, trees. Downslope of B.E. cap.	
BE06	07/17/02	14:08	0-6"	Thick, dark brown/black peat. Close to saturation, no odor.	In wetland, downslope of large B.E. concrete tower supports; near cap.	
BE08	07/15/02	10:00	0-6"	Thick, dark brown-colored sediment: peat, decaying leaves, twigs, etc. Saturated, partly submerged in H2O.	Located in a (wet) drainage channel below a (man-made?) hill. Thick vegetative cover, small trees surrounding.	
BE09	07/15/02	10:14	0-6"	Peat, roots, leaves, twigs, etc. Dark brown color, no odor. Close to saturation.	Located in a (semi-dry) drainage channel. Thick vegetative cover, small trees surrounding.	

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
BE10	07/15/02	10:33	0-6"	Leaves, twigs, sediment. Dark brown/black, saturated	Located in a (semi-dry) drainage channel. Thick vegetative cover, small trees surrounding.	
BE11	07/15/02	10:44	0-6"	Twigs, sediment, silt. Dark brown, no odor, saturated.	Located in a (semi-dry) drainage channel. Thick vegetative cover, small trees, and phragmites surrounding.	
BSO-01	07/15/02	09:52	0-6"	Loam, silty, light brown. No moisture, no odor	In a wetland on a (man-made?) hill, ~10' above a drainage channel.	Thick vegetation, phragmites
BSO-02	07/15/02	10:10	0-6"	Combination of loam, sand, silt, light brown color. No moisture, no odor.	In a wetland on a (man-made?) hill, ~10' above a drainage channel.	
BSO-03	07/15/02	10:28	0-6"	Roots, sand, stones, some loam, loose. No moisture, no odor.	In brush at top of hill/embankment, above a drainage channel (near Teradyne). Surrounded by ~8' high trees, brush.	
BSO-04	07/17/02	13:28	0-6"	Coarse, clay-like, with stones. Very dry, light brown color, no odor.	On small hill above drainage channel, near Teradyne. Area full of phragmites.	
BW01	07/17/02	09:02	0-6"	Thick black organic material, tiwgs, leaves, etc. Saturated, with organic odor.	In channel bed of a muddy tributary, ~25' from the Aberjona river. In viscinity of Wells G&H.	Field duplicate taken here
BW02	07/17/02	09:19	0-6"	Silty, thick organic matter, dark brown color. Saturated, no odor.	In wetland area ~100' from (Aberjona) river, in viscinity of Wells G&H. Loosestrife, cattails.	Near a proposed boardwalk area
BW03	07/17/02	09:32	0-6"	Silty, thick organic matter, dark brown with an orange tint. Saturated, no odor.	In wetland area ~100' from (Aberjona) river, in viscinity of Wells G&H. Loosestrife, cattails.	Near a proposed boardwalk area
BW04	07/17/02	09:45	0-6"	Silty, thick organic matter. 0-1" - dark brown color. 1-6" - black color. No odor overall.	In wetland area ~150' from (Aberjona) river, in viscinity of Wells G&H. Loosestrife, cattails.	Near a proposed boardwalk area
BW05	07/17/02	09:58	0-6"	Silty, thick organic matter. 0-1" - dark brown color. 1-6" - black color. No odor overall.	In wetland area ~100' from (Aberjona) river, in viscinity of Wells G&H. Loosestrife, cattails.	Near a proposed boardwalk area

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
CB04-01	07/11/02	11:30	0-6"	All peat, saturated, dark brown (color); no odor	~ 75-100 ft. from river; in a channel - sample submerged. Grasses & brush surrounding.	
CB04-02	07/11/02	11:23	0-6"	Peat, dark brown/black, saturated, no odor.	~ 75' from river, in a channel at bog's edge. Grasses, brush nearby.	
CB04-03	07/11/02	11:15	0-6"	All peat; moist (but not saturated or below water table). Dark brown color, no odor.	~ 60' from river; in bog off dirt path. Phragmites in (surrounding) area.	
CB04-04	07/11/02	10:57	0-6"	0-2" - peat, dark brown moist (but not saturated). 2-6" - sand. No odor	~ 50' from river, in a bog, located off a narrow path surrounded by brush. No surface H2O, many phragmites.	
CB04-05	07/11/02	10:38	0-6"	All peat; saturated, dark brown/black color, no odor.	~ 15-20' off dirt path before bridge, in wetland/bog. Sediment submerged in H2O.	
CB04-06	07/11/02	10:46	0-6"	All peat; saturated, dark brown/black color, no odor.	~ 15' off (dirt) path before bridge (opposite side of CB04-07), in bog area. Sediment not submerged; at H2O table.	Field duplicate taken here.
CB04-07	07/11/02	11:05	0-6"	0-4" - peat, dark brown, saturated. 4-6" - sand. No odor.	~ 60' from river in marsh area; opposite side of path (from CB04-06) leading to bridge. Dense, wood cover/brush.	
CB04-08	07/11/02	11:39	0-6"	All peat, saturated, dark brown (color); some organic odor.	150+ ft. from river, in marsh area with brush, weeds, etc. Sample submerged.	
CB04-09	07/11/02	11:48	0-6"	All peat, saturated, dark brown (color); no odor.	200+ ft. from river, in marsh area with brush, weeds, trees, etc. Sample submerged.	
CB04-10	07/11/02	11:55	0-6"	All peat, saturated, dark brown (color); no odor.	150+ ft. from river, in marsh area. Trees, brush, etc. Sample submerged.	
CB05-01	07/11/02	09:44	0-6"	Stones, cobbles, some roots, sand, and loam overall. Located ~ 36 ft. from (wet) bog area; 5 ft. off dirt path, under tree cover.	Located ~ 36 ft. from (wet) bog area; 5 ft. off dirt path, under tree cover.	
CB05-02	07/11/02	09:36	0-6"	Loam and some small stones, med. to dark brown in color, loose soil, low moisture.	located ~ 36 ft. from (wet) bog area; 5 ft. off dirt path, under tree cover.	

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
CB05-03	07/11/02	09:27	0-6"	Stones, sand, and loam. Light to med. brown color, very loose soil, low moisture; no odor.	Across from dirt (foot) path in open area, adjacent to brush.	
CB05-04	07/11/02	09:20	0-6"	Mostly loam, some gravel. Med. brown color, loose soil, low moisture. No odor.	Adjacent to bog (~ 50 ft); at corner of dirt path; ~ 100-150 ft. to river	
CB05-05	07/11/02	09:10	0-6"	All loam, med./dark brown color. No odor. Homogenous, loose soil, low moisture.	Adjacent to bog (~ 50 ft); 5 ft. off dirt path under tree cover. ~ 100-150 ft. to river	
CB05-06	07/11/02	09:02	0-6"	All loam, med./dark brown color. No odor. Homogenous, loose soil, low moisture.	Adjacent to bog (~ 50 ft); 5 ft. off dirt path under tree cover. ~ 100-150 ft. to river	
CB05-07	07/11/02	08:52	0-6"	All loam, med./dark brown color. No odor. Homogenous, loose soil, low moisture.	Adjacent to bog (~ 50 ft); 5 ft. off dirt path under tree cover. ~ 100-150 ft. to river	
CB05-08	07/11/02	08:43	0-6"	All loam, med. brown color. Homogenous, loose soil, low moisture.	Adjacent to bog (~ 50 ft); 5 ft. off dirt path under tree cover. ~ 100-150 ft. to river	
CB05-09	07/11/02	08:34	0-6"	loam & gravel, lighter brown color; no odor; Low moisture content; loose soil	Adjacent to bog (~ 50 ft); 5 ft. off dirt path under tree cover. ~ 100-150 ft. to river	
CB05-10	07/11/02	08:20	0-6"	loam w/ some cobbles. Medium brown color. No odor. Low moisture content; loose soil	Adjacent to bog (~ 50 ft); 5 ft. off dirt path under tree cover	Field duplicate taken here.
CB06-01	07/11/02	15:07	0-6"	All peat. Rich, med. brown, saturated.	In channel, ~ 150' from river, woods area. Sample submerged in surface H2O with decaying leaves at surface.	
CB06-02	07/11/02	14:58	0-6"	All peat. Rich, med. brown, saturated.	In channel, ~ 150' from river, woods area. Sample submerged in surface H2O with decaying leaves at surface.	
CB06-03	07/11/02	14:47	0-6"	All peat. Saturated, mixed with decaying leaves from surface. med. brown color, some organic odor.	In channel, ~ 150' from river, woods area. Sample submerged in surface H2O with decaying leaves at surface.	
CB06-04	07/11/02	14:40	0-6"	0-1" - peat & roots, med. brown color. 1-6" - sand. Saturated, some organic odor.	In channel, ~ 150' from river, woods area. Sample submerged in surface H2O with decaying leaves at surface.	
CB06-05	07/11/02	14:25	0-6"	All peat, dark brown/black color, saturated, no odor.	In channel, 150+ ft from river, woods area. Lots of roots, vegetation at channel surface.	

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
CB06-06	07/11/02	14:18	0-6"	All peat, dark brown in color, saturated.	In channel, 150+ ft from river, woods area. Sample submerged in surface water and vegetation.	
CB06-07	07/11/02	14:11	0-6"	All peat, dark brown in color, saturated.	In channel, ~100' from river, woods area. Wet/channel water at surface.	
CB06-08	07/11/02	14:05	0-6"	All peat, dark brown in color, saturated.	In channel, ~70' from river, woods area. Wet/channel water at surface.	
CB06-09	07/11/02	13:58	0-6"	0-2" - peat, med. brown color. 2-6" - sand. Saturated.	In channel, ~40' from river, woods area. Wet/channel water at surface.	
CB06-10	07/11/02	13:50	0-6"	0-4" - peat, rich brown/black color. 4-6" - sand. Saturated, no odor.	In channel, ~10' from river, woods area. Channel somewhat dry at the surface, (but water below surface).	Field duplicate taken here.
CB07-01	07/11/02	13:00	0-6"	All peat, saturated, rich brown/black color. No odor	Located in the middle of bog, ~ 100' from river. Vegetation primarily cattails, grasses	
CB07-02	07/11/02	10:10	0-6"	Peat, med. brown color. Saturated, thick texture, organic odor. Sediment vs. soil?	In wetland/bog area, ~50' from river. Cattails are primary vegetation, some phragmites.	
CB07-03	07/11/02	12:05	0-6"	0-6" - peat, med. brown color, saturated, no odor. Below 6" - sand.	In bog area, ~ 50' from river. Phragmites, tall grasses nearby.	
CB07-04	07/11/02	10:25	0-6"	0-6" - peat, saturated. Below 6" - sand.	In wetland/bog, ~75' from river. Cattails are primary vegetation; some phragmites.	
CB07-05	07/11/02	13:25	0-6"	0-4" - peat, med. brown color, no odor. 4-6" - sand. Saturated.	In marsh/bog area, w/ small trees, brush. ~150' from river.	
CB07-06	07/11/02	15:20	0-6"	0-1" - peat, med. brown color, no odor. 1-6" - sand. Soil is moist, close to saturation	In bog with woods (short trees, brush). Estimate ~75+ ft. from river, although no surface H20 directly visible.	
DAP01	07/11/02	15:44	0-6"	0-5" - Sandy/silty texture, light brown, granular. 5-6" - loam-like. Low to no moisture content.	On bank of Aberjona in wooded residential area, ~ 50' downstream of Wash. St. bridge	Field duplicate taken here.
DAP02	07/11/02	15:54	0-6"	Very fine loam, no sand. Light-med. brown color, no odor. Low moisture.	On bank of Aberjona in wooded residential area, ~ 70' downstream of Wash. St. bridge	

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
DAP03	07/11/02	16:00	0-6"	Very fine loam, no sand. Light-med. brown color, no odor. Low moisture.	On bank of Aberjona in wooded residential area, ~ 90' downstream of Wash. St. bridge	
DAP04	07/11/02	16:08	0-6"	Loam with lots of roots, med. brown color. Low moisture.	On bank of Aberjona in wooded residential area, ~ 110' downstream of Wash. St. bridge	
DAP05	07/11/02	16:14	0-6"	0-1" - sand. 5-6" - loam. Light brown color, low to no moisture.	On bank of Aberjona in wooded residential area, ~ 130' downstream of Wash. St. bridge	
HB02-11	07/15/02	15:44	0-6"	All peat; medium-dark brown. Close to saturation, no odor.	In wetland, off dirt access road off Cabot Rd., near Teradyne. ~150' from train tracks, brush, trees, phragmites. No surface water visible.	
HB02-12	07/15/02	15:32	0-6"	Saturated, thick peat, dark brown color. No odor.	[Same location description as HB02-11]	
HB02-13	07/15/02	15:20	0-6"	Dark/black peat, with some silt, roots, leaves, etc. Organic odor, very saturated.	[Same location description as HB02-11]	
HB02-14	07/15/02	15:10	0-6"	Peat, dark brown, saturated, No roots. No odor.	[Same location description as HB02-11]	
HB02-15	07/15/02	14:57	0-6"	Saturated peat, rich dark black/brown color, with many roots. No odor.	[Same location description as HB02-11]	
HB02-16	07/15/02	14:48	0-6"	0-3" - Peat, dark brown, no odor. 3-6" - sand. Not quite saturated.	[Same location description as HB02-11]	
HB02-17	07/15/02	14:40	0-6"	Peat, dark brown/black. No odor, close to saturation.	[Same location description as HB02-11]	
HB03-11	07/15/02	13:17	0-6"	Peat, loam; dark brown/black, saturated, no odor.	In downslope wetland area adjacent to Atlantic Co. property building (near 'T' bridge). Cattails, brush, low trees surrounding.	Field duplicate taken here.
HB03-12	07/15/02	13:30	0-6"	Peat material, but not saturated. Dark brown/black color, no odor.	[Same location description as HB03-11]	
HB03-13	07/15/02	13:38	0-6"	All peat; dark brown/black. Close to saturation.	[Same location description as HB03-11]	

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
HB03-14	07/15/02	13:46	0-6"	All peat; dark brown/black. Close to saturation.	[Same location description as HB03-11]. Also some phragmites nearby.	
HB03-15	07/15/02	13:54	0-6"	All peat; dark brown/black. Saturated.	[Same location description as HB03-11]	
HB03-16	07/15/02	14:03	0-6"	All peat with roots - has a (noticeable) orange stain; some metal debris nearby. Saturated.	[Same location description as HB03-11]. Access via back parking lot area of Atlantic Co.	
HB03-17	07/15/02	14:14	0-6"	All peat with roots, rich dark brown color. Close to saturation.	[Same location description as HB03-11]. Also some phragmites nearby.	
HB04-01	07/15/02	11:15	0-6"	Sandy, silty, fill-like, with stones. Light brown color. No moisture, no odor.	Just off a dirt access road (~5 ft.) near Teradyne Co. Trees, brush nearby. No surface water or river in view.	Field duplicate taken here.
HB04-02	07/15/02	11:24	0-6"	0-4" - all loam. 4-6" - white/yellow sand. No moisture.	[Same location description as HB04-01]	
HB04-03	07/15/02	11:33	0-6"	Sandy loam, with many roots, stones. Light brown color, no moisture, no odor.	[Same location description as HB04-01]	
HB04-04	07/15/02	11:38	0-6"	0-4" - Loam-like, with sand. 4-6" - white-ish sand, with stones. No moisture, no odor.	[Same location description as HB04-01]	
HB04-05	07/15/02	11:45	0-6"	Sandy texture, with roots, small stones. Light brown color, no moisture, no odor.	[Same location description as HB04-01]	
HB04-06	07/15/02	11:42	0-6"	Sandy texture, with roots, small stones. Light brown color, no moisture, no odor.	[Same location description as HB04-01]	
HB04-07	07/15/02	11:59	0-6"	Sandy texture, with roots, small stones. Light brown color, no moisture, no odor.	[Same location description as HB04-01]	
HB04-08	07/15/02	12:05	0-6"	Yellow to light brown colored sand, very fine, loose, no stones. No moisture, no odor.	[Same location description as HB04-01]	
HB04-09	07/15/02	12:13	0-6"	Sandy, with stones, roots; light brown color. Loose texture, no moisture, no odor.	[Same location description as HB04-01]	
HB04-10	07/15/02	12:19	0-6"	All sand, some small stones. Light brown, no moisture, no odor, loose texture.	[Same location description as HB04-01]	
IPSD-LP11	09/13/02	09:50	0-6"	Dk. brown, trace roots & leaves, much. Wet. Water 1" into sediment.	Note: very dry conditions. Water level low. Sample type: sediment	

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
IPSD-LP12	09/13/02	10:09	0-6"	Silty sand and gravel, wet, dk. brown, roots, leaves, twigs. No standing water over sediment at water's edge.	Water level very low, dry condition. Sample type: sediment	Field duplicate taken here.
IPSD-LP13	09/13/02	10:23	0-6"	Wet, brown, sand + gravel, trace silt. Sample at water's edge	Water 1" within sediment. Water level very low - dry conditions. Sample type: sediment	
IPSD-LP14	09/13/02	10:37	0-6"	Sand + gravel, trace silt. Trace roots, grass and twigs. Sample at water's edge	Water 1" within sediment. Water level very low - dry conditions. Sample type: sediment	
IPSD-LP15	09/13/02	10:50	0-6"	Silty sand and gravel, twigs, leaves + roots. Dk. brown, wet. Sample at water's edge.	Water 1" within sediment. Water level very low - dry condition. Sample type: sediment	
KFSd-01	09/04/02	11:20	4" H2O; 0-6" sed.	Brown sandy silt.	~ 1' off bank (at KFSO-01).	
KFSd-02	09/04/02	11:43	4" H2O; 3" sed.	Brown sandy silt.	~ 1 ft. into water.	
KFSd-03	09/04/02	12:00	4" H2O; 0-4" sed.	Brown sandy silt.	~ 1' into water.	
KFSd-04	09/04/02	12:20	4-5" sed.; (2" H2O)	Brown sandy silt	1.5" into water.	
KFSd-05	09/04/02	10:50	4" H2O; 2" sed.	Brown, sandy silt; twigs	~1.5' off bank (at KFSO-05 location). 20 ft. upstream of old dam.	Field duplicate taken here.
KFSd-06	09/04/02	13:25	0-1"	Sand, trace of silt, dark brown	Water 6" deep. Water 1.5' from river bank.	
KFSd-07	09/04/02	13:37	0-2"	2" sand, few sticks and stones.	4" from stone wall at river bank.	
KFSd-08	09/04/02	14:30	2.5" H2O 4" sed.	Sandy deposit		
KFSd-09	09/04/02	13:59	0-6"	Sand & silt, brown	Water 9" deep; ~ 1' from river bank	
KFSD-10	09/04/02	14:17	0-6"	Silt, trace sand, cobbles, twigs	Water 4" deep. ~1' from river bank.	
KFSO-01	09/04/02	11:10	0-6"	Dark brown, peat, loam soil	At river bank, ~ 2 ft. from river. Flood plain veg.	
KFSO-02	09/04/02	11:35	0-6"	Brown loam	~ 2' from top of bank.	
KFSO-03	09/04/02	11:50	0-6"	Brown loam	~ 2' from top of bank.	
KFSO-04	09/04/02	12:13	0-6"	Brown loam w/ a little bit of sand		

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
KFSO-05	09/04/02	10:20	0-6"	Dark brown, peat, loam soil, very moist (not 100%)	At river bank (top), 2' from water. 20 ft. upstream of old dam.	Field duplicate taken here.
KFSO-06	09/04/02	13:17	0-6"	Roots, sand & loam, brown, dry.		
KFSO-07	09/04/02	13:30	0-6"	Loam, stones, roots, trace sand, brown, dry		
KFSO-08	09/04/02	14:25	0-6"	Sand and silt, brown, dry		
KFSO-09	09/04/02	13:50	0-6"	Loam, trace sand, brown, dry		
KFSO-10	09/04/02	14:08	0-6"	Sandy loam, brown, dry		
LP01	07/12/02	11:36	0-6" sed. in 1.5' water	Combination of roots, twigs, sand, leaves, and very little silt. Brownish color. Saturated.	1.5' from bank (of Aberjona); 1.5' water depth. Stream - slight flow. Wooded vegetation, brush on banks.	
LP02	07/12/02	11:25	0-6" sed. in 1.0' water	Mostly silt, also stones, roots (twigs). Dark brownish color, no odor, saturated.	1.0' from bank (of Aberjona); 1.0' water depth. Stream - slight flow. Wooded vegetation, brush on banks.	
LP03	07/12/02	11:05	0-6" sed. in 1.0' water	Silt, roots (twigs), dark brownish color, saturated, no odor.	1.5' from bank (of Aberjona); 1.5' water depth. Stream - slight flow. Wooded vegetation, brush on banks.	
LP04	07/12/02	10:47	0-6" sed. in 1.0' water	Silt, twigs, and leaves, dark brownish color, no odor, saturated.	0.5' from bank (of Aberjona); 1.0' water depth. Stream - slight flow. Wooded vegetation, brush (i.e. poison ivy) surrounding.	
LP05	07/12/02	10:30	0-6" sed. in 2.0' water	Mostly silt, some leaves and sticks. Dark brown, no odor, saturated.	0.5' from bank (of Aberjona); 2.0' water depth. Stream - slight flow. Wooded vegetation, brush (i.e. poison ivy) on banks.	
LP06	07/12/02	10:12	0-6" sed. in 1.0' water	(Pure) silt, brown color, no odor, saturated.	1.0' from bank (of Aberjona); in 1.0' water depth. Stream - slight flow. Wooded vegetation, brush (i.e. poison ivy) on banks.	Field duplicate taken here.
LP07	07/12/02	09:50	0-6" sed. in 1.5' water	Sandy with cobbles, fines, brown color, no odor, saturated.	1.5' from bank (of Aberjona); 1.5' water depth. Stream - slight flow. Wooded vegetation, brush on banks. ~50' upstream from LP08.	1' downstream of concrete outfall pipe.

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
LP08	07/12/02	09:35	0-6" sed. in 2.0' water	Brown silt, sand, with fines. No odor, saturated.	1.0' from bank (of Aberjona); 2.0' water depth. Stream - slight flow. Wooded vegetation, brush on banks.	50' upstream from dam.
LP09	07/12/02	09:08	0-6"	Silt, sand, cobbles. Brown color, no odor, saturated.	On bank, 3' from water's edge (Aberjona). Location was under water previous day.	50' downstream from dam.
LP10	07/12/02	08:59	0-6" sed. in 4.0" water	0-1" - silt. 1-6" - sandy/silt, no odor, brown color, saturated.	Stream (Aberjona river), vegetated, some gravel and fines along bank.	75' upstream of railroad & bridge
WGH-01	09/04/02	15:18	0-2"	Dark brown silt (roots)	Sed. in 1" of water; adjacent to WGH-16. Sample type: sediment.	
WGH-02	09/04/02	15:45	1" H2O; 2" sed.	Dark brown silt	At water's edge. Sample type: sediment.	
WGH-03	09/04/02	16:15	0-4"	Silt w/ sand	At water's edge. Adjacent to WGH-18 soil sample. Sample type: sediment.	
WGH-04	09/04/02	16:29	0-2"	Mostly silt w/ some sand	Water's edge, adjacent to WGH-19 soil sample. Sample type: sediment.	
WGH-05	09/04/02	16:43	0-4" sed.; 1.0" H2O	Brown silt	Within 1 ft. of bank. Sample type: soil.	
WGH-06	07/18/02	08:05	0-6"	Organic material: peat, leaves, etc. Brown color, no odor, saturated.	Edge of wetland adjacent to Aberjona Auto Parts (north side). Cannot see river or surface water.	Field duplicate taken here.
WGH-07	07/18/02	08:23	0-6"	Organic material: peat, leaves, etc. Brown color, no odor, saturated.	Edge of wetland adj. to Aberjona Auto Parts (No. side). Cannot see river or surface water.	
WGH-08	07/18/02	08:35	0-6"	Organic material - peat mixed with twigs, phragmite leaves. Well saturated, dark brown color, no odor.	Edge of wetland adj. to Aberjona Auto Parts (No. side). Cannot see river or surface water.	
WGH-09	07/18/02	08:50	0-6"	Organic material - peat, well saturated. No leaves or twigs. No odor.	Edge of wetland adj. to Aberjona Auto Parts (No. side). Cannot see river or surface water.	
WGH-10	07/18/02	09:07	0-6"	Black organic matter with roots, well saturated. Organic odor.	Edge of surface water bordering wetlands, adj. to (No. side) of Aberjona Auto Parts.	

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Industri-Plex Superfund Site Sampling: Woburn, MA
Summary of Field Log Sheet Data

Location	Date	Time	Depth	Soil/Sediment Description	Location Description	Other
WGH-11	07/18/02	09:42	0-6"	Roots, leaves, other decayed matter. Some sand near bottom (~6" deep). Very saturated, dark brown/black color.	Edge of surface water bordering wetlands, adj. to (No. side) of Aberjona Auto Parts.	
WGH-12	07/18/02	10:00	0-6"	Roots, peat, thick matter. Saturated, dark brown. No odor.	Edge of surface water bordering wetlands, adj. to (No. side) of Aberjona Auto Parts.	
WGH-13	07/18/02	10:12	0-6"	Very fine black silt/sediment. Saturated, with organic odor.	Edge of surface water bordering wetlands. Near (No. east) edge of Aberjona Auto Parts.	
WGH-14	07/18/02	10:32	0-6"	Roots, thick dark brown matter (near a large tree). Very saturated, some organic odor.	Edge of wetland, ~25' from surface water. Cattails, loosestrife surrounding.	
WGH-15	07/18/02	10:55	0-6"	Roots, sand and stones, some silty material. Dark brown, no odor. Saturated.	Edge of surface water, wooded area nearby. East side of Aberjona Auto Parts, ~40' from Aberjona River. Brush, loosestrife.	
WGH-16	09/04/02	15:28	0-4"	Dark brown, loam, humus, twigs	3 ft. from water edge. Sample type: soil.	
WGH-17	09/04/02	15:50	0-2"	Dark brown sandy silt	Sample type: soil.	
WGH-18	09/04/02	16:21	0-6"	Sand & loam, few roots, brown, dry	Sample type: soil.	Field duplicate taken here.
WGH-19	09/04/02	16:36	0-6"	Brown, silty sand.	Sample type: soil.	
WGH-20	09/04/02	16:48	0-5"	Brown silt w/ roots	~ 1.5' of water's edge. Sample type: soil.	
WSS01	07/12/02	14:19	0-6"	Surface soil, loam w/ very small rocks. Brown, no odor, dry.	In residential backyard, overgrown vegetation, weeds. ~70' from river. 54' from WSS02	
WSS02	07/12/02	14:32	0-6"	Mostly loam with pine roots. Brown, dry, no odor.	18.5' from (Aberjona) river, under pine tree, in a grassy area.	Field duplicate taken here.
WSS03	07/12/02	14:41	0-6"	All loam, brown, no odor, dry.	Located ~65-70' from (Aberjona) river.	
WSS04	07/12/02	14:50	0-6"	Loam, brown, no odor, dry.	~ 24' to (Aberjona) river. ~100' to road (Salem Street). In grassy area.	
WSS05	07/12/02	15:00	0-6"	Loam, brown, no odor, dry.	~31' to (Aberjona) river. ~36' to road (Salem Street). In grassy area.	

