APPENDIX A

PRIOR FIELD INVESTIGATION DATA

Appendix A

Contents

Appendix A.1

NUS 1985 and EBASCO 1988 Aberjona Auto Parts Soil and Groundwater Data Summary Tables

Table 2-8
Aberjona Auto Parts Soil Analytical Results

Compound	AB-1-01 0'-2'	AB-1-02 2'-4'	AB-1-03 4'-6'	AB-1-04 9'-11'
Volatile Organic Compounds (mg/kg)				
1,1,1-Trichloroethane	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA
1,2-Dichloroethene	NA	NA	NA	NA
2-Butanone	--	--	0.011 J	--
4-Methyl-2-Pentanone	NA	NA	NA	NA
Acetone	0.008 J	0.006	.33 J .	--
Benzene	NA	NA	NA	NA
Carbon Disulfide	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA
Chloroform	--	--	--	4
Ethylbenzene	NA	NA	NA	NA
Methylene Chloride	--	--	--	3
Tetrachloroethane	NA	NA	NA	NA
Tetrachloroethene	NA	NA	NA	NA
Toluene	0.009	--	0.023	--
Total Xylenes	--	--	--	--
Trichloroethene	NA	NA	NA	NA
Vinyl Chloride	NA	NA	NA	NA
Base Neutrals Compounds (mg/kg)				
1,2,4-Trichlorobenzene	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	--
1,3-Dichlorobenzene	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	--
Acenaphthene	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA
Benzo(A)Anthracene	NA	NA	NA	NA
Benzo(A)Pyrene	NA	NA	NA	NA
Benzo(B)Fluoranthene	NA	NA	NA	NA
Benzo(GHI)Perylene	NA	NA	NA	NA
Benzo(K)Fluoranthene	NA	NA	NA	NA
Benzyl Alcohol	NA	NA	NA	NA
Benzyl Butyl Phthalate	NA	NA	NA	NA
Bis-(2-Ethylhexl) Phthalate	NA	NA	NA	--
Butylbenzylphthlate	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA
Dibenzo(AH)Anthracene	NA	NA	NA	NA
Diethyl Phthalate	NA	NA	NA	NA
Di-N-Butyl Phthalate	NA	NA	NA	NA
Di-N-Octyl Phthalate	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA
Indeno(1,2,3-CD)Pyrene	NA	NA	NA	NA
Napthalene	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA
Pyrene	NA	NA	NA	--
Acid Compounds (mg/kg)				
2,4,5-Trichlorophenol (2)	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA
4-Methylphenol	NA	NA	NA	NA
Phenol	NA	NA	NA	NA
Pesticides/PCBs (mg/kg)				
Chlordane	NA	NA	NA	--
PCB-1242	NA	NA	NA	NA
PCB-1254	NA	NA	NA	NA
PCB-1248	NA	NA	NA	NA
PCB-1260	NA	NA	NA	NA
Inorganic Compounds (mg/kg)				
Aluminum	NA	NA	NA	6,46
Antimony	NA	NA	NA	--
Arsenic	NA	NA	NA	7.7
Barium	NA	NA	NA	25
Cadmium	NA	NA	NA	--
Calcium	NA	NA	NA	2,57
Chromium	NA	NA	NA	16
Cobalt	NA	NA	NA	4.3
Copper	NA	NA	NA	9.2
Iron	NA	NA	NA	10.1
Lead	NA	NA	NA	2.9
Magnesium	NA	NA	NA	3.09
Manganese	NA	NA	NA	138
Mercury	NA	NA	NA	--
Nickel	NA	NA	NA	11
Potassium	NA	NA	NA	3,47
Sodium	NA	NA	NA	228
Zinc	NA	NA	NA	22
Notes:				

NA = Not Analyzed For
J = Estimated Quantity
-- = Below Detectable Limit
R = Value Was Rejected
C = The result has been corrected for the presence of the analyte in the blank
All compounds listed were detected at one time during analysis of soil, sediment, and/or water.
Source: Supplemental Remedial Investigation for Feasibility Study of Wells G & H Site, Woburn, MA; Blasland Bouck & Lee, Inc. 1988

Table 2-9
Aberjona Auto Parts
Summary of Analytical Results of Ground Water Samples

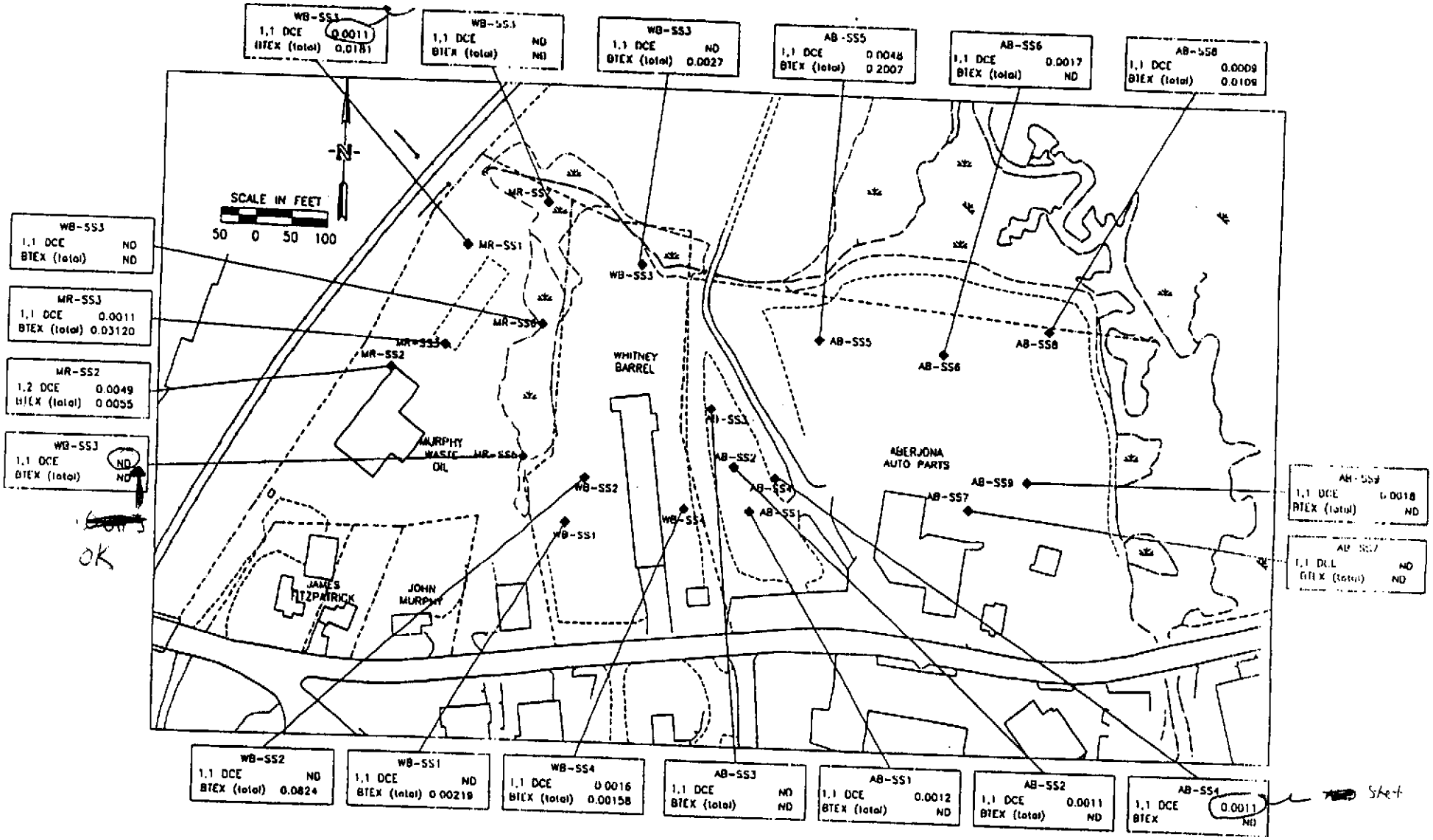
Compound	AB1-01 Ebasco 12-17-87	AB1-02 Ebasco 12-17-87	S83 NUS/FIT April 1985	S83 NUS/FIT April 1985	S83 NUS/FIT May 1985	S83 NUS/FIT June 1985	S83 NUS/FIT June 1985	S83 Ebasco 11-5-87
Volatile Organic Compounds (ug/L)								
Acetone	12 B	110 B	--	--	R	R	R	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--
Toluene	--	8 J	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--
Tetrachloroethene	--	--	--	--	15	12	14	--
Trichloroethene	--	--	--	1,400 J	470	440	470	69
1,2-Dichloroethene	--	--	NA	NA	NA	NA	NA	7
1,1-Dichloroethene	--	--	--	--	--	--	--	--
Chloroform	--	6 J	R	R	--	--	--	--
Methylene Chloride	--	--	R	R	R	R	R	--
2-Butanone	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	NA	NA	--	--	110	93	100	NA
1,1,2,2-Tetrachloroethane	NA	NA	--	--	--	--	--	NA
Benzene	NA	NA	--	--	--	--	--	--
Ethylbenzene	NA	NA	--	--	--	--	--	--
Vinyl Chloride	NA	NA	--	--	--	--	--	NA
Styrene	NA	NA	--	--	--	--	--	NA
Total Xylenes	--	6 J	--	--	--	--	--	--
Semi-Volatile Organic Compounds (ug/L)								
N-Nitrosodiphenylamine	28 B	26 B	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) Phthalate	10 B	--	19	--	NA	NA	NA	NA
Di-n-Butyl Phthalate	--	--	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	--	--	NA	NA	NA	NA	NA	NA
Di-n-Octyl Phthlate	--	--	--	--	NA	NA	NA	NA
Pesticides/PCBs (ug/L)								
Chlorodane	--	--	--	--	NA	NA	NA	NA
Inorganic Compounds (ug/L)								
Aluminum	10,400	11,600	710	740	NA	NA	NA	NA
Antimony	--	--	--	--	NA	NA	NA	NA
Arsenic	8.3 B	12.1	--	--	NA	NA	NA	NA
Barium	115 B	121 B	30	28	NA	NA	NA	NA
Beryllium	--	--	--	--	NA	NA	NA	NA
Cadmium	--	--	8	--	NA	NA	NA	NA
Calcium	50,600	45,600	62,000	62,000	NA	NA	NA	NA
Chromium	25	23	--	--	NA	NA	NA	NA
Cobalt	--	--	7.4	7.9	NA	NA	NA	NA
Copper	--	22 B	R	R	NA	NA	NA	NA
Iron	14,000	26,600	2,000	2,000	NA	NA	NA	NA
Lead	--	--	--	--	NA	NA	NA	NA
Magnesium	13,700	12,200	12,000	12,000	NA	NA	NA	NA
Manganese	781	1,020	740	740	NA	NA	NA	NA
Mercury	--	--	--	--	NA	NA	NA	NA
Nickel	--	--	R	--	NA	NA	NA	NA
Potassium	9,990	7,570	4,900	5,100	NA	NA	NA	NA
Selenium	--	--	R	--	NA	NA	NA	NA
Silver	--	--	--	--	NA	NA	NA	NA
Sodium	74,500	65,100	85,000	88,000	NA	NA	NA	NA
Thallium	--	--	--	--	NA	NA	NA	NA
Vanadium	17 B	28	--	--	NA	NA	NA	NA
Zinc	45	51	35	35	NA	NA	NA	NA
Cyanide	--	--	NA	NA	NA	NA	NA	NA

Notes:
NA = Not Analyzed For
J = Estimated Quantity
-- = Indicates Analyte was not detected in sample
B = Analyte was found in the blank as well as the sample
R = Value was rejected due to blank contamination identified in quality control

Sources: Supplemental Remedial Investigation for Feasibility Study of Wells G & H Site, Woburn, MA; Ebasco Services Inc. 1988
Wells G & H Site Remedial Investigation Report I Volumes I-IV; NUS Corporation

Appendix A.2

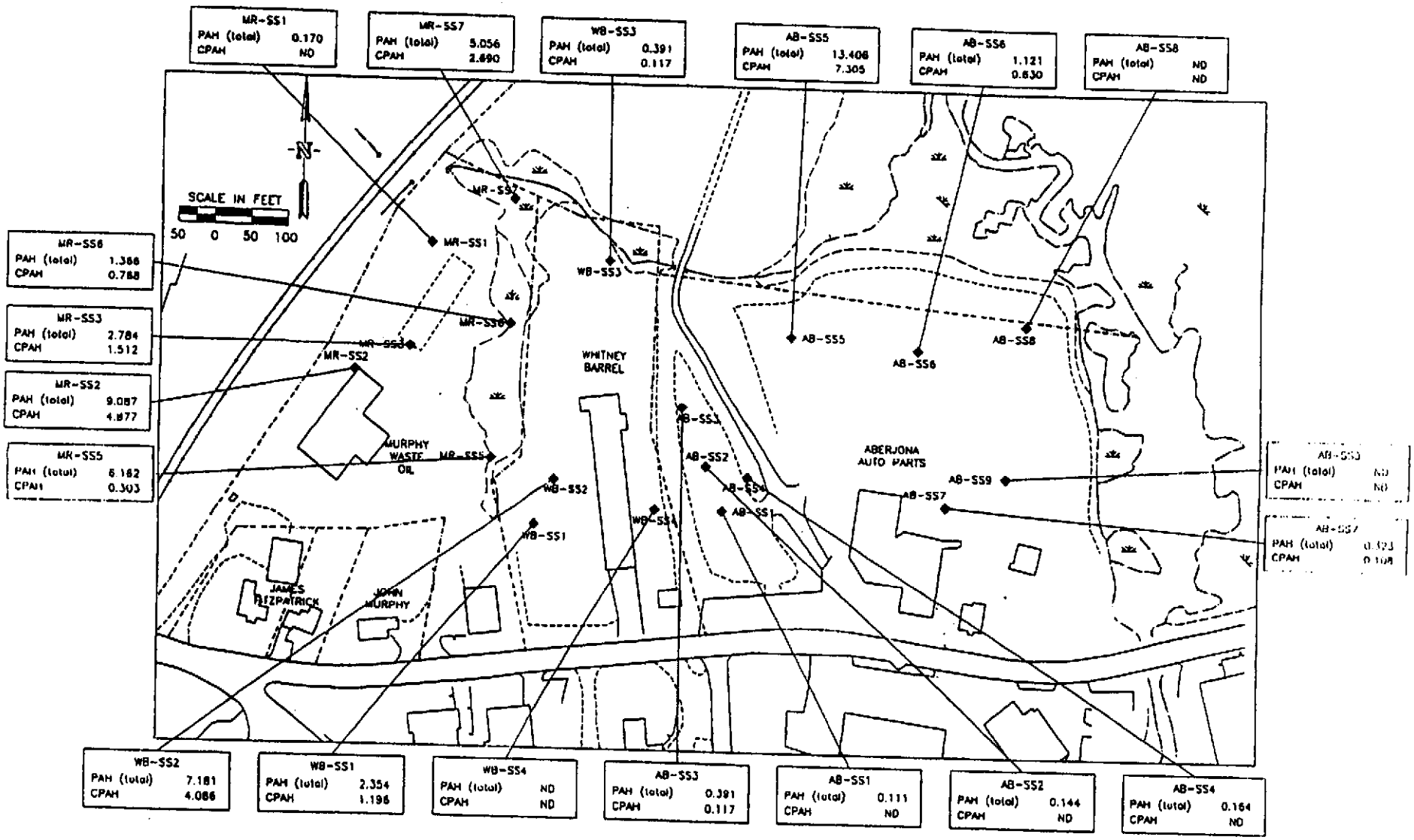
Data Summary Tables and Figure Excerpts – RETEC 1994 Draft Remedial Investigation – Southwest Properties