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APPENDIX A.7

USEPA AND TtNUS FIELD LOG SHEET DATA

SAMPLE LOG SHEETS

SEDIMENT/FLOODPLAIN SURFACE SOIL 2004

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Soil and Sediment Sampling for the Industri-Plex (OU-2)
and Wells G&H (OU-3) Superfund Sites
Woburn, Massachusetts

Collection of Surface Soil and Sediment Samples from Various Locations in and Adjacent to the Aberjona River in Winchester for Analysis of Metals and TOC

Quality Assurance Project Plan (QAPP)

February, 2004

U.S. Environmental Protection Agency
EPA New England
Office of Environmental Measurement & Evaluation
Investigations & Analysis Unit

Project Officer: Joseph F. LeMay, Remedial Project Manager

Project Officer Signature: Joseph F. LeMay

Office of Quality Assurance Acceptance:

Signature: _____

Date: _____

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1. **Project Name:** Soil & Sediment Sampling for the Industri-Plex and Wells G&H Superfund Sites

2. **Site No:** 0107 - (Industri-Plex OU-2); 0146 - (Wells G&H OU-3)

3. **Project Requested By:** Joseph F. LeMay (OSRR)

4. **Date of Request:** January 7, 2004

5. **Date of Project Initiation:** January 7, 2004

6. **Project Officer:** Joseph F. LeMay (OSRR)

7. **Quality Assurance Officer:** See Performance Coordinator

8. **Project Description:** Collection of Surface Soil and Sediment Samples from Various Locations for Analysis of Metals and TOC. The area to be sampled is between Bacon Street and the Mystic Valley Parkway in Winchester, MA

A. Objective and Scope Statement:

Please note the 2004 sampling requested by the site RPM is a continuation of a previously approved EIA sampling project, (please see QAPP dated July 2002, attached).

Updates:
The purpose of this field study is for EPA's Investigations & Analysis Unit (EIA) to gather surface sediment and soil from designated locations for analysis in support of the Industri-Plex Superfund Site, Operable Unit 2 (OU-2), Remedial Investigation and Feasibility Study (RI/FS). The comprehensive OU-2 RI/FS will incorporate the Wells G&H Superfund Site, Operable Unit 3 (OU-3), Aberjona River Study - Baseline Risk Assessment because the Industri-Plex Site is hydraulically connected to Wells G&H by the Aberjona River, the river serves as a historical and current migration pathway for contamination, and the Industri-Plex Site and the river share the same contaminants of concern, metals. Surface soils and sediment samples are necessary to fill in some human health risk assessment data gaps along the Aberjona River in Winchester, MA between Bacon Street and Mystic Valley Parkway.

The "study area" of this project consists of designated sampling locations as determined by the Remedial Project Manager. Six sediment depositional sample will be collected from the "ponded" areas of the river. Ten sediment samples along the edge of the river at the water line and 10 corresponding soil samples at the top of the river bank at the high water line will be collected. See the attached figure for approximate sample locations. All samples will be collected at a depth of 0-6 inches and analyzed for total metals and TOC. Sampling locations will be identified and flagged in the field, located by GPS, and ~~also~~ digitally photographed. A field log book will be maintained describing the collection procedures, samples, approximate depth of surface water (if any), and any pertinent field observations. EPA's Investigations &

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Analysis Unit (EIA) will collect samples according to Section 9 - Sampling Procedures and Requirements of the April, 2002 Quality Assurance Project Plan (QAPP), Revision 1, Industri-Plex MSGRP Remedial Investigation/Feasibility Study by TtNUS, Inc. The soil and sediment samples will be analyzed for total metals and will be analyzed for Total Organic Carbon (TOC) at the EPA New England Regional Laboratory in North Chelmsford, MA. EPA

B. Data Usage

Data from analysis samples collected will be used by the EPA as follows:

- Surface soil and surface sediment analysis is required to supplement gaps in human health risk assessment along the Aberjona River. The primary contaminants of concern in this field study are metals, (specifically arsenic, lead, and chromium).

C. Monitoring Event Design:

The Project Officer will provide EPA-EIA with GIS or areal maps of the major sampling areas, along with the proposed sampling locations in each area labeled on the map. The Project Officer will also provide the minimum number of samples needed for each sample type (surface soil, surface sediment) and the sampling depth range (such as 0" - 6"). Please refer to the memos from Joseph F. LeMay, Remedial Project Manager, dated January 7, 2004 for further information and instruction. There will be a QA/QC field duplicate collected for the 6 river sediments, 10 river edge sediments, and 10 soil samples for a total of 3 QA/QC samples.

D. Monitoring Parameters and Frequency of Collection:

Parameter	Number of Samples	SampleMatrix	Analytical Method Reference	Sample Container	Sample Preservation	Holding Time
Metals	26 + 3 QC samples	Soil sediment	6010B, 6020, 7000 series	8 oz. clear wide mouth	Ice	6 mos.
TOC	26 + 3 QC samples	Soil sediment	9060	4 oz. amber wide mouth	Ice	Analyze ASAP

9. Schedule of Tasks and Products:

Date	Activity
January 7, 2004	Request OEME lab support
January 13, 2004	Sampling team and RPM conduct reconnaissance
March 16-17, 2004	Conduct field sampling (tentative–frost must be gone)
March 18, 2004	Deliver samples to Chelmsford laboratory
March/April, 2004	Laboratory analyses
May, 2004	Data QA/QC'd and provided to Sampling Leader

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10. Project Organization and Responsibility:
The following is a list of key project personnel and their responsibilities:

Responsibility	Contact
Project Manager	Joseph LeMay (OSRR)
Sampling Leader	Dan Granz (EIA)
Sampling QC	Dan Granz (EIA)
Laboratory Analysis	Bill Andrade (EIA)
Laboratory QC	Bill Andrade (EIA)
Performance Auditing	QA Office (EQA)
Overall Performance Coordination	Jerry Keefe (EIA)

11. Data Quality Requirements and Assessments
Accuracy and Precision values are for method internal QA/QC. The values are to be considered as goals because some specific compounds are know outside these goals.

Parameter	Sample Matrix	Quant. Limit (ppb/vol)	Accuracy (%)	Precision (%)	Field Precision
Metals	Soil sediment	As, Cr, and Pb: (See Note below)	75 - 125%	20%	50%
TOC	Soil sediment	**	75 - 125%	35%	50%

*Samples that are above the calibration range, will be diluted and re-analyzed to within an acceptable calibration range.
** See referenced SOP's for specific analyte reporting limits.
***Accuracy determined with matrix spike (MS) samples and precision determined with either matrix spike duplicate (MSD) samples or laboratory fortified blanks.

12. Data Representativeness:
In general the data obtained from the sample analysis will be used for risk assessments, determining extent of contamination (Remedial Investigation), and evaluating potential remedial alternatives under the Feasibility Study. At least 85% of data must be valid. If data are incomplete, the project manager and OEME personnel will determine if additional sampling is needed.

13. Sampling Procedures:
Samples will be collected according to Section 9 - Sampling Procedures and Requirements of the April, 2002 Quality Assurance Project Plan (QAPP), Revision 1, Industri-Plex MSGRP

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Remedial Investigation/Feasibility Study by TtNUS, Inc.

14. Sample Custody Procedures:
Samples will be handled in accordance with EPA investigations & Analyses SOP for Chain of Custody. Each sample will be given a unique number and recorded in the field logbook and/or site map.

15. Calibration Procedures and Preventative Maintenance:
Equipment to be directly used during the field sampling event does not require calibration or preventative maintenance. EPA-NE lab procedures and preventive maintenance are documented in the lab QA plan.

16. Documentation, Data Reduction, and Reporting:
A. Documentation: All information will be recorded on the Sampling Team's field data sheets. In addition, the completion of chain of custody (COC) forms, labels, etc. is required for all samples. Laboratory documentation is maintained in their respective QA plans.

B. Data Reduction and Reporting: The data will be tabulated and reported to the project manager.

17. Data Validation:
The metals and TOC data will be reviewed as specified in the NERL QAP including a review by a peer chemist and by the Chemistry Team Leader.

18. Performance and Systems Audits:
May be performed by the QA Office, as requesting by the Project Officer.

19. Corrective Action:
Any corrective action will be determined by the sampling operations leader and project manager, if necessary, and documented in a field data sheet and/or field logbook.

20. Reports will be sent to: Joseph F. LeMay, RPM
EPA Region 1 - New England
Industri-Plex (OU-2)/ Wells G&H (OU-3) Superfund Sites

Gordon Bullard, Project Manager
TTNUS
55 Jonspin Road
Wilmington, MA 01887

Note: Provide a hard copy of all field logs/ data sheets, GIS sample location coordinates, and photographs to the above personnel. In addition, the above information will be provided electronically, where possible.

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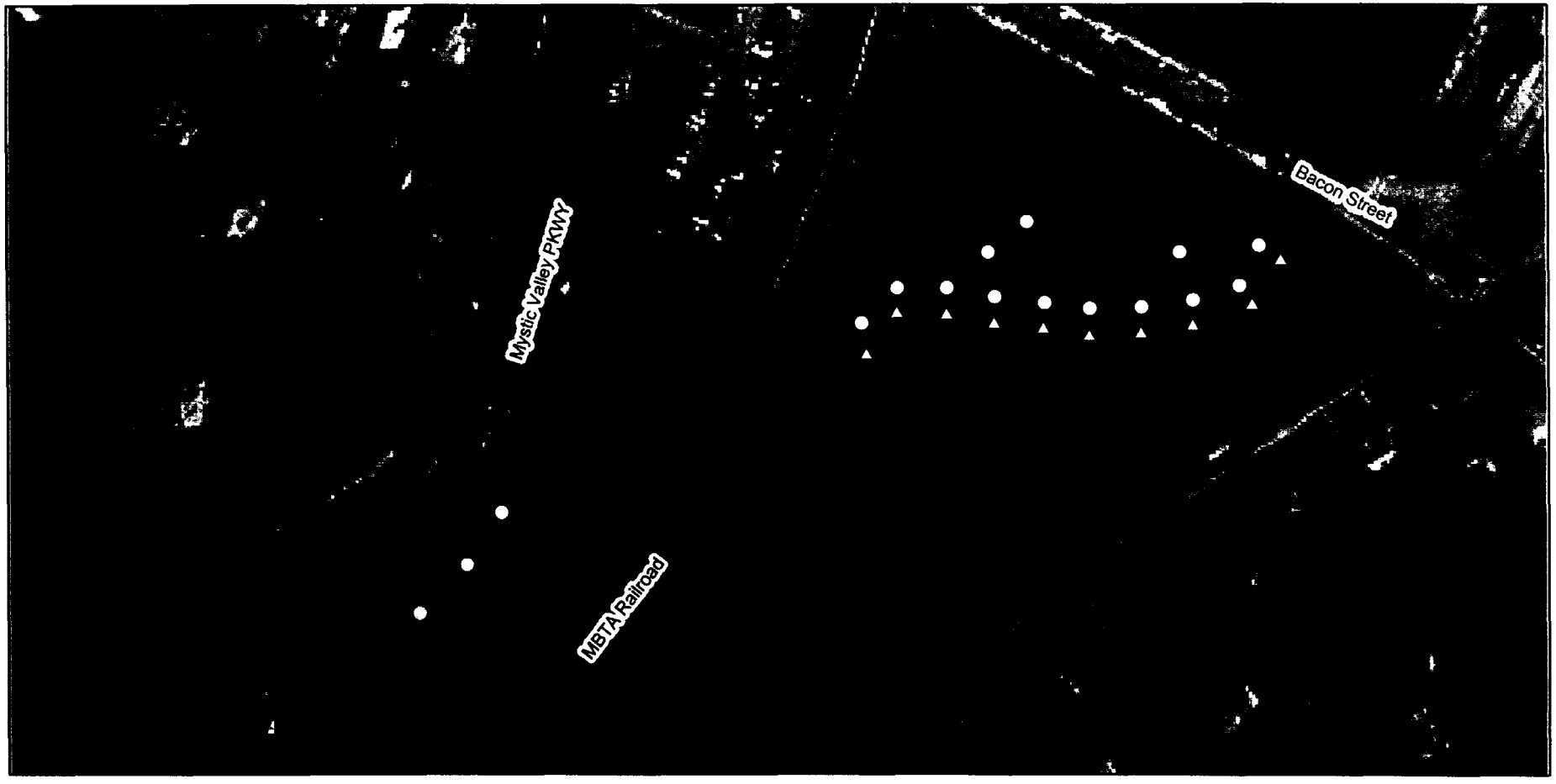

Aberjona River Study
Winchester, MA
Proposed
Soil and Sediment Sample Location

Legend

- ○ Proposed sediment location
- △ Proposed soil location*

N

0 100 200 Feet

***Note:** The soil sample positions have been exaggerated for clarity. Soil sample locations should be collected along the top of the bank (approximately 10 feet from the corresponding sediment location).

Original includes color coding.

EPA
New England

Created by the EPA Region 1 GIS Center
File: L:\projects\mics\lemay\proposed_soil_sed.mxd

FIELD NOTES

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Field Log Sheet for Sampling Activity

Project/Site Name:

Sampling Location: Industri-Plex Winchester, MA

Sample Type: ☐ Soil ☒ Sediment ☐ Wastewater ☐ Drinking water ☐ QA or other: _____

Weather Conditions: Overcast, ~45°f

Sampled By: D. Gram, L. Thuot

Sample #	Date	Time	Sample/ Depth above water surface	Sample/Location Description:	Other Info.
AJRW01	3/15/04	1130	0-6" / 3.5'	Med coarse sand w/ some detritus. Approx. 100' from Bacon St. Bridge, in center of channel	pic # 001, 002 GPS # B031516A
AJRW02	3/15/04	1145	0-6" / 2.25'	black, silty organic material, w/ leaves + twigs, some odor. Loc. adj. to downstream side of island	pic # 003, 004 GPS # B031516B
AJRW02D	3/15/04	1145	0-6" / 2.25'	"	"
AJRW03	3/15/04	1155	0-6" / 3'	Brown, fine silty some leaves. Just Downstream of small island. few oil droplets in sample	pic # 006 GPS # B031517A
AJRW04	3/15/04	1215	0-6" / 3.25'	med. coarse sand w/ some cobbles (up to 4" dia). At open loc. adj. to Mystic Pkwy.	pic # 007 GPS # B031517B
AJRW05	3/15/04	1220	0-6" / 3.75'	Brown, thick silty organic material slight odor (organic). Just Downstream of AJRW04 some oil droplets in sample	pic # 008 GPS # B031517C
AJRW06	3/15/04	1230	0-6" / 1.5'	Brown thick silty organic Leaves + other detritus. some oil specs. Downstream of AJRW05	pic # 009 GPS # B031517D

Note: (pic as Dan w. sample)

Signature(s): [signature] [signature]

Chain of Custody Number(s): _____

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Field Log Sheet for Sampling Activity

Project/Site Name: Industri-Plex

Sampling Location: Aberjona River Winchester, MA

Sample Type: ☒ Soil ☒ Sediment ☐ Wastewater ☐ Drinking water ☐ QA or other: _____

Weather Conditions: Rain ~50°F

Sampled By: D. Granz, L. Thuot

Sample #	Date	Time	Sample Depth	Sample/Location Description:	Other Info.	
AJRW07	4/26/04	1145	0-6"	Sandy silt w/ cobbles light brown; no odor ~38' from concrete culvert	GPS # R0426168 PIC# 01	sediment
AJRW08	4/26/04	1155	"	Loam, some silt, some roots. Dark brown. Loc. 5' up bank from AJRW07	GPS# R0426168 PIC# 02	soil
AJRW09	4/26/04	1205	"	Soft silt + fine sand Brown ~~Loc. 26~~	GPS# R0426168 PIC #03	sed.
AJRW09 D	4/26/04	1205	"	Same as AJRW09 ~~Loc. 26' from~~ L.T.	Same as AJRW09	sed.
AJRW10	4/26/04	1215	"	Loam, sand, cobbles up to 2" dia Some silt - up bank Brown Loc. 26' from AJRW09	GPS# R0426168 PIC #04	soil
AJRW10 D	4/26/04	1215	"	Same as AJRW10	Same as AJRW10	soil
AJRW11	4/26/04	1310	"	0-2" - fine white sand 2-6" Brown silt	PIC # 05 GPS# ~~AJRW~~ R0426171 L.T.	sed.
AJRW12	4/26/04	1320	"	Loam, sand, silt w/ some roots; 1 earthworm. Brown Loc. 30' up bank from AJRW11	PIC # ~~04~~ 01 L.T. GPS# R0426171	new disk (soil)
AJRW13	4/26/04	1330	"	0-3": sand, some roots 3-6": silt, brown color.	GPS # R0426178 PIC# 02	sed
AJRW14	4/26/04	1335	"	Loam, silt w/ roots. Brown. ~29' from AJRW13 up bank	GPS # R0426178 PIC # 03, 04	soil.

Signature(s): [signature] [signature]

Chain of Custody Number(s): _____

US EPA ARCHIVE DOCUMENT

Field Log Sheet for Sampling Activity

Project/Site Name: Industri-Plex

Sampling Location: Aberjona River Winchester, MA

Sample Type: ☒ Soil ☒ Sediment ☐ Wastewater ☐ Drinking water ☐ QA or other: _____

Weather Conditions: rain ~50°F

Sampled By: D. Granz, L. Thuer

Sample #	Date	Time	Sample Depth	Sample/Location Description:	Other Info.	
AJRW15	4/26/04	1400	0-6"	0-1": fine sand 1-6": silt w/ cobbles up to 1" dia. Brown	GPS# R042618A Pic# 05	Sed.
AJRW16	4/26/04	1410	"	All loam w/ a few roots. Brown Loc. ~15' from AJRW15	GPS# R042618A pic# 06	Soil.
AJRW17	4/26/04	1430	"	0-1": fine sand 1-6" fine silt w/ detritus light/med. brown color	GPS# R042618B Pic# 07	Sed.
AJRW18	4/26/04	1440	"	0-4": Loam, brown w/ roots 4-6": light brown silty clay some cobbles some sand Loc. ~5' from AJRW15	GPS# R042618B Pic# 08	Soil
AJRW19	4/26/04	1455	"	Mix of brown silt + fine sand, one fleck of petroleum sheen	GPS# R042619A Pic# 09	Sed.
AJRW20	4/26/04	1500	"	Loam, sand, w/ cobbles up to 2" dia. All brown. Loc. ~4' up bank from AJRW19	GPS# R042619A Pic# 10	Soil pic end disk
AJRW21	4/26/04	1515	"	0-3": brown silt w/ roots 3-6": light tan sand	GPS# R042619B pic# 03 Disk 3	Sed
AJRW22	4/26/04	1525	"	Uniform, dark brown loam Loc. ~16' up bank from AJRW21	GPS# R042619B Pic# 04 Disk 3	Soil
AJRW23	4/26/04	1555	"	Silt, fine sand w/ roots All brown	GPS# R042714A - Pic# 05 Disk 3	4/27/04 Sed.
AJRW24	4/26/04	1605	"	0-4" silt brown 4-6" fine sand light brown 33' to centerline of bridge 66' to water's edge Loc. ~3' up bank from AJRW23	GPS# R042714B - Pic# 05 Disk 3	4/27/04 Soil

Signature(s): _____

Chain of Custody Number(s): _____

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Field Log Sheet for Sampling Activity

Project/Site Name: Industri-Plex

Sampling Location: Abejona River Winchester, MA

Sample Type: ☒ Soil ☒ Sediment ☐ Wastewater ☐ Drinking water ☐ QA or other: _____

Weather Conditions: Rain ~50°F

Sampled By: Dan Grant, Lisa Thurst

Sample #	Date	Time	Sample Depth	Sample/Location Description:	Other Info.
AJRW12R	4/26/04	1635	0-6"	sand, tan, w/cobbles up to 1" dia. 20' 12' from original site of AJRW12.	GPS # R0426204 Percent of AJRW12 (ctr avg'd manner) Soil

Signature(s): [signature] [signature]

Chain of Custody Number(s): _____

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Latitude	Longitude	Feature	Correction Status	Date	Time	File Name	# of positions	Precision
42.444003	-71.139113	AJRW01	Postprocessed Code	3/15/2004	11:34:05am	B031516A.cor	20	1.2
42.444208	-71.139933	AJRW02	Postprocessed Code	3/15/2004	11:49:45am	B031516B.cor	34	1.6
42.444053	-71.140117	AJRW03	Postprocessed Code	3/15/2004	12:00:50pm	B031517A.cor	22	1.8
42.443651	-71.141548	AJRW04	Postprocessed Code	3/15/2004	12:16:13pm	B031517B.cor	22	1.7
42.443391	-71.141718	AJRW05	Postprocessed Code	3/15/2004	12:24:25pm	B031517C.cor	23	1.5
42.443146	-71.142020	AJRW06	Postprocessed Code	3/15/2004	12:33:42pm	B031517D.cor	37	1.4
-71.139101	42.443921	AJRW09	Postprocessed Code	4/26/2004	12:26:45pm	R042616A.cor	26	1.7
-71.139039	42.443830	AJRW10	Postprocessed Code	4/26/2004	12:30:48pm	R042616A.cor	26	1.4
-71.138924	42.443932	AJRW07	Postprocessed Code	4/26/2004	12:35:12pm	R042616B.cor	25	2.2
-71.138868	42.443934	AJRW08	Postprocessed Code	4/26/2004	12:40:23pm	R042616B.cor	26	1.8
-71.139194	42.443891	AJRW11	Postprocessed Code	4/26/2004	01:11:37pm	R042617A.cor	26	1.1
-71.139241	42.443869	AJRW12	Postprocessed Code	4/26/2004	01:15:27pm	R042617A.cor	27	1.2
-71.139356	42.443884	AJRW13	Postprocessed Code	4/26/2004	01:33:29pm	R042617B.cor	27	1.7
-71.139349	42.443737	AJRW14	Postprocessed Code	4/26/2004	01:49:01pm	R042617B.cor	26	1.6
-71.139555	42.443918	AJRW15	Postprocessed Code	4/26/2004	02:07:55pm	R042618A.cor	28	1.5
-71.139573	42.443839	AJRW16	Postprocessed Code	4/26/2004	02:11:09pm	R042618A.cor	28	1.4
-71.139733	42.443930	AJRW17	Postprocessed Code	4/26/2004	02:43:18pm	R042618B.cor	28	1.2
-71.139751	42.443930	AJRW18	Postprocessed Code	4/26/2004	02:46:03pm	R042618B.cor	27	1.5
-71.139935	42.443943	AJRW19	Postprocessed Code	4/26/2004	03:05:58pm	R042619A.cor	28	1.5
-71.139921	42.444025	AJRW20	Postprocessed Code	4/26/2004	03:08:41pm	R042619A.cor	28	1.8
-71.140093	42.444017	AJRW21	Postprocessed Code	4/26/2004	03:30:04pm	R042619B.cor	30	1.3
-71.140073	42.443971	AJRW22	Postprocessed Code	4/26/2004	03:33:16pm	R042619B.cor	28	1.3
-71.140442	42.443836	AJRW23	Postprocessed Code	4/26/2004	04:15:12pm	R042620A.cor	31	1.5
-71.139243	42.443828	AJRW12R	Postprocessed Code	4/26/2004	04:29:08pm	R042620B.cor	27	1.2
-71.140279	42.443947	AJRW23RR	Postprocessed Code	4/27/2004	10:25:06am	R042714A.cor	33	1.8
-71.140267	42.443876	AJRW24	Postprocessed Code	4/27/2004	10:29:38am	R042714B.cor	41	1.6

SAMPLE LOG SHEETS

SEDIMENT CORES 2003

US EPA ARCHIVE DOCUMENT

Field Log Sheet - Soil and Sediment Sampling

Project Site Name: Industri-Plex OU-2 (Site # 0107) / Judkins Pond near Town Hall / Winchester, MA

Sampling Location Name: Aberjona River / Davidson Park Area / off Brookside Ave. Winchester, MA
(*Select*: Cranberry Bog, HBHA, Salem St. Residence, Leonard Pool, Wells G&H, Danielson Park, or Aberjona River) KO

Sample Type: ☐ Surface Soil ☐ Surface Sediment ☒ Sediment Core ☐ QA/other: _____

Weather Conditions: 50°F sunny

Sampled By: DG/RF/KO

	Sample Loc. #	Date & Time	Depth	Soil/Sediment Description: (Color, Odor, Moisture, Type: Sand, Silt, Clay, etc.)	Location Description (Industrial, wetland, etc.: Distance to river/water)	Other comment / Information
Davidson Park area off Brookside Ave.	SC 11 12	2/21 1340	1-2'	black goop w/ H_2S odor	Davidson Park Pond (KO)	continued
	SC 11 23	2/21 1350	2'-3'	black goop w/ cobbles & some grit (musky scent!)		
	SC 11 34	2/21 1355	3-4'	organic silt w/ trace fine sand		
Judkins Pond near Town Hall	SC 12 01	2/21 1445	0-1'	organic silt	Judkins Pond (KO)	
	SC 12 12	2/21 1455	1-2'	organic silt w/ some sand		
	SC 12 23	2/21 1500	2-3'	organic silt w/ some sand		
	SC 12 34	2/21 1510	3-4'	dark brown organic silt w/ some fine sand (green visible on mixed sediment)		

Signature(s): _____

Chain of Custody Number(s): _____

Changes in red by [illegible]

US EPA ARCHIVE DOCUMENT

Field Log Sheet - Soil and Sediment Sampling

Project Site Name: Industri-Plex OU-2 (Site # 0107)

Sampling Location Name: Aberjona River / Winchester, MA Davidson Park Area off Brookside Ave. / Woburn, MA HBHA Near Cabot Road

(*Select*: Cranberry Bog, HBHA KO, Salem St. Residence, Leonard Pool, Wells G&H, Danielson Park, or Aberjona River KO)

Sample Type: ☐ Surface Soil ☐ Surface Sediment ☑ Sediment Core ☐ QA/other: _____

Weather Conditions: ~45°F — sunny

Sampled By: DG/KO/RF

Sample Loc. #	Date & Time	Depth	Soil/Sediment Description: (Color, Odor, Moisture, Type: Sand, Silt, Clay, etc.)	Location Description (Industrial, wetland, etc.; Distance to river/water)	Other comment / Information
SC 01 01	2/21 1025	0-1'	black, organic muck	HBHA Wetland (KO)	HBHA near Cabot Road
SC 01 12	2/21 1030	1-2'	2" black organic muck 22" tan medium sand		
SC 01 23	2/21 1040	2-3'	24"-28" — tan med. sand 28-30" - humic peat 30-36" — sandy peat		
SC 01 34	2/21 1048	3-4'	36-48" — Med. sand		
SC 02 01	2/21 1120	0-1'	organic silt w/ phrag root		
SC 02 12	2/21 1121	1-2'	organic muck w/ fine phrag roots		
SC 02 23	2/21 1135	2-3'	black muck w/ light sand		
SC 02 34	2/21 1145	3-4'	med. sand w/ some organic matter		
SC 11 01	2/21 1315	0-1'	black goop w/ detritus	Davidson Park Pond (KO)	
SC 11 01D	2/21 1315	0-1'	dupe of SC1101		continued

Davidson Park Area off Brookside Ave.

Signature(s): _____

Chain of Custody Number(s): _____

Changes in red 6/21/07 D.J. Fox

US EPA ARCHIVE DOCUMENT

Field Log Sheet - Soil and Sediment Sampling

Project Site Name: Industri-Plex OU-2 (Site # 0107)

Sampling Location Name: upstream & cranberry bog of Salem St Sediment Cores Woburn, MA

(*Select*: Cranberry Bog, HBHA, Salem St. Residence, Leonard Pool, Wells G&H, Danielson Park, or Aberjona River). KO wetland KO

Sample Type: ☐ Surface Soil ☐ Surface Sediment ☒ Sediment Core ☐ QA/other: _____

Weather Conditions: Sunny, ~36° F

Sampled By: D. Granz L. Thiot

Sample Loc. #	Date & Time	Depth	Soil/Sediment Description: (Color, Odor, Moisture, Type: Sand, Silt, Clay, etc.)	Location Description (Industrial, wetland, etc.: Distance to river/water)	Other comment / Information
SC08 01	2/24/03 13:05	0-1'	Dark brown sed. silt	adj. to Aber., Auto parts, ~40' to edge of pond near residence	~1' water above sed. core.
SC08 LT02	2/24/03 13:09	1-2'	Dark brown sed silt; some coarse sand at lower/deeper point (last 2")	Wells G+H wetland (KO) "	
SC08 LT23	2/24/03 13:21	2-3'	saturated sand (med.) w/ some silt	"	
SC08 34	2/24/03 13:26	3-4'	Saturated; sand (med.) w/ some organic silt	"	
SC09 01	2/24/03 14:45	0-1'	~1" peat & remainder med/coarse sand w/ few cobbles	6' from edge of Aberjona, in Cran. bog	1st 6" were frozen & removed
SC09 12	2/24/03 14:50	1-2'	Top 6" - Sand Lower 6" - peat, detritus	Cranberry Bog " (KO)	
SC09 23	2/24/03 15:02	2-3'	small amt. of sand, largely silty mud.	"	SC09 area pic. included
SC09 34	2/24/03 15:10	3-4'	saturated, silty mud, some gritty sed. within	"	

Signature(s): _____

Chain of Custody Number(s): _____

characterized by [illegible]

US EPA ARCHIVE DOCUMENT

Field Log Sheet - Soil and Sediment Sampling

Project Site Name: Industri-Plex OU-2 (Site # 0107)

Sampling Location Name: upstream of Salem ST. TCE Remed./DNW ; Aberjona River/HBHA Woburn, MA
(*Select*: Cranberry Bog, HBHA (KO), Salem St. Residence, Leonard Pool, Wells G&H, Wetland (KO), Danielson Park, or Aberjona River).

Sample Type: ☐ Surface Soil ☐ Surface Sediment ☒ Sediment Core ☐ QA/other: _____

Weather Conditions: Sunny, ~20° F

Sampled By: D. Granz L. Thuot

	Sample Loc. #	Date & Time	Depth	Soil/Sediment Description: (Color, Odor, Moisture, Type: Sand, Silt, Clay, etc.)	Location Description (Industrial, wetland, etc.; Distance to river/water)	Other comment / Information
Aberjona River near proposed boardwalk	SC07 01	2/26/03 13:06	0-1'	Dark brown, Saturated. Organic odor. Muddy Silt w/ organic matter, roots	Aber. river wetlands by monitor wells (Salem St)	~100' off shore into wetlands
	SC07 12	2/26/03 13:12	1-2'	Dark brown, Saturated. Silty + organic material/peat Some fibrous organics/roots.	Wells G+H wetland (KO)	"
	SC07 23	2/26/03 13:23	2-3'	Primarily organic peat; Dark brown, saturated. Some fine silt.	"	"
	SC07 34	2/26/03 13:30	3-4'	Dark brown, saturated organic peat; thick. Some roots/pine needles mixed in.	"	(includes aerial pic. shot)
HBHA near Perkin Elmer Co	SC03 01	2/26/03 14:31	0-1'	Silty, saturated peaty mud. Some sand at bottom of interval. Phragmite remains also.	In open wetland area behind Perkin Elmer.	~1' of water also are Sed. core sample.
	SC03 12	2/26/03 14:39	1-2'	Medium sand + some dark brown fines. Saturated.	HBHA Wetland (KO)	"
	SC03 23	2/26/03 14:45	2-3'	Med/fine light brown sand; very uniform. Saturated.	"	"
	SC03 34	2/26/03 14:52	3-4'	Med/fine sand, light brown ~~bro~~ and saturated.	"	(includes aerial picture)

Signature(s): _____

Chain of Custody Number(s): _____

Changes in red 6/2/03

US EPA ARCHIVE DOCUMENT

Field Log Sheet - Soil and Sediment Sampling

Project Site Name: Industri-Plex OU-2 (Site # 0107)

Sampling Location Name(s): Upper Mystic Lake / Aberjona River at Board walk (proposed) AREA between Olympia & Salem Street Woburn, MA
(*Select*: Cranberry Bog, HBHA, Salem St. Residence, Leonard Pool, Wells G&H, Danielson Park, or Aberjona River). wetland KO

Sample Type: ☐ Surface Soil ☐ Surface Sediment ☒ Sediment Core ☐ QA/other: _____

Weather Conditions: Sunny 20°F

A001 N 910361.32537
E 229 324.9957
MA

Sampled By: D. Chase, L. Cornwell

	[redacted]	[redacted]	Depth	Soil/Sediment Description: (Color, Odor, Moisture, Type: Sand, Silt, Clay, etc.)	Location Description (Industrial, wetland, etc.; Distance to river/water)	Other comment / Information
Upper Mystic Lake	SC13 01	2/27/03 1005	0-1' water 5½'	dark brown fine silt organic muck no odor	250' from shore Upper Mystic River Forebay (KO)	field dup. SC13 of D 23
	SC13 12	2/27/03 1015	1'-2'	12" to 20" dark brown fine silt organic muck 20-24" wood pieces		
	SC13 23	2/27/03 1025	2'-3'	organic silt with trace peat and wood fragments		
	SC13 34	2/27/03 1040	3'-4'	gooey peat with trace gravel		
near proposed Board walk Between Olympia and Salem Street	SC06 01	2/27/03 1230	[redacted]	dark brown peat w/ fragments	50-60 ft from shore Wells G+H Wetland (KO)	
	SC06 12 1-2	2/27/03 1240	1-2	dark brown, fine silt peat w/ fragments		
	SC0623	1245	23	organic w/ some fine sand, dark brown silt		
	SC0634	1252	34	organic silt w/ some sand, last 4" fine sand		
	SC0501	1300	0-1	organic silt w/ fine medium sands and roots	In front of Beaver dam; 25' from shore	
	SC0512	1355	12	same as above	Wells G+H Wetland (KO)	continued

Signature(s): _____

Chain of Custody Number(s): _____

Changes in red 6/21/04 D.S. Chase

US EPA ARCHIVE DOCUMENT

Field Log Sheet - Soil and Sediment Sampling

Project Site Name: Industri-Plex OU-2 (Site # 0107)

Sampling Location Name: Aberjona River at Boardwalk (proposed) area, between Olympia and Salem Stre. Woburn, MA
(*Select*: Cranberry Bog, HBHA, Salem St. Residence, Leonard Pool, Wells G&H, Danielson Park, or Aberjona River). KO

Sample Type: ☐ Surface Soil ☒ Surface Sediment ☒ Sediment Core ☐ QA/other: _____

Weather Conditions: 26 °F sunny

Sampled By: D. Crane J. Beale L. O'Neil

Sample Loc. #	Date & Time	Depth	Soil/Sediment Description: (Color, Odor, Moisture, Type: Sand, Silt, Clay, etc.)	Location Description (Industrial, wetland, etc.; Distance to river/water)	Other comment / Information
SC0523	2/27/03 1404	2-3	organics w/ fine silts and sands with plant roots. dark brown/black color	Wells G+H wetland (KO)	continuation
SC0534	1410	3-4	organics with little sand and roots, dark black color.	↓	

* near proposed boardwalk between Olympia and Salem Street ↓

Signature(s): _____

Chain of Custody Number(s): _____

changes in red 6/21/07 [illegible]

US EPA ARCHIVE DOCUMENT

Field Log Sheet - Soil and Sediment Sampling

Project Site Name: Industri-Plex OU-2 (Site # 0107)

Sampling Location Name(s): HBHA Woburn, MA
(*Select*: Cranberry Bog, HBHA, Salem St. Residence, Leonard Pool, Wells G&H, Danielson Park, or Aberjona River).
KO

Sample Type: ☐ Surface Soil ☐ Surface Sediment ☒ Sediment Core ☐ QA/other: _____

Weather Conditions: Sunny, windy, high ~25°F

Sampled By: D. Granz L. Trivot

HBHA just upstream of Mishawum Rd

Sample Loc. #	Date & Time	Depth	Soil/Sediment Description: (Color, Odor, Moisture, Type: Sand, Silt, Clay, etc.)	Location Description (Industrial, wetland, etc.; Distance to river/water)	Other comment / Information
SC04 01	2/25/03 11:00	0-1'	Silt; trace of sand & grit. Saturated, dark brown. Some organic matter	About ~100' from bank into pond; near Atlantic Co.	Includes duplicate #SC04D01
SC04 12	2/25/03 11:06	1-2'	Silt & sand; ~1" cobbles Saturated, dark brown	HBHA Pond 3 (KO) "	SC04 includes area a pic - (TJMaxx sign)
SC04 23	2/25/03 11:13	2-3'	~2.5" hit yellow sand (fine). Remainder = silty mud; saturated, dark brown.	"	
SC04 34	2/25/03 11:23	3-4'	Saturated; fine yellow sand; some stone & some silt (minor)	"	

Signature(s): _____

Chain of Custody Number(s): _____

changes in red 6/21/04

US EPA ARCHIVE DOCUMENT

Field Log Sheet - Soil and Sediment Sampling

Project Site Name: Industri-Plex OU-2 (Site # 0107)

Sampling Location Name: Cranberry bog Woburn, MA
(*Select*: Cranberry Bog, HBHA, Salem St. Residence, Leonard Pool, Wells G&H, Danielson Park, or Aberjona River).

Sample Type: ☐ Surface Soil ☐ Surface Sediment ☒ Sediment Core ☐ QA/other: _____

Weather Conditions: overcast, ~35°f

Sampled By: D. Granz L. Mnot

Sample Loc. #	Date & Time	Depth	Soil/Sediment Description: (Color, Odor, Moisture, Type: Sand, Silt, Clay, etc.)	Location Description (Industrial, wetland, etc.: Distance to river/water)	Other comment / Information
SC10 01	2/24/03 15:25	0-1'	1st 6" - organic silty mud; next 6" - coarse/med. sand	~20' from CB03-09; in drainage channel	
SC10 12	2/24/02 [redacted]	[redacted]	silty mud; also uniform med. sand	"	
SC10 23	2/24/02 15:37	2-3'	~~wet saturated~~ med. sand. Includes some coarser material.	"	
SC10 34	2/24/02 15:45	3-4'	med. coarse sand, size ranging from colloids to small pebbles	"	

Cranberry bog near west shore ditch

Signature(s): _____

Chain of Custody Number(s): _____

Changes in red 6/21/03 DJ. Granz

US EPA ARCHIVE DOCUMENT

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Industri-Plex
Sediment Core Sampling

GPS data
Feb 2003

Latitude (decdeg)	Longitude (decdeg)	Northing NAD83 (feet)	Easting NAD83 (feet)	Sample Location	Survey Method	GPS Unit	Date	Time ES	Feature Type	File Name	Number of Positions	Datum
42.509456	-71.138673	3010891.921	753594.277	SC01	Differential	GeoExplorer 3	2/21/2003	10:53:13am	Point	R022115A.cor	31	WGS-84
42.508034	-71.138050	3010374.407	753764.458	SC02	Differential	GeoExplorer 3	2/21/2003	11:48:08am	Point	R022116A.cor	29	WGS-84
42.506519	-71.137575	3009822.832	753894.882	SC03	Differential	GeoExplorer 3	2/26/2003	02:47:56pm	Point	R022619A.cor	23	WGS-84
42.503946	-71.135855	3008887.116	754362.676	SC04	Differential	GeoExplorer 3	2/25/2003	11:12:38am	Point	R022516A.cor	23	WGS-84
42.496812	-71.132637	3006290.963	755241.628	SC05	Differential	GeoExplorer 3	2/27/2003	01:59:09pm	Point	R022718A.cor	25	WGS-84
42.495692	-71.131307	3005884.345	755602.076	SC06	Differential	GeoExplorer 3	2/27/2003	12:45:59pm	Point	R022717A.cor	24	WGS-84
42.493369	-71.131878	3005037.100	755451.736	SC07	Differential	GeoExplorer 3	2/26/2003	01:23:23pm	Point	R022618A.cor	22	WGS-84
42.491717	-71.129244	3004438.133	756164.747	SC08	Differential	GeoExplorer 3	2/24/2003	12:57:17pm	Point	R022417A.cor	24	WGS-84
42.487663	-71.123139	3002967.938	757817.846	SC09	Differential	GeoExplorer 3	2/24/2003	02:55:39pm	Point	R022419A.cor	27	WGS-84
42.487513	-71.123446	3002912.907	757735.282	SC10	Differential	GeoExplorer 3	2/24/2003	03:38:14pm	Point	R022420A.cor	23	WGS-84
42.468292	-71.130153	2995900.244	755956.598	SC11	Differential	GeoExplorer 3	2/21/2003	02:03:58pm	Point	R022119B.cor	25	WGS-84
42.454600	-71.134735	2990905.133	754741.702	SC12	Differential	GeoExplorer 3	2/21/2003	03:01:57pm	Point	R022120A.cor	29	WGS-84
42.443443	-71.143642	2986829.024	752354.979	SC13	Differential	GeoExplorer 3	2/27/2003	10:59:46am	Point	R022715A.cor	27	WGS-84

US EPA ARCHIVE DOCUMENT

SAMPLE LOG SHEETS

BASEFLOW SURFACE WATER 2001/2002

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-10-071401

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Hand Grab / Direct Dip
Depth Sampled: 2.0 feet Total Stream Depth 3.4' feet
Sample Date & Time: 7/14/2001 0800 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula G. Bullard, C. Barker
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: **N/A** ppm

NOTES: Used 0.45 u filter for Dissolved metals

Color: Clear - Slight Brown color

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
22.84	468	488	95.4	8.09	6.55	-87.1	0.1

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes

Total water depth = 3.4'
sample depth = 2.0'
very low flow in river

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0325
Sample ID: IPSW-09-071401
QC Information: MS/MSD (if applicable)

Sample Method/Device: Hand Grab / Direct DIP
Depth Sampled: 1.1 feet Total Stream Depth 3.49 feet
Sample Date & Time: 7/14/2001 0830 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula C. Sanchez, G. Bullard
Date Recorded By: C. Sanchez / J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): MS/MSD

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:
moderate flow / used 0.45u filter for Dissolved metals

Color: Clear

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
23.52	436	499	118	9.99	7.05	-138	1.4

Site Sketch/Notes
TD: 3.49'
SD: 2.1'

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW- 08- 071401

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: IP SW- DP01- 071401 (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: 0.95 feet Total Stream Depth 1.58 feet
Sample Date & Time: 7 / 14 /2001 0905 hours
Dup 0910 hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula C. Sanchez, G. Bullard
Date Recorded By: C. Sanchez / J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: **N/A** ppm

NOTES: Used 0.45u Filter for ~~Total~~ Dissolved metals

Color: Clear.

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
19.35 ~~19.82~~	504	565	108	10.17	6.86	133	5.8

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- 07-071401

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: NA (If applicable)

Sample Method/Device: Hand Grab / Direct Dip
Depth Sampled: 1.0 feet Total Stream Depth 1.05 feet
Sample Date & Time: 7/14/2001 0945 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate) G. Bullard, C. Sanchez
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): ____

*Include sample source & lot No.

NOTES: Used 1.0 & 0.45u Filter for dissolved metals

Color: Slightly Yellow

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
18.65	570.	648.	106.	9.46	6.89	-125	5.1

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0325
Sample ID: IPSW-EB01-071401
QC Information: Rinsate / Equipment Blank (if applicable)

Sample Method/Device: Direct Pump-through Filters
Depth Sampled: N/A feet Total Stream Depth N/A feet
Sample Date & Time: 7/14/2001 1015 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate) / G. Bullard / C. Suarez
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF Lot 030515

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: DIUF Lot #: 030515
Pump through 1.0 & 0.45 u Filters
Color: Clear

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	
Dissolved TAL Metals	X
Total Suspended Solids	

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
N/A →							

Site Sketch/Notes N/A

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: JPSW-06-071401

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device:
Depth Sampled: 1.1 feet Total Stream Depth 1.85 feet
Sample Date & Time: 7/14/2001 1020 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate) G. Bullard C. Sanchez
Date Recorded By: J. Danieli / C. Sanchez
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used 0.45 & 1.0 u Filter - For dissolved metals

Color: Slightly yellow

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
18.07	565	652	98.5	8.92	7.01	-127	5.3

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	Y
Dissolved TAL Metals	Y
Total Suspended Solids	Y

Tt NUS Form 0004sw

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TETRA CH NUS, INC.

SA E LOG SHEET – SURFACE WA

Site Name: Industri-Plex
Sample ID: IPSW- 05- 071401

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: 0.8 feet Total Stream Depth 1.35 feet
Sample Date & Time: 7 / 14 /2001 1045 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate) G. Bulhard C. Sanchez
Date Recorded By: C. Sanchez / J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

____ Groundwater
_X_ Surface Water
____ Residential Supply
_X_ Grab
____ Composite
____ Trip Blank*
____ Rinsate Blank*
____ Field Duplicate Collected
____ Other (Specify):
*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: yellow

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
21.46	596	637	72.6	6.25	6.71	-127	7.1

Site Sketch/Notes

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA . H NUS, INC.

SAM F LOG SHEET – SURFACE ...

ite Name: Industri-Plex

Sample ID: IPSW-04-071401

Tetra Tech NUS Job No./PMS N0564-0325

QC Information: N/A (if applicable)

Sample Method/Device: Direct DIP

Depth Sampled: 0.45 feet Total Stream Depth 0.87 feet

Sample Date & Time: 7/14/2001 1120 hours

Dup. N/A hours

Sampler(s): J. Danieli / K. O'Neill (circle appropriate) G. Bullard, C. Sanchez

Date Recorded By: C. Sanchez, J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: ppm

NOTES:

High flow - Filtered w/1.0 + 0.45u Filter For Dissolved metals

Color: slightly yellow - Brown

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
21.5	578	617	97.8	8.39	6.88	-141	7.5

Site Sketch/Notes N/A

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-071401

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: NA (if applicable)

Sample Method/Device:
Depth Sampled: 0.75 feet Total Stream Depth 1.25 feet
Sample Date & Time: 7 / 14 /2001 1110 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate) C. Sanchez / G. Bullard
Date Recorded By: C. Sanchez / J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Filters using 0.45+ 1.0um Filter for dissolved metals

Color: Slight yellow

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
18.5	544	621	69.5	6.3	6.9	-149	2.4

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

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TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0325
Sample ID: IPSW-02-07/401
QC Information: NTA (if applicable)

Sample Method/Device:
Depth Sampled: 0.66 feet Total Stream Depth 1.1 feet
Sample Date & Time: 7/14/2001 1155 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula C. Sanchez, G. Bulard
Date Recorded By: J. Danieli / C. Sanchez
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Filtered through 1.0 + 0.45 µ for dissolved metals

Color: slightly yellow

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
28.2	561	606	72.3	6.35	6.88	-130	19.5

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

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TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-01-071401

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: 0.79 feet Total Stream Depth 1.2 feet
Sample Date & Time: 7 / 14 /2001 1210 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate) C. Sanchez, G. Bynard
Date Recorded By: L. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

____ Groundwater	____ Trip Blank*
X Surface Water	____ Rinsate Blank*
____ Residential Supply	____ Field Duplicate Collected
X Grab	____ Other (Specify):
____ Composite	

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Strong Flow
Filtered Through 0.45+ 1.0u Filter for Dissolved metals

Color: Slightly Yellow

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
17.93	484.0	560.0	63.4	5.95	7.07	-148.5	3.9

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

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TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0325
Sample ID: IPSW-01-082301
QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: .54 feet Total Stream Depth .9 feet
Sample Date & Time: 8 / 23 /2001 1530 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula L. Seydwitz
Date Recorded By: L. Seydwitz
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): MS/MSD

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Turbidity Reading Taken From YSI in Channel. All other readings from reference unit YSI.

Color: Brown

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
20.74	579	630	73.1	6.85	7.26	-182.0	10.4

Site Sketch/Notes See Station Photo./ Roux Associates Collect 3 - 500mL Bottles (Roux = Station 1.0)

filter -> .45 µ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

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TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-082301

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: .45 feet Total Stream Depth 0.75 feet
Sample Date & Time: 8 / 23 /2001 1500 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula L. Seydwitz
Date Recorded By: L. Seydwitz
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Turbidity Reading Taken From YSI in Channel. All other readings from Reference Unit YSI.

Color: brown

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
26.1	697	664	80.8	6.93	7	-105.0	440.6

Site Sketch/Notes See Station Photos. / Roux Associates also collect Sample. 3 - 500mL Bottles (Roux = Station 4)

2 filters used -> .45 & 1.0µm

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-03-082301

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: 0.72 feet Total Stream Depth 1.2 feet
Sample Date & Time: 8 / 23 /2001 1355 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula L. Seydewitz
Date Recorded By: L. Seydewitz
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Turbidity Reading Taken From YSI in Channel. All other readings from Reference Unit YSI

Color: yellow-Brown

Turbidity: CLR/SL/(CLDY)/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
21.36	640.00	689.00	8.0	7.53	6.99	-189.3	48

Site Sketch/Notes See Photos for Station.
Used 0.45 µ Filter for dissolved metals

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

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TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-082301

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: .42 feet Total Stream Depth 0.7 feet
Sample Date & Time: 6 / 23 /2001 1340 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula L. Seydwitz
Date Recorded By: L. Seydwitz
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Turbidity Reading from YSI in channel. All other readings from Reference unit YSI.

Color: brown

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
25.62	654	646	89.2	7.29	7.05	427.3	277.8

Site Sketch/Notes See Station Photos/ Roux Associates also collect sample 3 500mL bottles. (Roux = Station 9)

2 filters used -> .45 & 1.0µ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-082301

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device:
Depth Sampled: .72 feet Total Stream Depth 1.2 feet
Sample Date & Time: 8 / 23/2001 1245 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula L. Seydewitz
Date Recorded By: L. Seydewitz
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Turbidity Reading Taken from YSI in channel. All other Reading from Reference Unit YSI.

Color: cloudier then previously sampled sites

Turbidity: CLR/SL CLDY* CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
25.34	705	701	96.2	8.08	7.28	-178.0	14.6

Site Sketch/Notes See Photos for Station
2 filters used - .45 & 1.0

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N0564-0325
Sample ID: IPSW- 06- 082301
QC Information: N/A (if applicable)

Sample Method/Device: Direct D
Depth Sampled: .93 feet Total Stream Depth 1.56 feet
Sample Date & Time: 8 / 23 2001 1209 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula L. Seydewitz
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- X Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Turbidity Reading Taken From YSI in channel. All other readings from Reference Unit YSI.
Color: Yellow - Brown

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
20.45	648	709	63.1	7.26	7.34	-195.8	4.4

Site Sketch/Notes See Photos for Station

1 filter used .45 µ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-082301

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: .9 feet Total Stream Depth 1.5 feet
Sample Date & Time: 8 / 23 /2001 1125 hours
Dup. N/A hours
Sampler(s): J. Danielli / K. Lang/ Kara Nuppula L. Seydewitz
Date Recorded By: L. Seydewitz
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Turbidity Reading Taken From YSI in channel all other readings from Reference unit YSI.

Color: brown

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
21.79	631	672	86.5	7.72	7.31	-198.6	6.7

Site Sketch/Notes See Photos for Station

2 filters -> 1.0 & 4.5 µ

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-08-08230I

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: IPSW-DP01-08230I (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: .7 feet Total Stream Depth 1.2 feet
Sample Date & Time: 8 / 23 /2001 1033 hours
Dup. 1040 hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula L. Seydewitz
Date Recorded By: L. Seydewitz
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- X Field Duplicate Collected
- ____ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Turbidity Reading Taken From YSI in channel. All other Readings from Reference unit YSI.

Color: brown

Turbidity: CLR/SL/(CLDY)/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
21.98	593	629	72.2	6.59	7.39	-202.1	9.0

Site Sketch/Notes: See Photos for Station
both .45 & 1.0µ filters were used

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE. . TECH NUS, INC.

S PLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-9-082301

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 2 feet Total Stream Depth 3.4 feet
Sample Date & Time: 8 / 23 /2001 0943 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula L. Seydewitz
Date Recorded By: L. Seydewitz Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used both 1.0 and 0.45µ Filters - For Dissolved metals Turbidity Reading From YSI in Channel. All other readings from Seperate YSI unit.

Color: green/brown H_2O color

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
25.74	458	457	106.2	8.83	8.12	-203.2	4.1 NTU

Site Sketch/Notes See photos for Station

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-10-082301

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct DIP
Depth Sampled: 1.6 feet Total Stream Depth 3.1 feet
Sample Date & Time: 8/23/2001 0900 hours
Dup. N/A ~~hours~~
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula L. Seydewitz
Date Recorded By: L. Seydewitz
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:
no odor
Turbidity Reading Taken From YSI in Channel. All other readings from Reference Unit YSI.
Color: green/brown color

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
25	503	505	1020	8.24	7.99	-198.4	-3.2 NTU

Site Sketch/Notes See Photos for Station.
sample location ~ 5 ft from edge of bridge
channel width ~ 25 ft wide

Used both .45 & 1.0µm filters

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW - EB01 - 082301

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: Equipment Blank. (if applicable)

Sample Method/Device: Filter DI water through 0.45+10µ Filters
Depth Sampled: N/A feet Total Stream Depth N/A feet
Sample Date & Time: 8 / 23 /2001 0815 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula L. Seydewitz
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank* (Equipment Blank)
- ___ Field Duplicate Collected
- ___ Other (Specify): DI = 0510011

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: Clear

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A.

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	
Dissolved TAL Metals	X
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

PLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Tetra Tech NUS Job No./PMS ~~N0504~~ 4123-0325

Sample ID: IPSW-RB01-091801

QC Information: ~~EB~~ Rinsate Blank RB01 (if applicable)

Sample Method/Device: Direct Pump - DI water through Filters

Depth Sampled: N/A feet Total Stream Depth N/A feet

Sample Date & Time: 9/18/2001 0855 hours

Dup. N/A hours

Sampler(s): J. Danieli / K. Lang/ Kara Nuppula

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- X Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

NERL Reagent Grade Lot # = 0305151

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: N/A
- used both 0.45 + 1.0 µ Filters.

Color: N/A

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
N/A							

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-~~00~~-091801

Tetra Tech NUS Job No./PMS N4123 ~~N0664~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.60 feet Total Stream Depth 2.93 feet
Sample Date & Time: 9/18/2001 0920 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang / Kara Nuppula J. Lambert
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): ___

*include sample source & lot No.

NOTES: used 1.0µ Filter only

Micro Tip/OVA Monitor Reading: N/A ppm

Color: colorless

Turbidity CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
19.68	508	583	~~8.72~~ 95.1	8.73	7.83	202.5	2.45

Site Sketch/Notes See Station Photos.
* Turbidity recorded by HF scientific turbidimeter; all other parameters recorded by hand-held YSI

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-091801

Tetra Tech NUS Job No./PMS N0564-0325 (4133)
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.40 feet Total Stream Depth 2.56 feet
Sample Date & Time: 9/18/2001 0955 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used 0.45 u Filter Only

Color: Colorless

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
21.11	474	515	~~8.64~~ 8.50	96.8	~~7.57~~ 7.73	161.6	1.83

Site Sketch/Notes Refer to Station Photos.

* turbidity measured by HF scientific turbidity meter, all other parameters measured by Hand-held YSI

** DO always dropping slowly

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-091801

Tetra Tech NUS Job No./PMS: ~~N0564~~ 4123-0325
QC Information: IPSW-DP01-091801 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.10 feet Total Stream Depth 1.90 feet
Sample Date & Time: 9/18/2001 1035 hours
Dup. 1045 hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify): ___

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: only used 0.45u Filter

Color: slight brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO* (%)	DO (mg/L)	pH (std. Units)	ORP** (mV)	Turbidity (NTU)
16.95	528	622	56.0	5.42	6.92	159.9	4.98

Site Sketch/Notes

* DO is dropping slowly ~~[illegible]~~
* ORP is slowly rising

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-091801

Tetra Tech NUS Job No./PMS 4123 ~~N0564~~-0325
QC Information: N/A (if applicable)

Sample Method/Device:
Depth Sampled: 0.50 feet Total Stream Depth 0.85 feet
Sample Date & Time: 9 / 18/2001 1120 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Used both 1.0 + 0.45 micron filters
- Bubbles on water surface.

Color: lt brown tinge

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	** DO (%)	DO (mg/L)	pH (std. Units)	** ORP (mV)	* Turbidity (NTU)
15.38	596	727	57	5.71	7.02	190.7	7.44

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes

* Turb. determined using HF scientific turbidimeter; all other parameters determined using hand-held YSI

** ORP slowly increasing; DO slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N~~0664~~ 4123-0325
Sample ID: IPSW-06-091801
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.70 feet Total Stream Depth 1.75 feet
Sample Date & Time: 9/18/2001 1210 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula (J. Lambert)
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used both 0.45 + 1.0µ Filter.