SURFACE SOIL VOC RESULTS

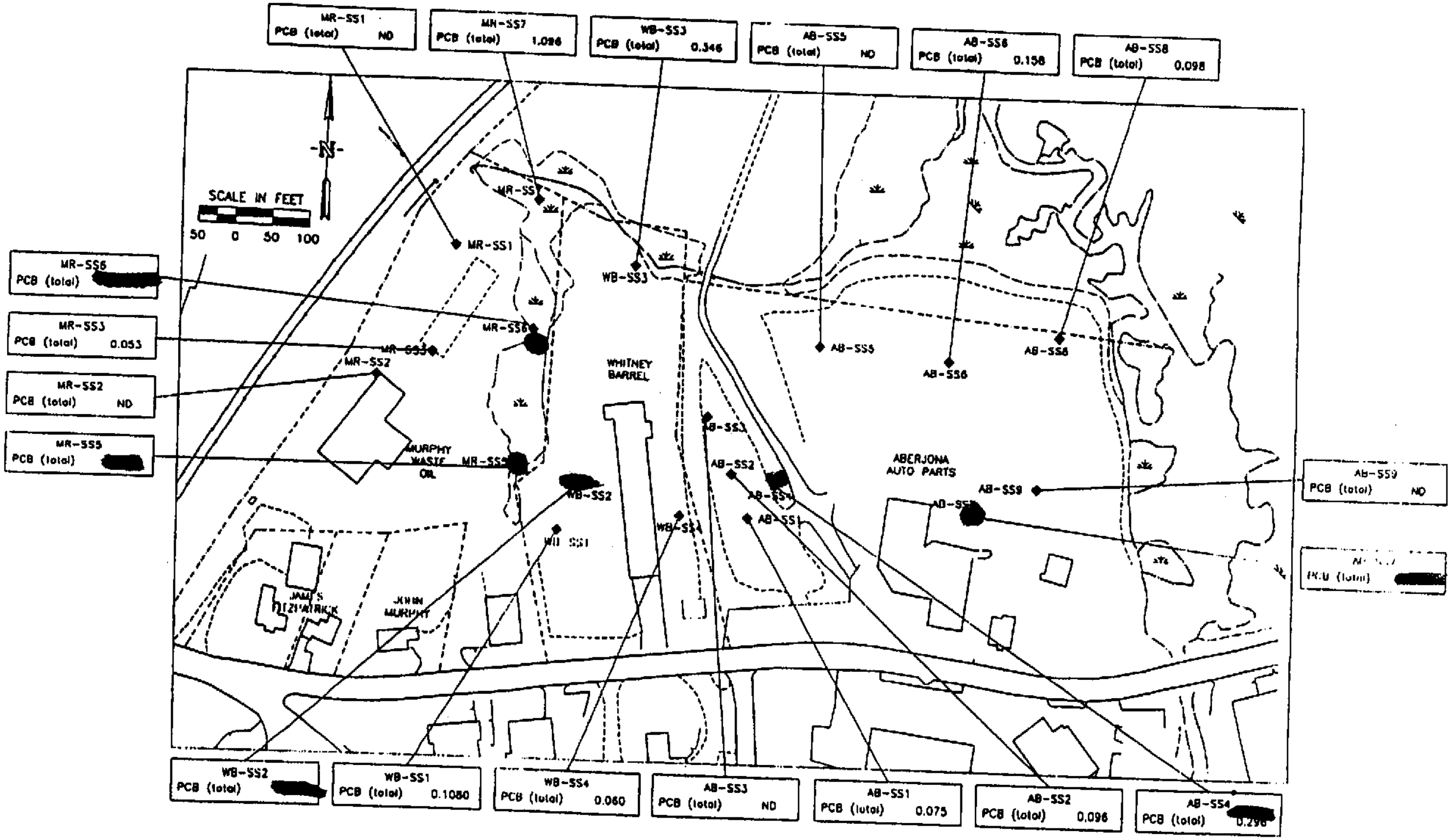
All Values are in ug/kg

06815003
FIGURE
5-1



SURFACE SOIL SVOC RESULTS

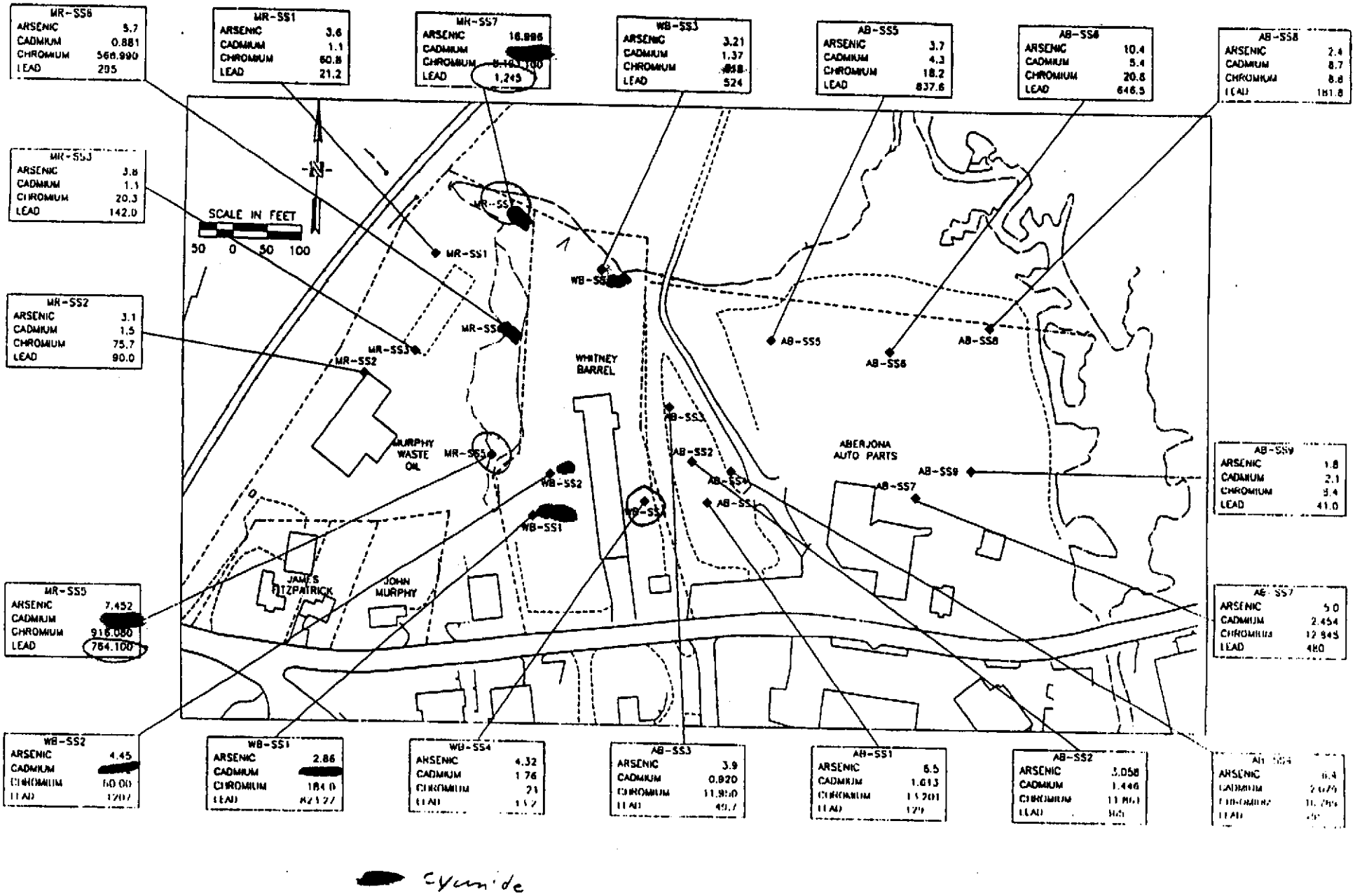
All Values are in mg/kg



Highest — PCB

SURFACE SOIL PCB RESULTS

All Values are in mg/kg



Cyanide

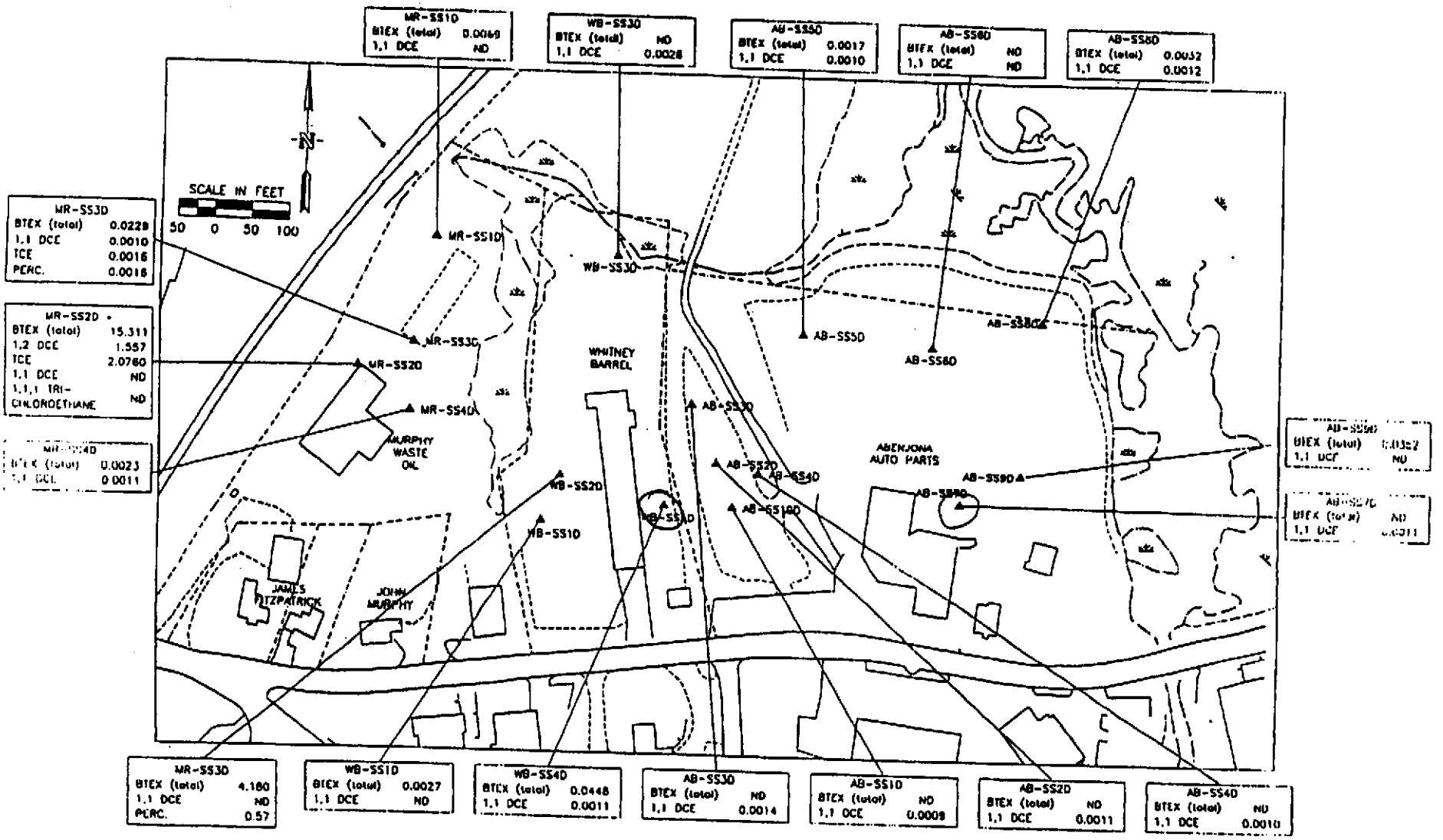
SURFACE SOIL METALS RESULTS

All Values are in mg/kg

0651S003

FIGURE

5-4



* 1,2 DCE & TCE Not detected except as noted

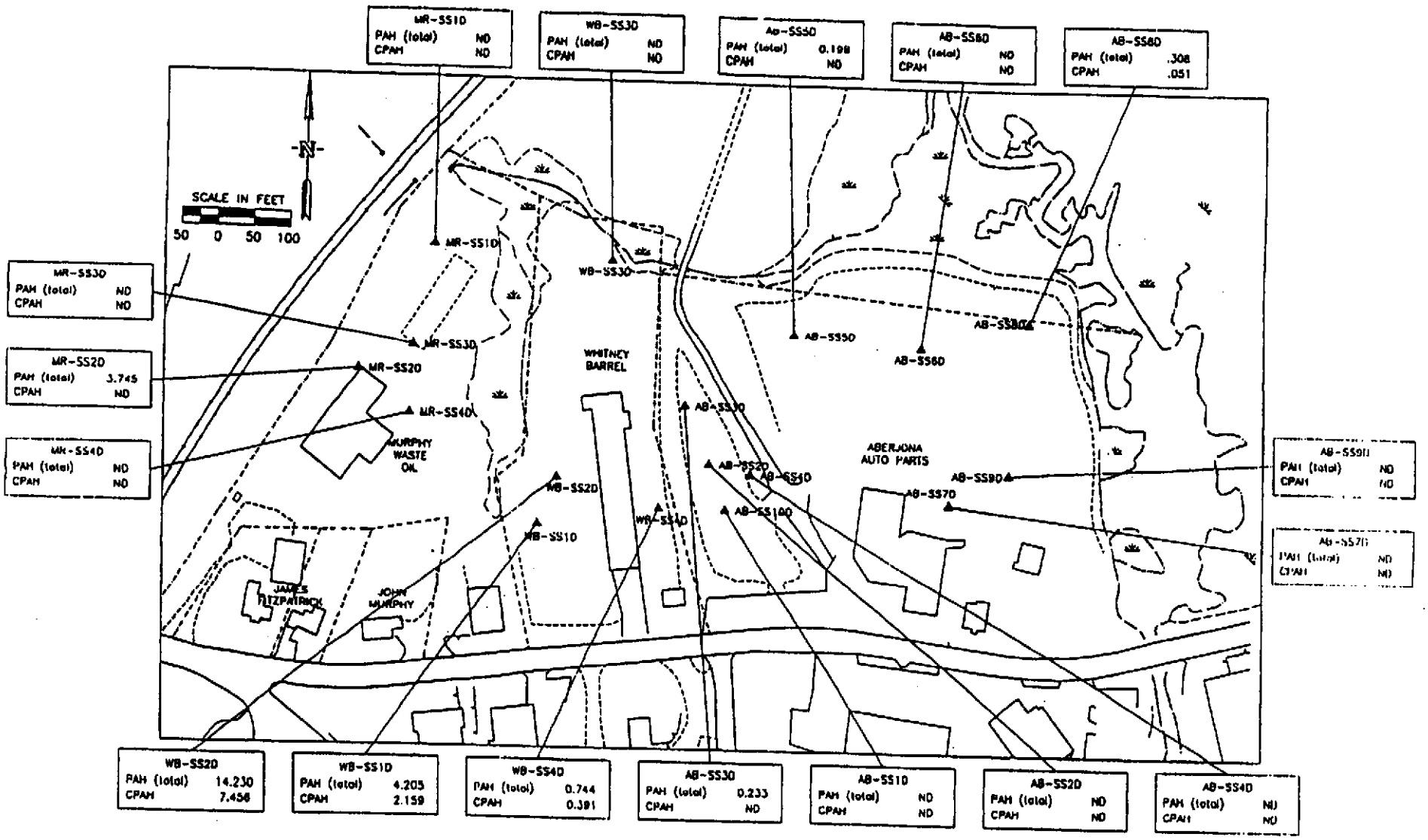
SUBSURFACE SOIL VOC RESULTS

All Values are in mg/kg

0631S003

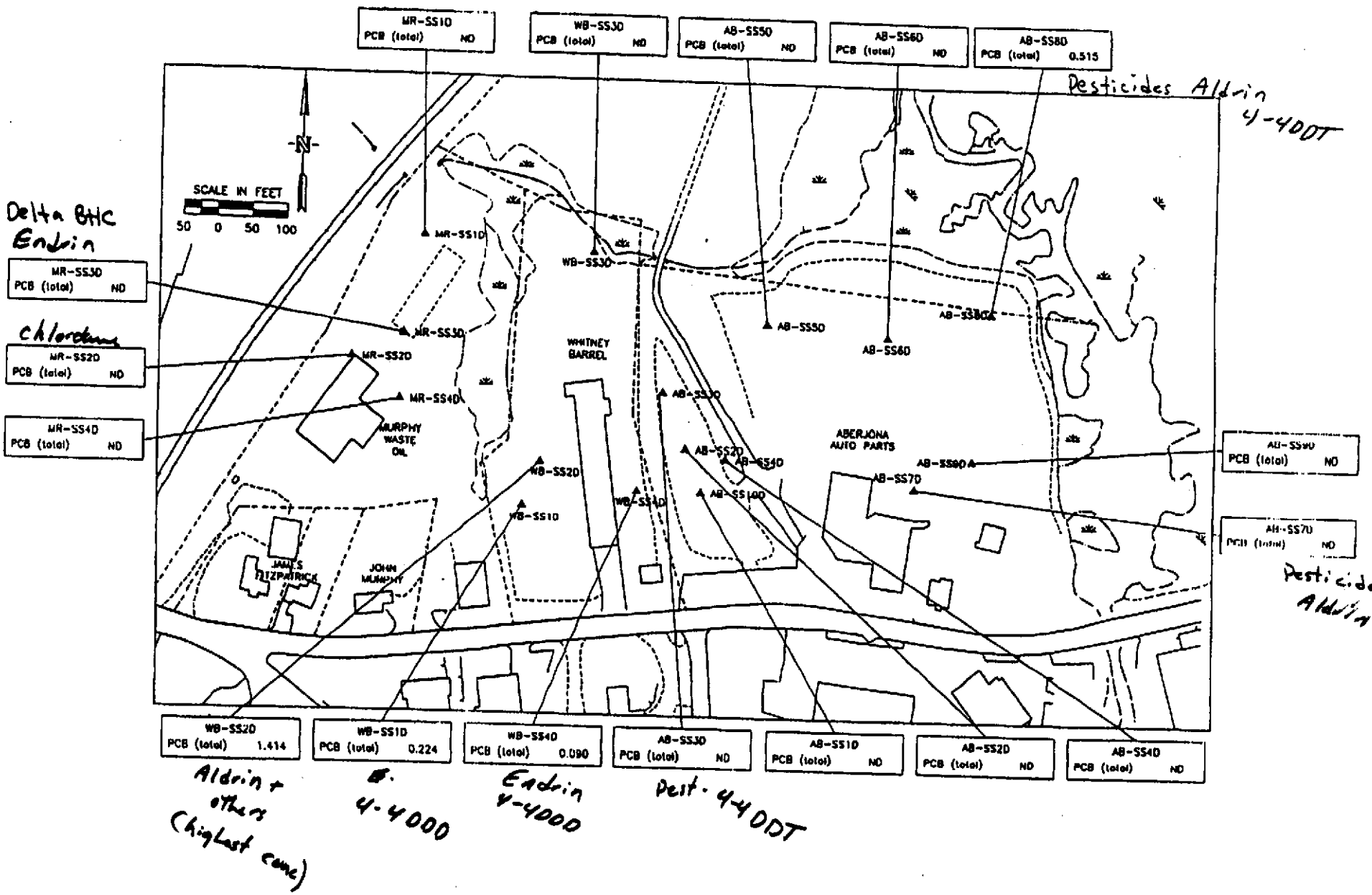
FIGURE

5-5



SUBSURFACE SOIL SVOC RESULTS

All Values are in mg/kg



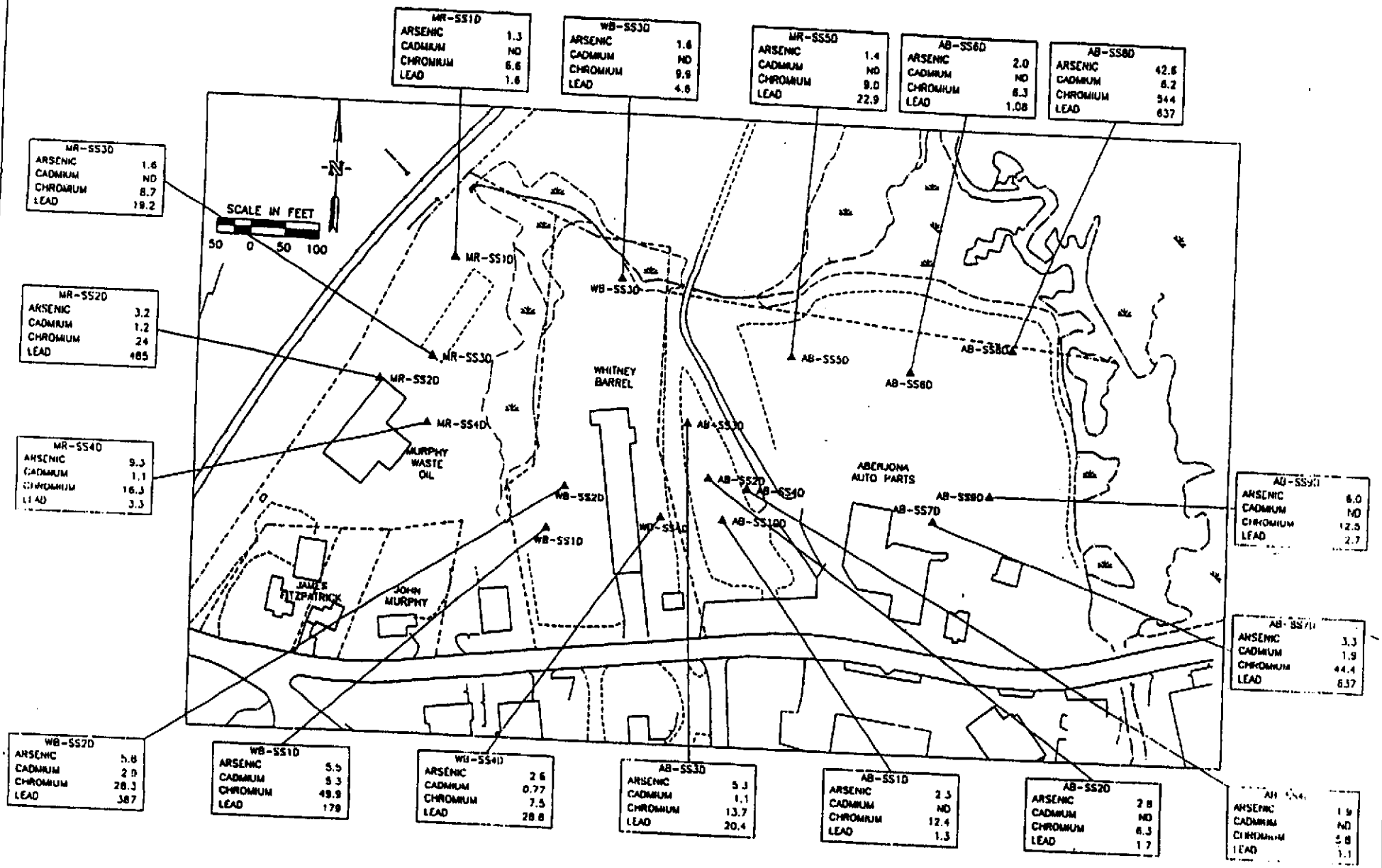
SUBSURFACE SOIL PCB RESULTS

All Values are in mg/kg

0681S003

FIGURE

5-7



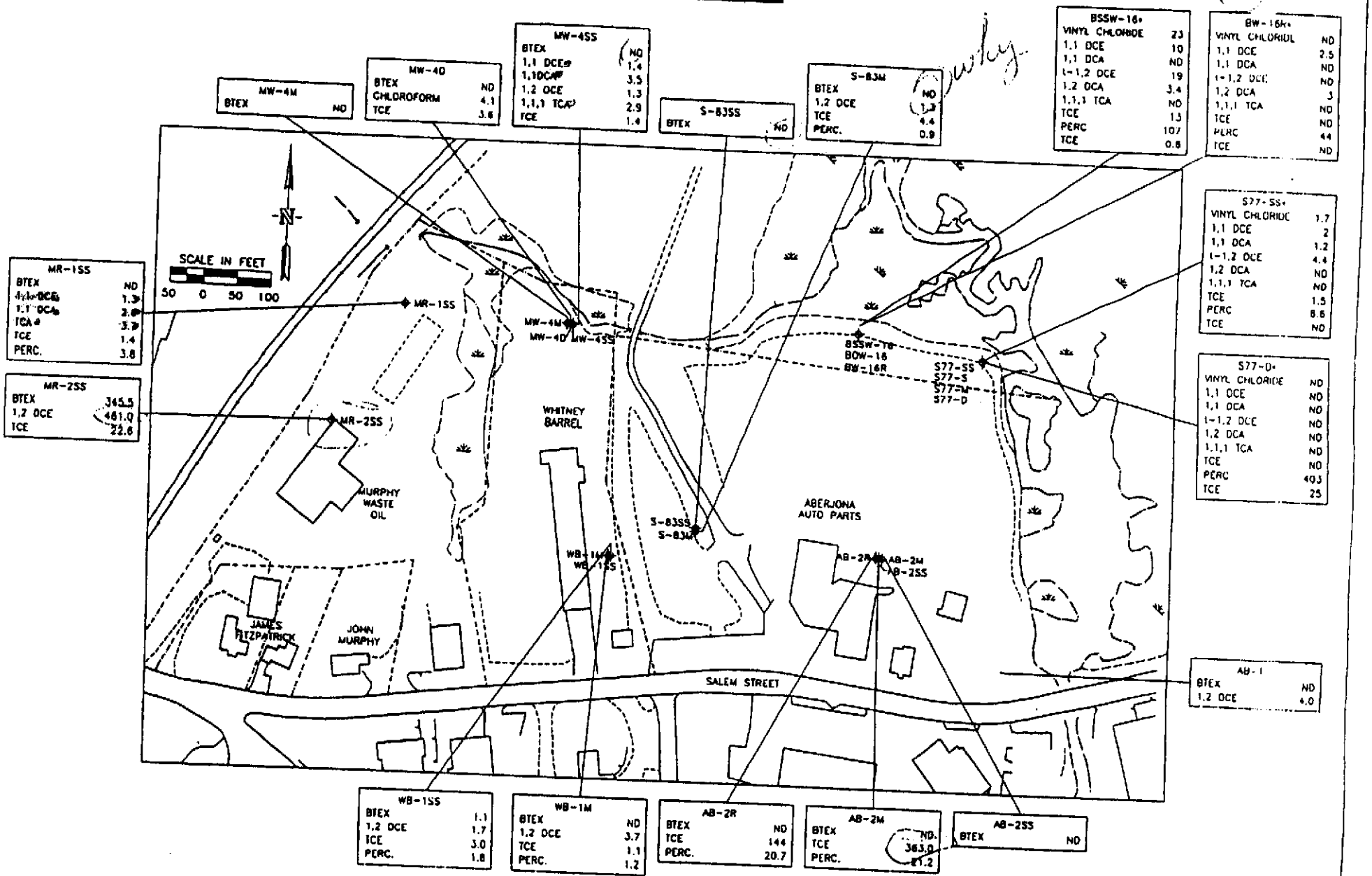
SUBSURFACE SOIL METALS RESULTS

All Values are in mg/kg

0051003

FIGURE

5-8



* From Wildwood property RD/RA August 1993

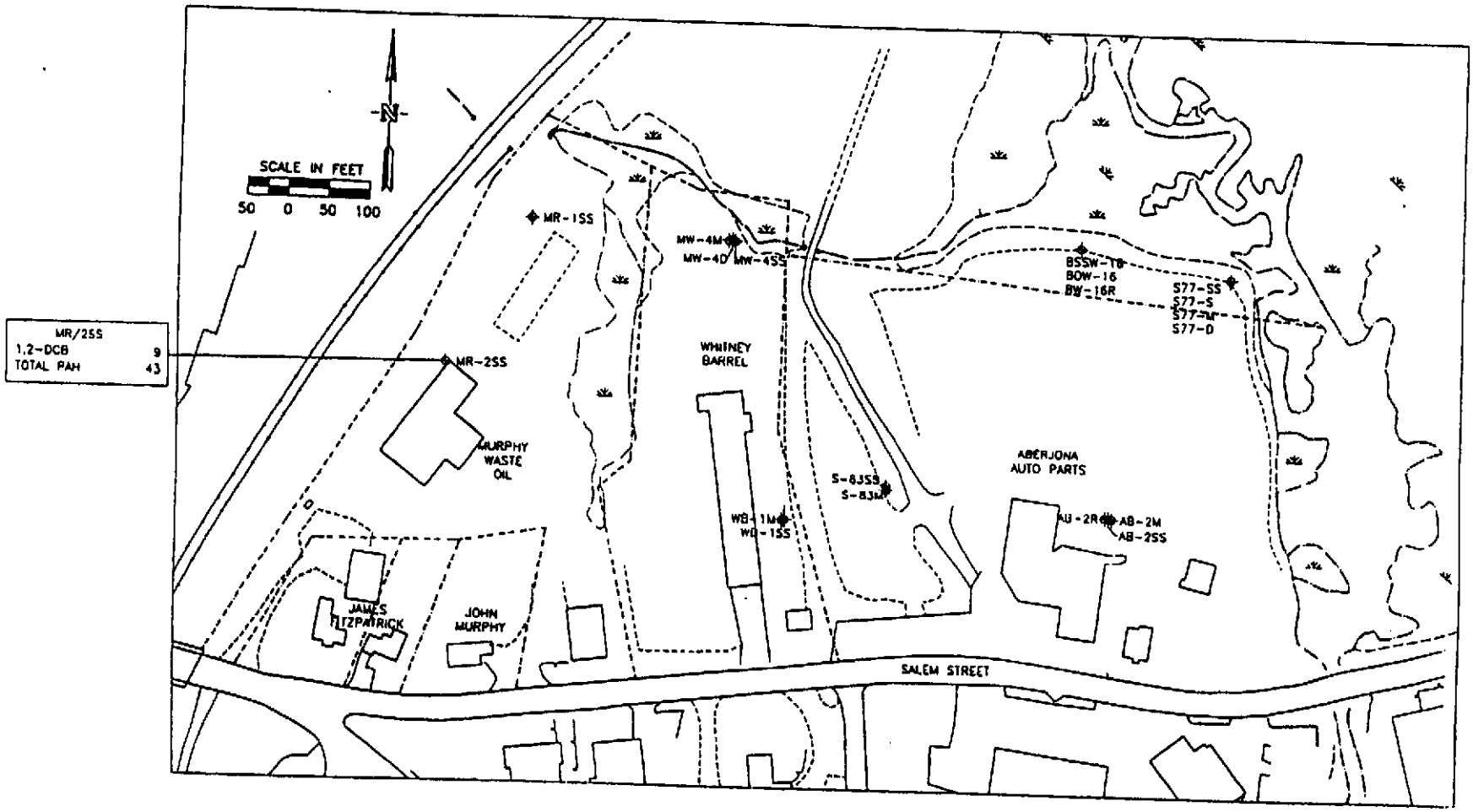
GROUNDWATER VOC RESULTS

All Values are in ug/L

0681S003

FIGURE

5-9



* Pesticides not detected except as noted.

DETECTED GROUNDWATER SVOC AND PESITICIDE RESULTS

All Values are in ug/L

0681S003

FIGURE

5-10

Acetone	[redacted]	0.0089 UJ	[redacted]	0.0051 UJ	[redacted]	0.0083 UJ	[redacted]	0.0091 UJ	[redacted]			0.0090 UJ	[redacted]	0.0144 UJ	[redacted]	0.0330 UJ	[redacted]	0
Carbon Disulfide	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
1,1-Dichloroethene		0.0012 J		0.0011 J	<	0.0028 U		0.0011 J		0.0048 [redacted]		0.0017 J	<	0.0026 U		0.0009 J		0
1,1-Dichloroethane	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
1,2-Dichloroethene (total)	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
Chloroform	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
1,2-Dichloroethane	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
2-Butanone	[redacted]	0.0108 UJ	[redacted]	0.0047 UJ	[redacted]	0.0053 UJ	[redacted]	0.0057 UJ	[redacted]	0.0319 [redacted]	[redacted]	0.0061 UJ	[redacted]	0.0046 UJ	[redacted]	0.0058 UJ	[redacted]	0
1,1,1-Trichloroethane	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
Carbon Tetrachloride	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
Bromodichloromethane	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
1,2-Dichloropropane	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
cis-1,3-Dichloropropene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
Trichloroethene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
Dibromochloromethane	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
1,1,2-Trichloroethane	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
Benzene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0
trans-1,3-Dichloropropene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0.
Bromoform	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0.
4-Methyl-2-Pentanone	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 [redacted]	<	0.0026 U	<	0.0026 [redacted]	<	0.
[illegible]exanone	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 [redacted]	<	0.0026 U	<	0.0026 [redacted]	<	0.
[illegible]achloroethene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0.
1,1,2,2-Tetrachloroethane	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0.
Toluene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U		0.0223 [redacted]	<	0.0025 U	<	0.0026 U		0.0014 J	<	0.
Chlorobenzene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U	<	0.0133 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0.
Ethylbenzene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U		0.0160 [redacted]	<	0.0025 U	<	0.0026 U		0.0015 J	<	0.
Styrene	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U		0.0027 [redacted]	<	0.0025 U	<	0.0026 U	<	0.0026 U	<	0.
Xylene (total)	<	0.0027 U	<	0.0027 U	<	0.0028 U	<	0.0030 U		[redacted]	<	0.0025 U	<	0.0026 U		0.0080	<	0.

Notes:
DUP-LAB is a duplicate sample of AB-SS9
All values in mg/kg

Acetone	[redacted]	0.0080 UJ	[redacted]	0.0070 UJ	[redacted]	0.0110 UJ	[redacted]	UJ	[redacted]	UJ	[redacted]	UJ	[redacted]	0.0230 U	[redacted]	0.0083 UJ	[redacted]							
Carbon Disulfide	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
1,1-Dichloroethene	<	0.0025 U		**0.0008 J**		**0.0011 J**	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
1,1-Dichloroethane	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
1,2-Dichloroethene (total)	<	0.0025 U		**0.0049**	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Chloroform	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
1,2-Dichloroethane	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
2-Butanone	<	0.0025 UJ	[redacted]	0.0051 UJ	[redacted]	0.0058 UJ	[redacted]	U		[redacted]	U		[redacted]	U	[redacted]	0.0038	[redacted]	0.0022 UJ	<					
1,1,1-Trichloroethane	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0000 U	<					
Carbon Tetrachloride	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Bromodichloromethane	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
1,2-Dichloropropane	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
cis-1,3-Dichloropropene	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Trichloroethene	<	0.0025 U		**0.0018 J**	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Dibromochloromethane	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
1,1,2-Trichloroethane	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Benzene	<	0.0025 U	<	0.0024 U		**0.0005 J**	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
trans-1,3-Dichloropropene	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Bromoform	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
4-Methyl-2-Pentanone	<	0.0025 UJ	<	0.0024 UJ	<	0.0025 UJ	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
2-Hexanone	<	0.0025 [redacted]	<	0.0024 [redacted]	<	0.0025 [redacted]	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Tetrachloroethene	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
1,1,2,2-Tetrachloroethane	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Toluene		**0.0013 J**		**0.0012 J**		**0.0077**	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U		0.0017 J	<					
Chlorobenzene	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Ethylbenzene		**0.0016 J**	<	0.0024 U		**0.0037**	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Styrene	<	0.0025 U	<	0.0024 U	<	0.0025 U	<	0.0070 U	<	[redacted]	U	<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					
Xylene (total)		**0.0152**		**0.0043**		**0.0195**	<	0.0070 U	<	0.0030 U		<	[redacted]	U	<	0.0020 U	<	0.0020 U	<					

Notes:
DUP-LAB is a duplicate sam
All values in mg/kg

4-Methylphenol	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
N-Nitroso-di-n-propylamine	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Hexachloroethane	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Nitrobenzene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Isophorone	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2-Nitrophenol	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2,4-Dimethylphenol	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
bis(2-chloroethoxy)methane	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2,4-Dichlorophenol	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
1,2,4-Trichlorobenzene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Naphthalene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		0.780	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
4-Chloroaniline	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Hexachlorobutadiene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
4-Chloro-3-methylphenol	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2-Methylnaphthalene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		1.418			0.035	J	<	0.358	U	<	0.347	U	<	0.355	U
Hexachlorocyclopentadiene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2,4,6-Trichlorophenol	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2,4,5-Trichlorophenol	<	0.926	U	<	0.896	U	<	0.958	U	<	1.029	U	<	1.773	U	<	0.877	U	<	0.896	U	<	0.868	U	<	0.887	U
2-Chloronaphthalene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2-Nitroaniline	<	0.926	U	<	0.896	U	<	0.958	U	<	1.029	U	<	1.773	U	<	0.877	U	<	0.896	U	<	0.868	U	<	0.887	U
Dimethylphthalate	<	0.370	U	<	0.358	U	<	0.383	U		0.041	J	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Acenaphthylene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		0.142	J	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2,6-Dinitrotoluene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
3-Nitroaniline	<	0.926	UJ	<	0.896	UJ	<	0.958	UJ	<	1.029	UJ	<	1.773	UJ	<	0.877	U	<	0.896	UJ	<	0.868	UJ	<	0.887	U
Acenaphthene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		0.071	J	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2,4-Dinitrophenol	<	0.926	U	<	0.896	U	<	0.958	U	<	1.029	U	<	1.773	U	<	0.877	U	<	0.896	U	<	0.868	U	<	0.887	U
4-Nitrophenol	<	0.926	U	<	0.896	U	<	0.958	U	<	1.029	U	<	1.773	U	<	0.877	U	<	0.896	U	<	0.868	U	<	0.887	U
Dibenzofuran	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		0.142	J	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
2,4-Dinitirotoluene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Diethylphthalate	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
4-Chlorophenyl-phenylether	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Fluorene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		0.142	J	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
4-Nitroaniline	<	0.926	U	<	0.896	U	<	0.958	U	<	1.029	U	<	1.773	U	<	0.877	U	<	0.896	U	<	0.868	U	<	0.887	U
4,6-Dinitro-2-methyphenol	<	0.926	U	<	0.896	U	<	0.958	U	<	1.029	U	<	1.773	UJ	<	0.877	UJ	<	0.896	U	<	0.868	U	<	0.887	U
N-Nitrosodiphenylamine (1)	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	UJ	<	0.351	UJ	<	0.358	U	<	0.347	U	<	0.355	U
4-Bromophenyl-phenylether	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	UJ	<	0.351	UJ	<	0.358	U	<	0.347	U	<	0.355	U
Hexachlorobenzene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	UJ	<	0.351	UJ	<	0.358	U	<	0.347	U	<	0.355	U
Pentachlorophenol	<	0.926	U	<	0.896	U	<	0.958	U	<	1.029	U	<	1.773	UJ	<	0.877	UJ	<	0.896	U	<	0.868	U	<	0.355	U
Phenanthrene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		1.277	J		0.035	J		0.036	J	<	0.347	U	<	0.355	U
Anthracene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		0.284	J	<	0.351	UJ	<	0.358	U	<	0.347	U	<	0.355	U
Carbazole	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	UJ	<	0.351	UJ	<	0.358	U	<	0.347	U	<	0.355	U
Di-n-butylphthalate		0.074	J		0.108	J		0.038	J		0.123	J		0.142	J		0.211	J		0.072	J		0.111	J	<	0.355	U
Fluoranthene		0.037	J		0.072	J		0.077	J		0.082	J		1.702	J		0.070	J		0.108	J	<	0.347	U	<	0.355	U
Pyrene		0.074	J		0.072	J		0.115	J		0.082	J		1.277			0.140	J		0.072	J	<	0.347	U	<	0.355	U
Butylbenzylphthalate		0.593			0.573			0.038	J		0.288	J		0.638	J		0.211	J		0.072	J	<	0.347	U	<	0.355	U
3,3'-Dichlorobenzidine	<	0.370	UJ	<	0.358	UJ	<	0.383	UJ	<	0.412	UJ	<	0.709	U	<	0.351	UJ	<	0.358	UJ	<	0.347	UJ	<	0.355	U
Benzo(a)anthracene	<	0.370	U	<	0.358	U		0.380	J	<	0.412	U		1.064			0.070	J		0.036	J	<	0.347	U	<	0.355	U
Chrysene	<	0.370	U	<	0.358	U		0.077	J	<	0.412	U		1.489			0.105	J		0.072	J	<	0.347	U	<	0.355	U
bis(2-ethylhexyl)phthalate		1.111	U	<	0.358	U	<	0.383	U	<	0.412	U		2.624	U		0.947	UJ	<	0.358	U	<	0.347	U	<	0.355	U
Di-n-octylphthalate		0.778		<	0.358	U	<	0.383	U	<	0.412	U		0.071	J	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Benzo(b)fluoranthene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		1.560			0.140	J	<	0.358	U	<	0.347	U	<	0.355	U
Benzo(k)fluoranthene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		1.064			0.070	J	<	0.358	U	<	0.347	U	<	0.355	U
Benzo(a)pyrene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		1.064			0.070	J	<	0.358	U	<	0.347	U	<	0.355	U
Indeno(1,2,3-cd)pyrene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		1.064			0.175	J	<	0.358	U	<	0.347	U	<	0.355	U
Dibenz(a,h)anthracene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U	<	0.709	U	<	0.351	U	<	0.358	U	<	0.347	U	<	0.355	U
Benzo(g,h,i)perylene	<	0.370	U	<	0.358	U	<	0.383	U	<	0.412	U		1.206			0.246	J	<	0.358	U	<	0.347	U	<	0.355	U

2,2'-oxybis(1-Chloropropane)	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 UJ	<	0.427 UJ	<	
4-Methylphenol	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
N-Nitroso-di-n-propylamine	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Hexachoroethane	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Nitrobenzene	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Isophorone	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2-Nitrophenol	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2,4-Dimethylphenol	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
bis(2-chloroethoxy)methane	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2,4-Dichlorophenol	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
1,2,4-Trichlorobenzene	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Naphthalene	<	0.340 U	<	[redacted] U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
4-Chloroaniline	<	0.340 UJ	<	0.351 UJ	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Hexachlorobutadiene	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
4-Chloro-3-methylphenol	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2-Methylnaphthalene	<	0.340 U		0.035 J		0.069 J	<	1.010 U	<	0.427 U	<	1
Hexachlorocyclopentadiene	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2,4,6-Trichlorophenol	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2,4,5-Trichlorophenol	<	0.850 U	<	0.877 U	<	0.859 U	<	2.525 U	<	1.068 U	<	2
2-Chloronaphthalene	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2-Nitroaniline	<	0.850 U	<	0.877 U	<	0.859 U	<	2.525 U	<	1.068 U	<	2
Dimethlylphthalate	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U		0.043 J	<	1
Acenaphthylene	<	0.340 U		0.070 J	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2,6-Dinitrotoluene	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
3-Nitroanfline	<	0.850 U	<	0.877 U	<	0.859 UJ	<	2.525 UJ	<	1.068 UJ	<	2
Acenaphthene	<	0.340 U		0.070 J	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2,4-Dinitrophenol	<	0.850 U	<	0.877 U	<	0.859 U	<	2.525 U	<	1.068 U	<	2
4-Nitrophenol	<	0.850 U	<	0.877 U	<	0.859 U	<	2.525 U	<	1.068 U	<	2
Dibenzofuran	<	0.340 U		0.035 J	<	0.344 U	<	1.010 U	<	0.427 U	<	1
2,4-Dinitirotoluene	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Diethylphthalate	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
4-Chlorophenyl-phenylether	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Fluorene	<	0.340 U		0.070 J	<	0.344 U	<	1.010 U	<	0.427 U	<	1
4-Nitroanilline	<	0.850 U	<	0.877 U	<	0.859 U	<	2.525 U	<	1.068 U	<	2
4,6-Dinitro-2-methyphenol	<	0.850 U	<	0.877 U	<	0.859 U	<	2.525 U	<	1.068 U	<	2
N-Nitrosodiphenylamine (1)	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
4-Bromophenyl-phenylether	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Hexachlorobenzene	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Pentachlorophenol	<	0.850 U	<	0.877 U	<	0.859 U	<	2.525 U	<	1.068 U	<	2
Phenanthrene		0.034 J	<	0.772 U		0.275 J		0.202 J		0.128 J		0
Anthracene	<	0.340 U		0.140 J	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Carbazole	<	0.340 U		0.070 J	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Di-n-butylphthalate	<	0.340 U		0.070 J	<	0.344 U		0.404 J		0.128 J	<	1
Fluoranthene		0.068 J		1.193		0.378		0.303 J		0.214 J		0
Pyrene		0.068 J		1.158		0.344		0.303 J		0.171 J		0
Butylbenzylphthalate	<	0.340 U		0.035 J	<	0.344 U	<	1.010 U	<	0.427 U	<	1
3,3'-Dichlorobenzidine	<	0.340 UJ	<	0.351 UJ	<	0.344 UJ	<	1.010 UJ	<	0.427 UJ	<	1
Benzo(a)anthracene	<	0.340 U		0.702		0.172 J		0.101 J		0.128 J		0
Chrysene	<	0.340 U		0.912		0.309 U		0.202 J		0.214 J		0
bis(2-ethylhexyl)phthalate	[redacted]	0.442 U	<	0.351 U	<	0.344 U		5.051 J	<	[redacted] U	<	1
Di-n-octylphthalate	<	0.340 U	<	0.351 U	<	0.344 U	<	1.010 U	<	0.427 U	<	1
Benzo(b)fluoranthene	<	0.340 U		1.018		0.378 U	<	1.010 U		0.171 J		0
Benzo(k)fluoranthene	<	0.340 U		0.596		0.206 J	<	1.010 U		0.085 J		0
Benzo(a)pyrene	<	0.340 U		0.807		0.069 J	<	1.010 U		0.085 J		0.
Indeno(1,2,3-cd)pyrene	<	0.340 U		0.702		0.309 J	<	1.010 U		0.085 J		0.
Dibenz(a,h)anthracene	<	0.340 U		0.140 J		0.069 J	<	1.010 U	<	0.427 U	<	1
Benzo(g,h,i)perylene	<	0.340 U		0.737		0.275 J	<	1.010 U		0.085 J		0.

dieldrin	<	0.0037 UJ	<	0.0036 UJ	<	0.0038 UJ	<	0.0041 UJ	<	0.0035 U	<	0.0035 U	<	0.0036 UJ	<	0.0035 U	<	0.0035 U
4,4'-DDE		0.0046		0.0031 J	<	0.0038 U	<	0.0041 U	<	0.0035 U	<	0.0035 U	<	0.0036 U	<	0.0035 U	<	0.0035 U
Endrin		0.0030 J	<	0.0036 UJ	<	0.0038 UJ	<	0.0041 UJ	<	0.0035 U	<	0.0035 U	<	0.0036 UJ	<	0.0035 U	<	0.0035 U
Endosulfan II	<	0.0037 U	<	0.0036 U	<	0.0038 U	<	0.0041 U	<	0.0035 U	<	0.0035 U		0.0023 J	<	0.0035 U	<	0.0035 U
4,4'-DDD		0.0167 J	<	0.0036 U	<	0.0038 U		0.0046	<	0.0035 U	<	0.0035 U	<	0.0036 U	<	0.0035 U	<	0.0035 U
Endosulfan Sulfate	<	0.0037 U	<	0.0036 U	<	0.0038 U	<	0.0041 U	<	0.0035 U	<	0.0035 U	<	0.0036 U	<	0.0035 U	<	0.0035 U
4,4'-DDT		0.0116 J	<	0.0036 U	<	0.0038 U		0.0107 J	<	0.0035 U	<	0.0035 U		0.0075 J		0.0041 J	<	0.0035 U
Methoxychlor	<	0.0180 U	<	0.0180 U	<	0.0190 U	<	0.0200 U	<	0.0180 U	<	0.0170 U	<	0.0180 U	<	0.0170 U	<	0.0180 U
Endrin Ketone	<	0.0037 U	<	0.0036 U	<	0.0038 U	<	0.0041 U	<	0.0035 U	<	0.0035 U	<	0.0036 U	<	0.0035 U	<	0.0035 U
Endring aldehyde	<	0.0037 U	<	0.0036 U	<	0.0038 U	<	0.0041 U	<	0.0035 U	<	0.0035 U	<	0.0036 U	<	0.0035 U	<	0.0035 U
alpha-chlordane		0.0040 J	<	0.0018 U	<	0.0019 U	<	0.0020 U	<	0.0018 U	<	0.0017 U		0.0016 J	<	0.0017 U	<	0.0018 U
gamma-chlordane		0.0030 J	<	0.0018 U	<	0.0019 U		0.0049	<	0.0018 U	<	0.0017 U		0.0033	<	0.0017 U	<	0.0018 U
Toxaphene	<	0.1850 U	<	0.1170 U	<	0.1910 U	<	0.2060 U	<	0.1770 U	<	0.1750 U	<	0.1790 U	<	0.1730 U	<	0.1770 U
Aroclor 1016	<	0.0370 U	<	0.0350 U	<	0.0380 U	<	0.0410 U	<	0.0350 U	<	0.0350 U	<	0.0360 U	<	0.0350 U	<	0.0350 U
Aroclor 1221	<	0.0740 U	<	0.0710 U	<	0.0760 U	<	0.0820 U	<	0.0710 U	<	0.0700 U	<	0.0720 U	<	0.0690 U	<	0.0710 U
Aroclor 1232	<	0.0370 U	<	0.0350 U	<	0.0380 U	<	0.0410 U	<	0.0350 U	<	0.0350 U	<	0.0360 U	<	0.0350 U	<	0.0350 U
Aroclor 1242	<	0.0370 U	<	0.0350 U	<	0.0380 U	<	0.0410 U	<	0.0350 U		0.1060	<	0.0360 U		0.0420	<	0.0350 U
Aroclor 1248	<	0.0370 U	<	0.0350 U	<	0.0380 U	<	0.0410 U	<	0.0350 U	<	0.0350 U	<	0.0360 U	<	0.0350 U	<	0.0350 U
Aroclor 1254	<	0.0370 U	<	0.0350 U	<	0.0380 U		0.2960	<	0.0350 U	<	0.0350 U		0.1790	<	0.0350 U	<	0.0350 U
Aroclor 1260		0.0750		0.0960	<	0.0380 U	<	0.0410 U	<	0.0350 U		0.0520		0.0830		0.0560	<	0.0350 U