Color: yellowish tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	** DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	* Turbidity (NTU)
15.33	655	798	65.3	6.52	7.13	201.5	7.49

Site Sketch/Notes Refer to station photos

* Turbidity determined with HF scientific turbidimeter; all other parameters determined with hand-held YSI

** DO slowly increasing; ORP slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-091801

Tetra Tech NUS Job No./PMS 4123 ~~N0504~~-0325
QC Information: NA (if applicable)

Sample Method/Device:
Depth Sampled: 0.60 feet Total Stream Depth 1.10 feet
Sample Date & Time: 9 / 18/2001 1245 hours
Dup. N/A hours
Sampler(s): J. Danielli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: used both .45 µm + 1 µ filters

Color: brown tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO * (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	** Turbidity (NTU)
19.51	763	852	9.68	105.6	7.19	203.0	14.5

Site Sketch/Notes Refer to Station Photos

* DO slowly decreasing, ORP slowly increasing

** Turbidity determined with HF scientific turbidimeter; all other parameters determined with Hand-held YSI unit.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-091801

Tetra Tech NUS Job No./PMS: ~~N0504~~ 4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.30 feet Total Stream Depth 0.30 feet
Sample Date & Time: 9/18/2001 1330 hours
Dup. N/A ~~hours~~
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: used both .45 um and 1 um filters

Color: greenish-brown tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
23.61	820	861	119.6	10.3	7.23	206.3	23.4

Site Sketch/Notes: Refer to Photos of Station
→ 3 - 500mL Bottles.
Roux Associates collects samples at this location (Roux Station 9.
Turbidity measurements determined using HF Scientific turbidimeter; all other measurements determined with hand-held YSI

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-091801

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.3 feet Total Stream Depth 0.5 feet
Sample Date & Time: 9 / 18 /2001 1400 hours
Dup.: N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used both 1.0 & 0.45u Filter.
Orange Flocculant/particles in water.
Color: Slight orange color.

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	* DO (%)	* DO (mg/L)	pH (std. Units)	* ORP (mV)	** Turbidity (NTU)
15.30	627.00	767.00	50.5	5.15	6.78		10.1

Site Sketch/Notes Refer to Station Photos
**Turbidity measured - by HF Scientific Turbidimeter
All other measurements YSI - 6820
* DO + DO% - slowly decreasing. ORP slowly decreasing.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS: ~~N0504~~ N4123-0325
Sample ID: IPSW-02-091801
QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.30 feet Total Stream Depth 0.55 feet
Sample Date & Time: 9/18/2001 1440 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- / Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Matrix Spike

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used Depth 0.45+1-0.1 Filter.
Sheen- noted on sediment on bank of channel
Color: colorless

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	**ORP (mV)	**Turbidity (NTU)
29.6	786	840	8.68	99.0	6.91	168.8	8.34

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes: Refer to Station Photo.
- Roux collects 3 500mL samples. (Roux Station 4
** Turbidity measured - by HF Scientific Turbidimeter- all other measurements 6820 YSI.
*DO is slowly decreasing, ORP is slowly increasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-091801

Tetra Tech NUS Job No./PMS N0564 4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.40 feet Total Stream Depth 0.75 feet
Sample Date & Time: 9/18/2001 1520 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used 0.45µ filter only.

Color: brown tinge (light)

Turbidity: CLR/SLCLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	* ORP (mV)	** Turbidity (NTU)
16.12	490	585	80.9	~~8.33~~ 8.01	7.25	180.1	4.93

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos
- Roux Collected 3 - 500mL samples (Roux-Station 1)
** = Turbidity measure by HF Scientific Turbidimeter. All other parameters measured by 6820-UST.
* ORP slowly increasing; DO slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-102201

Tetra Tech NUS Job No./PMS ~~N0564~~ N4123-0325
QC Information: Equipment Blank EB01 (if applicable)

Sample Method/Device: Filter DI Water through 0.45+ 1.0u Filters
Depth Sampled: N/A feet Total Stream Depth N/A feet
Sample Date & Time: 10 / 22 /2001 0825 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- X Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): Lot # 0305151

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Filter DI water through 0.45+1.0u Filters

Color: N/A

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
N/A							

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-102201

Tetra Tech NUS Job No./PMS ~~N0564~~ N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device* Direct Dip
Depth Sampled: 2.91.6 feet Total Stream Depth 28.95 feet
Sample Date & Time: 10 / 22 2001 0845 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: yellowish tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO* (mg/L)	pH (std. Units)	ORP* (mV)	Turbidity** (NTU)
14.23	494	622	92.9	9.67	7.52	171.8	~~5.1~~ 3.92

Site Sketch/Notes - See photos

* DO, ORP slowly dropping

** = Turbidity measurement from HF Scientific meter not usi.

Note: used both 0.45 & 1.0u filters

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-102201

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.86 feet Total Stream Depth 3.10 feet
Sample Date & Time: 10 / 22 /2001 0915 ~~1440~~ hours
Dup. N/A hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: colorless

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO* (mg/L)	pH (std. Units)	ORP* (mV)	Turbidity** (NTU)
14.42	447	562	104.2	10.65	7.63	150.6	1.85

Site Sketch/Notes Refer to Photos.

** Turb = 2.9 according to hand-held YSI; HF scientific turbidimeter used about

* ORP dropping slowly, DO dropping slowly

Note: Used 0.45u Filter

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-102201

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: IPSW-DPCI-102201 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.05 feet Total Stream Depth 1.75 feet
Sample Date & Time: 10 / 22/2001 955 hours
Dup. 1005 ~~hours~~
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula J Lambert
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: -used both .45 um + 1 um filters

Color: -brownish in color

Turbidity: ~~CLR/SL~~ CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
12.42	534	698	~~10.11~~ 68.7	7.43	7.27	162.7	7.68

Site Sketch/Notes Refer to Photos

* Turb. according to hand-held YSI = 11.5 NTU; Turb. above according to HF Scientific turbidimeter

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-102201

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.66 feet Total Stream Depth 1.10 feet
Sample Date & Time: 10 / 22 2001 1045 hours
Dup. N/A ~~hours~~
Sampler(s): J. Danielli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- X Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): ___

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: samples filtered with 0.45 mm + 1.0 mm filter

Color: - colorless; has some foam on top

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	**ORP (mV)	*Turbidity (NTU)
12.59	549	718	67.7	7.65	7.39	180.2	6.05

Site Sketch/Notes: Turbidity reading taken by HF Scientific turbidimeter; * turb. according to hand-held YSI = 7.7 NTU
** ORP is slowly decreasing; DO also slowly decreasing

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T. .A TECH NUS, INC.

..MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-010-102801

Tetra Tech NUS Job No./PMS N4123 ~~N0504~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.78 feet Total Stream Depth 1.30 feet
Sample Date & Time: 10 / 22 /2001 1115 hours
Dup. N/A hours
Sampler(s): J. Danielli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Used both 0.45 + 1.0 µ filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Color: yellowish tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
12.92	569	739	76.1	8.06	7.24	186.3	14.9

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes

* Turb. according to hand-held YSI = 15.6; Turb. taken with HF scientific turbidimeter above.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: JPSW-05-102201

Tetra Tech NUS Job No./PMS: ~~N0564~~-0325 N4123
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.75 feet Total Stream Depth 1.25 feet
Sample Date & Time: 10/22/2001 1235 hours
Dup. ____ hours
Sampler(s): J. Daniel / K. Lang/ Kara Nuppula G. Lambert
Date Recorded By: J. Daniel / G. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): ____

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: - used 1.0 + 0.45 um filters

Color: brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	** ORP (mV)	* Turbidity (NTU)
15.02	619	765	115.1	11.58	7.28	86.5	~~24.6~~ 14.5

Site Sketch/Notes: Refer to Photos

* Turb. recorded with HF Scientific turbidimeter, Turb. according to hand-held YSI = 24.6 NTU

** ORP + DO slowly dropping

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: JPSW-05-102201

Tetra Tech NUS Job No./PMS: ~~N0504~~ N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.31 feet Total Stream Depth 0.52 feet
Sample Date & Time: 10 / 22 /2001 1320 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. Lang / Kara Nuppula J. Lambert
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): ___

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: 1.0 um + 0.45 um filters used.

Color: yellowish tinge, sheen

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	* * DO (mg/L)	pH (std. Units)	ORP (mV)	* Turbidity (NTU)
16.7	673	808	136.3	13.18	7.34	197.8	57.1

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes: Refer to Photos.

* Turb. recorded by HF scientific turbidimeter. Turb. recorded by hand-held YSI = 16.4 NTU
* DO, ORP decreasing slowly.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE. TECH NUS, INC.

S. PLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-102201

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.62 feet Total Stream Depth 1.03 feet
Sample Date & Time: 10 / 22 /2001 1330 hours
Dup. NA hours
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: used 0.45 um +1.0 um filters

Color: yellow tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO** (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
13.92	484	614	61.4	6.70	7.21	185.0	7.22

Site Sketch/Notes

*Turb. recorded by HF Scientific turbidimeter; hand-held YSI has a turbidity of 8.5 NTU.

* DO decreasing slowly

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-10220I

Tetra Tech NUS Job No./PMS ~~N0564~~ N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.39 feet Total Stream Depth 0.65 feet
Sample Date & Time: 10/22/2001 1420 hours
Dup. ~~NA hours~~
Sampler(s): J. Danieli / K. Lang/ Kara Nuppula J. Lambert
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: 1.0 + 0.45 μm filters used

Micro Tip/OVA Monitor Reading: N/A ppm

Color: yellowish tint

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO** (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
15.09	624	772	81.8	8.30	7.05	195	19.2

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

* Turb - recorded with HF scientific turbidimeter. Turb = 23.2 for hand-held YSI unit

** ORP slowly increasing, DO slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-102201

Tetra Tech NUS Job No./PMS N~~0564~~ 4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.42 feet Total Stream Depth 0.70 feet
Sample Date & Time: 10 / 22/2001 1500 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. O'Neill (circle appropriate) J. Lambert
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: 0.45 um filter used only

Color: colorless

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	* Turbidity (NTU)
13.45	434	552	63.8	6.73	7.47	185.5	3.54

Site Sketch/Notes → see photos
*HF scientific turbidimeter used to determine turb.; Turb. according to hand-held YSI = 3.5 → 2.6 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-111901

Tetra Tech NUS Job No./PMS N0564-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip method
Depth Sampled: 0.43 feet Total Stream Depth 0.72 feet
Sample Date & Time: 11 / 19/2001 1510 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: 0.45 um filter used

Micro Tip/OVA Monitor Reading: N/A ppm

Color: brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO** (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
8.06	338	500	76.5	9.04	7.3	135.9	281

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station 1 Photos

* Turbidity recorded with HF Scientific turbidimeter; YSI turbidity = 3.2 NTU

** DO is decreasing slowly

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

RA TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-111901

Tetra Tech NUS Job No./PMS: ~~N0564~~ N4123-0325
QC Information: Matrix Spike (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.51 feet Total Stream Depth 0.85 feet
Sample Date & Time: 11 / 19 /2001 1420 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

*Include sample source & lot No.

NOTES: 1.0 um + 0.45 um filters used

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Yellow tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP* (mV)	Turbidity (NTU)
8.26	663	976	70.9	8.46	6.93	144.5	31.0

Site Sketch/Notes: Refer to Station 2 Photos.

* Turbidity recorded using HF Scientific turbidimeter - YSI turb. reading = 33.2 NTU

** DO slowly decreasing

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IDSW-03-111901
Tetra Tech NUS Job No./PMS: ~~N0564~~ 4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip Method
Depth Sampled: 0.55 feet Total Stream Depth 0.92 feet
Sample Date & Time: 11 / 19 /2001 1338 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: lots of iron Flocculant in water used 1.0 + 0.45 micron Filters

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Orange

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
8.68	461.00	670.00	71.5	8.56	66.0	75.3 **	11.13

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes: Refer to Station 3 Photos.
* = Turbidity measured by HF Scientific meter
YSI - Turb. Reading = 8.3 NTU
** = ORP slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-04-111901

Tetra Tech NUS Job No./PMS ~~N0564~~ 4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip Method
Depth Sampled: 0.36 feet Total Stream Depth 0.60 feet
Sample Date & Time: 11 / 19 /2001 1320 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert
Date Recorded By: Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): ____

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: **N/A** ppm

NOTES: used 1.0 um + 0.45 um filters

Color: yellow-green tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	** ORP (mV)	* Turbidity (NTU)
9.44	666	920	101.6	11.64	7.09	170.2	~~56*~~ 45.3

Site Sketch/Notes Refer to Station 4 Photos

* Turbidity measured with HF Scientific turbidimeter. YSI reading = 56.2 NTU

** ORP slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

RA TECH NUS, INC.

.MPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Tetra Tech NUS Job No./PMS ~~N0564-0325~~ 4123
Sample ID: IPSW-05-111901
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.86 feet Total Stream Depth 1.44 feet
Sample Date & Time: 11 / 19 /2001 1240 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

*include sample source & lot No.

NOTES: used 1.0 um + 0.45 um filters

Micro Tip/OVA Monitor Reading: **N/A** ppm

Color: yellow-green tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	** ORP (mV)	* Turbidity (NTU)
8.05	561	803	94.8	11.38	7.11	180.1	24.0

Site Sketch/Notes - see station photos for details

* Turb. measured with HF scientific turbidimeter - YSI turbidity = 30.9 NTU

** DO + ORP are slowly decreasing

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-0~~0~~111901

Tetra Tech NUS Job No./PMS N4123 ~~N0504~~-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip Method
Depth Sampled: 0.98 feet Total Stream Depth 1.63 feet
Sample Date & Time: 11 / 19 /2001 1140 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert
Date Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): ____

*include sample source & lot No.

NOTES: 1.0 um + 0.45 um filters used

Micro Tip/OVA Monitor Reading: **N/A** ppm

Color: green tinge; sheen on water

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO ** (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
7.14	504	764	192.7	11.19	7.26	167	11.67

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes see station photos for details

* Turb. measured with HF Scientific turbidimeter. YSI turbidity = 13.2 NTU

* DO is steadily ~~increasing~~ decreasing

Tt NUS Form 0004sw

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-07-111901
Tetra Tech NUS Job No./PMS: 1N4123 ~~N0564~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.72 feet Total Stream Depth 1.20 feet
Sample Date & Time: 11 / 19 /2001 1103 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): ____

*include sample source & lot No.

NOTES: 1.0 um + 0.45 um filters used

Micro Tip/OVA Monitor Reading: **N/A** ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity* (NTU)
6.91	483	712	80.7	9.54	7.40	167.2	6.02

Color: green-brown tinge

Turbidity: ~~CLR/SL~~ CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes: see station notes for details

*Turbidity recorded by HF Scientific turbidimeter; Turb. according to YSI = 8.2 NTU

** DO is slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T. .A TECH NUS, INC.

..MPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**

Tetra Tech NUS Job No./PMS ~~N0564~~ 4D3-0325

Sample ID: IPSW-08-111901

QC Information: IPSW-DP01-111901 (if applicable)

Sample Method/Device: Direct Dip

Depth Sampled: 1.08 feet Total Stream Depth 1.30 feet

Sample Date & Time: 11 / 19 /2001 1015 hours

Dup. 1020 hours

Sampler(s): J. Daneli / J. Lambert /

Date Recorded By: Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: **N/A** ppm

NOTES: 0.45 um filter used

Color: green-brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	** DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	* Turbidity (NTU)
8.39	511	729	83	9.65	7.32	151.2	4.56

Site Sketch/Notes see station photos for details

* Turb. measured with HF scientific turbidimeter; YSI turbidity = 10.2 NTU

** DO is decreasing slowly

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IDSW1-09-111901

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.72 feet Total Stream Depth 2.86 feet
Sample Date & Time: 11 / 19 /2001 09.30 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used 0.45 micron filter only

Color: brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	** DO (mg/L)	pH (std. Units)	** ORP (mV)	* Turbidity (NTU)
8.9	404	579	109.0	12.62	7.59	137.0	2.57

Site Sketch/Notes Refer to Station 9 Photos.

* Turb. recorded with HF scientific turbidimeter; YSI turbidity = 4.1

** DO + ORP are slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-10-111901

Tetra Tech NUS Job No./PMS: ~~N0504~~ 4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.92 feet Total Stream Depth 3.20 feet
Sample Date & Time: 11 / 19 /2001 0845 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: ~~1 ft~~ 0.45 µm filter used 1.0

Color: brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: **N/A** ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity* (NTU)
8.9	449	648	97.3	11.39	7.4	137.7	307

Site Sketch/Notes: Refer to Station 10 photos.
* Turbidity measurements taken with HF scientific turbidimeter - YSI turb. = 1.9
** DO slowly decreasing

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-EB01-111901

Tetra Tech NUS Job No./PMS ~~N0664~~ 4123-0325
QC Information: Equipment Rinsate Blank. (if applicable)

Sample Method/Device: filter DI through ~~0.45~~ filters
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 11 / 19 /2001 0840 hours
Dup. N/A hours
Sampler(s): J. Danielli / J. Lambert /
Date Recorded By: f. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- X Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): DI Lot# 0510011

*include sample source & lot No.

NOTES: Filter DI water through 0.45d 10-u filters.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: **N/A** ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
N/A							

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Tetra Tech NUS Job No./PMS: N0564-0325
Sample ID: IPSW-E301-121701
QC Information: ~~Rinsate~~ Equipment Blank (if applicable)

Sample Method/Device: DI water Filtered through Filters
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 12/17/2001 0840 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- X Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): Lot # = 0510011

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: **N/A** ppm

NOTES: Filters used 0.45 and 1.0u

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
N/A							

Site Sketch/Notes
N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

RA TECH NUS, INC.

AMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-10-121701

Tetra Tech NUS Job No./PMS N4123 ~~N9564-0325~~
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.40 feet Total Stream Depth 2.71 feet
Sample Date & Time: 12 / 17 /2001 0850 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: f. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Filters used = 0.45 µm

Micro Tip/OVA Monitor Reading: **N/A** ppm

Color: brown tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP* (mV)	Turbidity** (NTU)
6.13	453	708	98.3 ~~13.12~~	13.12	7.14	157.1	3.15

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos 5.2

Note: Turbidity measurement from HF Scientific Turbidimeter.

*ORP is slowly decreasing

*Turbidity measured with HF Scientific turbidimeter; YSI turbidity = 5.2 NTU

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Tetra Tech NUS Job No./PMS: ~~N0604-0325~~ N4123-0325
Sample ID: IPSW-09-121701
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.8 feet
Total Stream Depth: 3.34 feet
Sample Date & Time: 12 / 17 /2001 0930 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: **N/A** ppm

NOTES: filter = 0.45 um

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP** (mV)	Turbidity (NTU)
5.98	398	649	94.0	11.6	7.30	129.5	2.28

Site Sketch/Notes: See station photos for details

*Turb recorded by HF scientific turbidimeter; YSI turbidity = 3.4 NTU

** ORP slowly decreasing

* DO membrane damaged; using YSI at stations for DO measurements

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-121701

Tetra Tech NUS Job No./PMS N0564-0325 N24123
QC Information: Dup of (IPSW-D001-121701) (if applicable)

Sample Method/Device: Direct dip
Depth Sampled: 1.1 feet Total Stream Depth 1.95 feet
Sample Date & Time: 12/17/2001 1020 hours
Dup. 1025 hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: 1.0 µm + 0.45 µm filters used

Color: brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	* Turbidity (NTU)
3.84	384	644	76.5	10.1	7.29	128.8	7.34

Site Sketch/Notes see station photos for details

*Turbidity measured with HF scientific turbidimeter - YSI turbidity = 28.3 NTU

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325 (if applicable)

QC Information: NTA

Site Name: Industri-Plex

Sample ID: IPSW-07-121701

Sample Method/Device: Direct Dip

Depth Sampled: 1.00 feet Total Stream Depth 1.80 feet

Sample Date & Time: ___/___/2001 1110 hours

Dup. N/A hours

Sampler(s): J. Danieli / K. O'Neill (circle appropriate) J. Lambert

Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: ppm

NOTES: 1.0 x 0.45 .1u filters used

Color: brown tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	*Turbidity (NTU)
2.46	135	764	98.8	13.5	7.2	143	102

Site Sketch/Notes See station photos for details

*Turbidity recorded by HF scientific turbidimeter; hand-held YSI turbidity = 102 NTU

** DO membrane damaged; DO readings taken from ~~[illegible]~~ YSI at surface water station.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-122701

Tetra Tech NUS Job No./PMS ~~N0584~~ N4128-0325
QC Information: N/A (If applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.9 feet Total Stream Depth 1.63 feet
Sample Date & Time: 12/17/2001 1145 hours
Dup. _____ hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate) J. Lambert
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): _____

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used = 1.0 um, 0.45 um

Color: yellow green

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO* (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	**Turbidity (NTU)
2.14	456	872		10.0	7.15	51	5.8

Site Sketch/Notes see station photos for details

* DO membrane damaged - using DO from YSI at surface water station

** Turb. measured with HF scientific turbidimeter - hand-held

YSI turbidity = N/A

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA CH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-121701

Tetra Tech NUS Job No./PMS: ~~N0564~~ N9123-0325
QC Information: N/A (If applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.70 feet Total Stream Depth: 1.35 feet
Sample Date & Time: 12 / 17 /2001 1235 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate)
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

*Include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used: 0.45 µm, 1.8 µm

Color: yellow-green

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP** (mV)	*Turbidity (NTU)
2.22	543	9[illegible]	-16.9	[illegible]	7.62	133.7	4[illegible]

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes see station photos for details
*Turbidity measured by HF scientific turbidimeter, hand-held
YSI turbidity - 47.8 NTU
** DO membrane damaged - used YSI at station to determine DO
*ORP is decreasing slowly

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-121701

Tetra Tech NUS Job No./PMS 04423 ~~00554-0325~~
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.48 feet Total Stream Depth 0.64 feet
Sample Date & Time: 12/17/2001 1320 hours
Dup. N/A hours
Sampler(s): J. Danieli / K. O'Neill (circle appropriate)
Date Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- __X__ Surface Water
- ____ Residential Supply
- __X__ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filter used

Color: orange tinge brown

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO* (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity** (NTU)
2.33	492	888	73.2	10.0	6.83	135.8	18.1

Site Sketch/Notes See station photos for details

*DO membrane damaged - used DO readings from YSI at surface water station

**Turbidity measured with HF scientific turbidimeter; hand held YSI reading = 23.9 NTU

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-121701

Tetra Tech NUS Job No./PMS: N4123 ~~N0564~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 1.05 feet
Sample Date & Time: 12/17/2001 1335 hours
Dup. N/A hours
Sampler(s): ~~J. Danieli~~ / K. O'Neill (circle appropriate)
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: 0.45 um filter used

Color: orange tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO* (%)	DO (mg/L)	pH (std. Units)	ORP*** (mV)	Turbidity** (NTU)
3.60	430	736	60.2	6.90	7.01	84.2	3.8

Site Sketch/Notes

See station photos for details

* DO membrane damaged - used surface water station YSI for DO + DO%

** Turb. measured with HF scientific turbidimeter; hand-held YSI turbidity = 67.1 NTU

*** ORP is decreasing slowly

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325 (if applicable)

Site Name: Industri-Plex

QC Information: MS/MSD

Sample ID: IPSW.02-121701

Sample Method/Device: Direct Dip

Depth Sampled: 0.685 feet Total Stream Depth 1.09 feet

Sample Date & Time: 12/17/2001 1415 hours

Dup. N/A hours

Sampler(s): J. Daniell / K. O'Neill (circle appropriate)

Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): MS/MSD

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used - 0.45 um

Color: orange tinge

Turbidity: CLR/SL/CLDY/VCLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity* (NTU)
3.76	513	863	67.5	6.9	7.00	137.4	23.1

Site Sketch/Notes see station photos for details

* Turbidity recorded with HF scientific turbidimeter; YSI turbidity = 33.5 NTU

** DO membrane damaged; used DO values from in-situ YSI at the station

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-121701

Tetra Tech NUS Job No./PMS: N4123 ~~N0664~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 1.0 feet
Sample Date & Time: 12/17/2001 1435 hours
Dup. N/A hours
Sampler(s): J. Daniel / K. O'Neill (circle appropriate)
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used - 1.0, 0.45 um

Color: green-brown tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO** (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity* (NTU)
2.2	332	588	78.1	10.7	7.29	135.3	8.5

Site Sketch/Notes see station photos for details

* Turbidity measured with HF scientific turbidimeter; hand-held YSI turbidity = N/A

** DO membrane damaged - will use DO measurements from YSI at surface water station

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-010402

Tetra Tech NUS Job No./PMS ~~N0564~~ N4125-0325
QC Information: equip. blank (if applicable)

Sample Method/Device: ~~filter~~ pump through 2 filters
Depth Sampled: N/A feet Total Stream Depth N/A feet
Sample Date & Time: 1 / 4 /2002 0830 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neil
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): lot # 070111

*include sample source & lot No.

NOTES: 1.0 µm + 0.45 µm filters used

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)	Turbidity (NTU)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-010402

Tetra Tech NUS Job No./PMS: ~~N0564~~ 04123 0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.50 feet Total Stream Depth 0.80 feet
Sample Date & Time: 1/4/2002 1325 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 0.45 mm

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Temp °C ~~Turbidity (NTU)~~	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	Turb.* (NTU)	pH (std. Units)	ORP (mV)
0.59	4.08	765	107.7	15.57	9.16	7.28	137.2

Color: brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes see station photos

* Turbidity recorded with HF Scientific turbidimeter - handheld

YSI turbidity = 13.0 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW.02-016402

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325
QC Information: MS (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.60 feet Total Stream Depth 1.08 feet
Sample Date & Time: 1/4/2002 1255 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used - 0.45 um

Color: brown tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	Turbidity* (NTU)	pH (std. Units)	ORP (mV)
4.32	433	716	119.2	15.75	~~11.7~~ 9.31	7.04	118.3

Site Sketch/Notes see station photos for details

* Turbidity recorded by HF scientific turbidimeter. Hand-held YSI turbidity = ~~4.3~~ 11.7 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

RA TECH NUS, INC.

AMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-010402

Tetra Tech NUS Job No./PMS N4123 ~~N0504~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.61 feet Total Stream Depth 1.09 feet
Sample Date & Time: 1/4/2002 1225 hours
Dup. N/A hours
Sampler(s): J. Daniel / J. Lambert /
Date Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used - 0.45 µm + 1.0 µm

Color: orange tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C Turbidity (NTU)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	Turbidity* (NTU)	pH (std. Units)	ORP** (mV)
1.89	505	904	840	11.7	28.3	6.89	70.1

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes see station photos for details
*Turbidity recorded using HF Scientific turbidimeter; hand-held YSI turbidity = 18.2 NTU
** ORP is slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-010402

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325
QC Information: _____ (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.40 feet Total Stream Depth 0.60 feet
Sample Date & Time: 1/4/2002 1210 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / _____
Date Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

*include sample source & lot No.

NOTES: filters used - 0.45 mm 1.0 mm

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	Turb* (NTU)	pH (std. Units)	ORP (mV)
2.23	413	731	90.5	12.40	17.9	6.98	111.4

Color: brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes see station photos for details
* Turb. recorded with HF scientific turbidimeter, hand held YSI turbidity - 25.2 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-010402

Tetra Tech NUS Job No./PMS: ~~N0504~~ N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.70 feet Total Stream Depth 1.24 feet
Sample Date & Time: 1/4/2002 1135 ~~1105~~ hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 1.0 um + 0.45 um

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	Turb.* (NTU)	pH (std. Units)	ORP** (mV)
1.61	448	826	97.8	13.95	13.59	7.16	112.7

Color: brown tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes see site station notes for details.

*Turbidity recorded with HF scientific turbidimeter; hand-held YSI turbidity = 16.7 NTU

**ORP is slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

RA TECH NUS, INC.

AMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-010402

Tetra Tech NUS Job No./PMS ~~N0564~~ N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 6.80 feet Total Stream Depth 1.50 feet
Sample Date & Time: 1/4/2002 1110 hours
Dup. N/A hours
Sampler(s): J. Daniel / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filter(s) used = ~~1.0 um~~ 0.45 um

Color: green-brown

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	Turb.* (NTU)	pH (std. Units)	ORP ** (mV)
0.30	451	855	115.2	16.86	~~10.05~~ 9.07	7.57	169.4

Turbidity (NTU)

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes see station photos for details

* Turb. recorded using HF scientific turbidimeter. Hand-held YSI turbidity = 10.0 NTU

** ORP is slowly decreasing

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-010402

Tetra Tech NUS Job No./PMS: ~~N0564~~ N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct dip
Depth Sampled: 0.30 feet Total Stream Depth 0.50 feet
Sample Date & Time: 1/4/2002 _____ hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / _____
Date Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used - 1.0 µm + 0.45 µm

Color: green-brown

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%) **	DO (mg/L)	Turb.* (NTU)	pH (std. Units)	ORP (mV)
0.23	441	844	118.9	17.41	6.40	7.6	172.0

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes: see station photos for details

*Turbidity recorded using HF Scientific turbidimeter. Hand-held YSI turbidity = 54.3 NTU.

** DO is dropping slowly

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-010402

Tetra Tech NUS Job No./PMS: N4123 ~~N0564~~-0325
QC Information: DUP 01 - IPSW-DP01-010402 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.84 feet Total Stream Depth 0.50 feet
Sample Date & Time: 1/4/2002 1000 hours
Dup. 1005 hours
Sampler(s): S. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used. 1.0 µm + 0.45 µm

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	Turb* (NTU)	pH (std. Units)	ORP (mV)
2.25	1142	838	112.0	16.18	~~12.07~~ 8.39	7.65	177.1

Turbidity (NTU)

Color: brown-green tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes: See station photos for details.
*Turb. recorded by HF Scientific turbidimeter - hand-held YSI turbidity = 12.0 NTU

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

RA TECH NUS, INC.

AMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-010402

Tetra Tech NUS Job No./PMS ~~N0584~~ N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 3.0 feet Total Stream Depth 1.86 feet
Sample Date & Time: 1/4/2002 0915 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used - 0.45 µm

Color: green tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	Turb.* NTU	pH (std. Units)	ORP (mV)
0.62	372	697	121.2	17.54	3.16	7.64	160.5

Turbidity (NTU)

Site Sketch/Notes see station photos for details

*Turbidity recorded using HF scientific turbidimeter. Hand-held YSI turbidity = 5.6 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-16-010402

Tetra Tech NUS Job No./PMS N4123 ~~N0564~~-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 2.0 feet Total Stream Depth 1.20 feet
Sample Date & Time: 1/4/2002 0840 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: 0.45 um filter and 1.0 um filter used

Color: green tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Temp °C	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP** (mV)	Turbidity (NTU)
2.42	424	746	108.7	14.93	7.59	185.3	2.38

Site Sketch/Notes see station photos for details
*used HF Scientific turbidimeter to measure turbidity - Turb.= 3.6 NTU according to YSI
** ORP, ~~turb.~~ DO slowly decreasing

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Direct pour w/ peristaltic pump
Depth Sampled: 2 feet Total Stream Depth 3.82 feet
Sample Date & Time: 2 / 15 /2002 08:50 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / C. Mackey
Date Recorded By: Christi Mackey 2/15/02
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIWF # 1104070

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: Colorless

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
	~~2.59~~	~~472~~	~~825~~	~~115.1~~	~~15.65~~	~~8.36~~	~~68.4~~

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	
Dissolved TAL Metals	X
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 2 feet Total Stream Depth 3.82 feet
Sample Date & Time: 2/15/2002 08:50 hours
Dup. N/A hours
Sampler(s): J. Danieli J. Lambert C. Mackey
Date Recorded By: Christi Mackey 2/15/02
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used - 0.45 um

Color: brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
4.81	2.59	472	825	115.1%	15.65	8.36	68.4

Site Sketch/Notes see station photos for details

* Turbidity recorded using HF scientific turbidimeter; YSI turbidity = 14.2 NTU

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.4 feet Total Stream Depth 3.16 feet
Sample Date & Time: 2/15/2002 10:00 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / C. Mackey / K. Lang
Date Recorded By: Christi Mack
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used. 0.45 um

Micro Tip/OVA Monitor Reading: N/A ppm

Color: brown tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
3.71	2.6	435	760	117.9%	16.01	8.0	48.5

Site Sketch/Notes see station photos for details

* Turb. recorded using HF Scientific turbidimeter; YSI turbidity = 9.4 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP01 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.2 feet Total Stream Depth 2.06 feet
Sample Date & Time: 2/15/2002 10:50 hours
Dup. 10:40 hours
Sampler(s): J. Danieli / J. Lambert / C. Mackey / K. Lang
Date Recorded By: C. Mackey
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 0.45 MM

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
7.93	2.75	526	920	104.3	14.17	7.62	53.0

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes see station photos for details

* Turb. recorded using HF Scientific turbidimeter; YSI turbidity = 26 NTU

Water is green/gray

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 1.09 feet
Sample Date & Time: 2/15/2002 11:00 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / C. Hackey / K. Lang
Date Recorded By: C. Hackey
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 0.45 mm, 1.0 um

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
12.23	1.79	550	988	109.5	15.29	7.44	49.8

Color: orange tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes see station photos for details

* Turbidity recorded using HF scientific turbidimeter - YSI turbidity = 31.7 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.0 feet Total Stream Depth 1.7 feet
Sample Date & Time: 2/15/2002 1130 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / C. MacKey / K. Lang
Date Recorded By: C. Mackey
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 0.45/1.0

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
19	1.86	557	998	14.01%	13.99	7.27	56.4

Site Sketch/Notes see station photos for details

* Turbidity recorded using HF scientific turbidimeter; YSI turbidity = 19.4 NTU

Color: green/Brown

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 1.45 feet
Sample Date & Time: 2/15/2002 12:30 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / C. Mackey / K. Lang
Date Recorded By: C. Mack
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 10 um, 0.45 um

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Green/Brown

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
13.5	3.3	544	929	94.7	12.59	7.31	47.8

Site Sketch/Notes see station photos for details

*Turbidity measured using HF scientific turbidimeter; YSI turbidity = 30.3 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-64-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.4 feet Total Stream Depth 0.72 feet
Sample Date & Time: 2/15/2002 1250 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / C. Mackey / K. Lang
Date Recorded By: C. Mackey
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 1.0 mm, 0.45 mm

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
64	3.7	518	877	94.1%	13.05	6.99	60.3

Color: Brown

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Site Sketch/Notes - see station photos for details

* Turbidity recorded using HF scientific turbidimeter; turb. according to YSI = 44.3 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.7 feet Total Stream Depth 1.23 feet
Sample Date & Time: 2/15/2002 1305 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. Long / C. Mackey
Date Recorded By: K. Long
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 0.45 / 1.6nm

Color: yellow

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
~~17.6~~ 0.03	4.35	508.00	934.00	93.1	12.05	6.97	227.1

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes see station photos for details

* Turb. recorded using HF scientific turbidimeter; YSI turbidity = 17.6 NTU

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

. MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-02/502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS for total & filtered metals (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.8 feet Total Stream Depth 1.29 feet
Sample Date & Time: 2 / 15 /2002 13:30 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lamberti / C. Mackey / K. Lang
Date Recorded By: C. Mackey
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: filters used 0.45/1.0

Color: Brown/Green

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
15.0	3.4	~~5.01~~ 50	841	90.1	11.80	6.7	21.4

Site Sketch/Notes see station photos for details

* Turbidity recorded using HF scientific turbidimeter; YSI turbidity = 111.5 NTU

ANALYSIS	Check (X)
Total TAL Metals	X (MS)
Dissolved TAL Metals	X (MS)
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-021502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.9 feet Total Stream Depth 1.75 feet
Sample Date & Time: 2/15/2002 1400 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / C. Mackey / K. Lang
Date Recorded By: C. Mackey
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: filters used - 1.0um, 0.45um

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Green/Brown

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity* (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
16	3.8	491	8.26	104.9	13.91	7.27	20

Site Sketch/Notes see station photos for details

* Turbidity recorded using HF scientific turbidimeter; YSI turbidity = 60 NTU

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPOW-EBC1-031202

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EBC1 (if applicable)

Sample Method/Device: Filter through 0.45 Filter
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 3/12/2002 0815 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / B. Fennelly / K. O'Neill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DI = 051001

*include sample source & lot No.

NOTES: Use 0.45 Filter

Micro Tip/OVA Monitor Reading: **N/A** ppm

Color: NA

Turbidity: CLR/SL CLDY/CLDY/OPAQ NA

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-03/2002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.1 feet Total Stream Depth ~~2.5~~ 2.69 feet BF 3/12/02
Sample Date & Time: 3/12/2002 0812 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / K. O'Neill, B. Fennelly
Date Recorded By: Brian [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
~~0.4~~ 4.82	~~5.23~~	~~502~~	~~806~~	~~109.4~~	~~13.86~~	~~8.82~~	~~351.6~~
0.7	5.78	549	~~868~~ 868	109.5	13.61	9.02	167.3

Site Sketch/Notes See Station Photos

YSI 3/12/02

B.P. 770.5

DRT-15LE Turbidity: 4.82 NTU.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW - 09 - 031202

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: direct dip
Depth Sampled: 2.0 feet Total Stream Depth 3.56 feet
Sample Date & Time: 3/12/2002 0835 hours
Dup. VA hours
Sampler(s): J. Danieli / J. Lambert / B. Fennelly
Date Recorded By: Kevin O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: 176
213.52 1.76 18

Color: used 0.45 u filter 1.94

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data: B.P. 770.8

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
-0.2	5.41	469	749	113.5	14.26	8.48	261.5

Turbidity: (CLR/SL) CLDY/CLDY/OPAQ

Site Sketch/Notes

DRT-15CE Turbidity 3.91 NTU

ANALYSIS	Check (X)
Total TAL Metals	
Dissolved TAL Metals	
Total Suspended Solids	

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US EPA ARCHIVE DOCUMENT

Tt .A TECH NUS, INC.

.MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW - 08 - 031202

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW- DP01 - 031202 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.8 feet Total Stream Depth 2.02 feet
Sample Date & Time: 3 /12 /2002 0910 hours
Dup 0915 hours
Sampler(s): J. Danieli / J. Lambert / K. Ocneil ; B. Kennelly
Date Recorded By: Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Used 0.45 u Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
1.8	5.14	419	676	103.4	13.11	7.89	230.0

Site Sketch/Notes pressure. 771.6 mm Hg.

Turbidity meter reading: 5.48 NTU.

ANALYSIS	Check (X)	Dup
Total TAL Metals	✓	✓
Dissolved TAL Metals	✓	✓
Total Suspended Solids	✓	✓

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

A TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-031202

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 1.22 feet
Sample Date & Time: 3/12/2002 0942 hours
Dup. _____ hours
Sampler(s): J. Daniel / J. Lambert / B. Fenelly; K. O'Neill
Date Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	
Dissolved TAL Metals	
Total Suspended Solids	

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
0.1	4.58	457	750	103.8	13.34	7.50	170.0

Site Sketch/Notes

Turbidimeter Reading: 4.71 NTU.
Bar. Pressure: 771.4 mm Hg.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

A TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-031202

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: Direct dip
Depth Sampled: 1.1 feet Total Stream Depth 1.74 feet
Sample Date & Time: 3/12/2002 1004 hours
Dup. _____ hours
Sampler(s): J. Danieli / J. Lambert / B Fennelly KO
Date Recorded By: Kevin O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data: BP 771.0 mm Hg

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
3/12/02 ~~54.7~~ 17.2	4.27	465	~~770~~	109.1	13.97	7.54	185.5

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	✓
Dissolved TAL Metals	✓
Total Suspended Solids	✓

Site Sketch/Notes

DRT-15CE Turb meter 482 NTU

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-031202

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.60 feet Total Stream Depth 1.48 feet
Sample Date & Time: 3/12/2002 1027 hours
Dup. _____ hours
Sampler(s): J. Daniel / J. Lambert / R. Fenelly, K. O'Neill
Date Recorded By: Bonnie [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:
Used 0.45u Filter.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
2.80	4.72	436	715	103.2	13.27	7.47	185.0

Site Sketch/Notes

turbidimeter
Reading: 6.72 NTU.
Barometric Pres.: 770.4 mmHg

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

A TECH NUS, INC.

.MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-~~04~~-031202
03 3/12/02 CO

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: direct dip
Depth Sampled: 0.6 feet Total Stream Depth 1.13 feet
Sample Date & Time: 3/12/2002 1045 hours
Dup. _____ hours
Sampler(s): J. Danieli / J. Lambert / B Fennelly
Date Recorded By: Kevin Orrill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Used 0.45µ filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data: BP 770.2 mm Hg

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
-2.5	5.47	859	538	106.5	13.26	7.02	144.0

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes

DRT-15CE Turb meter 2.61 NTU

ANALYSIS	Check (X)
Total TAL Metals	✓
Dissolved TAL Metals	✓
Total Suspended Solids	✓

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-031202.

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 0.80 feet
Sample Date & Time: 3 / 12 /2002 1059 hours
Dup. _____ hours
Sampler(s): J. Danieli / J. Lambert / B. Farrell / K. O'Neil
Date Recorded By: _____
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

*include sample source & lot No.

NOTES: Used 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
11.2	5.34	406	650	93.5	11.78	6.94	126.6

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes

Barom. Press. 770.1 mm Hg
Turbimeter Reading: 11.45 NTU.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-031202

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 1.15 feet
Sample Date & Time: 3/12/2002 1126 hours
Dup. _____ hours
Sampler(s): J. Danieli / J. Lambert / B Fennelly
Date Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Used 0.45u filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data: BP 769.7 mm Hg

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
23.8	6.17	405	632	120.1	14.53	7.14	142.6

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes

DRT-15CE Turb. meter 16.94 NTU

ANALYSIS	Check (X)
Total TAL Metals	✓ Lab QC
Dissolved TAL Metals	✓ Lab QC
Total Suspended Solids	✓

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-031202

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: direct dip
Depth Sampled: 0.4 feet Total Stream Depth 0.99 feet
Sample Date & Time: 3/12/2002 1155 hours
Dup. hours
Sampler(s): J. Danieli / J. Lambert / B. Franklin / E. O'Neill
Date Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Used 0.45 µ Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
~0.9	4.37	327	540	124.0	15.77	7.38	138.7

Site Sketch/Notes

Barometric Pres.: 769.4 mm Hg
Turbidimeter Reading: ~~0.99~~ 4.33 NTU.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 1.03 feet
Sample Date & Time: 4/17/2002 1402 hours
Dup. N/A hours
Sampler(s): J. Daniell / J. Lambert / K. O'Neill
Date Recorded By: J. Daniell
Signature K O'Neill

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
9.86	21.34	597	642	73.2	6.25	7.24	-344.9

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Photos

MP = notch on top of riser

SW elev. = -2.7 ft below MP

GW elev = -5.23 " below MP

MP

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Tetra Tech NUS Job No./PMS N4123-0325

Sample ID: IPSW-02-041702

QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct Dip

Depth Sampled: 0.8 feet

Total Stream Depth 1.27 feet

Sample Date & Time: 4/17/2002 1338 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert / K. O'Neill

Date Recorded By: J. Danieli (Signature) K. O'Neill

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
6.36	10.90	677	735	87.6	7.81	7.01	-323.4

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Photos

MP = notch on top of riser

SW elev = -4.76 feet from mp

GW elev = 4.57 ft from mp

measured w/ ruler on outside of pipe

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 1.12 feet
Sample Date & Time: 4/17/2002 1310 hours
Dup. _____ hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: K O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: None

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
3.95	20.46	803	880	81.3	7.17	6.75	-324.0

Site Sketch/Notes

MP = notch on top of riser pipe
GW elev. = -3.03 ft below MP
SW elev. = -3.27' below MP

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 0.98 feet
Sample Date & Time: 4/17/2002 1300 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: Wine

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
7.57	21.72	701	748	119.0	10.25	7.32	-312.7

Site Sketch/Notes See Photo.

No Piez.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 1.4 feet
Sample Date & Time: 4/17/2002 1195 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: J. Danieli
K. O'Neill Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES:
Use 0.45 µ Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
7.13	21.24	761	820	121.6	10.76	7.39	-314.6

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Photos
Piez. M.P. = notch on top of riser pipe
SW. elev. = -2.63' below M.P.
GW elev = -2.62 below M.P.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IP SW-06-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip.
Depth Sampled: 1.5 feet Total Stream Depth 2.7 feet
Sample Date & Time: 4/17/2002 1100 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: J. Danieli · K Mull
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Use 0.45u Filter

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

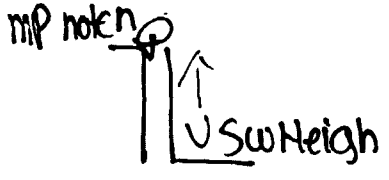
Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
7.83	17.55	770	898	93.1	8.74	7.22	-314.8

Site Sketch/Notes See photo MP: notch on Piezo. Riser

Stat 6 Piezometer: SW-elevation (ft above SW) = -0.79 from MP

GW elevation -0.70 from M.P. (ft From MP



M.P. = notch on "Bank Side" of Piez.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

A TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 1.2 feet
Sample Date & Time: 4/17/2002 1008 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli K ONeill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: used 0.45u Filter only.

Color: None

Smell gas

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data: flowing

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
543	16.79	756	897	100.2	9.84	7.26	-324.1

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes
M.P. = notch in riser
GW elev = 2.54
~~GW elev =~~
~~SW~~ elev. = 2.71 ft from M.P.
SW

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-08-041702
QC Information: IPSW-DP01-041702 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.4 feet
Total Stream Depth 2.25 feet
Sample Date & Time: 4/17/2002 0927 hours
Dup. 0930 hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: J. Danieli
Signature K. O'Neill

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Use 0.45u Filter

Color: None

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X X
Dissolved TAL Metals	X X
Total Suspended Solids	X X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
6.5	17.05	697	822	~~72.8~~ 101.8	~~10.13~~ 9.77	7.54	-328.1

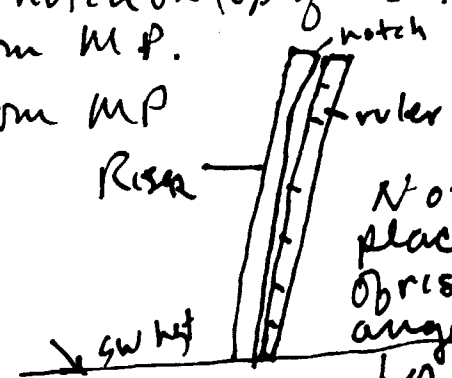
low 4/17/02

Site Sketch/Notes See photo

M.P. = notch on top of riser

GW Depth -3.22' from M.P.

SW elev. 3.11 from MP



Note Ruler placed along outside of riser + followed angle of riser for SW depth

This would correspond w/ M-scope wrong measurement

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 3.2 feet Total Stream Depth 3.79 feet
Sample Date & Time: 4/17/2002 0850 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: J. Danieli K. O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES:
Use 0.45u Filter

Color: none

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
403	17.7	710	837	~~129.0~~ 120.6	~~2.47~~ 11.60	8.50	-331.7

RO 4/17/02

Site Sketch/Notes
No Piezometer at this location

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 0.98' feet
Sample Date & Time: 4/17/2002 0830 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Water very low
low flow
used 0.45u Filter only.

Color: none

Piez. ±3.93 ft stickup (notch)
GW at -4.15 ft from M.P.
SW not avail. at Piez (see notes)

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
5.60	15.97	950	1147	125.6	12.31	7.74	-322.7

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photo

Water is ~12-18" lower than usual.
It appears that some downstream activities (dam?) may have resulted in low water at this location. Noted wet ~~and~~ muddy staining indicating recent drop in water level

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-041702

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI water through 0.45u Filter w/ peri. pump.
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 4/17/2002 0813 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DI Lot# = 120610

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)

Site Sketch/Notes

ID 4/17/02

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-050802

Tetra Tech NUS Job No./PMS: N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: DIRECT DIP
Depth Sampled: 0.5 feet Total Stream Depth 1.0 feet
Sample Date & Time: 5/8 /2002 1325 hours
Dup. _____ hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: Kim O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
3.86 (-3.9 YSI)	17.82	636	549	113.8	10.67	7.19	33.9

Site Sketch/Notes

Piez. Measurements
GW @ = -5.28
SW @ = -2.83
} meas. from notch on top of piez

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-050802
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/DS (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 1.1 feet
Sample Date & Time: 5/8/2002 1300 hours
Dup. _____ hours
Sampler(s): J. Daniel / J. Lambert / K O'Neill
Date Recorded By: Kevin O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: lgt yellow

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
5.24	18.82	630	556	95.3	8.82	7.00	12.4

Site Sketch/Notes

Bkg. measurements
GW@ - 4.82'
SW@ - 4.93'
measured from notch on top of piez.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-03-050802
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: ~.77 feet Total Stream Depth 1.29 feet
Sample Date & Time: 5/8/2002 1140 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Low Flow used 0.45u Filter.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
2.81 (-5.4)452	16.44	607	726	87.7%	8.54	6.91	-30.1

Site Sketch/Notes See photos

Depth to SW = -3.10ft
to GW = -3.10ft } From MP = notch in piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-04-050802
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 20.5 feet
Total Stream Depth 0.87 feet
Sample Date & Time: 5/8/2002 1125 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Good Flow used 0.45u filter

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
9.01 (Lab)	18.56	541	617	161.5	15.03	7.54	75.2

YSI

Site Sketch/Notes See photos
No piezometer at this Station

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt A TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-050802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.7 feet Total Stream Depth 1.33 feet
Sample Date & Time: 5/8/2002 1030 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: Kevin ONeill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: used 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
609 (±0.1 YSI)	17.60	694	596	114.1	10.50	7.19	28.3

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See Photo

Piez.
Depth to GW = 2.65'
" SW = -2.68
measured from notch

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-050802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 2.8 feet Total Stream Depth 2.1 feet
Sample Date & Time: ___/___/2002 1005 hours
Dup. _____ hours
Sampler(s): J. Danielj / J. Lambert / K O'Neill
Date Recorded By: Kevin O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used 0.45u Filter. very low flow

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
4.14 (1.2 YSI)	15.45	770	630	69.1	6.86	7.08	-64.9

Site Sketch/Notes

Piez
Depth to GW is -1.76'
" " SW is -1.76
> measured from notch on top of Piez.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-0508 D2

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 1.1 feet
Sample Date & Time: 5/8/2002 0935 hours
Dup. _____ hours
Sampler(s): J. Danieli / J. Lambert / K O'Neill
Date Recorded By: Kevin O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Used 0.45u filter only
Piez - GW @ ~2.43 ~2.33
SW @ ~2.73
from notch on Piez

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
5.23 (0.6 YSI)	16.16	770	640	82.8	8.14	7.12	15.8

Site Sketch/Notes
Gas (Natural) smell in area
see photos
GW

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-08-050802
QC Information: IPSW-DP01-050802 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 22 @ 9' Total Stream Depth 2.2 feet
Sample Date & Time: 5/8/2002 0902 hours
Dup. 0905 hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: Kevin O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Used 0.45u Filter only

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
7.10	16.36	712	595	91.7	8.82	7.31	89.6
1.3 (YSI)							

Site Sketch/Notes See Photos

Depth to GW -3.26' } measured from notch on top of Piez
" SW = -3.12

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-050802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: 2.5 Direct Dip
Depth Sampled: _____ feet Total Stream Depth 3.5 feet
Sample Date & Time: 5/8/2002 0750 hours
Dup. _____ hours
Sampler(s): J. Daniel / J. Lambert / K. O'Neill
Date Recorded By: K Mull
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: used 1.0 + 0.45 µ filters
Very slow flow

Color: Collected at Station 10 Sample pt

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
1.84	14.59	759	608	103.3	10.44	7.52	118.9
-5.9 (YSI)							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Photos

Depth to GW = 1.87' from notch on Piez. Top
SW = 1.75

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-050802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 2.6 feet Total Stream Depth 3.7 feet
Sample Date & Time: 5/8/2002 0825 hours
Dup. _____ hours
Sampler(s): J. Daniel / J. Lambert / K. O'Neill
Date Recorded By: Ken O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Windy w/ waves – well mixed sample used 0.45 µ Filter only

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
1.92 ~5.8 (YSI)	15.10	687	557	112.0	11.23	7.81	92.8

Site Sketch/Notes See Photos

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-050802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Filter 0.45+1.0 - Run DI water through
Depth Sampled: NA feet Total Stream Depth: NA feet
Sample Date & Time: 5/8/2002 0750 ~~NA~~ hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIWF = 12006101

*include sample source & lot No.

NOTES: NA

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-EB01-062002
QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI through 0.45 micron Filter
Depth Sampled: NA feet
Total Stream Depth NA feet
Sample Date & Time: 6/20/2002 0830 hours
Dup. NA hours
Sampler(s): J. Danielli / J. Lambert / G. Bullard
Date Recorded By: J. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF = 0120283

*include sample source & lot No.

NOTES: NA

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA →							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-062002
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.8 feet Total Stream Depth 3.1 feet
Sample Date & Time: 6 / 20 / 2002 0820 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / G. Bullard
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 micron Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%) ***	DO (mg/L)	pH (std. Units)	ORP (mV)
* 5.5	20.14	447	493	~~105.10~~ 104.9	9.71	8.3	452
** 5.3				6/20/02			

*** → slowly dropping

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station Photos

* = YSI Reading
** = HF Scientific.

Piezometer:
mp = Notch on top of Piezometer

Depth to GW = 2.1 ft below mp
Depth to SW = 2.1 ft below mp

*** Note = ISCO Reading 99.1% DO%
9.10 DO

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-09-062002
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 2.3 feet Total Stream Depth 3.86 feet
Sample Date & Time: 6 / 20 2002 0850 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / C. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 micron Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

	Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO *** (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*	3.7	21.25	428	460	125.1	11.08	8.5	405.5
**	3.86							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See Station Photo
No piezometer @ this location.

* = YSI
** = NF Scientific meter

*** Note: DO% = ISCO = 132.8%
DO = ISCO = 11.8

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-062002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP01-062002 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.4 feet Total Stream Depth 2.30 feet
Sample Date & Time: 6 / 20 2002 0938 hours 10/6/20/02
Dup. ~~0940~~ hours 0935
Sampler(s): J. Danieli / J. Lambert / G Bullard
Date Recorded By: L Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: 1.0ut used 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

	Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*	6.0	18.45	480	548	74.1	6.89	7.34	407.1
**	7.42							

*= YSI
**= HF Scientific meter

Site Sketch/Notes See Station Photos

MP = Notch in Top OF Piezometer

Depth to GW = 2.32 Ft below MP
Depth to SW = ~~2.32~~ 3.07 Ft below MP 10/6/20/02

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-062002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.63 feet Total Stream Depth 1.04 feet
Sample Date & Time: 6/20/2002 1025 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / G Bullard
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: used 2-0.45μ Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (μs/cm)	Spec. Cond. (μs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 8.2	18.15	538	619	71.9	6.75	7.17	376.1
** 8.67							

Site Sketch/Notes See Station Photo

* = YSI
** = HF Scientific Turbidimeter

MP = Notch On Top OF Piezometer

Depth to GW = 2.62 ft below MP
Depth to SW = 2.93 ft below MP

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-062002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.03 feet Total Stream Depth 1.72 feet
Sample Date & Time: 6 / 20/2002 1055 hours
Dup NA hours
Sampler(s): J. Daniel / J. Lambert / G. Bullard
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Used ~~2-0.45~~ 1.0 & 0.45 µ Filters Dupbolo2

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 8.1	17.82	530	614	67	6.33	7.18	339
** 8.70							

Site Sketch/Notes See Station Photo
MP = Notch on Top of Piezometer
Depth to GW = 3.78 ft below mp
Depth to SW = 4.00 ft below mp

* = YSI
** = HF Scientific Turbidimeter Meter

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-05-0602002
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet
Total Stream Depth 1.32 feet
Sample Date & Time: 6 / 20 2002 1120 hours
Dup. NA hours
Sampler(s): J. Danieli J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: used 1.0 & 0.45u Filters

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* ~~18.310~~ 14.5 * 13.35	21.75	544	580	57.2	4.92	7.03	327.4

Color: Orange-Brown.