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endosulfan I	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0050 U	< 0.0021 U	< 0.
dieldrin	< 0.0034 U	< 0.0035 U	< 0.0034 U	< 0.0101 UJ	< 0.0043 UJ	0.
4,4'-DDE	< 0.0034 U	< 0.0035 U	< 0.0034 U	< 0.0101 U	**0.0078**	**0.**
Endrin	**0.0030 J**	**0.0067 J**	< 0.0034 U	< 0.0101 UJ	< 0.0043 UJ	< 0.
Endosulfan II	< 0.0034 U	< 0.0035 U	< 0.0034 U	< 0.0101 U	< 0.0043 U	< 0.
4,4'-DDD	< 0.0034 U	< 0.0035 U	< 0.0034 U	**0.0374 J**	[redacted] **0.0483** [redacted]	**0.**
Endosulfan Sulfate	< 0.0034 U	< 0.0035 U	< 0.0034 U	< 0.0101 U	< 0.0043 U	< 0.
4,4'-DDT	< 0.0034 U	< 0.0035 U	< 0.0034 U	**0.0169 J**	**0.1200 J**	**0.**
Methoxychlor	< 0.0170 U	< 0.0170 U	< 0.0170 U	< 0.0500 U	< 0.0210 U	< 0.
Endrin Ketone	< 0.0034 U	< 0.0035 U	< 0.0034 U	< 0.0101 U	< 0.0043 U	< 0.
Endring aldehyde	< 0.0034 U	< 0.0035 U	< 0.0034 U	[redacted] **0.0177** [redacted]	< 0.0043 U	**0.**
alpha-chlordane	**0.0520**	**0.0164 J**	< 0.0017 U	**0.3170** [redacted]	**0.8920** [redacted]	**0.**
gamma-chlordane	**0.0290**	**0.0097 J**	< 0.0017 U	**0.2510** [redacted]	**1.9770** [redacted]	**0.**
Toxaphene	< 0.1700 U	< 0.1750 U	< 0.1710 U	< 0.0503 U	< 0.2140 U	< 0.
Aroclor 1016	< 0.0340 U	< 0.0350 U	< 0.0340 U	< 0.1010 U	< 0.0430 U	< 0.
Aroclor 1221	< 0.0680 U	< 0.0700 U	< 0.0690 U	< 0.2010 U	< 0.0850 U	< 0.
Aroclor 1232	< 0.0340 U	< 0.0350 U	< 0.0340 U	< 0.1010 U	< 0.0430 U	< 0.
Aroclor 1242	< 0.0340 U	< 0.0350 U	< 0.0340 U	< 0.1010 U	< 0.0430 U	< 0.
Aroclor 1248	< 0.0340 U	< 0.0350 U	< 0.0340 U	< 0.1010 U	< 0.0430 U	< 0.
Aroclor 1254	< 0.0340 U	< 0.0350 U	< 0.0340 U	**5.1220 J**	[redacted]	**0.**
Aroclor 1260	< 0.0340 U	< 0.0350 U	**0.0530**	**2.1570 J**	[redacted]	**0.**

Cadmium	1.6	1.4 B	0.92	2.1	4.3	5.4	2.5	8.7	2.1	53	5.9 J	5.1 J	1.4 J	
Calcium	4,356	1,409	844	3,006	9,301	5,765	3,839	6,452	9,155	5,839	7,935 J	3,896 J	1,399 J	
Chromium	13.2 J	11.9 J	[redacted] J	16.8 J	18.2	20.8	12.8 J	8.8	8.4	15.7	184 J	60.1 J	618 J	
Cobalt	7.2 B	3.8 B	6.9 B	5.8 B	8.4	11.1	9.8	12.1	20.2	12.6	7.5	8.9	2.7 B	
Copper	26.7	92.6	16.4	46.0	106	104	40.6	85.4	20.2	59.7	54.8 J	68.9 J	21.1 J	
Iron	17,161 J	16,923 J	12,460 J	13,287 J	35,395	39,064	24,103 J	32,469	36,838	32,590	34,925 J	44,810 J	13,928 J	
Lead	129 J	365 J	49.7 J	195 J	838	646	480 J	182	[redacted] J	892 J	823 J	1207 J	524 J	
Magnesium	3,491	1,548	2,590	2,175	4,535	4,918	3,522	4,713	7,691	5,376	2,621	2,843	1,296	
Manganese	205 J	132 J	211 J	182 J	269	280	192 J	363	315	249	294 J	344 J	104 J	
Mercury	0.18	[redacted]	< 0.09 U	< 0.09 U	< 0.089 U	< 0.078 U	[redacted] 0.12	< 0.093 U	< 0.093 U	[redacted] 0.094	0.29 J	0.55 J	< 0.09 [redacted]	
Nickel	7.2	10.4	7.7	16.0	51.8	29.3	10.7	29.6	13.1	25.3	5.4 J	27.2 J	11.6 J	
Potassium	682 B	266 B	480 B	523 B	666 B	980	1,087	877	2,458	1,142	806	762	279 B	
Selenium	< 0.45 U	[redacted] 0.44 [redacted]	< 0.47 U	< 0.50 U	< 0.49 B	< 0.42 UJ	< 0.44 U	< 0.53 UJ	0.48 UJ	< 0.42 U	< 0.44 UJ	< 0.43 UJ	0.53 J	
Silver	0.73 B	< 0.72 U	0.92 B	< 0.80 U	1.5	1.8	0.87 B	1.7	3.6	0.28	< 0.71 U	1.2 B	0.94 B	
Sodium	84.2 B	56.1 B	50.1 B	76.6 B	281 B	152 B	95.7 B	156 B	212 B	190 B	226 B	254 B	51.0 B	
Thallium	< 0.15 U	< 0.15 U	< 0.16 U	< 0.17 U	< 0.1 U	< 0.1 U	< 0.15 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.15 U	< 0.14 U	< 0.16 U	
Vanadium	21.9	10.7	22.1	17.6	28.7 J	31.5 J	22.8	30.0 J	51.7 J	35.1 J	4.4 B	25.0	17.5	
Zinc	85.8	111	[redacted]	147	796	737	143	883	98.1	501 [redacted]	42.1 J	244 J	97.0 J	
Cyanide	< 0.19 U	< 0.21 U	< 0.22 U	< 0.23 U	< 0.20 U	< 0.20 U	< 0.21 UJ	< 0.20 U	< 0.20 U	< 0.20 U	1.8 J	0.56 J	0.36 J	

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Carbon Disulfide	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
1,1-Dichloroethene	0.0009 J	< 0.0030 J	0.0011 J	0.0014 J	0.0010 J	0.0010 J	[redacted] 0.0017 [redacted]	0.0011 J	0.0012 J	< 0.0042
1,1-Dichloroethane	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
1,2-Dichloroethene (total)	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Chloroform	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
1,2-Dichloroethane	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
2-Butanone	[redacted] 0.0069 UJ	[redacted] 0.0060 UJ	[redacted] 0.0053 UJ	[redacted] 0.0044 UJ	[redacted] 0.0102 UJ	[redacted] 0.0061 UJ	[redacted] 0.0070 UJ	[redacted] 0.0068 UJ	[redacted] 0.0082 UJ	[redacted] 0.0175
1,1,1-Trichloroethane	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Carbon Tetrachloride	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Bromodichloromethane	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
1,2-Dichloropropane	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
cis-1,3-Dichloropropene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Trichloroethene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Dibromochloromethane	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
1,1,2-Trichloroethane	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Benzene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
trans-1,3-Dichloropropene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Bromoform	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
4-Methyl-2-Pentanone	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 UJ	< 0.0033 UJ	< 0.0028 U	< 0.0038 UJ	< 0.0042
2-Hexanone	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 UJ	< 0.0033 UJ	< 0.0028 U	< 0.0038 UJ	< 0.0042
Tetrachloroethene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
1,1,2,2-Tetrachloroethane	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Toluene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	0.0010 J	< 0.0033 U	< 0.0028 U	0.0009 J	0.0042
Chlorobenzene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 UJ	< 0.0042
Ethylbenzene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	0.0012 J	0.0039
Styrene	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	< 0.0029 U	< 0.0033 U	< 0.0028 U	< 0.0038 [redacted]	< 0.0042
Xylene (total)	< 0.0030 U	< 0.0030 U	< 0.0029 U	< 0.0028 U	< 0.0028 U	0.0007 J	< 0.0033 U	< 0.0028 U	0.0011 J	0.0271

Notes:
QZ-99 is a duplicate sample of AB-SS1D
All values in mg/kg

Carbon Disulfide	< 0.0029 U	[redacted] 5.190 [redacted]	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
1,1-Dichloroethene	< 0.0029 U	< 5.190 U	**0.0010 J**	**0.0011 J**	< . 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
1,1-Dichloroethane	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
1,2-Dichloroethene (total)	< 0.0029 U	**1.557 J**	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Chloroform	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
1,2-Dichloroethane	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
2-Butanone	0.0066 UJ	**5.190** [redacted]	0.0060 UJ	[redacted] 0.0067 UJ	< 0.0380	[redacted] 0.0220 [redacted]	< 0.0020 U	< 0.0020
1,1,1-Trichloroethane	< 0.0029 U	[redacted] 5.190 [redacted]	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Carbon Tetrachloride	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Bromodichloromethane	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
1,2-Dichloropropane	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
cis-1,3-Dichloropropene	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Trichloroethene	< 0.0029 U	**2.076 J**	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Dibromochloromethane	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
1,1,2-Trichloroethane	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Benzene	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
trans-1,3-Dichloropropene	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Bromoform	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
4-Methyl-2-Pentanone	< 0.0029 UJ	< 5.190 U	< 0.0029 UJ	< 0.0027 UJ	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
2-Hexanone	< 0.0029 [redacted]	< 5.190 U	< 0.0029 [redacted]	< 0.0027 [redacted]	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Tetrachloroethene	< 0.0029 U	< 5.190 U	**0.0016 J**	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
1,1,2,2-Tetrachloroethane	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Toluene	**0.0006 J**	**3.114 J**	**0.0014 J**	**0.0014 J**	< 0.0020 U	0.0017 J	< 0.0020 U	< 0.0020
Chlorobenzene	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Ethylbenzene	< 0.0029 U	**1.557 J**	**0.0060**	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Styrene	< 0.0029 U	< 5.190 U	< 0.0029 U	< 0.0027 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Xylene (total)	**0.0063**	**10.640**	**0.0155**	**0.0009 J**	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020

Notes:
QZ-99 is a duplicate sample
All values in mg/kg

2-Methylphenol	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2,2'-oxybis(1-Chloropropane)	< 0.412 U	< 0.407 [redacted]	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
4-Methylphenol	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
N-Nitroso-di-n-propylamine	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Hexachoroethane	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Nitrobenzene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Isophorone	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2-Nitrophenol	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2,4-Dimethylphenol	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
bis(2-chloroethoxy)methane	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2,4-Dichlorophenol	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
1,2,4-Trichlorobenzene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Naphthalene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
4-Chloroaniline	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 [redacted]	< 0
Hexachlorobutadiene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
4-Chloro-3-methylphenol	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2-Methylnaphthalene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Hexachlorocyclopentadiene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2,4,6-Trichlorophenol	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2,4,5-Trichlorophenol	< 1.029 U	< 1.016 U	< 0.992 U	< 0.969 U	< 0.969 U	< 0.992 U	< 1.174 U	< 1.004 U	< 1.282 U	< 1.515 U	< 0
2-Chloronaphthalene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2-Nitroaniline	< 1.029 U	< 1.016 U	< 0.992 U	< 0.969 U	< 0.969 U	< 0.992 U	< 1.174 U	< 1.004 U	< 1.282 U	< 1.515 U	< 0
Dimethlylphthalate	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Acenaphthylene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2,6-Dinitrotoluene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
3-Nitroaniline	< 1.029 UJ	< 1.016 UJ	< 0.992 UJ	< 0.969 UJ	< 0.969 UJ	< 0.992 U	< 1.174 U	< 1.004 UJ	< 1.282 UJ	< 1.515 U	< 0
Acenaphthene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2,4-Dinitrophenol	< 1.029 U	< 1.016 U	< 0.992 U	< 0.969 U	< 0.969 U	< 0.992 U	< 1.174 U	< 1.004 U	< 1.282 U	< 1.515 U	< 0
4-Nitrophenol	< 1.029 U	< 1.016 U	< 0.992 U	< 0.969 U	< 0.969 U	< 0.992 U	< 1.174 U	< 1.004 U	< 1.282 U	< 1.515 U	< 0
Dibenzofuran	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
2,4-Dinitirotoluene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Diethylphthalate	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	0.079 J	< 0.469 U	< 0.402 U	< 0.513 U	0.061 J	< 0
4-Chlorophenyl-phenylether	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Fluorene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
4-Nitroaniline	< 1.029 U	< 1.016 U	< 0.992 U	< 0.969 U	< 0.969 U	< 0.992 U	< 1.174 U	< 1.004 U	< 1.282 U	< 1.515 U	< 0
4,6-Dinitro-2-methyphenol	< 1.029 U	< 1.016 U	< 0.992 U	< 0.969 U	< 0.969 U	< 0.992 U	< 1.174 U	< 1.004 U	< 1.282 U	< 1.515 U	< 0
N-Nitrosodiphenylamine (1)	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
4-Bromophenyl-phenylether	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Hexachlorobenzene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Pentachlorophenol	< 1.029 U	< 1.016 U	< 0.992 U	< 0.969 U	< 0.969 U	< 0.992 U	< 1.174 U	< 1.004 U	< 1.282 U	< 1.515 U	< 0
Phenanthrene	< 0.412 U	< 0.407 U	< 0.397 U	0.039 J	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Anthracene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Carbazole	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Di-n-butylphthalate	0.123 J	0.203 J	0.079 J	0.155 J	0.271 J	< 0.397 U	< 0.469 U	0.201 J	< 0.513 U	< 0.606 U	0
Fluoranthene	< 0.412 U	< 0.407 U	< 0.397 U	0.078 J	< 0.388 U	0.079 J	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	0
Pyrene	< 0.412 U	< 0.407 U	< 0.397 U	0.116 J	< 0.388 U	0.040 J	< 0.469 U	< 0.402 U	0.051 J	< 0.606 U	0
Butylbenzylphthalate	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	0.103 J	< 0.606 U	0
3,3'-Dichlorobenzidine	< 0.412 UJ	< 0.407 [redacted]	< 0.397 UJ	< 0.388 UJ	< 0.388 UJ	< 0.397 U	< 0.469 U	< 0.402 UJ	< 0.513 UJ	< 0.606 [redacted]	< 0
Benzo(a)anthracene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Chrysene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	0.051 J	< 0.606 U	0
bis(2-ethylhexyl)phthalate	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	1.468 [redacted]	< 0.469 U	< 0.402 U	[redacted] 0.718 U	< 0.606 U	[redacted] 0
Di-n-octylphthalate	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Benzo(b)fluoranthene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Benzo(k)fluoranthene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Benzo(a)pyrene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Indeno(1,2,3-cd)pyrene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Dibenz(a,h)anthracene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0
Benzo(g,h,i)perylene	< 0.412 U	< 0.407 U	< 0.397 U	< 0.388 U	< 0.388 U	< 0.397 U	< 0.469 U	< 0.402 U	< 0.513 U	< 0.606 U	< 0

2-Methylphenol	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2,2'-oxybis(1-Chloropropane)	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
4-Methylphenol	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
N-Nitroso-di-n-propylamine	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Hexachoroethane	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Nitrobenzene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Isophorone	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2-Nitrophenol	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2,4-Dimethylphenol	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
bis(2-chloroethoxy)methane	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2,4-Dichlorophenol	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
1,2,4-Trichlorobenzene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Naphthalene		0.650	U	<	9.363	U	<	0.402	U	<	0.392	U
4-Chloroaniline	<	0.407	UJ	<	9.363	UJ	<	0.402	U	<	0.392	U
Hexachlorobutadiene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
4-Chloro-3-methylphenol	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2-Methylnaphthalene	<	0.407	U		1.873	J	<	0.402	U	<	0.392	U
Hexachlorocyclopentadiene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2,4,6-Trichlorophenol	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2,4,5-Trichlorophenol	<	1.016	U	<	23.408	U	<	1.004	U	<	0.980	U
2-Chloronaphthalene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2-Nitroaniline	<	1.016	U	<	23.408	U	<	1.004	U	<	0.980	U
Dimethylphthalate	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Acenaphthylene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2,6-Dinitrotoluene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
3-Nitroaniline	<	1.016	U	<	23.408	U	<	1.004	UJ	<	0.980	UJ
Acenaphthene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2,4-Dinitrophenol	<	1.016	U	<	23.408	U	<	1.004	U	<	0.980	U
4-Nitrophenol	<	1.016	U	<	23.408	U	<	1.004	U	<	0.980	U
Dibenzofuran	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
2,4-Dinitrotoluene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Diethylphthalate	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
4-Chlorophenyl-phenylether	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Fluorene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
4-Nitroaniline	<	1.016	U	<	23.408	U	<	1.004	U	<	0.980	U
4,6-Dinitro-2-methyphenol	<	1.016	U	<	23.408	U	<	1.004	U	<	0.980	U
N-Nitrosodiphenylamine (1)	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
4-Bromophenyl-phenylether	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Hexachlorobenzene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Pentachlorophenol	<	1.016	U	<	23.408	U	<	1.004	U	<	0.980	U
Phenanthrene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Anthracene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Carbazole	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Di-n-butylphthalate	<	0.407	U	<	9.363	U	<	0.402	U		0.078	J
Fluoranthene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Pyrene	<	0.407	U		3.745	J	<	0.402	U	<	0.392	U
Butylbenzylphthalate	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
3,3'-Dichlorobenzidine	<	0.407	UJ	<	9.363	UJ	<	0.402	UJ	<	0.392	UJ
Benzo(a)anthracene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Chrysene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
bis(2-ethylhexyl)phthalate		3.171		<	9.363	U		0.402	U		0.392	U
Di-n-octylphthalate	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Benzo(b)fluoranthene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Benzo(k)fluoranthene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Benzo(a)pyrene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Indeno(1,2,3-cd)pyrene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Dibenz(a,h)anthracene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U
Benzo(g,h,i)perylene	<	0.407	U	<	9.363	U	<	0.402	U	<	0.392	U

heptachlor epoxide	<	0.0020	U	<	0.0020	U	<	0.0020	U	<	0.0019	U	<	0.0019	U	<	0.0020	U	<	0.0023	U	<	0.0020	U	<	0.0025	U
endosulfan I	<	0.0020	U	<	0.0020	U	<	0.0020	U	<	0.0019	U	<	0.0019	U	<	0.0020	U	<	0.0023	U	<	0.0020	U	<	0.0025	U
dieldrin	<	0.0041	UJ	<	0.0041	UJ	<	0.0040	UJ	<	0.0038	UJ	<	0.0039	UJ	<	0.0040	U	<	0.0047	U	<	0.0040	UJ	<	0.0051	U
4,4'-DDE	<	0.0041	U	<	0.0041	U	<	0.0040	U	<	0.0038	U	<	0.0039	U	<	0.0040	U	<	0.0047	U	<	0.0040	U	<	0.0051	U
Endrin	<	0.0041	UJ	<	0.0041	UJ	<	0.0040	UJ	<	0.0038	UJ	<	0.0039	UJ	<	0.0040	U	<	0.0047	U	<	0.0040	UJ	<	0.0051	U
Endosulfan II	<	0.0041	U	<	0.0041	U	<	0.0040	U	<	0.0038	U	<	0.0039	U	<	0.0040	U	<	0.0047	U	<	0.0040	U	<	0.0051	U
4,4'-DDD	<	0.0041	U	<	0.0041	U	<	0.0040	U	<	0.0038	U	<	0.0039	U	<	0.0040	U	<	0.0047	U	<	0.0040	U	<	0.0051	U
Endosulfan Sulfate	<	0.0041	U	<	0.0041	U	<	0.0040	U	<	0.0038	U	<	0.0039	U	<	0.0040	U	<	0.0047	U	<	0.0040	U		0.0029	J
4,4'-DDT	<	0.0041	U	<	0.0041	U	<	0.0040	U		0.0089		<	0.0039	U	<	0.0040	U	<	0.0047	U	<	0.0040	U		0.0220	
Methoxychlor	<	0.0200	U	<	0.0200	U	<	0.0200	U	<	0.0190	U	<	0.0190	U	<	0.0200	U	<	[redacted]	U	<	0.0200	U	<	0.0250	U
Endrin Ketone	<	0.0041	U	<	0.0041	U	<	0.0040	U	<	0.0038	U	<	0.0039	U	<	0.0040	U	<	0.0047	U	<	0.0040	U	<	0.0051	U
Endring aldehyde	<	0.0041	U	<	0.0041	U	<	0.0040	U	<	0.0038	U	<	0.0039	U	<	0.0040	U	<	0.0047	U	<	0.0040	U		0.0034	J
alpha-chlordane	<	0.0020	U	<	0.0020	U	<	0.0020	U	<	0.0019	U	<	0.0019	U	<	0.0020	U	<	0.0023	U	<	0.0020	U	<	0.0025	U
gamma-chlordane	<	0.0020	U	<	0.0200	U	<	0.0020	U	<	0.0019	U	<	0.0019	U	<	0.0020	U	<	0.0023	U	<	0.0020	U	<	0.0025	U
Toxaphene	<	0.2050	U	<	0.2030	U	<	0.1980	U	<	0.1920	U	<	0.1930	U	<	0.1980	U	<	0.2340	U	<	0.1990	U	<	0.2560	U
Aroclor 1016	<	0.0410	U	<	0.0410	U	<	0.0400	U	<	0.0380	U	<	0.0390	U	<	0.0400	U	<	[redacted]	U	<	0.0400	U	<	0.0510	U
Aroclor 1221	<	0.8200	U	<	0.0810	U	<	0.0790	U	<	0.0770	U	<	0.0770	U	<	0.0790	U	<	0.0940	U	<	0.0800	U	<	0.1020	U
Aroclor 1232	<	0.0410	U	<	0.0410	U	<	0.0400	U	<	0.0380	U	<	0.0390	U	<	0.0400	U	<	[redacted]	U	<	0.0400	U	<	0.0510	U
Aroclor 1242	<	0.0410	U	<	0.0410	U	<	0.0400	U	<	0.0380	U	<	0.0390	U	<	0.0400	U	<	[redacted]	U	<	0.0400	U		0.2830	
Aroclor 1248	<	0.0410	U	<	0.0410	U	<	0.0400	U	<	0.0380	U	<	0.0390	U	<	0.0400	U	<	[redacted]	U	<	0.0400	U	<	0.0510	U
Aroclor 1254	<	0.0410	U	<	0.0410	U	<	0.0400	U	<	0.0380	U	<	0.0390	U	<	0.0400	U	<	[redacted]	U	<	0.0400	U	<	0.0510	U
Aroclor 1260	[redacted]	0.0750	[redacted]	<	0.0410	U	<	0.0400	U	<	0.0380	U	<	0.0390	U	<	0.0400	U	<	[redacted]	U	<	0.0400	U		0.2320	

heptachlor epoxide	<	0.0020 U	<	0.0019 U	<	0.0020 U	< 0.0020 U
endosulfan I	<	0.0020 U	<	0.0019 U	<	0.0020 U	< 0.0020 U
dieldrin	<	0.0041 U	<	0.0037 U	<	0.0040 U	< 0.0040 U
4,4'-DDE	<	0.0041 U	<	0.0037 U	<	0.0040 U	< 0.0040 U
Endrin	<	0.0041 U	<	0.0037 U		0.0085	< 0.0040 U
Endosulfan II	<	0.0041 U	<	0.0037 U	<	0.0040 U	< 0.0040 U
4,4'-DDD	<	0.0041 U	<	0.0037 U	<	0.0040 U	< 0.0040 U
Endosulfan Sulfate	<	0.0041 U	<	0.0037 U	<	0.0040 U	< 0.0040 U
4,4'-DDT	<	0.0041 U	<	0.0037 U	<	0.0040 U	< 0.0040 U
Methoxychlor	<	0.0200 U	<	0.0190 U	<	0.0200 U	< 0.0200 U
Endrin Ketone	<	0.0041 U	<	0.0037 U	<	0.0040 U	< 0.0040 U
Endring aldehyde	<	0.0041 U	<	0.0037 U	<	0.0040 U	< 0.0040 U
alpha-chlordane		0.0014 J		0.1290		0.0650	< 0.0020 U
gamma-chlordane	<	0.0020 U		0.0710		0.1280	< 0.0020 U
Toxaphene	<	0.2030 U	<	0.1870 U	<	0.2010 U	< 0.1960 U
Aroclor 1016	<	0.0410 U	<	0.0370 U	<	0.0400 U	< 0.0390 U
Aroclor 1221	<	0.0810 U	<	0.0750 U	<	0.0800 U	< 0.0780 U
Aroclor 1232	<	0.0410 U	<	0.0370 U	<	0.0400 U	< 0.0390 U
Aroclor 1242	<	0.0410 U	<	0.0370 U	<	0.0400 U	< 0.0390 U
Aroclor 1248	<	0.0410 U	<	0.0370 U	<	0.0400 U	< 0.0390 U
Aroclor 1254	<	0.0410 U	<	0.0370 U	<	0.0400 U	< 0.0390 U
Aroclor 1260	<	0.0410 U	<	0.0370 U	<	0.0400 U	< 0.0390 U

Beryllium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<
Cadmium	< 0.82 U	< 0.83 U	< 0.75 U	1.1	< 0.78 U	< 0.8 U	< 0.98 U	1.9	8.2	< 1.2 U	5.3 J	2.9 J	<
Calcium	498 B	270 B	128 B	2,220	235 [redacted]	1,589	1,330	7,978	7,374	1,743	7,066 J	2,429 J	
Chromium	12.4 J	19.0 J	6.3 J	13.7 J	5.8 J	9.0	6.3	44.4 J	544	12.5	49.9 J	28.3 J	
Cobalt	2.0 B	1.7 B	1.6 B	6.9 B	1.2 B	1.6 B	1.6 B	15.3	13.0	5.8 B	5.71 B	7.3	
Copper	3.3 B	1.8 B	1.6 B	17.7	2.0 B	3.0 B	1.8 B	19.4	224	2.5 B	27.5 J	56.4 J	
Iron	3,085 J	3,279 J	3,167 J	14,467 J	3,130 J	3,584	2,646	25,750 J	36,830	4,260	19,474 J	37,377 J	
Lead	1.3 J	1.7 J	1.7 J	20.4 J	1.1 J	22.9	1.8	20.2 J	637	2.7	179 J	387 J	
Magnesium	673 B	664 B	626 B	3,413	726 B	965	832 B	5,689	4,669	967 B	2,397	2,537	
Manganese	26.8 J	26.0 J	21.7 J	281 J	25.5 J	38.5	30.4	178 J	320	32.5	178 J	325 J	
Mercury	[redacted] 0.12 [redacted]	< 0.10 U	< 0.10 U	< 0.11 U	< 0.08 U	< 0.105 U	< 0.128 U	[redacted] 0.09 [redacted]	1.0	< 0.179 U	0.29 J	0.12 J	<
Nickel	1.8 B	0.83 B	1.3 B	6.0 B	1.1 B	8.6	4.1 B	4.7 B	51.4	6.1 B	13.2 J	21.0 J	
Potassium	73.2 B	< 59.3 U	135 B	331 B	160 B	266 B	140 B	2,104	1,066	146 B	598 B	1,145	
Selenium	< 0.50 U	< 0.51 U	< 0.50 U	0.48 B	0.48 B	< 0.47 UJ	< 0.54 UJ	< 0.49 U	1.6	2.2	< 0.48 UJ	0.48 J	<
Silver	< 0.82 U	< 0.83 U	< 0.75 U	< 0.76 U	< 0.78 U	< 0.80 U	< 0.98 U	1.68 B	2.7	< 1.2 U	2.0	< 0.73 U	<
Sodium	< 40.5 U	< 41.3 U	< 37.0 U	59.8 B	< 38.6 U	91.7 B	112 B	195 B	317 B	225 B	354 B	235 B	<
Thallium	< 0.17 U	< 0.17 U	< 0.17 U	< 0.16 U	< 0.16 U	< 0.2 U	< 0.2 U	< 0.16 U	< 0.2 U	< 0.2 U	< 0.16 U	< 0.15 U	<
Vanadium	4.2 B	4.8 B	5.1 B	25.1	4.7 B	6.6 J	6.7 J	44.9	32.6 J	20.4 J	17.4	45.2	
Zinc	7.3	6.8	6.4	48.0	6.5	23.9	9.0	127	1,349	11.1	103 J	182 J	
Cyanide	< 0.22 U	< 0.22 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.20 U	< 0.20 U	< 0.23 U	< 0.30 U	< 0.40 U	0.77 J	0.20 J	<

Carbon Disulfide	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
1,1-Dichloroethene	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
1,1-Dichloroethane	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
1,2-Dichloroethene (total)		4.0	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U		1.3 J		1.7 J		3.7
Chloroform	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
1,2-Dichloroethane	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
2-Butanone	[redacted]	4.2 U	<	2.0 U	[redacted]	84.3	[redacted]	[redacted]	30.7	[redacted]	[redacted]	3.7 U	<	2.0 U	[redacted]	3.3 U	<	2.0 U	[redacted]	3.0
1,1,1-Trichloroethane	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Carbon Tetrachloride	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Bromodichloromethane	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
1,2-Dichloropropane	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
cis-1,3-Dichloropropene	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Trichloroethene	<	2.0 U	<	2.0 U		363.0	[redacted]		144.0	[redacted]	<	2.0 U	<	2.0 U		4.4		3.0		1.1
Dibromochloromethane	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
1,1,2-Trichloroethane	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Benzene	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U		1.1 J	<	2.0
trans-1,3-Dichloropropene	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Bromoform	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
4-Methyl-2-Pentanone	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
2-Hexanone	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Tetrachloroethene	<	2.0 U	<	2.0 U		21.2	[redacted]		20.7	[redacted]	<	2.0 U	<	2.0 U		0.9 J		1.8 J		1.2
1,1,2,2-Tetrachloroethane	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Toluene	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Chlorobenzene	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Ethylbenzene	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Styrene	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Xylene (total)	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0
Sum of BTEX	<	2.0 U	<	2.0 U	<	50.0	[redacted]	<	20.0	[redacted]	<	2.0 U	<	2.0 U	<	2.0 U		1.1 J	<	2.0

Notes:
All values in ug/L

Carbon Disulfide	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
1,1-Dichloroethene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
1,1-Dichloroethane	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
1,2-Dichloroethene (total)	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Chloroform	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
1,2-Dichloroethane	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
2-Butanone	[redacted]	4.2 U	[redacted]	3.9 U	[redacted]	4.1 U	[redacted]	4.4 U	[redacted]	3.7 U	[redacted]	5.9 U
1,1,1-Trichloroethane	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Carbon Tetrachloride	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Bromodichloromethane	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
1,2-Dichloropropane	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
cis-1,3-Dichloropropene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Trichloroethene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Dibromochloromethane	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
1,1,2-Trichloroethane	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Benzene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
trans-1,3-Dichloropropene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Bromoform	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
4-Methyl-2-Pentanone	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
2-Hexanone	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Tetrachloroethene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
1,1,2,2-Tetrachloroethane	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Toluene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Chlorobenzene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Ethylbenzene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Styrene	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Xylene (total)	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U
Sum of BTEX	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U	<	2.0 U

Notes:
All values in ug/L

2-Methylphenol	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2,2'-oxybis(1-Chloropropane)		1 J	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
4-Methylphenol	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
N-Nitroso-di-n-propylamine	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Hexachoroethane	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Nitrobenzene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Isophorone	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2-Nitrophenol	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2,4-Dimethylphenol	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
bis(2-chloroethoxy)methane	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2,4-Dichlorophenol	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
1,2,4-Trichlorobenzene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Naphthalene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
4-Chloroaniline	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Hexachlorobutadiene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
4-Chloro-3-methylphenol	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2-Methylnaphthalene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Hexachlorocyclopentadiene	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ
2,4,6-Trichlorophenol	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2,4,5-Trichlorophenol	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U
2-Chloronaphthalene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2-Nitroaniline	<	25 U	<	25 UJ	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U
Dimethylphthalate	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Acenaphthylene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2,6-Dinitrotoluene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
3-Nitroaniline	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ
Acenaphthene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2,4-Dinitrophenol	<	25 U	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 U	<	25 U	<	25 U	<	25 U
4-Nitrophenol	<	25 U	<	25 U	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 UJ	<	25 U	<	25 U	<	25 U	<	25 U
Dibenzofuran	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
2,4-Dinitirotoluene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Diethylphthalate	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
4-Chlorophenyl-phenylether	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Fluorene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
4-Nitroaniline	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U
4,6-Dinitro-2-methyphenol	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U
N-Nitrosodiphenylamine (1)	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
4-Bromophenyl-phenylether	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Hexachlorobenzene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Pentachlorophenol	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U	<	25 U
Phenanthrene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Anthracene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Carbazole	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Di-n-butylphthalate	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Fluoranthene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Pyrene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Butylbenzylphthalate	<	10 U	<	10 UJ	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 UJ	<	10 U	<	10 U	<	10 U	<	10 U
3,3'-Dichlorobenzidine	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ	<	10 UJ
Benzo(a)anthracene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Chrysene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
bis(2-ethylhexyl)phthalate		4 J		2 J	<	10 U	<	10 U	<	10 U	<	10 U		2 J	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Di-n-octylphthalate	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Benzo(b)fluoranthene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Benzo(k)fluoranthene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Benzo(a)pyrene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Indeno(1,2,3-cd)pyrene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Dibenz(a,h)anthracene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U
Benzo(g,h,i)perylene	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U	<	10 U

heptachlor epoxide	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	<
endosulfan I	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	<
dieldrin	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
4,4'-DDE	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
Endrin	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
Endosulfan II	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
4,4'-DDD	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
Endosulfan Sulfate	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
4,4'-DDT	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
Methoxychlor	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	<
Endrin Ketone	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
Endring aldehyde	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	<
alpha-chlordane	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	<
gamma-chlordane	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	<
Toxaphene	< 5.00 U	< 5.00 U	< 5.00 U	< 5.00 U	< 5.00 U	< 5.00 U	< 5.00 U	< 5.00 U	<
Aroclor 1016	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	<
Aroclor 1221	< 2.00 U	< 2.00 U	< 2.00 U	< 2.00 U	< 2.00 U	< 2.00 U	< 2.00 U	< 2.00 U	<
Aroclor 1232	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	<
Aroclor 1242	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	<
Aroclor 1248	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	<
Aroclor 1254	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	<
Aroclor 1260	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	<

Beryllium	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	<
Cadmium	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	<
Calcium	34,900	45,800	41,800	43,600	22,900	21,900	54,500	40,000	32,100	3
Chromium	[redacted] 17.0 [redacted]	< 2.0 U	< 2.0 U	< 2.0 U	[redacted] 4.0 [redacted]	[redacted] 4.0 [redacted]	< 2.0 U	< 2.0 U	< 2.0 U	[redacted]
Cobalt	< 4.0 U	[redacted] 8.0 [redacted]	[redacted] 9.0 [redacted]	[redacted] 7.0 [redacted]	< 4.0 U	< 4.0 U	[redacted] 7.0 [redacted]	[redacted] 6.0 [redacted]	[redacted] 9.0 [redacted]	<
Copper	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	<
Iron	11,700	1,380	[redacted] 7.0 [redacted]	[redacted] 6.0 [redacted]	[redacted] 16.0 [redacted]	[redacted] 23.0 [redacted]	[redacted] 26.0 [redacted]	4,880	[redacted] 43.0 [redacted]	
Lead	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	[redacted] 1.0 [redacted]	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	[redacted]
Magnesium	5,980	6,040	7,800	7,260	[redacted] 1,530 [redacted]	[redacted] 1,520 [redacted]	10,700	[redacted] 3,480 [redacted]	6,000	[redacted]
Manganese	586	734	536	179	18.0	20.0	502	480	279	
Mercury	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.4	< 0.2 U	<
Nickel	[redacted] 29.0 [redacted]	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	<
Potassium	[redacted] 4,750 [redacted]	31,600	[redacted] 3,340 [redacted]	[redacted] 4,740 [redacted]	[redacted] 3,670 [redacted]	[redacted] 3,700 [redacted]	[redacted] 3,880 [redacted]	14,000	[redacted] 3,010 [redacted]	[redacted]
Selenium	< 3.0 U	< 3.0 U	< 3.0 U	< 3.0 U	< 3.0 U	< 3.0 U	< 3.0 U	< 3.0 U	< 3.0 U	<
Silver	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	<
Sodium	50,500	71,100	42,700	37,900	29,600	27,800	96,100	72,500	131,000	10
Thallium	< 1.0 U	< 1.0 U	[redacted] 1.0 [redacted]	< 1.0 U	[redacted] 1.0 [redacted]	[redacted] 1.0 [redacted]	< 1.0 U	< 1.0 U	[redacted] 1.0 [redacted]	<
Vanadium	[redacted] 3.0 [redacted]	< 2.0 U	[redacted] 3.0 [redacted]	< 2.0 U	< 2.0 U	[redacted] 3.0 [redacted]	< 2.0 U	< 2.0 U	< 2.0 U	[redacted]
Zinc	55.0	< 5.0 U	< 5.0 U	< 5.0 U	[redacted] 6.0 [redacted]	< 5.0 U	< 5.0 U	[redacted] 8.0 [redacted]	< 5.0 U	[redacted]
Cyanide	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	[redacted] 10.2 [redacted]	<

Appendix A.3

GHR 1988 Whitney Barrel Soil and Groundwater Data Summary Table Excerpts

Table 2-6 (Continued)
Whitney Barrel Property Soil Analytical Results

Compound	TP-1 0'-6'	TP-3 0'-8'	TP-6 0'-7'	TP-7 0'-6.5'	TP-9 0'-5'	TP-11 0'-6'	TP-12 0'-6'	TP-12 Dup 0'-6'	TP-13 0'-7'	TP-15 0'-6.5'	TP-17 0'-7.5'	TP-18 0'-6'	MW-1s	MW-2s 0'-14'	MW-3s 0'-14'	MW-4s 0'-15.5'	B-1 0'-16'	B-2 0'-11'	B-3 0'-15'	B-4 0'-10.5'	B-5 0'-10.5'	B-6 0'-15'	B-6 rep 0'-15'	B-7 0'-10.5'	B-8 0'-11'
Acid Compounds (mg/kg)																									
2,4,5-Trichlorophenol (2)	--	--	--	--	--	--	0.016J	0.017J	--	0.033J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides/PCBs (mg/kg)																									
Chlordane	--	--	--	--	--	26.8	17.6	19.5	0.47	1.98	5.97	0.31	--	0.28	3.6	4.03	0.38	--	1.61	0.29	6.3	2.12	1.89	3.55	0.06
PCB-1242	--	--	7.26	4.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	0.11	--	11.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.26	--	--	--	--	3.96	--
PCB-1248	--	--	--	--	1.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	--	--	--	7.01	--	46.6	56	94.8	1.03	3.38	8.46	0.54	0.09	--	5.37	0.5	0.07	--	--	0.21	5.36	1.1	0.96	--	--
Inorganic Compounds (mg/kg)																									
Aluminum	7,760	4,930	4,180	5,150	3,240	4,210	4,530	4,340	4,630	4,200	3,710	3,590	5,660	3,490	3,570	3,490	6,200	3,770	5,110	3,960	4,650	3,820	3,140	4,850	3,450
Antimony	27	22	32	26	24	--	--	--	--	--	--	--	--	24	--	24	--	22	--	--	22	--	30	--	--
Arsenic	4.4	2.02	3.1	4.16	2.5	4.9	415	375	4	4.9	3.8	2.8	2.9	2.67	7.62	2.25	4.16	3.1	4.7	2.38	3.52	4.2	2.57	4.06	3.3
Barium	38	17	17	20	--	13	--	10	17	22	56	--	18	12	21	17	26	10	40	--	18	21	--	20	14
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium	556	856	869	748	538	634	392	424	779	872	1,500	422	1,500	909	1,230	890	993	799	1,540	697	1,150	984	661	1,750	596
Chromium	22	8.1	10	19.6	5.9	18	7	10	10	38	420	12	16	7.9	23.8	23.5	20.8	8	28	9.4	51	58	19.8	450	71
Cobalt	6	--	--	5.9	--	--	--	--	--	--	--	--	--	--	--	--	5.9	--	6	--	5.9	--	--	--	--
Copper	14	5	10	15.8	3.9	6	4	3	10	20	13	4	10	5.9	17.8	33.3	23.8	6	39	5.9	11.8	19	7.9	15.8	9.5
Iron	9,270	4,770	6,610	10,000	4,770	5,140	3,560	3,190	6,530	8,170	4,930	3,450	7,330	4,940	7,440	5,200	6,930	4,390	20,200	4,600	5,590	11,000	4,440	4,920	6,370
Lead	78	17.2	42	101	12.2	32	10	--	52	72	252	10	54	13.9	95	35.3	19.8	11	233	16.3	33.3	82	21.8	61.3	51.5
Magnesium	1,870	1,300	1,290	1,010	846	936	892	930	781	1,060	1,070	846	1,830	1,230	1,190	1,040	1,340	942	1,630	1,130	1,300	1,110	887	767	728
Manganese	72	68.7	70	81.2	41.7	57	45	42	50	74	62	34	102	65.3	74.3	56.9	82.2	50	143	53.4	74.5	83	44.6	50.5	47.5
Mercury	0.42	0.45	0.44	0.53	0.62	0.7	0.4	0.6	0.5	0.34	0.66	0.48	0.31	--	0.36	--	--	--	0.52	--	--	--	0.28	--	--
Nickel	10	10.1	10	9.9	8.3	8	8	6	8	10	8	8	10	8.9	9.9	7.8	14.8	10	14	7.4	9.8	10	9.9	9.9	9
Potassium	509	552	509	396	378	357	321	379	307	457	393	293	518	532	495	490	954	471	639	559	554	479	425	283	336
Sodium	36	68.7	98	129	56.9	62	90	100	72	66	78	33	112	65.4	103	58.8	85.1	50	95	36.6	64.7	62	49.5	42.6	31.5
Zinc	29	17.2	28	59.4	15.7	30	12	10	56	69	66	15	22	15.8	66.3	41.2	33.7	92	170	32.7	27.4	60	22.8	45.5	47

Notes:

NA = Not Analyzed For

J = Estimated Quantity

-- = Below Detectable Limit

C = The result has been corrected for the presence of the analyte in the blank

All compounds listed were detected at one time during analysis of sediment, soil or water.