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photos
Notch on 1206120102
MP = Top of Piezometer
Depth to GW = 2.67 ft below MP.
Depth to SW = 2.08 ft below MP.

* = VSI
** = HF Scientific meter

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T[redacted]A TECH NUS, INC.

[redacted]MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: TPSW-04-062002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.52 feet Total Stream Depth 0.87 feet
Sample Date & Time: 6/20/2002 1150 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 1.0+0.45u. Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

	Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
	* 12.4	22.18	477	505	75.8	6.58	7.04	312.4
	** 13.18							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See Photos
No Piezometer

* = YSI
** = HF Scientific Meter

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TI . TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-0162002
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.81 feet Total Stream Depth 1.35 feet
Sample Date & Time: 6/20/2002 1155 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 1.0 & 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.7	19.6	546	609	54.1	4.95	6.77	295.2
** 5.73							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See station Photo.
mP = Notch on top of Piezometer
Depth to GW = 3.16 ft below mP
Depth to SW = 3.35 ft below mP

* = YSI
** = HF Scientific meter

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-02-062002
QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.63 feet
Total Stream Depth 1.04 feet
Sample Date & Time: 6/20/2002 1235 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): MS/MSD

*include sample source & lot No.

NOTES: Use 10 & 0.45u Filters 6/20/02

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 5.5	18.53	456	520	74.4	6.83	7.08	300.8
** 5.9							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See Station Photo

MP = Notch on top of Piezometer

Depth to GW = 2.99 ft below MP

~~IPSW = Depth to SW = ft below MP~~ 6/20/02

~~Total Height of Piezometer = 4.9 ft~~

Depth to SW = 5.00 ft below MP

* = YSI
** = HF Scientific Meter

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-01-062002
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet
Total Stream Depth 1.1 feet
Sample Date & Time: 6/20/2002 1307 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45µ Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 5.4	18.60	502	573	86.3	7.91	7.14	286.4
** 7.2							

* = YSI
** = HF Scientific Meter

Site Sketch/Notes See Station Photos
mp = Notch on top of Piezometer
Depth to GW = 5.07 ft below mp.
Depth to SW = 2.82 ft below mp.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-ARB-062002
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.56 feet Total Stream Depth 0.94 feet
Sample Date & Time: 6/20/2002 1330 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Ab. River - Background Sample
Culvert @ Commerce Way
Use 0.45 u Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

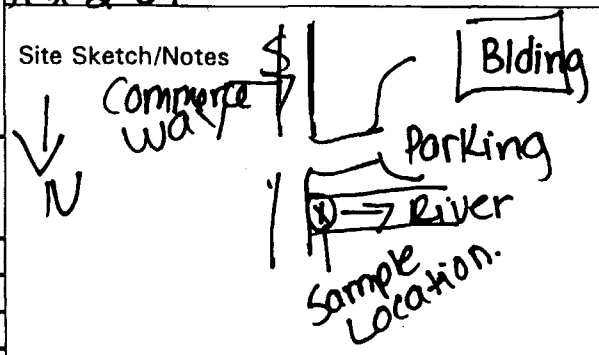
Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 1.1 ** 2.89	22.01	581	617	82.0	6.95	7.41	263.1

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes



30 Commerce Way

* = YSI
** = HF Scientific meter

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-071602
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.42 feet Total Stream Depth 0.71 feet
Sample Date & Time: 7/16/2002 1257 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.3 ** 6.78	19.25	653	581	70.5	6.52	7.35	280b

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station Photos

* = YSI
** = HF Scientific

Piezometer measurements.

Depth to SW = 3.02ft below mp
" " GW = 4.97ft below mp
mp = measuring point = Top of Piezometer-Notch

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-02-071602
QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.402 feet Total Stream Depth 0.67 feet
Sample Date & Time: 7/16 2002 1235 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 6.3	23.26	739	715	98.5	8.29	7.1	291.2
** 8.28							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station Photos

* = YSI
** = HF Scientific

Piezometer measurement:
Depth to SW = No water Stickup = 5.12 ft below MP
" " GW = 4.81 ft below MP of Piezometer
MP = measuring Point = Top ~~of~~ Notch

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T A TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-071602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.48 feet Total Stream Depth 0.80 feet
Sample Date & Time: 7/16/2002 1205 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / C. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 2.9							
** 6.62	18.83	775	684	50.9	4.68	6.70	240.2

Color: Orange Tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photos
* = YSI
** = HF Scientific
Piezometer Readings:
Depth to SW = 3.60 ft below mp
to GW = 3.41 ft below mp
MP = measuring point = Notch on top of piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-071602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.336 feet Total Stream Depth 0.56 feet
Sample Date & Time: 7/16/2002 1200 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* ~~244~~ 710	~~23.8~~ 102						
** 17.76	23.79	742	725	71.1	6.00	7.30	310.5

Color: Brownting

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Site Sketch/Notes See station Photos
No piezometer at this station
* = YSI
** = HF Scientific.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-071602
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.558 feet Total Stream Depth 0.93 feet
Sample Date & Time: 7 / 16 2002 1135 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Orange Tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 14.4							
** 14.53	22.34	802	762	77.1	6.61	7.28	327.8

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photo
* = YSI
** = HF Scientific

Piezometer Readings
Depth to SW = 3.06 ft below mp
to GW = 3.06 ft below mp
mp = measuring point = Notch on top of Piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-C10-071602
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.684 feet Total Stream Depth 1.14 feet
Sample Date & Time: 7 / 16/2002 1105 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / G. Bullard
Date Recorded By: J. Daniell
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u. Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Brown Tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 7.5							
** 9.47	19.7	765	1688	80.7	7.42	7.53	341.1

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photo

* = YSI
** = HF Scientific
Piezometer Readings
Depth to SW = 4.57 ft below mp
" " GW = 4.45 ft below mp

mp = measuring point - notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-C71602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.72 feet Total Stream Depth 1.2 feet
Sample Date & Time: 7/16/2002 1036 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Murky-
Use 0.45 u Filter.

Color: Green Tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.8 ** 7.94	20.31	733	6608	75.0	6.73	7.47	360.6

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photos
* = YSI
** = HF Scientific

Piezometer Readings:
Depth to SW: 2.63 ft From MP
Depth to GW: 2.83 ft From MP
MP: measuring Point: Notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T A TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-071602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP01-071602 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.17 feet Total Stream Depth 1.95 feet
Sample Date & Time: 7 / 16 /2002 1012 hours
Dup. 1015 hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.8 ** 6.94	21.49	718	670	74.8	6.60	7.85	373.4

Color: Green / Brown

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photos
* = YSI
** = HF Scientific

Depth to GW = 3.71 ft from mp
Depth to SW = 3.36 ft from mp
mp = Measuring Point = Notch in Top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE TECH NUS, INC.

IPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-09-071602
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 2.01 feet
Total Stream Depth 3.35 feet
Sample Date & Time: 7/16/2002 0940 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- Y Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* -0.6							
** 2.43	24.58	545	540	111.6	9.27	8.29	378.8

Color: Clear

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photos
No Piezometer
* = YSI turbidity
** = HF Scientific Turbidity

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-071602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 2.0' feet Total Stream Depth 3.42 feet
Sample Date & Time: 7/16/2002 0900 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*6.5 NTU							
**9.56	24.36	570	564	~~100.4~~ 101.1	8.85	8.43	393

7/16/02

Color: Green

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos
* = YSI Turb Readings
** = HF Scientific Turb Readings

Piezometer Readings:
Depth to SW = 1.8ft
Depth to GW = 1.8ft
MP = Notch in Top of Piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex** Tetra Tech NUS Job No./PMS N4123-0325

Sample ID: IPSW-ARB-071602 QC Information: NA (if applicable)

Sample Method/Device: Direct Dip.

Depth Sampled: ____ feet 0.56 Total Stream Depth 0.96 feet

Sample Date & Time: 7/16/2002 1320 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert / G. Bullard

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- X Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 uFilter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 64 ** 5.18	19.37	8161	768	69.5	6.36	7.27	281.5

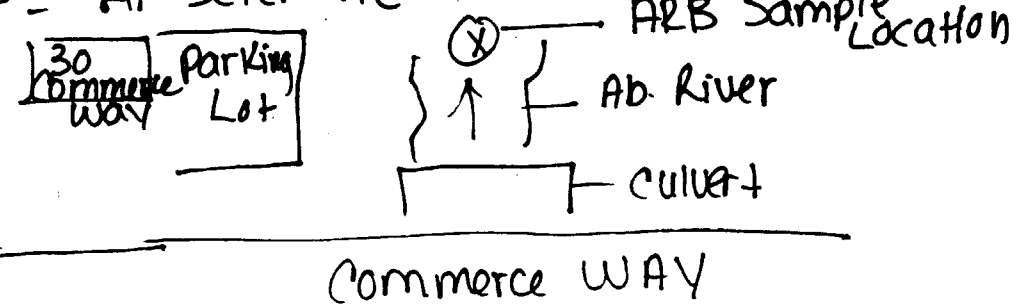
ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes ~~See station Photo~~ S/D 7/16/02

No piezometer

* = YSI

** = HF Scientific



Tt NUS Form 0004sw

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US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-071602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI water through 0.45u Filter.
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 7 / 16 /2002 0910 hours
Dup. NA hours
Sampler(s): J. Danielli / J. Lambert / G. Bullard
Date Recorded By: J. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DI =

*include sample source & lot No.

NOTES: NA

Micro Tip/OVA Monitor Reading: N/A ppm

Color: NA

Turbidity: CLR/SL CLDY/CLDY/OPAQ NA

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A →							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

. .MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-080602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI Through Filter
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 8/6/2002 0940 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF Lot# = 0600624.

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color: NA

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-10-080602
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.88 feet Total Stream Depth 3.14 feet
Sample Date & Time: 8/6/2002 0945 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Green Tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 2.50 ** 3.96	26.5	513	528	91.1	7.44	8.42	357.4

Site Sketch/Notes See Station Photos

* = YSI
** = HF Scientific Turbidimeter.

Piezometer Readings:

Depth to GW = 2.04 ft below MP
Depth to SW = 2.04 ft below MP

MP: measuring point = notch on top of piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE TECH NUS, INC.

IPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-080602
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.80 feet Total Stream Depth 3.00 feet
Sample Date & Time: 8/6/2002 1005 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Use 0.45u Filter
water Rough- heavey
wave Action

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 1.9 ** 2.65	26.79	4960	480	112.5	9.15	8.93	338.4

Site Sketch/Notes See Station Photos
No piezometer

* = YSI
** = HF Scientific Turbidimeter.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-080602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-0901-080602 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.09 feet Total Stream Depth 1.82 feet
Sample Date & Time: 8/6/2002 1030 hours
Dup. 1035 hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES:

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Brown Tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 1.90	23.2	553	572	77.3	6.59	7.57	358
** ~~10.06~~ 3.65							

Site Sketch/Notes See Station Photos

*= VSI
** = HF Scientific Turbidimeter

Piezometer Readings:

Depth to SW: 3.44 ft below mp
Depth to GW: ~~3.41~~ 3.79 "
mp = measuring Point = Notch on top of Piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-07-080602
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.46 feet
Total Stream Depth: 0.76 feet
Sample Date & Time: 8/6/2002 1115 hours
Dup. NA hours
Sampler(s): J. Danielli / J. Lambert / G. Bullard
Date Recorded By: J. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 28.8	22.64	540	565	65.4	5.64	7.48	335.3
** 5.78							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes see Station Photos

* = YSI
** = HF Scientific Turbidimeter

Piezometer Readings:
Depth to SW = 2.94 ft below mp
" " GW = 2.75 " "
mp = measuring point = Notch on top of Piezometer.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-016-080602
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.62 feet Total Stream Depth 1.03 feet
Sample Date & Time: 8 / 6 /2002 1147 hours
Dup. hours
Sampler(s): J. Daniel / J. Lambert / G. Bullard
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 6.1 ** 7.80	21.87	568	605	100.5	5.3	7.37	323.6

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes: See Station Photos

* = YSI
** = HF Scientific Turbidimeter

Piezometer Readings:
Depth to SW: 4.65 ft below MP
" " GW: 4.60 " "

MP = Measuring Point = Notch on top of Piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW05-080602
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.52 feet Total Stream Depth 0.87 feet
Sample Date & Time: 8/16/2002 1241 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / G. Bullard
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 132 ** 13.90	24.39	645	652	90.9	7.56	7.59	295.3

Color: Orange tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See Station Photos

* = YSI
** = HF Scientific Turbidimeter

Piezometer Readings
Depth to Surface Water = 3.08 ft below MP
Depth to GW = 3.12 " "

MP = measuring Point = Notch on top of Piezometer.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-0[illegible]-080602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.36 feet Total Stream Depth 0.6 feet
Sample Date & Time: 8/6/2002 1306 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Green Tinge

Turbidity: CLR/SL/CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 26.3	26.56	6226	6007	99.5	7.98	7.46	277.3
** 26.9							

Site Sketch/Notes SO station Photos
No Piezometer

* = YSI
** = HF Scientific meter

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-03-080602
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.47 feet Total Stream Depth 0.78 feet
Sample Date & Time: 8/6/2002 1313 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES:

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Orange - Tinge- orange Fe Flocculant

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.5 ** 7.96	20.63	600	654	41.8	3.71	6.66	282.5

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photos

Depth to SW = 3.74 ft below MP
Depth to GW = 3.57 ft below MP
MP = Measuring Point = Notch on top of Piezometer

* = YSI
** = HF Scientific Turbidimeter

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-080602
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.37 feet Total Stream Depth 0.62 feet
Sample Date & Time: 8/6/2002 1330 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: use 0.45u filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Brown tinge

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 11.8	24.52	647	653	105.2	8.75	7.09	276.2
** 13.53							

* = YSI
** = HF Scientific Turbidimeter

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photos

Piezometer Readings:

Depth to GW = 5.34 ft below MP

Depth to SW = 5.11 ft below MP → dry no surface water - Height of Piez. Stickup from GS.

MP = measuring point = notch on top of piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-080602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.40 feet Total Stream Depth 0.66 feet
Sample Date & Time: 8/16/2002 1359 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: use 0.45 u Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.6 ** 5.62	20.16	438	485	49.9	4.52	7.23	262.8

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station Photos

Piezometer Readings:
Depth to SW = 3.18 ft below MP
Depth to GW = 5.12 " "

MP = measuring point = notch on top of Piezometer

* = YSI
** = HF Scientific Turbidimeter

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

. IPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-ARB-080602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip.
Depth Sampled: 0.56 feet Total Stream Depth 0.94 feet
Sample Date & Time: 8 / 6 /2002 1421 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

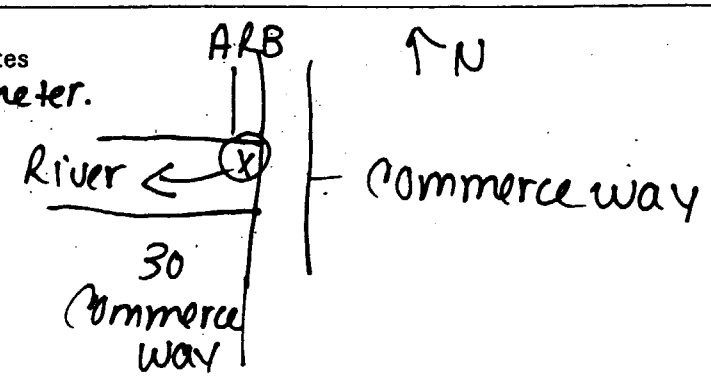
Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.8	21.26	6664	715	52.6	4.65	7.14	265.6
** 6.96							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes
No Piezometer.



* = YSI
** = HF Scientific Turbidimeter

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IDSW-EB01-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI water through filter
Depth Sampled: N/A feet Total Stream Depth N/A feet
Sample Date & Time: 9/10/2002 0915 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIWF=06006242

*include sample source & lot No.

NOTES:

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10 - 091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.89 feet Total Stream Depth 3.15 feet
Sample Date & Time: 9/10/2002 0910 hours
Dup NA hours
Sampler(s): J. Danielli / J. Lambert / K. O'Neill
Date Recorded By: J. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Use 0.45 u Filter

Color: Green Tinge

Turbidity: CLR/SLCLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 0.6	21.3	501	519	123.6	10.44	8.57	232.0
** 2.97							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes see station photos for details

* Turb. measured using YSI
** Turb. measured using HF scientific turbidimeter

Piezometer readings -
depth to SW = 2.15 ft below MP
depth to GW = 2.03 ft below MP

MP = measuring point - notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.90 feet Total Stream Depth 3.18 feet
Sample Date & Time: 9/10/2002 0940 hours
Dup. N/A hours
Sampler(s): J. Danielli / J. Lambert / K. O'Neill
Date Recorded By: J Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 1.6	23.51	465	479	123.9	10.51	9.35	221.0
** 4.42							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See station photos for details

* turb. measured using YSI
** turb. measured using HF Scientific turbidimeter

No piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP01-091002 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.09 feet Total Stream Depth 1.83 feet
Sample Date & Time: 9/10/2002 1000 hours
Dup. 1005 hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*28.6	21.02	556	602	53.7	4.78	7.77	240.2
** 7.20							

Site Sketch/Notes See station photos for details

* turb. measured using YSI
** turb. measured using HF scientific turbidimeter

Piezometer readings –
Depth to SW = 3.60 ft below MP
Depth to GW = 3.92 ft below MP

MP = measuring point = notch on top of piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.72 feet Total Stream Depth ~~1.21~~ feet 091002
Sample Date & Time: 9/10/2002 1037 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.1	20.63	561	612	63.0%	5.65	~~10.67~~ 9/9/02 7.60	242.9
** 5.90							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See station photos for details

* Turb. measured using YSI

** Turb. measured using HF Scientific turbidimeter

Piezometer readings -

Depth to SW = 2.80 ft below MP

Depth to GW = 2.71 ft below MP

MP = measuring point = notch on top of piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 0.9 feet
Sample Date & Time: 9/10/2002 1110 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / K O'Neill
Date Recorded By: Kevin O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*6.8	~~23.84~~ 21.41	583	626	57.9	5.07	7.40	248.5
**7.90	10/9/02						

Color:

Turbidity: (CLR/SL) CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	
Dissolved TAL Metals	
Total Suspended Solids	

Site Sketch/Notes See station photos for details

* Turb. measured using YSI

** Turb. measured using HF Scientific turbidimeter

Piezometer readings:

Depth to SW = 4.63 ft below MP

Depth to GW = 4.45 ft below MP

MP = measuring point = notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.4 feet Total Stream Depth 0.85 feet
Sample Date & Time: 9/16/2002 1130 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill
Date Recorded By: K O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color: light tan

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*15.1	24.44	651	658	88.8	7.39	7.31	253.2
**16.04							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station photos for details

* Turb. measured using YSI
* Turb. measured using HF Scientific turbidimeter

Piezometer readings –
Depth to SW = 3.15 ft below MP
Depth to GW = 3.18 ft below MP

MP = measuring point = notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE. TECH NUS, INC.

IPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.3 feet Total Stream Depth 0.5 feet
Sample Date & Time: 9/10/2002 1225 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / K O'Neill
Date Recorded By: Kerri O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ✓ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES:

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*21.6 **24.5	26.70	638	617	64.1	5.13	7.31	270.0

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	
Dissolved TAL Metals	
Total Suspended Solids	

Site Sketch/Notes see station photos for details
* Turb. measured using YSI
** Turb. measured using HF Scientific Turbidimeter
. No piezometer at this station

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 0.95 feet
Sample Date & Time: 9/10/2002 1235 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / K O'Neill
Date Recorded By: Kevin O'Neill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color: light tan

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*5.2 **7.04	20.40	591	648	41.1	3.69	6.64	235.8

Site Sketch/Notes See station photos for details
* Turb. measured using YSI
** Turb. measured using HF Scientific Turbidimeter
Piezometer readings –
Depth to SW = 3.54 ft below MP
Depth to GW = 3.46 ft below MP
MP = measuring point = notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.3 feet Total Stream Depth 0.6 feet
Sample Date & Time: 9/10/2002 1305 hours
Dup. N/A hours
Sampler(s): J. Daniell / J. Lambert / K. O'Neill
Date Recorded By: J. Daniell
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): MS

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*6.8	25.11	596	595	80.6	6.64	6.92	256.4
**8.15							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station photos for details
* Turb. measured using YSI
** Turb. measured using HF Scientific Turbidimeter
Piezometer readings – Surface water
Depth to SW = N/A ft below MP is not at base of piez. ~5' away in chart.
Depth to GW = 5.24 ft below MP
MP = measuring point = notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.4 feet Total Stream Depth 0.7 feet
Sample Date & Time: 9/10/2002 ~~1341~~ 1336 hours 1609-10-00
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 µ filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*2.4	20.57	394	431	48.4	4.34	7.32	226.1
** 3.71							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station photos for details
*Turb. measured using YSI
** Turb. measured using HF scientific turbidimeter
Piezometer readings -
Depth to SW = 3.19 ft below MP
Depth to GW = 4.84 ft below MP
MP = measuring point = notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T A TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-ARB- 091002

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.3 feet Total Stream Depth 0.55 feet
Sample Date & Time: 9/10/2002 1400 hours
Dup. N/A hours
Sampler(s): J. Daniell / J. Lambert / K. Oneill
Date Recorded By: J. Daniell
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 4.1 ** 4.89	20.72	6169	728	41.5	3.72	7.32	254.0

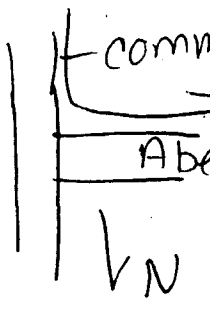
Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes - No piezometer.

* Turb. measured using YSI
** turb measured using HF scientific turbidimeter



Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-ARB-102502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 0.95 feet
Sample Date & Time: 10 / 25 2002 1250 hours
Dup _____ hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- Y Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Background Sample OF Aberjona River
Use 0.45u Filter

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

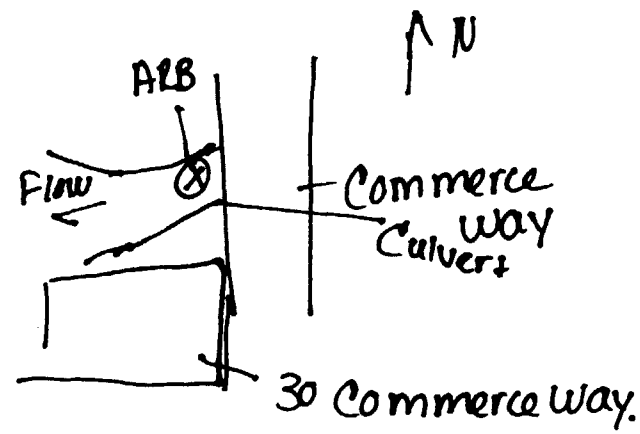
Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* -49	8.09	428	632	70.3	8.27	6.96	30.3
** 2.91							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes No piezometer

* = YSI
** = HF Scientific



Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T[redacted]TECH NUS, INC.

[redacted]LE LOG SHEET – SURFACE WATER [redacted]

Site Name: Industri-Plex

Sample ID: IPSW-10-102502

Tetra Tech NUS Job No./PMS N4123-0325

QC Information: NA (if applicable)

Sample Method/Device: Direct Dip

Depth Sampled: 1.8 feet Total Stream Depth 3.5 feet

Sample Date & Time: 10 / 25 2002 0828 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert / K. O'Neill

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* -4.9	11.73	461	617	77.7	8.35	7.58	257.5
** 2.38							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes

* = YSI
** = HF Scientific

Piezometer Readings

Depth to GW 1.98
Depth to SW 2.0 > ft below mp

mp = Notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-102502
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Filter DI through 0.45u Filter
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 10 / 25 / 2002 0835 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Equip. Blank DIUF = 06060242

*include sample source & lot No.

NOTES: N/A

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	Y
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-102502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: N/A (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.6 feet Total Stream Depth 2.8 feet
Sample Date & Time: 10/25/2002 0850 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / K. Oliveri
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 µ Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 5.8 / ** 2.25	11.92	422	562	86.7	9.21	7.56	237.2

Site Sketch/Notes * = YSI
** = HF Scientific

No Piezometer

Windy w/ small waves

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-102502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP01-102502 (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 1.0 feet Total Stream Depth 1.9 feet
Sample Date & Time: 10 / 25 / 2002 0915 hours
Dup. 0920 hours
Sampler(s): J. Danieli / J. Lambert / R. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- Y Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- Y Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 µ Filter.

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* 2.7 ** 5.50	6.85	396	606	74.7	9.08	7.00	214.1

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes * = YSI
** = HF Scientific

Piez. Reading

Depth to GW 3.65
Depth to SW 3.27 (3.29 LW) } ft below MP

MP = Notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-102502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.4 feet Total Stream Depth 0.65 feet
Sample Date & Time: 10 / 25 2002 0930 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / K. ONeil
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
1.6 * 8.47 **	6.11	373	584	74.1	9.18	6.91	145.9

Site Sketch/Notes * = YSI
** = HF Scientific

Piez. Readings:
Depth to GW 3.16 ft
Depth to SW 3.24 ft
below mp.

mp = Notch on Top of Piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-102502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 0.95 feet
Sample Date & Time: 10/25/2002 1020 hours
Dup. N/A hours
Sampler(s): J. Daniel / J. Lambert / K. O'Neill
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X ~~0.9~~ ~~7.40~~**	5.30	388	622	96.0	10.82	7.01	129.2

Site Sketch/Notes
*=YSI
**=Scientific

Piez. Readings:

Depth to GW 4.16
Depth to SW 4.24 } ft below MP

MP= depth below notch on top of Piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

IPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-102502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.6 feet Total Stream Depth 1.2 feet
Sample Date & Time: 10 / 25 2002 1040 hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill Dup. NA hours
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 µ Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*5.4	5.27	390	625	58.9	7.44	6.80	74.9
14.72**							

Site Sketch/Notes

* = YSI
** = HF Scientific

Piez Reading
Depth to GW 2.57
Depth to SW 2.42
} Ft below MP

MP = Notch on top of Piezometer.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-102502
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 1.15 feet
Sample Date & Time: 10 / 25 / 2002 1100 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / T. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*=0.2 **4.65	7.36	414	625	60.8	7.30	6.80	22.6

Site Sketch/Notes *=YSI
**=HF Scientific

Piez Reading
Depth to SW 3.53
Depth to GW 3.46
ft below MP
MP= Notch on top of Piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

IPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IDSW-04-102502
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: direct dip
Depth Sampled: 0.5 feet Total Stream Depth 0.7 feet
Sample Date & Time: 10/25/2002 1125 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / K. DiNelli
Date Recorded By: K. DiNelli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u-Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
13.4* 17.8**	7.50	636	423	65.2	7.79	7.87	27.4

Site Sketch/Notes * = YSI
** = HF Scientific

No piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-102502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Direct Dip
Depth Sampled: 0.5 feet Total Stream Depth 0.9 feet
Sample Date & Time: 10/25/2002 1205 hours
Dup. NA hours
Sampler(s): J. Daniell / J. Lambert / K. ONeill
Date Recorded By: Kevin ONeill
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: use 0.45 u-Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*6.4 **14.79	9.17	432	619	66.6	7.67	6.76	68.9

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes
* YSI
** HF Scientific

Piez. Reading:
Depth to GW 5.01
Depth to SW 5.17
ft below MP

MP = measuring point, notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Sample ID: IPSW-01-102502

Tetra Tech NUS Job No./PMS N4123-0325

QC Information: NA (if applicable)

Sample Method/Device: Direct Dip

Depth Sampled: 0.4 feet Total Stream Depth 0.8 feet

Sample Date & Time: 10 / 25 /2002 1230 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert / K. ONeill

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45-u Filter

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* - 4.8	5.95	377	593	83.7	10.35	7.11	49.7
** 3.20							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes

* = VST

** = HF Scientific

Piez. Reading:

Depth ~~below~~ to GW 5.04

Depth to SW 3.00

> ft below MP

MP = Notch on Top of Piezometer.