Source: See Assessment Report of the former Whitney Barrel Co. site, 256 Salem St, Woburn; GHR Engineering Assoc.

Table 2-6
Whitney Barrel Property Soil Analytical Results

Compound	TP-1 0'-6'	TP-3 0'-8'	TP-6 0'-7'	TP-7 0'-6.5'	TP-9 0'-5'	TP-11 0'-6'	TP-12 0'-6'	TP-12 Dup 0'-6'	TP-13 0'-7'	TP-15 0'-6.5'	TP-17 0'-7.5'	TP-18 0'-6'	MW-1s	MW-2s 0'-14'	MW-3s 0'-14'	MW-4s 0'-15.5'	B-1 0'-16'	B-2 0'-11'	B-3 0'-15'	B-4 0'-10.5'	B-5 0'-10.5'	B-6 0'-15'	B-6 rep 0'-15'	B-7 0'-10.5'	B-8 0'-11'
Volatile Organic Compounds (mg/kg)																									
1,1,1-Trichloroethane	--	--	--	--	--	--	0.026	2	0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	--	--	--	--	--	--	--	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	0.062C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.017C	--	--	--	--	--
Carbon Disulfide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	--	--	--	--	--	--	0.25	0.28	--	--	--	--	--	--	--	--	--	--	--	0.001J	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	3.9	3.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.004JC	--	0.003JC	--	0.004JC	0.004JC	--	--
Tetrachloroethene	0.003J	--	--	0.013	0.002J	--	320	130	0.007	--	--	--	0.013	--	0.002J	--	--	--	--	--	--	--	--	--	0.005JC
Toluene	--	--	--	--	--	--	31	26	--	--	--	--	--	--	--	--	--	--	--	0.003J	--	--	--	--	--
Total Xylenes	--	--	--	--	--	--	26	28	0.002J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002J	--
Trichloroethene	0.004J	--	--	0.018	--	--	330	120	--	--	--	--	0.003J	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Base Neutrals Compounds (mg/kg)																									
1,2,4-Trichlorobenzene	--	--	--	0.170J	--	2	0.036	0.079	0.110J	0.100J	0.170J	0.071J	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	0.073J	0.007J	0.007J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	0.300J	--	--	--	--	0.36	--	--	--	--	--	--	--	--	--	0.170J	--	--	--	--
1,4-Dichlorobenzene	--	--	--	0.081J	--	0.9	0.003J	0.001J	--	0.200J	0.92	--	--	--	--	--	--	--	--	--	0.49	--	--	--	--
2-Methylnaphthalene	--	--	0.4	--	0.210J	0.072J	0.036	0.036	0.300J	0.092J	0.82	0.075J	0.210J	--	--	--	--	--	--	0.069J	--	--	--	--	--
Acenaphthene	--	--	--	--	--	0.130J	0.005J	0.005J	0.098J	--	2.3	--	--	--	--	--	--	--	--	0.230J	--	--	1	0.45	--	--
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	0.200J	--	--	--	--	--	--	--	--	0.120J	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--	--	0.170J	1.4	--	0.071J	--	--	--	--	--	--	0.4	--	--	0.092J	0.190J	--	--
Benzo(A)Anthracene	0.071J	0.150J	0.160J	0.110J	--	--	--	--	--	0.110J	0.64	--	0.160J	--	0.110J	0.092J	--	--	--	1.1	--	--	0.37	0.37	--	0.069
Benzo(A)Pyrene	0.066J	0.140J	0.200J	0.170J	--	--	--	--	0.068J	0.096J	0.44	--	--	--	0.130J	0.098J	--	--	--	1.2	--	--	0.220J	0.310J	--	--
Benzo(B)Fluoranthene	0.110J	0.160J	0.330J	0.130J	--	0.075J	--	--	--	0.088J	0.56	--	0.130J	--	0.130J	0.074J	--	--	--	0.96	--	--	0.200J	0.250J	--	--
Benzo(GHI)Perylene	--	0.070J	0.130J	0.150J	--	--	--	--	--	0.069J	0.320J	--	--	--	0.210J	0.092J	--	0.082J	1	--	--	--	0.180J	--	--
Benzo(K)Fluoranthene	--	--	--	0.120J	--	--	--	--	--	0.067J	0.290J	--	0.150J	--	0.088J	0.068J	--	--	0.64	--	--	0.260J	0.36	--	--
Benzyl Alcohol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Butyl Phthalate	--	--	0.130J	--	--	--	--	--	--	--	--	--	--	0.74	--	--	--	--	--	0.160J	--	--	--	5.7	--
Bis-(2-Ethylhexl) Phthalate	0.51	0.093J	1	0.39	0.39	1.3	0.038	0.038	0.51	0.79	0.58	0.310J	0.200J	1.9	0.43	--	0.230J	0.220	0.6	--	1.4	0.46	0.41	11	0.096J
Chrysene	0.080J	0.150J	0.200J	0.140J	--	--	--	--	0.075J	0.220J	0.8	--	0.210J	0.100J	0.150J	0.170J	0.081J	--	1.4	--	--	0.56	0.5	--	--
Dibenzofuran	--	--	--	--	--	0.066J	0.004J	0.003J	0.11J	--	0.82	--	--	--	--	--	--	--	--	--	--	0.240J	0.130J	--	--
Dibenzo(A,H)Anthracene	--	--	--	0.065J	--	--	--	--	--	--	0.180J	--	--	--	--	--	--	--	0.240J	--	--	--	0.080J	--	--
Diethyl Phthalate	--	--	--	--	--	--	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Butyl Phthalate	--	--	--	--	--	--	0.013	0.013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.9	--	--	0.110J	0.094J
Fluoranthene	0.150J	0.260J	0.270J	0.130J	--	0.180J	--	--	0.088J	0.190J	2.6	0.080J	0.37	0.095J	--	0.140J	0.100J	0.100J	2	--	0.072J	1.9	1.4	--	0.072J
Fluorene	--	--	--	--	0.074J	0.073J	0.004J	0.004J	0.170J	--	1.6	--	0.120J	--	--	--	--	--	0.230J	--	--	0.280J	0.180J	--	--
Indeno(1,2,3-CD)Pyrene	--	--	0.110J	0.110J	--	--	--	--	--	--	0.290J	--	--	--	0.150J	--	--	--	0.6	--	--	--	0.170J	--	--
Naphthalene	--	--	0.59	--	--	0.210J	0.014	0.014	0.077J	0.130J	3.9	--	0.160J	--	--	--	--	--	--	--	--	--	0.100J	--	--
Phenanthrene	0.084J	0.140J	0.190J	0.075J	0.120J	0.110J	0.005J	0.005J	0.11	0.150J	2.4	0.097J	0.220J	--	0.095J	--	--	--	2	--	--	0.290J	0.67	--	0.064J
Pyrene	0.120J	0.300J	0.36	0.260J	0.070J	0.120J	0.003J	--	0.100J	0.160J	2.5	0.083J	0.41	0.090J	0.210J	0.260J	0.095J	0.091J	3	--	0.098J	0.84	0.83	--	0.100J

Notes:

NA = Not Analyzed For

J = Estimated Quantity

U = Below Detectable Limit

C = The result has been corrected for the presence of the analyte in the blank

All compounds listed were detected at one time during analysis of sediment, soil or water.

Source: Site Assessment Report of the former Whitney Barrel Co. site, 256 Union St, Woburn; GHR Engineering Assoc.

Table 2-7
Whitney Barrel Company
Summary of Analytical Results of Ground Water Samples

Compound	MW-1s	MW-2s	MW-2s DUP	MW-3s	MW-4s
Volatile Organic Compounds (ug/L)					
Benzene	5	--	2 J	12	63
Chlorobenzene	3 J	39	35	2 J	6 J
1,1,1-Tricloroethane	--	--	--	--	99
1,1-Dichloroethane	--	--	--	43	300
Chloroethane	--	--	--	--	2 J
Chloroform	--	--	--	--	--
1,2-Dichloroethene	39	49	45	77	31
Ethylbenzene	2 J	7	10	31	90
Methylene Chloride	--	--	--	--	--
Toluene	--	1 J	1 J	26	66
Vinyl Chloride	11	18	13	32	15 J
Acetone	--	--	--	--	140 C
2-Butanone	--	--	--	--	16 J,C
4-Methyl-2-Pentanone	--	--	--	5 J	12 J
Total Xylenes	5	5	4 J	96	180
Base Neutral Compounds (ug/L)					
1,2,4-Trichlorobenzene	--	--	--	--	17 J
1,2-Dichlorobenzene	--	--	--	17 J	21
1,3-Dichlorobenzene	--	29	29	6 J	9 J
1,4-Dichlorobenzene	--	140	140	8 J	24
Napthalene	--	--	--	11 J	6 J
Bis-(2-Ethylhexyl) Phthalate	10 J,C	--	--	--	5 J,C
Diethyl Phthalate	--	--	--	--	8 J,C
2-Methylnapthalene	--	--	--	5 J	--
Acid Compounds (ug/L)					
2-4-Dimethylphenol	--	--	--	--	25
Phenol	--	--	--	--	15 J
2-Methylphenol	--	--	--	--	39
4-Methylphenol	--	--	--	6 J	30
Pesticides/PCBs (ug/L)					
PCB-1260	--	2.8	10	2.2	--
Inorganic Compounds (ug/L)					
Aluminum	5,600	1,400	--	--	9
Arsenic	11	3	--	62	--
Calcium	62,400	23,800	34,800	60,800	60,8[illegible]
Copper	--	--	--	--	--
Iron	13,500	4,200	5,580	35,000	35,0[illegible]
Magnesium	6,100	2,040	2,660	10,900	10,9[illegible]
Manganese	1,780	680	940	1,520	1,52[illegible]
Potassium	6,700	11,100	15,500	12,800	12,8[illegible]
Sodium	34,600	50,800	68,100	185,000	185,0[illegible]
Zinc	60	--	20	60	[illegible]

Notes:
NA = Not Analyzed For
J = Estimated Quantity
-- = Below Detectable Limit
C = The result has been corrected for the presence of the analyte in the blank.

Source: Site Assessment Report of the former Whitney Barrel Co. site, 256 Salem St., Woburn; GHR Engineering Associates 1988

Appendix A.4

Clean Harbors Table and Figure Excerpts for the Murphy Property and Short Term Measure Soil Characterization Data

TABLE 1

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
B-1	SS-1	0.5-2.5	<1	Fill
	SS-2	2.5-4.5	4.0	"
	SS-3	4.5-6.5	7.0	"
	SS-4	6.5-8.5	<1	Sand and Gravel
	SS-5	8.5-10.5	2.0	"
	SS-6	10.5-12.5	4.0	"
B-2	SS-1	0.5-2.5	16	Fill
	SS-2	2.5-4.5	24	"
	SS-3	4.5-6.5	160	"
	SS-4	6.5-8.5	100	Sand and Gravel
	SS-5	8.5-10.5	100	"
	SS-6	10.5-12.5	150	"
B-4	SS-1	0-2	3.0	Fill
	SS-2	2-4	1.8	"
	SS-3	4-6	1.4	"
	SS-4	6-8	4.0	Sand and Gravel
	SS-5	8-10	—	"
	SS-6	10-12	>1,000	"
	SS-7	12-14	>1,000	"
B-5	SS-1	0-2	<1	Fill
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	<1	Sand & Gravel
	SS-5	8-10	<1	"
	SS-6	10-12	1.2	"
	SS-7	12-14	3.6	"
B-6	SS-1	0-2	1.2	Fill
	SS-2	2-4	19	"
	SS-3	4-6	<1	"
	SS-4	6-8	<1	Sand and Gavel
	SS-5	8-10	8.2	"
	SS-6	10-12	3.0	"
B-7	SS-1	0-2	<1	Fill
	SS-2	2-4	—	"
	SS-3	4-6	<1	"
	SS-4	6-8	48	Sand and Gavel
	SS-5	8-10	>1,000	"
	SS-6	10-12	600	"
B-8	SS-1	0-2	<1	Fill
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	>1,000	Sand with little Gravel
	SS-5	8-10	>1,000	"
	SS-6	10-12	280	"

TABLE 1 (continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
B-9	SS-1	0-2	<1	Fill
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	28	Sand with little Gravel
	SS-5	8-10	850	"
	SS-6	10-12	180	"
B-10	SS-1	0-2	<1	Fill
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	1.8	Sand with little Gravel
	SS-5	8-10	2.0	"
	SS-6	10-12	30	"
B-11	SS-1	0-2	<1	Fill
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	12	Sand with little Gravel
	SS-5	8-10	32	"
	SS-6	10-12	325	"
B-12	SS-1	0-2	<1	Fill
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	2.6	Sand with little Gravel
	SS-5	8-10	4.2	"
	SS-6	10-12	1.6	"
B-13	SS-1	0-2	40	Fill
	SS-2	2-4	17	"
	SS-3	4-6	38	"
	SS-4	6-8	>1,000	Sand with little Gravel
	SS-5	8-10	>1,000	"
	SS-6	10-12	>1,000	"
B-14	SS-1	0.5-2.5	95	Fill
	SS-2	2.5-4.5	>1,000	"
	SS-3	4.5-6.5	>1,000	"
	SS-4	6.5-8.5	>1,000	Sand with little Gravel
	SS-5	8.5-10.5	>1,000	"
	SS-6	10.5-12.5	850	"
B-15	SS-1	0-2	<1	Fill
	SS-2	2-4	3.0	"
	SS-3	4-6	<1	"
	SS-4	6-8	<1	Sand with little Gravel
	SS-5	8-10	1.5	"
	SS-6	10-12	3.5	"
	SS-7	12-14	18	"

TABLE 1 (continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
B-16	SS-1	0-2	<1	Fill
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	<1	Sand with little Gravel
	SS-5	8-10	<1	"
	SS-6	10-12	1.8	"
	SS-7	12-14	1.2	"
B-17	SS-1	0-2	8.2	Fill
	SS-2	2-4	70	"
	SS-3	4-6	14	"
	SS-4	6-8	1.5	Sand with little Gravel
	SS-5	8-10	3.8	"
	SS-6	10-12	1.4	"
B-18	SS-1	0-2	5.8	Fill
	SS-2	2-4	2.6	"
	SS-3	4-6	2.0	"
	SS-4	6-8	4.6	Sand with little Gravel
	SS-5	8-10	3.2	"
	SS-6	10-12	6.4	"
	SS-7	12-14	1.2	"
B-19	SS-1	0-2	<1	Fill
	SS-2	2-4	—	"
	SS-3	4-6	<1	Sand with little Gravel
	SS-4	6-8	7.6	"
	SS-5	8-10	<1	"
	SS-6	10-12	<1	"
B-20	SS-1	0-2	<1	Fill
	SS-2	2-4	—	"
	SS-3	4-6	<1	Sand with little Gravel
	SS-4	6-8	5.8	"
	SS-5	8-10	1.2	"
	SS-6	10-12	<1	"
MW-3D	SS-1	14-16	<1	Sand with little Gravel
	SS-2	19-21	<1	"
	SS-3	24-26	<1	
	SS-4	29-31	<1	"
	SS-5	34-36	<1	"
	SS-6	39-41	1.2	"
	SS-7	44-46	<1	Gravel with trace Sand
	SS-8	49-51	<1	"

TABLE 1 (continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth *(feet)*	VOC Headspace *(ppm)*	Comments
MW-7	SS-1	0.5-2.5	60	Fill
	SS-2	2.5-4.5	230	"
	SS-3	4.5-6.5	350	"
	SS-4	6.5-8.5	460	"
	SS-5	8.5-10.5	70	Sand
	SS-6	10.5-12.5	100	"
MW-8	SS-1	0-2	1.6	Fill
	SS-2	2-4	3.0	"
	SS-3	4-6	5.8	"
	SS-4	6-8	<1	"
	SS-5	8-10	<1	Sand with little Gravel
	SS-6	10-12	<1	"
MW-9	SS-1	0-2	<1	Fill
	SS-2	2-4	—	"
	SS-3	4-6	2.3	"
	SS-4	6-8	—	Sand with little Gravel
	SS-5	8-10	1.8	"
	SS-6	10-12	3.0	"
MW-10	SS-1	15-17	80	Sand and Gravel
	SS-2	17-19	68	"
	SS-3	24-26	2.7	"
	SS-4	29-31	5.0	"
	SS-5	34-36	2.8	"
	SS-6	39-41	4.0	"
	SS-7	41-46	1.7	"
MW-11	SS-1	0-2	<1	Sand and Loam
	SS-2	2-4	<1	"
	SS-3	4-6	4	Sand with little Gravel
	SS-4	6-8	18	"
	SS-5	8-10	740	"
	SS-6	10-12	58	"

Notes:
1. Headspace VOCs measured using Foxboro 128 GC Flame Ionization Detector.
2. — = Sample not screened.