Tt NUS Form 0004sw

SAMPLE LOG SHEETS

STORM EVENT SURFACE WATER 2002

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- RB01- 042602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: RB01 (if applicable)

Sample Method/Device: Rinse OFF OF PONDBUCKETS USED For compositing samples
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 4 / 26 /2002 1655 hours
Dup. NA hours
Sampler(s): (J. Daniel) / J. Lambert / _____
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DI = 1206101

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)

Site Sketch/Notes

PO 4/26/02

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-RB02-042602
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: RB02 (if applicable)

Sample Method/Device: Rinse OFF OF Poly. Buckets used For Compositing Samples.
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 4 / 26 2002 1700 hours
Dup. NA hours
Sampler(s): (J. Danieli) / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DI = 12061011

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

TD 4/26/02

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

A TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-RB03-042602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: RB03 (if applicable)

Sample Method/Device: Rinse OFF of Poly Buckets used for compositing Samples.
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 4 / 26 / 2002 1705 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / _____
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- X Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DI = 1206101

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

10 4/26/02

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: JPSW-EB01-042602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI through Filters
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 4 / 26 / 2002 1010 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / L. Seydwitz
Date Recorded By: L. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DI = 1206101

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: **N/A** ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

LD 4/26/02

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Tetra Tech NUS Job No./PMS N4123-0325

Sample ID: IPSW-EB02-042602

QC Information: EB02 (if applicable)

Sample Method/Device: Pump DI Through Filters

Depth Sampled: NA feet Total Stream Depth NA feet

Sample Date & Time: 4 / 26 /2002 1015 hours

Dup. _____ hours

Sampler(s): J. Danieli / J. Lambert / L. Seydwitz

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- X Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): DI = 1206101

*include sample source & lot No.

NOTES:

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

LO 4/26/02

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex ~~Automatic Sampler~~
Sample ID: IPSW-01-042602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: ~~IPSW-0101-042602~~ (N 4/26/02) (if applicable)

Sample Method/Device: Automatic Sampler
Depth Sampled: ** feet Total Stream Depth ** feet
Sample Date & Time: 4 / 26 /2002 0955 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard. L. Seydewitz, S. Salzer
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
** See Downloaded data for 4/26/02.							

Site Sketch/Notes See photos

GW level From Piezometer- not Recorded

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-0421602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPDP01-0421602 (if applicable)

Sample Method/Device: Automatic Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 4 / 21/2002 1029 hours
Dup. 1035 hours
Sampler(s): J. Danielli / J. Lambert / L. Seydwitz, S. Salzer, G. Bullard
Date Recorded By: L Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: * = see downloaded data

Micro Tip/OVA Monitor Reading: N/A ppm

Color: Yellow

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
See downloaded data							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See photos
gw depth 4.05' top of piez.
sw depth 4.20' top of piez.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-042601

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD - Total Metals (if applicable)

Sample Method/Device: Automatic Samplers
Depth Sampled: ** feet Total Stream Depth ** feet
Sample Date & Time: 4/26/2002 1200 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / L. Seydwitz, G. Bullard, S. Salzer
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
**See downloaded data.							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	~~X~~ 4/26/02

Site Sketch/Notes See Photos

GW Level = 2.77 ft from MP.

→ Note - no TSS Sample Collected

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-04-042602 Total Metals-TSS 0401-0410 ** QC Information: NA (if applicable)

Sample Method/Device: Automatic Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 4/26/2002 1115 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / L. Seydwitz, G. Bullard, S. Salzer
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- X Composite **
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: ** Samples 0401-0410 based on hourly grabs from automatic sampler.
01 = ~ 10 = ~ 0630 4/26/02
Color: 2130 4/25/02
Grab Samples 0401-0410 - Total metals + TSS only
See attached hydrograph.
Filtered - Total metals - composite only.
and 1 Total metals + 1 TSS sample composite.
ID - IPSW-04-042602
Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*See downloaded data.							

Site Sketch/Notes See Photos
No piezometer at this Station

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TI[redacted] TECH NUS, INC.

[redacted]MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05-042602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: DP02 (if applicable)

Sample Method/Device: Automatic Samplers
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 4 / 26 / 2002 1250 hours
Dup. 1255 hours
Sampler(s): J. Danieli / J. Lambert / L Sedwitz, G. Bullard, S Salzer
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
See downloaded data							

Site Sketch/Notes See Photos

~~Groundwater - 2.09 to SW~~
~~1.96 to GW from MP~~ 4/26/02

No GW Level - could not Reach Piezometer - w/in High water.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**

Tetra Tech NUS Job No./PMS N4123-0325

Sample ID: IPSW-06-042601

QC Information: NA (if applicable)

Sample Method/Device: Automatic Sampler

Depth Sampled: ** feet Total Stream Depth ** feet

Sample Date & Time: 4/26/2002 1555 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert / L. Seydwitz

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: ** = See data download

Micro Tip/OVA Monitor Reading: **N/A** ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
See data download							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Photos

NO GW level from Piezometer- Piezometer in High SW water.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T. A TECH NUS, INC.

.MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-042602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD - Total metals only (if applicable)

Sample Method/Device: Automatic Samplers
Depth Sampled: XX feet Total Stream Depth XX feet
Sample Date & Time: 4 / 26/2002 1510 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / L. Seydwitz, G. Bullard, S. Salzer
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
See downloaded data							

Site Sketch/Notes

Water Level Measurements:
2.24 GW
2.35 SW From M.P.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-08-042602
QC Information: NA (if applicable)

Sample Method/Device: Automatic Sampler
Depth Sampled: ** feet
Total Stream Depth ** feet
Sample Date & Time: 4 / 26 /2002 1434 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / L. Seydwitz, S. Salzer, G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- X Composite ***
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

bottles 1-8

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: ** = See downloaded data.
MP = measuring point
*** Samples 0801-0808 = hourly Grabs from automatic sampler 01 = ~0445 4/25/02
08 = ~0445 4/26/02

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ See attached

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
See Downloaded data							

Site Sketch/Notes See photos.

Groundwater Level = ~~Not Recorded~~ 4/26/02
2.58 From Piezometer MP.
Surface water = 2.67 from Piezometer M.P.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TE . TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-042602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: DP03 (Total metals + Filtered Total Metals only) (if applicable)

Sample Method/Device:
Depth Sampled: ** feet Total Stream Depth _____ feet
Sample Date & Time: 4/26/2002 1410 hours
Dup. 1415 hours
Sampler(s): J. Danieli / J. Lambert / S. Salzer / G. Bullard / L. Seydowitz
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- Y Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: ** - see downloaded data.

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
See downloaded data							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See Photos

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-042602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD- Total Metals (if applicable)

Sample Method/Device: Auto
Depth Sampled: ~~13.88~~ feet Total Stream Depth ** feet
Sample Date & Time: 2 / 26 /2002 1350 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / S. Salzer, G. Bullard, L. Seydwitz
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: ** = See downloaded data

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
See data download.							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes See Photos

Groundwater Level: 2.09 to SW
1.96 to GW from MP.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-051502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information DUP-DP01 051502 (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 5/15/2002 1210 hours
Dup. 1215 hours
Sampler(s): J. Daniell / J. Lambert / K. ONeill, C. Sanchez G. Glennon
Date Recorded By: J. Daniell
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Note - Samplers initiated 5/12/02 - Run until 5/15/02 1145
Color:
* = See downloaded data

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*	→						

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See photos
Water levels: depth to surface water = -2.40ft
depth to GW = -4.40ft
→ From measuring point.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-051502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automatic Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 5/15/2002 1310 hours
Dup. NA hours
Sampler(s): J. Danieli J. Lambert / E. Glennon / C. Sanchez / K. O'Neill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Samplers began ~3000m on 5/13/02 run until ~1300 5/15/02
* = See downloaded data

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
* →							

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Photos

Water levels: SW From MP = -4.25ft
GW From MP = -4.12ft.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-051502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Automated Sampler
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 5/15/2002 1345 hours
Dup ___ hours
Sampler(s): J. Danieli / J. Lambert / G. Glennon / K. O'Neill / C. Sanchez
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: * = See downloaded data.
Samplers initiated on 5/15/02 ~ 300pm to ~~5/15/02 ~ 130pm~~ 5/15/02 Sampler Stopped at 9:21 Am 5/15/02

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes See photos

Water level measurements: SW depth from MP = 2.65ft
GW depth from MP = 2.56ft

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-051602
Samples 1 - 65 (only certain samples sent to lab - see attached spreadsheet)

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: DP02 DP03 (if applicable)
From bottle # 64
From Bottle # 31

Sample Method/Device: Automated Sampler.
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 5/16/2002 1100 hours
Dup. DP02 = 1110 hours DP03 1120
Sampler(s): J. Danieli / J. Lambert / C. Sanchez G Glennon
Date Recorded By: J. Danieli / J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

___	Groundwater	___	Trip Blank*
X	Surface Water	___	Rinsate Blank*
___	Residential Supply	___	Field Duplicate Collected
X	Grab	___	Other (Specify):
___	Composite		

*include sample source & lot No.

NOTES: * = see downloaded data
Sampler initiated 5:41 on 5/12/02 - ended 5/15/02 - when program complete. @ 9:45 AM on 5/15/02
See attached sheets.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes See Photos.

No piezometer at this Station

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-05-051502
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated Samplers
Depth Sampled: * feet
Total Stream Depth * feet
Sample Date & Time: 5/15/2002 1415 * hours
Dup. 1415 NA hours
Sampler(s): J. Danieli / J. Lambert / C. Sanchez / K. O'Neill / G. Glennon
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: * = See downloaded data! Auto sampler initiated on 5/15/02 ~ 300pm – Sampled through 5/15/02 - when sample program was completed.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes See Photos

Water Level Measurements = SW depth From MP = 1.95ft
GW depth From MP = 1.95ft

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-06-051502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated Samplers
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 5/15/2002 1620 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / C. Sanchez / K. O'Neill / G. Glennon
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: X = See downloaded data
Sampler initiated ~3:00pm 5/13/02 - disabled 5/15/02 when sampling program completed.

Color: 5/15/02 ~~before~~

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

Site Sketch/Notes See Photos
Water Level measurements: SW depth from MP = 0.7
GW depth from MP = 0.7

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-051502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 5/15/2002 1455 hours
Dup. NA hours
Sampler(s): J. Danielli / ~~J. Lambert~~ / G. Glennen / K. O'Neill / C. Sanchez
Date Recorded By: _____
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: * = See down loaded data. Auto sampler initiated at ~ 3:00pm on 5/13/02 - Runs until 1440 5/15/02

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes See Photos

Water level measurements: SW depth from MP = 2.1ft
GW depth from MP = 1.94ft

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Sample ID: IDSW-08-051602

Tetra Tech NUS Job No./PMS N4123-0325

QC Information: DP04 bottle 11 ~~bottle 10~~ 5/18/02 (if applicable)

Bottles 1-46 - certain ones sent to lab - see attached Spread Sheet ~~DP05~~ 5/18/02 (D)

Sample Method/Device: Automated Sampler

Depth Sampled: * feet Total Stream Depth * feet

Sample Date & Time: 5/16/2002 1415 hours

Dup. DP04 1430 ~~DP05 1440~~ hours

Sampler(s): J. Danieli / J. Lambert / G. Glennon / R. Sanchez

Date Recorded By: J. Danieli

Signature

TYPE OF SAMPLE: (Check all that apply)

DP 5/18/02

	Groundwater		Trip Blank*
X	Surface Water		Rinsate Blank*
	Residential Supply		Field Duplicate Collected
X	Grab		Other (Specify):
	Composite		

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: * = See downloaded data
Sampler initiated on 5/13/02 at ~ 3:00pm run until 5/15/02 until ~ 3:00pm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Photos

Water level Measurements (measured on 5/15/02 at ~1510) - depth to SW from MP = 2.30
depth to GW from MP = 2.54

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-051502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated Sampler
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 5/15/2002 1530 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Glennon / C. Sanchez / K. O'Neill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: * = See downloaded data
Sampler initiated on 5/13/02 ~ 3:00pm - disabled 5/15/02 @ 1517.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes See Photos
No piezometer at this station.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt TECH NUS, INC.

MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-10-051502
QC Information: NA (if applicable)

Sample Method/Device: Automated Sampler
Depth Sampled: * feet
Total Stream Depth * feet
Sample Date & Time: 5/15/2002 1550 hours
Dup NA hours
Sampler(s): J. Danieli / J. Lambert / G. Glennon / C. Sanchez / K. O'Neill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: * = See downloaded data
Sampler initiated ~3:00pm 5/13/02 - disabled 5/15/02 before 1528

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes

See Photos
Water level measurement: SW depth from mp = 1.07 ft
GW depth from mp = 1.85 ft

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-RB01-051502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: RB01 (if applicable)

Sample Method/Device: Direct Pour - Rinse OFF OF bucket used for compositing Samples
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 5/15/2002 0700 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. ONeill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DJUF = 12061101

*include sample source & lot No.

NOTES: Rinsate OFF OF 2 Gal. Bucket used For compositing Samples.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex** Tetra Tech NUS Job No./PMS N4123-0325

Sample ID: IPSW - EB01 - 051602 QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI H2O through 1.0µ filter

Depth Sampled: NA feet Total Stream Depth NA feet

Sample Date & Time: 5/16/2002 1200 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert /

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank* 5/16/02
- X Rinsate Blank* 1.0
- ___ Field Duplicate Collected
- X Other (Specify): Equipment Blank DIUF = 1206101

*include sample source & lot No.

NOTES: NA

Micro Tip/OVA Monitor Reading: **N/A** ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB02-051602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB02 (if applicable)

Sample Method/Device: Pump DI H_2O through 1.0u filter
Depth Sampled: _____ feet Total Stream Depth NA feet
Sample Date & Time: 5/16/2002 1245 hours
Dup. NA hours
Sampler(s): J. Daniell / J. Lambert / _____
Date Recorded By: J. Daniell
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- X Other (Specify): Equipment Blank DIUF = 1206101

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Tetra Tech NUS Job No./PMS N4123-0325

Sample ID: IPSW-EB03-051602

QC Information: EB03 (if applicable)

Sample Method/Device: Pump DI H_2O through 1.0 u Filter

Depth Sampled: NA feet Total Stream Depth NA feet

Sample Date & Time: 5/16/2002 1435 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert /

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- X Other (Specify): Equipment Blank DIUF = 1206101

*include sample source & lot No.

NOTES: NA

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Sample ID: IPSW-EB04-051602

Tetra Tech NUS Job No./PMS N4123-0325

QC Information: EB04 (if applicable)

Sample Method/Device: Pump DI H_2O through 1.0 u filter

Depth Sampled: NA feet Total Stream Depth NA feet

Sample Date & Time: 5/16/2002 1515 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert /

Date Recorded By: J. Danieli (Signature)

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Equipment Blank DI UF = 1206101

*include sample source & lot No.

NOTES: NA

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-BB01-051602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: BB01 (if applicable)

Sample Method/Device: Direct Pour - DI W/in ISCO Sample Bottle
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 5/16/2002 1530 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / _____
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- X Other (Specify): Bottle Blank DIUF = 12016101

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: N/A

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A							

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

T A TECH NUS, INC.

.MPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- EB01- 072602

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI through 0.45 Filter
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 7/26/2002 0835 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / K. O'Neill
Date Recorded By: f. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF Lot # 1206101

*include sample source & lot No.

NOTES: NA

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-01-072502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP01-072502 (if applicable)

Sample Method/Device: Automated Isco Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 7/25/2002 0820 hours
Dup 0830 hours
Sampler(s): J. Danielli / J. Lambert / K. O'Neill / G. Bullard
Date Recorded By: L. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Samplers enabled on 7/23/02 @ 1621 ended 7/25/02 @ 0758 use 0.45u Filter

Micro Tip/OVA Monitor Reading: **N/A** ppm

Color:

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station Photos
* = See downloaded data

Piezometer Readings: Depth to GW 4.74 ft below mp
Depth to SW 2.95 " "

MP = measuring point - Notch on top of Piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

RA TECH NUS, INC.

AMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW- EB02 - 072502
QC Information: EB02 (if applicable)

Sample Method/Device: Pour DI Water over Plastic Trash Bag
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 7 / 25 2002 0908 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / G-Bullard
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF Lot # 1206101

*include sample source & lot No.

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-072502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 7/25/2002 0913 hours
Dup. NA hours
Sampler(s) J. Daniel / J. Lambert / K. ONeill / G. Bullard
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45u Filter
Sampler enabled on 7/23/02 @ 1621 end on 7/25/02 @ 0757

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station photos
* = see downloaded data.

Piezometer Readings
Depth to GW = 5.03 ft below MP
Depth to SW = 5.05 ft below MP
MP = measuring point - notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-03-0725 02

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: ~~N/A~~ IPSW-DP02-0725 02 (if applicable)
7/25/02

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 7/25/2002 1115 hours
Dup. ~~1120~~ ~~N/A~~ hours 1017/25/02
Sampler(s): J. Danieli / J. Lambert / K. ONeill / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Use 0.45u Filter
Sampler enabled on 7/23/02 @ 1629 - disabled on 7/25/02 @ 0759.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station photos
* = see downloaded data
Piezometer Reading:
Depth to GW = 3.33 ft below mp
Depth to SW = 3.44 ft below mp
mp = measuring point = Notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-04-072502
Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

0401-0415 every other sample 0419, 0423, 0427, 0431, 0435, 0439 + 0440 = Samples sent to La

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 7/25/2002 1000* hours
Dup. NA hours
Sampler(s): J. Danielli / J. Lambert / K. ONeill / G. Bullard
Date Recorded By: J. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Samples collected hourly beginning at 1621 = 0401 ending at 0440 @ ~0758 on 7/25/02
Color:
use 0.45u Filter

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes see station photos
* = see downloaded data
No piezometer.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

RA TECH NUS, INC.

AMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05 - 072502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automatic ISCO Sampler
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 7/25/2002 1250 ~~NA~~ hours 10 7/25/02
Dup. ~~NA~~ hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / K. O'Neill
Date Recorded By: f. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ~~X~~ ~~Grab~~ 10 7/25/02
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Use 0.45u Filter
Sampler enabled on 7/23/02 @ 1625 disabled on 7/25/02 @ 0756

Note: No samples from sample program complete to reinitiated @ on 7/24/02

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes See station photos
* = see downloaded data
Piezometer Readings
Depth to GW = 2.78 ft below mp
Depth to SW = 2.75 ft below mp
mp = measuring point = notch in top of piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-06-072502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 7/25/2002 1530 hours
Dup. NA hours
Sampler(s): J. Danielli / J. Lambert / G. Bullard / K. O'Neill
Date Recorded By: J. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: Use 0.45 u Filter
Sampler enabled on 7/24/02 @ 0940 disabled on 07/25/02 @ 0759
Note: Sampler initially enabled on 7/23/02 at ~ 1640 - power died at initial surge no samples collected until 7/24/02 at ~ ~~0950~~ 0945 7/25/02

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Color: C

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station photos
* = see downloaded data
Piezometer Readings:
Depth to GW = 4.19 ft below mp
" " SW = 4.29 " "
mp = measuring point = notch in top of Piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-072502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP04-072502 (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 7/25/2002 1510 hours
Due: 1515 hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / K. O'Neill
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Use 0.45 u Filter
Sampler enabled on 7/23/02 @ 1630 disabled on 7/25/02
Color: @ 0757

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See Station photos
X = see downloaded data

Piezometer Readings:
Depth to GW = 2.65 ft below mp
" SW = 2.80 " "

MP: Measuring Point = notch on top of piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-BB01-072502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: Bottle Blank (if applicable)

Sample Method/Device: Pour DI water into clean bottle
Depth Sampled: NA feet Total Stream Depth ~~1416~~ NA feet
Sample Date & Time: 7 / 25 2002 ~~1416 NA~~ hours 7/25/02
Dup. NA hours
Sampler(s): (J. Danieli) / J. Lambert / _____
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Bottle Blank DIWF = 12061101

*include sample source & lot No.

NOTES: N/A

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-EB03-072502
QC Information: EB03 (if applicable)

Sample Method/Device: Pump DI through 0.45u filter
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 7/25/2002 1440 ~~NA hours~~ 7/25/02
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / G. Bullard
Date Recorded By: J. Daniell
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF = 1206101

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: N/A

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-072502
0801, 0802, 0803, ~~0801 – 0823~~
0805, 0807, 0809, 0811, 0813, 0815, 0817, 0819, 0821, 0823 = samples sent to lab

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 7/25/2002 1326 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / G. Bullard / K. ONeill
Date Recorded By: J Daniell
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ~~X Grab~~ X Grab ✓
- ~~X Composite~~ 10 7/25/02
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: Samples collected hourly beginning at ~~1600~~ 0801 on 7/23/02 ending at ~~08~~ 0752 on 7/25/02
Note: No samples from 1745 7/23/02 to 1025 7/24/02 Samplers lost power
Reenabled on 7/24/02 @ 1025

Color:
Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station photos
X = See downloaded data

Piezometer Reading
Depth to GW = 3.66 ft below mp
" " SW = 3.31 " "

mp = measuring point = notch on top of piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Tetra Tech NUS Job No./PMS N4123-0325
Sample ID: IPSW-09-072502
QC Information: IPSW-DP03-072502 (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet
Total Stream Depth * feet
Sample Date & Time: 7/25/2002 1415 hours
Dup. 1420 hours
Sampler(s): J. Daniell / J. Lambert / G. Bullard / K. O'Neill
Date Recorded By: L. Daniell
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: use 0.45 µ filter
Sampler enabled on 7/23/02 @ 1628 and disabled on 7/25/02 @ 0748.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes See station photos
* = see downloaded data
No piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-10-07 25 02

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: ~~NA~~ MS/MSD (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 7/25/2002 1441 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert / G. Bullard / R. ONeill
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: use 0.45 u. Filter. Sampler enabled @ 1629 on 7/23/02, Sampler disabled @ 1534 on 7/24/02 Program Completed.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes See station photos

* = see downloaded data

Piezometer Reading:

Depth to GW = 2.03 ft below MP
" " SW = 1.99 " "

MP: measuring point = notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-01-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: DP01, DP05 (if applicable)

Sample Method/Device: TSCO
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/13/02 1020 hours 1025 DP
Sampler(s): B. Bullard / A. Petrosky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ___ Grab
- ✓ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ✓ Field Duplicate Collected
- ___ Other (Specify):

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW - 4.56
SW - 3.00

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL metals total	✓			
" " dissolved	✓			
TSS				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: _____
Sample ID: IPSW-EB02-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: EB02 (if applicable)

Sample Method/Device: Rinse off poly bags used for composite
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 08/31/02 1030 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ✓ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): DI Lot 0606242

* Include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	
Total TAL Metals ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TtA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: _____
Sample ID: STATION 2

Tetra Tech NUS Charge No. _____
QC Information: _____ (if applicable)

Sample Method/Device: _____
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: ___/___/___ _____ hours
Sampler(s): _____

Recorded By: _____ Signature

No Sample

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Program failed

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data

Vol.	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

SW 5.26
SW 5.27

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

Tt [redacted]A TECH NUS, INC.

[redacted]SAMPLE LOG SHEET - LIQUID PHASE [redacted]

Site Name: IP[redacted]
Sample ID: IPSW-03-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCo
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0930 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ___ Grab
- ✓ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW 342 btoc
SW 345 btoc

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	
TAL Metals (total) ✓				
TAL Metals (diss) ✓				
TSS				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0401-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW > No piezometer at this Station

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0403 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0405 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0407 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0409 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0411 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0413 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0415-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0417-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0418-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0420 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0422 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0424 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 1000 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-05-083102

Tetra Tech NUS Charge No. _____
QC Information: _____ (if applicable)

Sample Method/Device: ISCO
Depth Sampled: — feet Total Depth — feet (SW Only)
Sample Date & Time: 8/31/02 0910 hours
Sampler(s): G. Bullard / A. Osfrosky

Recorded By: _____
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ___ Grab
- ✓ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW depth 2.8 btoc
SW depth 2.8 btoc

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (tot) ✓				
TAL Metals (dis) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-06-083102

Tetra Tech NUS Charge No. 4123 0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0850 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: _____ Signature

TYPE OF SAMPLE: (Check all that apply)

- ✓ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ___ Grab
- ✓ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW depth 4.25 top of casing
SW depth 4.32 toc

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	
TAL Metals (dis) ✓				
TAL Metals (tot) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW07 083102

Tetra Tech NUS Charge No. 4123 0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0825 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- ____ Grab
- ____ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW depth 2.8' below top of casing
SW depth 2.8' below top of casing

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (total) ✓				
TAL Metals (dis) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0801 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW 3.72
SW 3.44

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0803 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* Include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0805 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0807-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0808 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* Include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0810 - 083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0812-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* Include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0814-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrotsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0816-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* Include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0820-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO Sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* Include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-0823-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO sampler
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0800 hours
Sampler(s): G. Bullard / A. Ostrofsky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ✓ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW
SW

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dissolved) ✓				
TAL Metals (total) ✓				
TSS ✓				

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: LBSW-09-083102

Tetra Tech NUS Charge No. 4123 0325
QC Information: _____ (if applicable)

Sample Method/Device: ISCO
Depth Sampled: _____ feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 755 hours
Sampler(s): G. Bullard A. Ostrosky

Recorded By: _____ Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ✓ Surface Water
- ___ Residential Supply
- ___ Grab
- ✓ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): _____

* Include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (dis) ✓				
TAL Metals (tot) ✓				
TSS				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-10-083102

Tetra Tech NUS Charge No.
QC Information: DP02, DP03, DP04 (if applicable)

Sample Method/Device: ISCO
Depth Sampled: ____ feet Total Depth ____ feet (SW Only)
Sample Date & Time: 8/31/02 0720 hours 0725 DP
Sampler(s): G. Bullard A Ostrosky

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ✓ Surface Water
- ____ Residential Supply
- ____ Grab
- ✓ Composite
- ____ Trip Blank*
- ____ Rinsate Blank*
- ✓ Field Duplicate Collected
- ____ Other (Specify):

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: ____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

GW depth 2.13
SW depth 2.13

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
TAL Metals (total) ✓				
TAL Metals (dis) ✓				
TSS ✓				

TtNUS Form 0004

TECH NUS, INC.

MPLE LOG SHEET - LIQUID PHASE

Site Name: IP
Sample ID: IPSW-EB01-083102

Tetra Tech NUS Charge No. 4123-0325
QC Information: Rinsate (if applicable)

Sample Method/Device: pump through filter
Depth Sampled: — feet Total Depth _____ feet (SW Only)
Sample Date & Time: 8/31/02 0748 hours
Sampler(s): _____

Recorded By: _____ Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DI Lot 0606242

* Include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	
TAL Metals (total) ✓				

TtNUS Form 0004

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Sample ID: IPSW-BB01-0925 02

Tetra Tech NUS Job No./PMS N4123-0325

QC Information: BB01 (if applicable)

Sample Method/Device: Pour DI water into ISCO Sample BOTTLE

Depth Sampled: NA feet Total Stream Depth NA feet

Sample Date & Time: 9/25/2002 1400 hours

Dup. NA hours

Sampler(s): J. Danieli / J. Lambert /

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF- 0120282

*include sample source & lot No.