TABLE 2
SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Samples	Depth (feet)	Benzene (ug/kg)	Toluene (ug/kg)	Total Xylenes (ug/kg)	Acetone (ug/kg)	Chloro-ethane (ug/kg)	PCE (ug/kg)	1,1-DCA (ug/kg)	1,1,1-TCA (ug/kg)	TCE (ug/kg)	t-1,2-DCE (ug/kg)	Vinyl Chloride (ug/kg)	2-Butanone (ug/kg)
B-1	(SS-3)	4.5-6.5	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-1	(SS-5)	8.5-10.5	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-2	(SS-3)	4.5-6.5	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-4	(SS-1)	0-2	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-4	(SS-6)	10-12	ND(10)	ND(15)	**290**	ND(100)	ND(20)	ND(15)	ND(15)	ND(10)	ND(10)	ND(15)	ND(35)	ND(45)
B-6	(SS-5)	8-10	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-7	(SS-5)	8-10	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-8	(SS-1)	0-2	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-8	(SS-4)	6-8	ND(7.5)	ND(11)	ND(7.5)	ND(75)	ND(15)	ND(11)	ND(11)	ND(7.5)	ND(7.5)	ND(11)	ND(26)	ND(34)
B-9	(SS-5)	8-10	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-10	(SS-6)	10-12	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-11	(SS-4)	6-8	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-11	(SS-6)	10-12	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-12	(SS-5)	8-10	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-13	(SS-1)	0-2	ND(10)	ND(15)	ND(10)	ND(100)	ND(20)	**29**	**46**	**32**	**86**	**210**	ND(35)	ND(45)
B-13	(SS-5)	8-10	ND(10)	ND(15)	ND(10)	ND(100)	ND(20)	ND(15)	ND(15)	ND(10)	ND(10)	ND(15)	ND(35)	ND(45)
B-14	(SS-2)	2.5-4.5	ND(500)	ND(750)	**1,300**	ND(5000)	ND(1000)	ND(750)	ND(750)	ND(500)	ND(500)	ND(750)	ND(1800)	ND(2300)
B-14	(SS-5)	8.5-10.5	ND(200)	**380**	**580**	ND(2000)	ND(400)	ND(300)	ND(300)	ND(200)	ND(200)	ND(300)	ND(700)	ND(900)
B-15	(SS-5)	8-10	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-15	(SS-7)	12-14	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-16	(SS-6)	10-12	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	**68**	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
B-17	(SS-2)	2-4	ND(250)	ND(250)	ND(250)	ND(980)	ND(490)	ND(250)	ND(250)	ND(250)	ND(250)	ND(250)	ND(490)	ND(980)
B-18	(SS-1)	0-2	ND(230)	ND(230)	ND(230)	ND(910)	ND(450)	**240**	ND(230)	ND(230)	**1,300**	ND(230)	ND(450)	ND(910)
B-18	(SS-3)	4-6	ND(250)	ND(250)	ND(250)	ND(990)	ND(490)	**300**	ND(250)	ND(250)	**680**	ND(250)	ND(490)	ND(990)
B-19	(SS-4)	6-8	ND(990)	ND(990)	ND(990)	ND(4000)	ND(2000)	ND(990)	ND(990)	ND(990)	ND(990)	ND(990)	ND(2000)	ND(4000)
B-20	(SS-4)	6-8	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(15)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	ND(20)
MW-1	(SS-5)	8-10	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	ND(20)
MW-2	(SS-2)	2-4	ND(5)	ND(5)	ND(5)	**210**	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	**50**
MW-3	(SS-6)	10-12	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	ND(20)
MW-3D	(SS-6)	39-41	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	ND(20)
MW-4	(SS-6)	10-12	ND(5)	ND(5)	ND(5)	**23**	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	ND(19)
MW-5S	(SS-6)	10-12	ND(5)	ND(5)	ND(5)	ND(18)	ND(9)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(9)	ND(18)
MW-6	(SS-1)	0-2	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	ND(20)
MW-7	(SS-2)	2.5-4.5	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
MW-7	(SS-4)	6.5-8.5	ND(750)	**12,000**	**48,000**	ND(7500)	ND(1500)	ND(1100)	ND(1100)	ND(750)	ND(1100)	ND(1100)	ND(2600)	ND(3400)
MW-9	(SS-6)	10-12	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
MW-10	(SS-2)	17-19	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	ND(20)
MW-10	(SS-4)	29-31	ND(5)	ND(5)	ND(5)	ND(20)	ND(10)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(10)	ND(20)
MW-11	(SS-3)	4-6	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)
MW-11	(SS-5)	8-10	ND(5)	ND(7.5)	ND(5)	ND(50)	ND(10)	ND(7.5)	ND(7.5)	ND(5)	ND(5)	ND(7.5)	ND(18)	ND(23)

Notes:

1. ( ) = number in parentheses is laboratory Practical Quantitation Limit (PQL)
2. ND = none detected above PQL
3. ug/kg = micrograms per kilogram
4. All analyses by EPA Method 8260
5. Cis-1, 2-dichloroethene reported as trans-1, 2-dichloroethene
6. Results for MW-1, MW-2, MW-3, MW-4, MW-5S and MW-6 from October 1994

TABLE 3
SOIL ANALYTICAL RESULTS
TPH & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Sample	Depth	TPH	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
		(feet)	*mg/kg*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
B-1	(SS-3)	4.5-6.5	23	45	ND(41)	ND(41)	ND(8.4)	28	ND(21)	41	29
B-1	(SS-5)	8.5-10.5	16	ND(78)	ND(78)	ND(78)	ND(16)	65	ND(40)	100	100
B-2	(SS-3)	4.5-6.5	94	ND(290)	ND(290)	ND(290)	ND(59)	350	ND(150)	920	540
B-4	(SS-1)	0-2	660	ND(3200)	ND(3200)	3,200	730	5,600	1,600	7,000	7,600
B-4	(SS-6)	10-12	7,700	ND(750)	ND(750)	ND(750)	180	560	ND(390)	430	310
B-6	(SS-5)	8-10	ND(10)	ND(40)	ND(40)	220	ND(8.1)	28	ND(21)	56	46
B-7	(SS-5)	8-10	11	ND(40)	ND(40)	ND(40)	ND(8.0)	ND(20)	ND(20)	9.3	ND(8.0)
B-8	(SS-1)	0-2	1,600	400	150	410	18	100	ND(22)	240	220
B-8	(SS-4)	6-8	38	ND(540)	940	580	ND(110)	660	ND(280)	1,200	730
B-9	(SS-5)	8-10	13	ND(40)	ND(40)	ND(40)	ND(8.1)	ND(20)	ND(20)	ND(8.1)	ND(8.1)
B-10	(SS-6)	10-12	14	ND(40)	ND(40)	ND(40)	ND(8.1)	ND(21)	ND(21)	9.5	ND(8.1)
B-11	(SS-4)	6-8	ND(10)	ND(40)	ND(40)	ND(40)	ND(8.2)	ND(21)	ND(21)	28	22
B-11	(SS-6)	10-12	ND(10)	ND(39)	ND(39)	ND(39)	ND(8.0)	ND(20)	ND(20)	ND(8.0)	ND(8.0)
B-12	(SS-5)	8-10	150	ND(39)	ND(39)	ND(39)	ND(7.9)	ND(20)	ND(20)	ND(7.9)	ND(7.9)
B-13	(SS-1)	0-2	4,700	ND(1400)	ND(1400)	ND(1,400)	ND(290)	2,200	ND(730)	3,600	4,300
B-13	(SS-5)	8-10	1,200	ND(160)	ND(160)	ND(160)	65	320	88	200	190
B-14	(SS-2)	2.5-4.5	6,400	ND(1500)	ND(1500)	ND(1500)	300	890	ND(750)	820	410
B-14	(SS-5)	8.5-10.5	3,000	ND(400)	ND(400)	ND(400)	120	570	ND(210)	560	410
B-15	(SS-5)	8-10	11	ND(39)	ND(39)	70	ND(7.8)	ND(20)	ND(20)	ND(7.8)	ND(7.8)
B-15	(SS-7)	12-14	ND(10)	ND(38)	ND(38)	38	ND(7.8)	ND(20)	ND(20)	ND(7.8)	ND(7.8)
B-16	(SS-6)	10-12	240	ND(39)	52	ND(39)	ND(7.8)	59	ND(20)	41	11
B-17	(SS-2)	2-4	730	ND(2900)	3,200	5,100	700	9,000	2,600	11,000	13,000
B-18	(SS-1)	0-2	1,100	ND(1400)	4,100	4,200	ND(280)	5,000	ND(710)	5,900	5,300
B-18	(SS-3)	4-6	86	ND(240)	730	580	ND(50)	820	ND(130)	1,100	940
B-19	(SS-4)	6-8	1,700	ND(4700)	ND(4700)	ND(4700)	ND(4700)	ND(4700)	ND(4700)	ND(470)	ND(470)
B-20	(SS-4)	6-8	450	ND(4400)	ND(4400)	ND(4400)	ND(4400)	ND(4400)	ND(4400)	660	480
MW-1	(SS-1)	0-2	130	---	---	---	---	---	---	---	---
MW-1	(SS-5)	8-10	ND(10)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND(330)	ND(330)
MW-2	(SS-1)	0-2	130	---	---	---	---	---	---	---	---
MW-2	(SS-2)	2-4	130	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND(3,300)	ND(3,300)
MW-2	(SS-4A)	7.5-9.5	15	---	---	---	---	---	---	---	---
MW-3	(SS-1)	0-2	320	---	---	---	---	---	---	---	---
MW-3	(SS-4)	6-8	61	---	---	---	---	---	---	---	---
MW-3	(SS-6)	10-12	ND(10)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND(330)	ND(330)
MW-3D	(SS-6)	39-41	ND(10)	ND(42)	ND(42)	ND(42)	ND(8.5)	ND(21)	ND(21)	ND(8.5)	ND(8.5)

TABLE 3 (continued)
SOIL ANALYTICAL RESULTS
TPH & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Sample	Depth	TPH	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
		(feet)	*mg/kg*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
MW-4	(SS-1)	0-2	**470**	---	---	---	---	---	---	---	---
MW-4	(SS-5)	8-10	**12**	---	---	---	---	---	---	---	---
MW-4	(SS-6)	10-12	ND(10)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND(330)	ND(330)
MW-5S	(SS-1)	0-2	**140**	---	---	---	---	---	---	---	---
MW-5S	(SS-6)	10-12	ND(10)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND(330)	ND(330)
MW-6	(SS-1)	0-2	**180**	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)
MW-6	(SS-8)	18-20	ND(10)	---	---	---	---	---	---	---	---
MW-7	(SS-2)	2.5-4.5	**230**	**740**	ND(690)	ND(690)	ND(140)	**380**	ND(350)	**740**	**230**
MW-7	(SS-4)	6.5-8.5	**4,000**	ND(1500)	ND(1500)	ND(1500)	**310**	**1,900**	ND(750)	**3,700**	**3,100**
MW-9	(SS-6)	10-12	ND(10)	ND(41)	ND(41)	ND(41)	ND(8.3)	ND(21)	ND(21)	ND(8.3)	ND(8.3)
MW-10	(SS-2)	17-19	**94**	ND(190)	ND(190)	ND(190)	ND(39)	**130**	ND(98)	**240**	**250**
MW-10	(SS-4)	29-31	**11**	ND(37)	ND(37)	ND(37)	ND(7.5)	ND(19)	ND(19)	ND(7.5)	ND(7.5)
MW-11	(SS-3)	4-6	**49**	ND(230)	ND(230)	ND(230)	ND(47)	**200**	ND(120)	**100**	**90**
MW-11	(SS-5)	8-10	**26**	ND(40)	ND(40)	ND(40)	ND(8.2)	**35**	ND(21)	**10**	ND(8.2)

Notes:
1. ( ) = number in parentheses is laboratory Practical Quantitation Limit (PQL)
2. ND = none detected above PQL
3. ug/kg = micrograms per kilogram
4. --- = not analyzed for that parameter
5. Results for MW-1, MW-2, MW-3, MW-4, MW-5S and MW-6 from October 1994

TABLE 3 (continued)
SOIL ANALYTICAL RESULTS
TPH & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Samples	Depth	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene
		(feet)	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
B-1	(SS-3)	4.5-6.5	16	23	18	8.8	18	7.0	1.6	16
B-1	(SS-5)	8.5-10.5	44	59	44	22	60	14	10	64
B-2	(SS-3)	4.5-6.5	440	420	380	200	540	77	44	370
B-4	(SS-1)	0-2	3,000	3,700	2,300	1,300	2,800	6,500	210	2,300
B-4	(SS-6)	10-12	170	500	150	51	220	61	ND(23)	150
B-6	(SS-5)	8-10	24	37	25	13	31	17	3.3	27
B-7	(SS-5)	8-10	3.1	ND(6.0)	4.2	2.0	3.4	2.5	ND(1.2)	3.5
B-8	(SS-1)	0-2	58	100	72	36	58	8.9	5.4	41
B-8	(SS-4)	6-8	370	350	580	280	390	300	46	500
B-9	(SS-5)	8-10	1.0	ND(6.0)	3.2	1.2	2.8	ND(2.0)	ND(1.2)	4.1
B-10	(SS-6)	10-12	3.7	ND(6.0)	4.0	2.1	4.5	3.6	ND(1.2)	4.6
B-11	(SS-4)	6-8	11	12	9.4	4.8	8.7	2.9	ND(1.2)	6.2
B-11	(SS-6)	10-12	3.3	ND(5.9)	3.4	1.8	3.0	ND(2.0)	ND(1.2)	3.3
B-12	(SS-5)	8-10	0.83	ND(5.9)	2.7	1.3	3.6	2.8	ND(1.2)	5.8
B-13	(SS-1)	0-2	1,000	1,900	1,800	820	1,600	510	110	1,400
B-13	(SS-5)	8-10	74	250	75	33	93	88	12	48
B-14	(SS-2)	2.5-4.5	240	380	300	140	240	ND(75)	ND(44)	80
B-14	(SS-5)	8.5-10.5	210	700	290	120	320	32	19	190
B-15	(SS-5)	8-10	ND(0.78)	ND(5.8)	ND(0.78)	ND(0.78)	ND(0.78)	ND(2.0)	ND(1.2)	ND(2.0)
B-15	(SS-7)	12-14	ND(0.78)	ND(5.8)	ND(0.78)	ND(0.78)	0.93	ND(2.0)	ND(1.2)	2.7
B-16	(SS-6)	10-12	9.5	14	20	6.8	9.7	ND(2.0)	ND(1.2)	22
B-17	(SS-2)	2-4	4,900	7,100	4,100	2,300	5,900	420	380	4,000
B-18	(SS-1)	0-2	990	3,100	1,800	1,000	2,200	2,000	160	1,700
B-18	(SS-3)	4-6	170	620	410	200	400	670	30	310
B-19	(SS-4)	6-8	ND(470)	ND(470)	ND(470)	ND(470)	ND(470)	ND(470)	ND(470)	ND(470)
B-20	(SS-4)	6-8	ND(440)	ND(440)	ND(440)	ND(440)	ND(440)	ND(440)	ND(440)	ND(440)
MW-1	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-1	(SS-5)	8-10	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
MW-2	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-2	(SS-2)	2-4	ND(3,300)	ND(3,300)	ND(3,300)	ND(3,300)	ND(3,300)	ND(3,300)	ND(3,300)	ND(3,300)
MW-2	(SS-4A)	7.5-9.5	---	---	---	---	---	---	---	---
MW-3	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-3	(SS-4)	6-8	---	---	---	---	---	---	---	---
MW-3	(SS-6)	10-12	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
MW-3D	(SS-6)	39-41	ND(0.85)	ND(6.3)	ND(0.85)	ND(0.85)	ND(0.85)	ND(2.1)	ND(1.3)	ND(2.1)

TABLE 3 (continued)
SOIL ANALYTICAL RESULTS
TPH & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Samples	Depth	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene
		(feet)	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
MW-4	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-4	(SS-5)	8-10	---	---	---	---	---	---	---	---
MW-4	(SS-6)	10-12	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
MW-5S	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-5S	(SS-6)	10-12	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
MW-6	(SS-1)	0-2	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)	ND(3,200)
MW-6	(SS-8)	18-20	---	---	---	---	---	---	---	---
MW-7	(SS-2)	2.5-4.5	**300**	**220**	**320**	**170**	**400**	**140**	**34**	**350**
MW-7	(SS-4)	6.5-8.5	**1,500**	**1,600**	**1,600**	**890**	**2,000**	**450**	**220**	**1,200**
MW-9	(SS-6)	10-12	ND(0.83)	ND(6.2)	ND(0.83)	ND(0.83)	ND(0.83)	ND(2.1)	ND(1.2)	ND(2.1)
MW-10	(SS-2)	17-19	**100**	**130**	**120**	**62**	**160**	**23**	**20**	**160**
MW-10	(SS-4)	29-31	ND(0.75)	ND(5.6)	ND(0.75)	ND(0.75)	ND(0.75)	ND(1.9)	ND(1.1)	ND(1.9)
MW-11	(SS-3)	4-6	**34**	**41**	**37**	**16**	**37**	**15**	ND(7.1)	**53**
MW-11	(SS-5)	8-10	**4.1**	**7.1**	**4.3**	**2.1**	**5.1**	ND(2.1)	ND(1.2)	**4.5**

Notes:
1. ( ) = number in parentheses is laboratory Practical Quantitation Limit (PQL)
2. ND = none detected above PQL
3. ug/kg = micrograms per kilogram
4. --- -not analyzed for that parameter
5. Results for MW-1, MW-2, MW-3, MW-4, MW-5S and MW-6 from October 1994

TABLE 4

SOIL ANALYTICAL RESULTS
INORGANIC CONSTITUENTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Sample	Depth (feet)	Antimony (mg/kg)	Arsenic (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Zinc (mg/kg)	Cyanide (mg/kg)
B-1	(SS-3)	4.5-6.5	ND(4)	ND(8)	ND(0.038)	ND(0.38)	11	5.8	9	ND(0.0708)	ND(1.1)	ND(8)	ND(0.86)	ND(10)	15	ND(2.4)
B-1	(SS-5)	8.5-10.5	ND(4)	ND(7)	ND(0.036)	ND(0.36)	8.0	6.8	6	ND(0.0620)	ND(1.1)	ND(7)	ND(0.74)	ND(10)	17	ND(2.0)
B-2	(SS-3)	4.5-6.5	ND(3)	ND(8)	ND(0.039)	ND(0.39)	18	22	40	ND(0.0696)	ND(1.2)	ND(8)	ND(0.68)	ND(10)	49	ND(2.0)
B-4	(SS-1)	0-2	ND(3)	8	0.329	0.56	29	38	100	ND(0.0676)	13	ND(7)	ND(0.64)	ND(10)	84	ND(1.9)
B-4	(SS-6)	10-12	5	ND(8)	0.266	ND(0.38)	16	27	60	ND(0.0600)	11	ND(8)	ND(0.81)	ND(10)	36	ND(1.5)
B-6	(SS-5)	8-10	ND(4)	ND(7)	0.222	ND(0.37)	11	12	10	ND(0.0667)	5.9	ND(7)	ND(0.75)	ND(10)	24	ND(2.1)
B-7	(SS-5)	8-10	ND(4)	ND(7)	0.109	ND(0.36)	6.1	3.6	ND(4)	ND(0.0639)	3.2	ND(7)	ND(0.77)	ND(10)	9.7	ND(2.4)
B-8	(SS-1)	0-2	ND(4)	10	0.309	0.83	24	48	1,900	0.3167	17	ND(6)	ND(0.70)	ND(9)	70	ND(1.9)
B-8	(SS-4)	6-8	ND(3)	ND(8)	0.285	ND(0.41)	5.8	1.9	10	ND(0.0818)	ND(1.2)	ND(8)	ND(0.66)	ND(10)	6.6	ND(1.5)
B-9	(SS-5)	8-10	ND(3)	ND(8)	0.122	ND(0.41)	5.1	3.9	5	ND(0.0692)	ND(1.2)	ND(8)	ND(0.70)	ND(10)	7.7	ND(1.4)
B-10	(SS-6)	10-12	ND(4)	ND(7)	0.073	ND(0.36)	4.8	2.8	4	ND(0.0745)	3.3	ND(7)	ND(0.86)	ND(10)	7.9	ND(1.8)
B-11	(SS-4)	6-8	5	ND(7)	0.168	ND(0.36)	5.8	3.4	ND(4)	ND(0.0603)	ND(1.1)	ND(7)	ND(0.70)	ND(10)	6.9	ND(1.5)
B-11	(SS-6)	10-12	ND(4)	ND(5)	0.185	ND(0.26)	5.7	5.2	ND(3)	ND(0.0681)	ND(0.79)	ND(5)	ND(0.73)	ND(8)	7.1	ND(1.9)
B-12	(SS-5)	8-10	ND(3)	ND(6)	0.161	ND(0.32)	10	5.2	20	ND(0.0644)	5.2	ND(6)	ND(0.63)	ND(10)	24	ND(1.9)
B-13	(SS-1)	0-2	ND(2)	9	0.232	0.43	15	16	70	0.5339	8.9	ND(7)	ND(0.47)	ND(10)	57	ND(1.8)
B-13	(SS-5)	8-10	ND(3)	ND(7)	0.140	ND(0.35)	6.5	6.0	10	ND(0.0773)	1.1	ND(7)	ND(0.68)	ND(10)	15	ND(1.3)
B-14	(SS-2)	2.5-4.5	ND(4)	ND(7)	ND(0.035)	ND(0.35)	7.8	20	170	0.1521	2.5	ND(7)	ND(0.81)	ND(10)	48	ND(1.4)
B-14	(SS-5)	8.5-10.5	ND(4)	ND(6)	ND(0.032)	ND(0.32)	9.4	12	60	ND(0.0653)	1.3	ND(6)	ND(0.75)	ND(10)	25	ND(1.4)
B-15	(SS-5)	8-10	ND(4)	ND(8)	ND(0.038)	ND(0.38)	9.6	4.2	ND(4)	ND(0.0743)	2.6	ND(8)	ND(0.77)	ND(10)	9.8	ND(1.7)
B-15	(SS-7)	12-14	ND(4)	ND(8)	ND(0.039)	ND(0.39)	6.6	4.6	ND(4)	ND(0.0676)	2.2	ND(8)	ND(0.85)	ND(10)	11	ND(2.0)
B-16	(SS-6)	10-12	ND(3)	ND(7)	ND(0.034)	ND(0.34)	6.9	3.5	8	ND(0.0672)	ND(1.0)	ND(7)	ND(0.67)	ND(10)	10	ND(1.9)
B-17	(SS-2)	2-4	5	ND(7)	0.460	0.43	23	270	120	0.6804	13	ND(7)	ND(0.62)	ND(10)	120	NIX(2.3)
B-18	(SS-1)	0-2	ND(3)	ND(5)	0.243	3.5	24	23	560	0.0508	13	ND(5)	ND(0.60)	10	68	NIX(2.2)
B-18	(SS-3)	4-6	ND(3)	ND(5)	0.283	0.23	8.0	4.7	40	ND(0.0508)	ND(0.68)	ND(5)	ND(0.68)	ND(7)	14	ND(2.4)
B-19	(SS-4)	6-8	ND(3)	ND(7)	ND(0.036)	ND(0.36)	33	34	240	0.0565	2.4	ND(7)	ND(0.59)	NIX(10)	97	NIX(1.9)
B-20	(SS-4)	6-8	ND(3)	ND(6)	ND(0.031)	ND(0.31)	14	28	260	ND(0.0601)	5.6	ND(6)	ND(0.62)	ND(9)	55	NIX(1.9)
MW-1	(SS-5)	8-10	ND(3)	ND(6)	ND(0.031)	0.37	18	21	7	ND(0.0636)	8.1	ND(6)	ND(0.65)	ND(9)	34	NIX(1.1)
MW-2	(SS-2)	2-4	ND(3)	7	ND(0.035)	0.42	20	20	60	0.1579	9.0	ND(7)	ND(0.69)	ND(10)	56	NIX(1.1)
MW-3	(SS-6)	10-12	ND(3)	ND(7)	0.067	ND(0.34)	3.9	1.8	ND(3)	ND(0.0718)	ND(1.0)	ND(7)	ND(0.50)	ND(10)	5.5	NIX(1.1)
MW-3D	(SS-6)	39-41	ND(3)	6	0.260	ND(0.29)	9.1	8.0	4	ND(0.0855)	6.7	ND(6)	ND(0.55)	ND(9)	14	NIX(1.1)
MW-4	(SS-6)	10-12	ND(4)	ND(6)	ND(0.029)	ND(0.29)	4.9	1.9	ND(3)	ND(0.0622)	ND(0.88)	ND(6)	ND(0.80)	ND(9)	8.0	NIX(1.1)
MW-5S	(SS-6)	10-12	ND(3)	ND(5)	ND(0.025)	0.38	13	30	4	ND(0.0640)	8.0	ND(5)	ND(0.56)	ND(7)	27	ND (1.0)
MW-6	(SS-1)	0-2	5	ND(7)	ND(0.034)	0.55	20	28	130	0.1533	7.5	ND(7)	ND(0.71)	ND(10)	97	ND(1.0)
MW-7	(SS-2)	2.5-4.5	ND(4)	ND(8)	ND(0.038)	ND(0.38)	13	28	120	ND(0.0754)	ND(1.1)	ND(8)	ND(0.78)	ND(10)	61	ND(2.1)
MW-7	(SS-4)	6.5-8.5	ND(4)	ND(6)	ND(0.032)	ND(0.32)	32	19	240	0.0792	9.3	ND(6)	ND(0.82)	ND(9)	88	ND(1.9)
MW-9	(SS-6)	10-12	ND(4)	ND(8)	0.127	ND(0.42)	6.0	3.0	ND(4)	ND(0.0742)	ND(1.3)	ND(8)	ND(0.79)	ND(10)	7.8	ND(2.0)
MW-10	(SS-2)	17-19	ND(2)	ND(4)	0.260	0.24	17	23	10	ND(0.0595)	13	ND(4)	ND(0.41)	ND(7)	38	ND(2.1)
MW-10	(SS-4)	29-31	3	ND(4)	0.246	0.31	15	28	9	ND(0.0559)	14	ND(4)	ND(0.57)	ND(7)	37	ND(1.8)
MW-11	(SS-3)	4-6	6	ND(8)	ND(0.038)	ND(0.38)	400	13	20	ND(0.0585)	ND(1.1)	ND(8)	ND(0.76)	ND(10)	41	ND(1.5)
MW-11	(SS-5)	8-10	ND(4)	ND(7)	ND(0.033)	ND(0.33)	38	1.5	4	ND(0.0463)	ND(1.0)	ND(7)	ND(0.78)	ND(10)	11	NIX(1.7)