NOTES:

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: **Industri-Plex**
Sample ID: IPSW-EB01-09 2502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Pump DI through 0.45u filter
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 9/25/2002 0940 hours
Dup. NA hours
Sampler(s): J. Daniels / J. Lambert /
Date Recorded By: J. Daniels
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF= 0120282

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: **N/A** ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB02-092502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB02 (if applicable)

Sample Method/Device: Filter DI through 0.45u filter
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 9/ /2002 1124 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF = 0120282

*include sample source & lot No.

NOTES:

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IDSW-EB03-092502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB03 (if applicable)

Sample Method/Device: DI water over Trash Bag → Used For Composite Samples
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 9/25/2002 1213 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DTUF=0120282

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES:

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-01-092502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP01-092502 (if applicable)

Sample Method/Device: Automated Isco Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 9/25/2002 0840 hours
Dup. 0845 hours
Sampler(s): J. Danieli / J. Lambert / D Nartigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: * = See downloaded data
Sampler enabled on 9/23/02 @ 0212 and disabled on 9/25/02 at 0824

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer:
Depth to GW 4.69 ft below MP
Depth to SW 3.00 ft below MP
MP = notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-09 2502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 9/25/2002 0930 hours
Dup. N/A hours
Sampler(s): J. Danielli / J. Lambert / D. Hartigan
Date Recorded By: J. Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab 9/23/02
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): MS/MSD

*include sample source & lot No.

NOTES: * = See downloaded data
Sampler enabled on 9/23/02 @ 0458
disabled on 9/25/02 @ 0140
Color:
Note: Program completed on 9/23/02 at 2335 and restarted on 9/24/02 at 1131.

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer
Depth to GW 5.20 ft below MP.
Depth to SW NA ft below MP. - no water at piezometer base
MP = notch on top of Piezometer
Stick up = 5.1 ft above GS.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW - 03 - 0925 02

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW - DP02 - 092502 (if applicable)

Sample Method/Device: Automated Isco Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 9/25/2002 1010 hours
Dup. 1015 hours
Sampler(s): J. Daniel / J. Lambert / D. Hartigan / G. Bullard
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES:
* = See downloaded data
Sampler enabled on 9/23/02
C 0924 and disabled on 9/25/02
C 0717

Color:

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer:
Depth to GW 3.44 ft below MP
Depth to SW 3.5 ft below MP
MP = notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex

Tetra Tech NUS Job No./PMS N4123-0325

Sample ID: IPSW-OH-09 0502 0401-0456

QC Information: NA (if applicable)

Sample Method/Device: Automated ISCO Sampler

Depth Sampled: * feet Total Stream Depth * feet

Sample Date & Time: 9/25/2002 0953 hours

Dup. NA hours

Sampler(s): J. Daniel / J. Lambert / G Bullard / R. Hartigan

Date Recorded By: J. Daniel (Signature)

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: * = See downloaded data
Sampler enabled on 092302 @ 0225 and disabled on 092502 @ 0950
Samples = Hourly Grab Samples.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes Refer to Station Photos
No Piezometer @ this Station

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-05- 092502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated Sampler.
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 9 / 25 2002 1125 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / D. Hartigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater (PD 9/23/02)
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): MS/MSD

*include sample source & lot No.

NOTES: X = downloaded data
Sampler enabled on 092302 @ 0750 and disabled on 9/25/02
Color: @ 0731

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

Turbidity: CLR/SL CLDY/CLDY/OPAQ

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer:

Depth to GW 1.92 ft below mp

Depth to SW 1.85 ft below mp

mp = notch on top of Piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-016-092502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated ISCO
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 9/25/2002 1338 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / D. Harthgan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): MS/MSD

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: * = See downloaded data
Sampler enabled on 092302 @ 0836 and disabled on ~~092502~~
Color: 0219@ ~~0722~~ 9/25/02
Note: Sampler Program Completed on 9/23/02 at 1226. Sampler Restarted on 9/24/02 at 1316.
Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos.
Piezometer
Depth to GW 4.4 ft below MP
Depth to SW 4.45 ft below MP
MP = notch on top of Piezometer.

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-07-092502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP04-092502 (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 9/25/2002 1312 hours
Dup. 1315 hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / D Hartigan
Date Recorded By: J Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: * = See downloaded data
Sampler enabled on 092302 @ 0751 and disabled on 092502 @ 0720

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer:

Depth to GW 3.1 ft below mp

Depth to SW 3.13 ft below mp

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-08-092502 0801- 0847

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device:
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 9/25/2002 1149 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / D. Martigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- X Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: * = See downloaded data Sampler enabled on 9/23/02 @ ~~0751~~ 0857 and disabled on 9/25/02 @ 0845.

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer:
Depth to GW 3.61 ft below MP.
Depth to SW 3.25 ft below MP
MP = notch on top of Piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-09-092502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP03-092502 (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 9/25/2002 1212 hours
Dup. 1215 hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / D. Hartigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: * = See downloaded data
Sampler enabled on 9/23/02
C 0753 and disabled on 9/25/02

Color: C 0722

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

Site Sketch/Notes Refer to Station Photos
No Piezometer at this Station.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

Tt TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-00-092502

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated ISCO Samplers
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 9/25/2002 1248 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / G. Bullard / D Hartigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): MS/MSD

*include sample source & lot No.

NOTES: * = see downloaded data
Sampler enabled on 092302 @ 0754 and sampler disabled on 092402 @ 1619
Note: Sampler completed on 9/23/02 at 1256. Sampler Re-Started on 9/24/02 at 1026.

Color:
Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer:
Depth to GW 2.05 ft below mp
Depth to SW 2.05 ft below mp
mp = notch on top of Piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- 01 - 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW- DP01-101802 (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/18/2002 1050 hours
Dup: 1053 hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill / D. Hartigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: X = See downloaded data

Color: Sampler enabled on 10/16/02 @ 1118 and disabled on 10/18/02 @ 0548.

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW ~~4.68~~ 2.92 ft below MP KO 10/18/02

Depth to GW ~~2.92~~ 4.68 ft below MP 10/18/02 KO

MP = measuring point, notch on top of piezometer

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-02-101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: * feet Total Stream Depth * feet
Sample Date & Time: 10/18/2002 1151 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill / D. Harrigan
Date Recorded By: J Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab 10/16/02
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: * = See downloaded data

Color: Sampler enabled on 10/16/02 @ 1208 and disabled on 10/17/02 @ 2158

Note: Program complete on 10/16/02

Turbidity: CLR/SL CLDY/CLDY/OPAQ Program Resumed on 10/17/02 @ 1012

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
*							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW 4.94 ft below MP

Depth to GW 4.90 ft below MP

MP = measuring point, notch on top of piezometer.

Tt NUS Form 0004sw

US EPA ARCHIVE DOCUMENT

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- 03 - 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW- DP02 -101802 (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/18/2002 1020 hours
Dup. 1022 hours
Sampler(s): J. Danieli / J. Lambert / R. O'Neill / D. Hartigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: X = see downloaded data

Color: Sampler enabled on 10/16/02 @ 1209 and disabled on 10/17/02 @ 2151

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW 3.30 ft below MP

Depth to GW 3.17 ft below MP

MP = measuring point, notch on top of piezometer

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- 04 - 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/18/2002 0845 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill / D. Harrigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ~~X Composite~~ 10/18/02
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: X = See downloaded data
Sampler enabled on 10/16/02
Color: @ 1121 disabled on 10/18/02 @ 0845.
Samples sent to Lab = 20
0401, 0403, 0405, 0407, 0409, 0411, 0413, 0415, 0416, 0417, 0419, 0421, 0423, 0425, 0427, 0429, 0433, 0437, 0441, 0445
Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW ___ ft. below MP
Depth to GW ___ ft below MP
} no piezometer

MP = measuring point, notch on top of piezometer

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW – 05 – 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/18/2002 1215 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill / D. Hartigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: X = See downloaded data

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

Color: Sampler enabled on 10/16/02 @ 1210 and disabled on 10/17/02 @ 1759

Note: Program Complete on 10/17/02 @ 0017 Program resumed on 10/17/02 @ 1125

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW 2.39 ft below MP

Depth to GW 2.37 ft below MP

MP = measuring point, notch on top of piezometer.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-006-101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DUP-101802 (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/18/2002 1405 hours
Dup. 1408 hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill / D. Hartigan
Date Recorded By: L. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab 10/18/02
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: X = See downloaded data

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

Color: Sampler enabled on 10/16/02 @ 1210 and disabled on 10/17/02 @ 1622
Note: Program Completed on 10/16/02 @ 1949
Program Resumed on 10/17/02 @ 1252.
Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW 2.81 ft below MP

Depth to GW 2.77 ft below MP

MP = measuring point, notch on top of piezometer.

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- 07 - 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: MS/MSD (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/18/2002 1333 hours
Dup: N/A hours
Sampler(s): J. Danieli / J. Lambert / K. O'Neill / D. Harrigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- ___ Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: X = See downloaded data

Color: Sampler enabled on 10/16/02 @ 1210 and disabled on 10/18/02 @ 0336.
~~Note~~ 10/18/03

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW 3.0 ft below MP

Depth to GW 2.85 ft below MP

MP = measuring point, notch on top of piezometer

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- 08 - 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: NA (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/18/2002 0930 hours
Dup. ~~NA~~ hours
Sampler(s): J. Daniel / J. Lambert / K. O'Neill / D. Hartigan
Date Recorded By: J Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: X = See downloaded data

Color: Sampler enable on 10/16/02 @ 1400 - disabled on 10/17/02 @ 2349 - Power Failed.

Samples sent to Lab = 15

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW 2.97 ft below MP

Depth to GW 3.39 ft below MP

MP = measuring point, notch on top of piezometer.

ANALYSIS 0801, 0803, 0805, 0807, 0808, 0809, 0811, 0813, 0815, 0817, 0819, 0823, 0827, 0831, 0835	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- 9 - 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP03 - 101802 (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/ 18/2002 1252 hours
Dup. 1255 hours
Sampler(s): J. Danieli / J. Lambert / R. Olvein / D. Hartigan
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

NOTES: X = See downloaded data

Color: Sampler enabled on 10/16/02 @ 1210 and disabled on 10/18/02 @ 1248.

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Site Sketch/Notes Refer to Station Photos

Piezometer Readings:

Depth to SW ___ ft below MP } no piezometer
Depth to GW ___ ft below MP

MP = measuring point, notch on top of piezometer.

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW- 10 - 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: IPSW-DP04-101802 (if applicable)

Sample Method/Device: Automated ISCO Sampler
Depth Sampled: X feet Total Stream Depth X feet
Sample Date & Time: 10/18/2002 1310 hours
Dup. 1315 hours
Sampler(s): J. Daniel / J. Lambert / R. O'Neill / D. Hartigan
Date Recorded By: J Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- X Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- X Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: X = See downloaded data

Color: Sampler enabled on 10/16/02 @ 1210 and disabled on 10/17/02 @ 1423

Note: Program completed on 10/17/02 at 0112

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Program resumed on 10/17/02 @ 1215.

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
X							

Site Sketch/Notes: Refer to Station Photos

Piezometer Readings:

Depth to SW 1.45 ft below MP

Depth to GW 1.58 ft below MP

MP = measuring point, notch on top of piezometer

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	X
Total Suspended Solids	X

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB01-10~~1802~~

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB01 (if applicable)

Sample Method/Device: Filter DI Water through 0.45 u Filter
Depth Sampled: N/A feet Total Stream Depth N/A feet
Sample Date & Time: 10/18/2002 1105 hours
Dup. N/A hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Equip. Blank DI = 0606242

*include sample source & lot No.

NOTES: N/A

Micro Tip/OVA Monitor Reading: N/A ppm

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A							

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB02-101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB02 (if applicable)

Sample Method/Device: Filter DI water through 0.45 u Filter
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 10/18/2002 1127 hours
Dup. NA hours
Sampler(s): J. Daniel / J. Lambert /
Date Recorded By: J. Daniel
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Equip Blank DI = 06060242

*include sample source & lot No.

NOTES: NA

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
NA							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB03-10118102

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB03 (if applicable)

Sample Method/Device: DI water through clean trash bag - used to collect composite
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 10/18/2002 1220 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert / _____
Date Recorded By: J Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Equip. Blank DI = 06060242

*include sample source & lot No.

NOTES: N/A

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A	→						

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW-EB04-101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: EB04 (if applicable)

Sample Method/Device: DI water through clean trash bag - used to collect composite
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 10/18/2002 1225 hours
Dup. NA hours
Sampler(s): J. Danielli / J. Lambert /
Date Recorded By: J Danielli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Equip. Blank DI = 00060242

*include sample source & lot No.

NOTES:

Micro Tip/OVA Monitor Reading: N/A ppm

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A →							

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Site Sketch/Notes N/A

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

TETRA TECH NUS, INC.

SAMPLE LOG SHEET – SURFACE WATER

Site Name: Industri-Plex
Sample ID: IPSW - BB01- 101802

Tetra Tech NUS Job No./PMS N4123-0325
QC Information: Bottle Blank (BB01 (if applicable)

Sample Method/Device: DI water in ISCO Bottle
Depth Sampled: NA feet Total Stream Depth NA feet
Sample Date & Time: 10/18/2002 1500 hours
Dup. NA hours
Sampler(s): J. Danieli / J. Lambert /
Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): DI = 06006242

*include sample source & lot No.

Micro Tip/OVA Monitor Reading: N/A ppm

NOTES: N/A

Color:

Turbidity: CLR/SL CLDY/CLDY/OPAQ

Field Sampling Data:

Turbidity (NTU)	Temp °C (°C)	Cond. (µs/cm)	Spec. Cond. (µs/cm)	DO (%)	DO (mg/L)	pH (std. Units)	ORP (mV)
N/A							

Site Sketch/Notes NA

ANALYSIS	Check (X)
Total TAL Metals	X
Dissolved TAL Metals	
Total Suspended Solids	

Tt NUS Form 0004sw

APPENDIX A.8

GROUNDWATER USE & VALUE DETERMINATION

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

ELLEN ROY HERZFELDER
Secretary

ROBERT W. GOLLEDGE, Jr.
Commissioner

US EPA ARCHIVE DOCUMENT

June 21, 2004

Robert Cianciarulo, Chief
Massachusetts Superfund Section
U.S. EPA Region I
JFK Federal Building
Boston, MA 02203

RE: Groundwater Use and Value Determination
Wells G + H Superfund Site (MAD #980732168, RTN#3-0479)

Dear Mr. Cianciarulo:

Enclosed please find the Groundwater Use and Value Determination prepared by the Department (DEP) for the Wells G + H Superfund Site (the Site). This Determination was conducted by the DEP pursuant to the Memorandum of Agreement (1998) between the U.S. Environmental Protection Agency and the DEP.

In determining the use and value of the groundwater in the vicinity of the Wells G + H Site, we referred to the aquifer classification system in the Massachusetts Contingency Plan (MCP). The classification in the MCP gives consideration to all of the factors in the Use and Value Guidance. Enclosed with the Use and Value Determination is a copy of the GIS map used to determine the aquifer classification. This map provides a variety of information, including the USGS yield classification, the presence of public water supplies and zones of protection, surface water bodies, wetlands, protected open space areas, and drainage basin boundaries.

If you have any questions regarding this letter, please don't hesitate to contact me at 617-654-6651.

Sincerely,

Richard Chalpin
Assistant Commissioner, Bureau of Waste Site Cleanup

cc. Joe LeMay, EPA
Anna Mayor, MADEP
Gordon Bullard, TTNUS
enclosure

This information is available in alternate format. Call Aprel McCabe, ADA Coordinator at 1-617-556-1171. TDD Service - 1-800-298-2207.

DEP on the World Wide Web: http://www.mass.gov/dep
Printed on Recycled Paper

GROUNDWATER USE AND VALUE DETERMINATION
Wells G + H Superfund Site
Woburn, MA

June 2004

Consistent with the Environmental Protection Agency's (EPA) 1996 Final Ground Water Use and Value Determination Guidance, the Department has developed a "Use and Value Determination" of the groundwater beneath the Wells G + H Superfund Site (the "Site"). The purpose of the Use and Value Determination is to identify whether the aquifer at the site should be considered of "High", "Medium", or "Low" use and value. In the development of its Determination, the Department has applied the criteria for groundwater classification as promulgated in the Massachusetts Contingency Plan (MCP). The classification contained in the MCP considers criteria similar to those recommended in the Use and Value Guidance as agreed to in the Memorandum of Agreement (MOA) between EPA and DEP. The Department's recommendation supports a medium use and value for the Site Area groundwater. A brief background of the Site, an explanation for the determination, and a table listing the criteria that facilitated the determination are outlined below.

The Site covers approximately 330 acres in eastern Woburn, Massachusetts. The Site is bounded by Route 128/95 to the north, Route 93 to the east, the Boston and Maine railroad to the west, and Salem Street to the south. The groundwater under evaluation for this determination is within the boundaries of the Site as shown on the attached Figure.

The Site is almost entirely within the Interim Wellhead Protection Area (IWPA) of the two municipal wells G + H. The two wells reside near the center of the Site as shown on the Figure. The aquifer within the Site is classified as medium and high yield by the United States Geological Survey (USGS). Combined, the wells had a pumping capacity of approximately 1.73 million gallons of water per day (MGD). Wells G + H were shut down in May of 1979 when high levels of chlorinated organics were discovered in both wells. Since that date the wells have not been used. However, the City has not formally abandoned the wells in accordance with the DEP's regulations; therefore, at this time the DEP Drinking Water Program has classified the wells as inactive.

Approximately two thirds of the water currently used by the City is from seven groundwater wells in a separate aquifer under Horn Pond, and the remainder is supplied by the Massachusetts Water Resources Authority. There have been problems with TCE contamination from an unknown source in the aquifer at Horn Pond, as well as bacterial contamination from a nearby Combined Sewage Overflow (CSO), but these have been stabilized and controlled. City engineers have indicated to the DEP's Drinking Water Program that the stability of the current water supply and the expression of public opinion against the use of the G + H wells for drinking has meant that the likelihood of using the inactive wells in the near future is very low. However, they have also expressed to DEP that they do not want to eliminate the possible future use of the resource. Water usage has increased tenfold since the City's water system became operational in 1873, and is now at least 6 million gallons of water per day.

With regard to the cleanup of the Site, an intensive remedial investigation was conducted through the 1980s following the shut down of the wells. A Record of Decision issued by EPA in September of 1989 required the remediation of the sources of the contamination to the wells, and

US EPA ARCHIVE DOCUMENT

the investigation of the Central Area groundwater and the Aberjona River. To date, contaminated soil at the Site has been remediated at three of the source areas known as Wildwood Conservation Trust (also known as Beatrice Food Corporation), New England Plastics, Inc., and W.R. Grace. Contaminated soils remain at the Unifirst Corporation and the Olympia Nominee Trust properties. The remaining contaminants include chlorinated organics, heavy metals, polychlorinated biphenyls (PCBs), and other wastes.

The investigation of the Aberjona River, which flows through the center of the site, has indicated that contaminants are present in both sediment and surface water. The sediment of the Aberjona River contains elevated levels of metals including arsenic, chromium, mercury, copper and lead, volatile and semi-volatile organics, pesticides, and PCBs. The surface water contains volatile organics, pesticides, semi-volatile organics, and metals. The groundwater within the Central Area, i.e., the area downgradient of the source area properties, contains a broad mix of inorganic and organic contaminants, including nitrates, sodium, chloride, barium, arsenic, chromium and lead, chlorinated organics consisting primarily of trichloroethylene and tetrachloroethylene, other volatile organics, poly-aromatic hydrocarbons (PAHs), and other semi-volatile organic compounds.

Because the Site is within the IWPA of a current drinking water supply, and also because the aquifer is medium and high yield, the Site Area aquifer is classified under the MCP as GW-1 meaning a current or potential drinking water source area. The one-mile diameter IWPA default zone supercedes any of the areas excluded as non-drinking water source areas under the MCP. The GW-2 classification applies to areas where there is potential migration of vapors from groundwater to occupied structures; specifically, where groundwater has an average annual depth of 15 feet or less and where the structure is within a 30 foot surface radius of that groundwater. Since much of the site is developed with commercial, industrial and residential structures, GW-2 potentially applies to the majority of the aquifer. An exception to the developed areas is the land surrounding the wells owned by the City that is vacant. Potential uses for this land are being examined under a Superfund Redevelopment Grant by the EPA. So far all of the plans created under the grant have included various scenarios of recreational use.

Lastly, at a minimum, all groundwater is considered as GW-3, which considers the ecological and human health impacts and risks associated with the discharge of groundwater to surface water. The aquifer discharges into the Aberjona River and its associated wetlands.

Considering these classifications, exposure scenarios for the groundwater risk evaluation should include, but not be limited to: ingestion and exposures from other domestic uses; inhalation of vapors from seepage into buildings; use of the water in industrial processes and other potential exposures to the use of the water in industrial and residential activities; worker exposure during excavation into groundwater; and exposures resulting from discharge to surface water.

Overall, the aquifer has significant current ecological value for its contribution to the River and the associated wetlands; however, the groundwater and the sediment of the River and its wetlands are contaminated. The full ecological value of the groundwater won't be realized until it and the sediment of the area have been remediated, which is most likely several years away. Its potential human value is significant, but only in the far future. In light of these and other criteria established in the MCP that were examined in this determination, the Department supports a medium use and value for the Site Area aquifer.

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Groundwater Use and Value Considerations				
Factors	High	Medium	Low	Comments
1. Quantity	X			Aquifer is high-yield (1.75 million gal/day) The aquifer is alluvial, highly porous sand and gravel.
2. Quality			X	Aquifer is contaminated throughout (upper aquifer into the bedrock) with a broad variety of contaminants above drinking water standards. Many of the contaminants are organic and volatile and therefore are expected to eventually breakdown or volatilize upon eventually reaching surface water. Main sources of anthropogenic contamination of the aquifer appear to have been identified, and most are being or have been removed.
3. Current Public Water Supply Systems		X		There are two public supply wells on site. Both are inactive due to the presence of contamination. The City uses groundwater from another aquifer (Horn Pond Aquifer) and supplements the lost supply from Wells G&H with MWRA water. The City experiences regular water shortages and voluntary and required reduction efforts during the summer months.
4. Current Private Drinking Water Supply Wells			X	No known private drinking water wells within the study area. The City does not allow private wells to be tied into the municipal drinking water system at any point.
5. Likelihood and I.D. of Future Drinking Water Use		X		There are no other potential water supply development areas in the City that we are aware of. It is unlikely that the Wells G&H will be used in the near future, but possibly in the longer term as demand increases.
6. Other Current or reasonable Expected Groundwater Use(s) in Review Area		X		There are industrial wells used for processing and irrigation, and commercial wells also used for irrigation in the area. It is reasonable to expect similar uses to continue.
7. Ecological Value	X			Groundwater in the study area discharges directly to the Aberjona River.
8. Public Opinion		X		Public opinion has been opposed to utilizing the Wells G&H for water supply. The City has expressed an interest in having the source available for the future.

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MA DEP - Bureau of Waste Site Cleanup

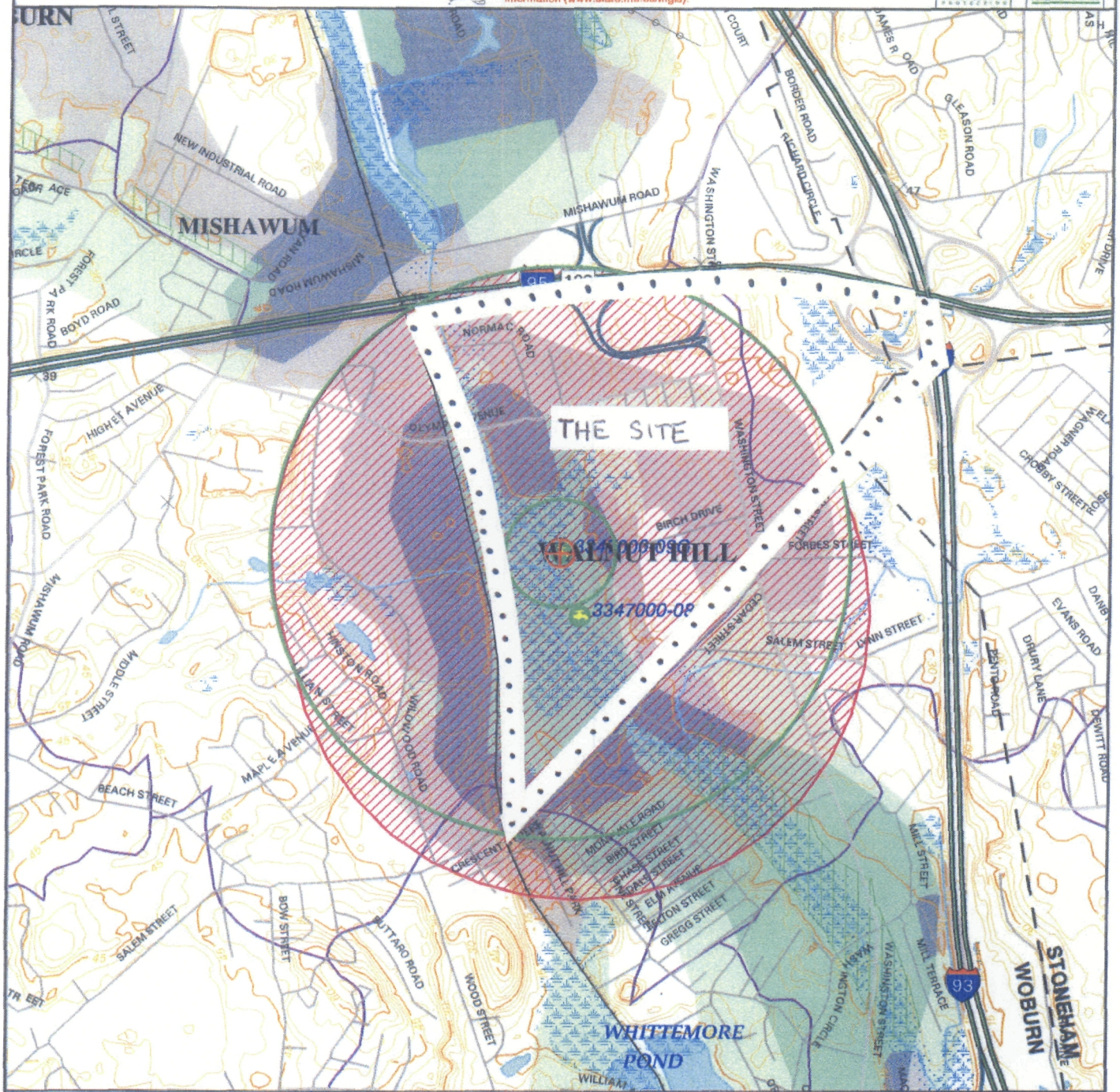
Site Scoring Map: 500 feet & 0.5 Mile Radii

SITE NAME:
Wells G and H Superfund Site RTN 3-0479
Aberjona River Valley
Woburn
916205n 230325ew

Site Location

The information shown on this map is the best available at the date of printing. Please refer to the MassGIS Website for data source information (www.state.ma.us/mgis).

MASSGIS — Massachusetts Geographic Information System — Massachusetts Executive Office of Environmental Affairs - 2003



Roads: Ltd Access, Divided, Other Highway, Maj Rds, Street, Trail
Boundaries: Town, County, DEP Region; Train: Powerline; Pipeline; Aqueduct
Basins: Major, Sub; Streams: Perennial, Intermittent. Man Made Shore, Dams
Potentially Productive Aquifers: Medium,High Yield
Non-Potential Drinking Water Source Area: Medium,High Yield

EPA Sole Source Aquifer; FEMA 100-year floodplain
PWS: Ground,Surface,Emergency Surface,Non Community
Approved Zone2; IWPA; Surface Water Supply Zone A
Hydrography: Water Features,Public Surface Water Supply
Wetlands: Fresh,Salt,NHESP Wetlands Habitat
Protected Open Space; ACEC
DEP Permitted Solid Waste Facilities; Certified Vernal Pools

N W E S

SCALE 1:15000

0 1/2 MILES

0 1/2 KILOMETERS

August 05, 2003

Original includes color coding.

US EPA ARCHIVE DOCUMENT