Notes:
1. ( ) = number in parentheses is laboratory Practical Quantitation Limit (PQL).
2. mg/kg - milligrams per kilogram
3. ND = below PQL
4. Results for MW 1, MW-2, MW-3, MW-4, MW-5S and MW-6 from October 1994

TABLE 5

WETLAND SAMPLING DATA SUMMARY

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Station ID	HNU (ppm)	Soil Description	Surrounding Area Description
P-1	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-2	<1	Dark brown fine SAND; and Silt; some organic matter. Strong organic odor.	Standing water, tree and scrub vegetation
P-3	<1	Dark to light brown fine SAND; and Silt.	Standing water, open area with cattails
P-4	<1	Dark brown to brownish-gray fine SAND; and Silt.	Standing water, reeds and scrub vegetation
P-5	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails and trees, plastic pail debris
P-6	<1	Dark to light brown fine SAND; and Silt.	Standing water, cattails and reeds
P-7	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, open area
P-9	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails and reeds
P-10	<1	Dark brown to brownish-gray fine SAND; and Silt.	Standing water, open area with reeds
P-11	<1	Dark brown fine SAND; and Silt, some organic matter.	Standing water, tree and scrub vegetation
P-12	8	Dark brown fine SAND; and Silt, some organic matter. Heavily stained soil with strong petroleum odor.	Standing water, scrub vegetation
P-13	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-14	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-15	2	Dark brown fine SAND; and Silt; some organic matter. Heavily stained soil with strong petroleum odor.	Standing water, open area
P-17	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-18	<1	Dark brown fine SAND; and Silt; some organic matter. White ceramic (?) material in sample.	Standing water, tree and scrub vegetation
P-19	<1	Brown fine SAND; and Silt; some organic matter.	Dry ground, grass and scrub vegetation
P-20	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails and reeds
P-21	<1	Dark brown fine SAND; and Silt; some organic matter;	Standing water, tree and scrub vegetation
P-22	<1	Light brown medium to fine SAND; trace gravel; trace organic matter	Dry ground, gravel fill, tree vegetation
P-23	<1	Brown medium to fine SAND; and organic matter.	Standing water, reed and scrub vegetation, hydrogen sulfide odor
P-24	<1	Dark brown medium to fine SAND; and Silt; some organic matter	Standing water, reed and scrub vegetation,
P-25	<1	Dark brown medium to fine SAND; and Silt; some organic matter	Standing water, reed tree and scrub vegetation
P-26	<1	Dark brown medium to fine SAND; and Silt; some organc matter	Standing water, tree and scrub vegetation
P-27	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, open area with cattail and reeds
P-28	<1	Dark brown fine SAND; and Silt; some organic matter.	Wet ground, reed and tree vegetation
P-29	<1	Dark to light brown fine SAND; and Silt; some organic matter	Standing water, open area with reed vegetation
P-30	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, open area with cattail and reed vegetation

Notes:

1. Samples P-1 through P-30 collected on 11/16/95.
2. All samples collected at a depth of 6 inches to 18 inches below grade.

Disk 3621

TABLE 6
SOIL ANALYTICAL RESULTS
INITIAL WETLAND SAMPLING

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	TPH (mg/kg)	Total PCB (mg/kg)	Total Chromium (mg/kg)	Total Lead (mg/kg)
P-1	44	3.3	76	90
P-2	92	2.7	56	80
P-3	320	3.1	210	140
P-4	40	15	45.1	30
P-5	610	69	280	1,700
P-6	620	6.7	500	620
P-7	3,900	8.9	800	2,700
P-9	140	5.7	110	100
P-10	610	5.4	290	1,400
P-11	4,100	8.5	180	730
P-12	82,000	60	340	24,900
P-13	550	37	400	190
P-14	20,000	11 *	820	16,800
P-15	38,000	24 *	1,100	1,700
P-17	330	5.9	1,000	270
P-18	24,000	13 *	970	3,200
P-19	770	3.1 *	2,000	1,500
P-20	69	0.8 *	190	70
P-21	2,100	1.4 *	1,800	600
P-22	110	0.4 *	230	70
P-23	11,000	10	21,300	2,500
P-24	540	1.0 *	62,500	3,300
P-25	260	2.9	12,400	380
P-26	270	6.6 *	66,500	1,400
P-27	230	0.2 *	14,000	600
P-28	22	ND (1.3)	3,100	90
P-29	130	0.2 *	760	120
P-30	77	ND (0.2)	9,400	280
P-31	—	—	1,500	—
P-32	—	—	7,500	—
SW-1	72	ND (0.1)	5,700	130
SW-2	97,000	220	1,100	35,100
SW-3	620	15	430	1,000
SW-4	74	0.8*	93	630

Notes:
1) Total Petroleum Hydrocarbons (TPH) by Gas Chromatogram/Flame Ionization Detector.
2) All samples collected at a depth of 0-2 feet below grade.
3) All PCBs detected are Aroclor 1254 except those marked with an asterisk(*), which are Aroclor 1260.
4) — = Not analyzed.

Disk 3621

TABLE 7

SOIL ANALYTICAL RESULTS
ADDITIONAL WETLAND SAMPLING

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

		Inorganics			VOCs	PAHs				
Location	Sample Date	Arsenic	Cadmium	Amenable Cyanide	Total Xylenes	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Fluoranthene	Pyrene	Pesticides
		(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(mg/kg)*
P-12	12/18/95	ND (10)	ND (0.65)	ND (8.0)	**53,000**	ND (11,000)	ND (11,000)	ND (11,000)	ND (11,000)	ND(8)
P-24	12/18/95	ND (20)	ND (0.79)	ND (1.0)	ND (250)	ND (880)	ND (880)	ND (880)	ND (880)	ND(1)
P-26	12/18/95	ND (20)	ND (1.0)	ND (1.2)	ND (230)	ND (1,200)	ND (1,200)	ND (1,200)	ND (1,200)	ND(12)
SW-1	10/13/94	ND (10)	ND (0.55)	ND (0.5)	ND (5)	**340**	**680**	**640**	**430**	ND(0.5)
SW-2	10/14/94	ND (10)	**11**	ND (0.5)	**1,300**	ND (66,000)	ND (66,000)	ND (66,000)	---	ND(0.5)
SW-2	12/18/95	---	---	---	---	ND (9,800)	ND (9,800)	ND (9,800)	ND (9,800)	---
SW-3	10/14/94	ND (10)	**2.9**	ND (0.5)	ND (5)	ND (1,600)	ND (1,600)	ND (1,600)	ND (1,600)	ND(0.5)
SW-4	10/13/94	**10**	**2.0**	ND (0.5)	ND (5)	ND (1,600)	**2,000**	**2,000**	ND (1,600)	ND(0.5)

Notes:
1) --- = Not analyzed.
2) All samples collected at a depth of 0-2 feet below grade.
3) ND = None detected above method Practical Quantitation Limit (PQL).
4) Only those PAHs detected are shown.

TABLE 8

WATER LEVEL DATA

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

	Location									
Date	**MW-1**	**MW-2**	**MW-3**	**MW-3D**	**MW-4**	**MW-5S**	**MW-5D**	**MW-6**	**MW-7**	**MW-8**
11/9/94	43.54	43.56	43.53	---	43.41	43.46	43.48	43.52	---	---
12/13/94	45.04	44.80	45.05	---	44.93	44.74	44.74	44.67	---	---
9/15/95	42.37	42.39	42.04	---	42.15	42.35	42.35	42.33	---	---
10/9/95	44.11	43.76	44.27	43.93	44.31	43.87	43.64	43.67	43.71	---
10/19/95	43.46	43.43	43.64	43.44	43.52	43.40	43.42	43.36	43.41	---
10/27/95	43.85	43.76	43.98	43.78	43.95	43.73	43.69	43.67	43.76	43.78
11/7/95	44.10	44.03	44.24	44.04	44.18	43.99	44.03	43.95	---	44.04
11/17/95	45.82	45.15	45.39	45.46	45.39	45.21	45.13	44.96	--	45.23
12/4/95	44.44	44.48	44.36	44.41	44.30	44.36	44.16	44.42	---	44.47
12/18/95	44.32	44.38	44.20	44.23	44.14	44.25	44.16	44.32	44.34	44.37
3/7/96	45.28	45.26	45.04	46.12	45.14	45.09	44.90	45.19	45.17	45.24
(Reference Elev.)	*(53.29)*	*(53.85)*	*(52.86)*	*(52.41)*	*(52.29)*	*(53.88)*	*(54.06)*	*(55.71)*	*(50.44)*	*(54.32)*

TABLE 8 (continued)

WATER LEVEL DATA

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

	Location									
Date	**MW-9**	**MW-10**	**MW-11**	**MW-12**	**MW-13**	**MR-1SS**	**MR-2SS**	**SW-A**	**SW-B**	**SW-C**
								---	---	---
11/9/94	---	---	---	---	---	43.20	43.55	---	---	---
12/13/95	---	---	---	---	---	44.93	---	---	---	---
9/15/95	---	---	---	---	---	42.05	42.33	---	---	---
10/9/95	44.18	---	44.01	44.82	44.49	---	43.86	44.76	44.69	---
10/19/95	43.44	43.48	43.19	43.47	43.87	43.28	43.37	---	44.17	---
10/27/95	43.88	43.82	43.69	43.96	44.19	43.81	43.75	---	44.40	---
11/7/95	44.11	44.08	43.87	44.38	44.51	44.01	43.99	---	44.58	---
11/17/95	45.48	45.56	45.35	45.38	45.29	45.65	45.48	45.12	45.17	---
12/4/95	44.27	44.47	44.03	44.35	44.44	44.03	44.38	---	44.60	---
12/18/95	44.16	44.36	43.86	43.99	44.22	43.97	44.26	---	---	44.66
3/7/96	45.06	45.28	44.86	44.96	44.94	44.93	45.16	44.98	45.01	44.89
(Reference Elev.)	*(51.82)*	*(53.84)*	*(50.04)*	*(47.29)*	*(46.42)*	*(51.62)*	*(50.80)*	*(47.22)*	*(46.42)*	*(46.46)*

TABLE 8 (continued)

WATER LEVEL DATA

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Date	Location								
	MW-4S Whitney Barrel	MW-4M Whitney Barrel	MW-4D Whitney Barrel	BW-2 Wildwood	BW-2R Wildwood	BSW-2 Wildwood	BW-3 Wildwood	BW-4 Wildwood	OW-2 Conn. Mutual
11/9/94	---	---	---	---	---	---	---	---	---
12/13/95	---	---	---	---	---	---	---	---	---
9/15/95	---	---	---	---	---	---	---	---	---
10/9/95	---	---	---	---	---	---	---	---	---
10/19/95	---	---	---	---	---	---	---	---	---
10/27/95	43.47	43.43	43.71	43.05	43.53	43.47	43.50	43.74	---
11/7/95	---	---	---	---	---	---	---	---	---
11/17/95	45.03	44.91	---	---	---	---	45.00	45.43	
12/4/95	43.87	43.90	---	43.38	43.93	43.82	43.93	44.29	44.39
12/18/95	---	---	---	---	---	---	43.83	44.15	44.25
3/7/96	44.49	44.34	44.69	---	---	---	44.43	44.99	45.26
(Reference Elev.)	*(46.53)*	*(46.91)*	*(47.59)*	*(46.82)*	*(47.78)*	*(48.04)*	*(47.38)*	*(46.46)*	*(76.19)*

NOTES:

1. Reference elevations are PVC rim except MR-1SS , MW-12, MW-13, SW-A, SW-B, SW-C, BW-2, BSW-2, MW-4 and OW-2 (protective casing rim).
2. --- indicates well not installed, data point dry or otherwise not gauged.

TABLE 9

VERTICAL HYDRAULIC GRADIENT CALCULATIONS

Murphy's Waste Oil Service, Inc.
252 Salem Stret
Woburn, Massachusetts

Date	MW-3			MW-5			MW-10			MW-12			MW-13		
	ΔH	ΔY	i	ΔH	ΔY	i	ΔH	ΔY	i	ΔH	ΔY	i	ΔH	ΔY	i
	feet	*feet*	%	*feet*	*feet*	%	*feet*	*feet*	%	*feet*	*feet*	%	*feet*	*feet*	%
11/9/94	---	37.5	---	0.02	69	0.0	---	28	---	---	3.8	---	---	3.8	---
12/13/94	---	37.5	---	0	69	0.0	---	28	---	---	3.8	---	---	3.8	---
9/15/95	---	37.5	---	0	69	0.0	---	28	---	---	3.8	---	---	3.8	---
10/9/95	-0.34	37.5	-0.9	-0.23	69	-0.3	---	28	---	0.06	3.8	1.6	-0.2	3.8	-5.3
10/19/95	-0.2	37.5	-0.5	0.02	69	0.0	0.11	28	0.4	---	3.8	---	-0.3	3.8	-7.9
10/27/95	-0.2	37.5	-0.5	-0.04	69	-0.1	0.07	28	0.3	---	3.8	---	-0.21	3.8	-5.5
11/7/95	-0.2	37.5	-0.5	0.04	69	0.1	0.09	28	0.3	---	3.8	---	-0.07	3.8	-1.8
11/17/95	0.07	37.5	0.2	-0.08	69	-0.1	0.08	28	0.3	0.26	3.8	6.8	0.12	3.8	3.2
12/4/95	0.05	37.5	0.1	-0.08	69	-0.1	0.09	28	0.3	---	3.8	---	-0.16	3.8	-4.2
12/18/95	0.03	37.5	0.1	-0.09	69	-0.1	0.1	28	0.4	---	3.8	---	---	3.8	---
3/7/96	1.08	37.5	2.9	-0.19	69	-0.3	0.12	28	0.4	-0.02	3.8	-0.5	-0.07	3.8	-1.8

Notes:

1. Vertical gradients were calculated for well clusters MW-3/MW-3D; MW-5S/MW-5D; MR-2SS/MW-10; and groundwater relative to surface water at MW-12/SW-A and MW-13/SW-B.

2. The parameters are defined as:
   ΔH = Change in head
   ΔY = Vertical difference between screened interval
   i = Vertical gradient in percent = ΔH/ΔY

TABLE 10
AQUIFER TESTING DATA SUMMARY

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

WELL	L (ft)	L (cm)	r (cm)	R (cm)	To (sec)	K (cm/sec)	i (ftvert./fthor)	Vx (ft/day)
MW-8	2.80	85.3	2.6	10.2	3.0	2.85E-02	0.002	0.65
MW-9	5.40	164.6	2.6	10.2	5.0	1.16E-02	0.002	0.26
MW-10	5.00	152.4	2.6	10.2	5.2	1.18E-02	0.002	0.27
MW-11	5.99	182.6	2.6	10.2	2.4	2.25E-02	0.002	0.51
MW-12	3.00	91.4	1.7	2.0	19.2	3.14E-03	0.002	0.07
MW-13	3.00	91.4	1.7	2.0	25.5	2.37E-03	0.002	0.05

Hydraulic conductivity (K) was calculated using the Hvorslev method which is valid for unconfined conditions where the length of the well screen is greater than eight times the effective radius of the well screen.
K was calculated by the formula:

$$K = \frac{r \ln(L/R)}{2LT_o}$$

Where:

K is hydraulic conductivity
r is the radius of the well casing
R is the effective radius of the well screen (or soil boring)
L is the average length of well screen through which water passes during the test
To is the time it takes for the water level to rise 37 percent of the initial change

Average linear velocities were calculated using measured hydraulic conductivity, hydraulic gradients and an assumed value of effective porosity, using the equation:

$$V = \frac{Ki}{n_e}$$

Where:

Vx is average linear velocity
i is hydraulic gradient
ne is effective porosity of sediments = 0.25

References:

Dunne, T. and Leopold, L.B., 1978. Water in Environmental Planning, W.H. Freeman and Company.
Freeze, R.A. and J.A. Cherry, 1979. Groundwater, Prentice-Hall, Inc.
Fetter, C.W., 1988. Applied Hydrogeology, Second Edition, Merrill Publishing Company.

TABLE 11

Field Data

November 7, 1995

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Well Depth *(feet)*	Reference Elevation *(feet)*	Water Level *(feet)*	Water Elevation *(feet)*	Water Temp *(Centigrade)*	Specific Conductance *(µmhos/cm)*	pH
MW-1	15.0	53.29	9.19	44.10	12.4	460	6.2
MW-2	15.0	53.85	9.82	44.03	12.6	626	6.1
MW-3	14.0	52.86	8.62	44.24	13.3	353	5.5
MW-3D	49.0	52.41	8.37	44.04	12.3	791	6.3
MW-4	15.0	52.29	8.11	44.18	14.3	302	6.1
MW-5S	15.0	53.88	9.89	43.99	14.6	530	6.2
MW-5D	83.5	54.06	10.03	44.03	14.7	1,150	7.3
MW-6	18.0	55.71	11.76	43.95	11.9	647	6.1
MW-7	12.0	50.44	—	—	—	—	—
MW-8	12.0	54.32	10.28	44.04	14.3	632	6.4
MW-9	12.0	51.83	7.71	44.11	14.8	486	5.7
MW-10	41.0	53.84	9.76	44.08	13.9	299	6.3
MW-11	12.0	50.04	6.17	43.87	13.6	8,600	6.1
MW-12	5.4	47.29	2.91	44.38	9.6	6,390	6.5
MW-13	5.3	46.42	1.91	44.51	7.1	1,200	6.3
MR-1SS	13.0	50.34	7.61	44.01	14.3	447	6.0
MR-2SS	15.0	50.80	6.81	43.99	14.5	996	6.3

NOTES:

1. Well reference elevations determined at top of PVC well rim, measured in feet relative to benchmark (pin in power pole = 51.38 feet NGVD).
2. Well depth in feet below standpipe/roadbox rim.
3. Water level measured from reference elevation down to water level.
4. Conductivity in micromhos per centimeter corrected to 25 degrees Centigrade.

TABLE 12

Field Data

December 18, 1995

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Well Depth *(feet)*	Reference Elevation *(feet)*	Water Level *(feet)*	Water Elevation *(feet)*	Water Temp *(Centigrade)*	Specific Conductance *(µmhos/cm)*	pH
MW-1	15.0	53.29	8.79	44.32	9.3	529	6.0
MW-2	15.0	53.85	9.47	44.38	8.8	570	5.9
MW-3	14.0	52.86	8.66	44.20	10.3	332	5.4
MW-3D	49.0	52.41	8.18	44.23	10.6	569	6.1
MW-4	15.0	52.29	8.15	44.14	8.9	340	5.8
MW-5S	15.0	53.88	9.63	44.25	11.0	10	6.1
MW-5D	83.5	54.06	9.90	44.16	9.0	5	6.3
MW-6	18.0	55.71	11.39	44.32	10.7	646	5.8
MW-7	12.0	50.44	6.10	44.34	11.7	1,656	6.3
MW-8	12.0	54.32	9.95	44.37	10.6	694	6.2
MW-9	12.0	51.83	7.66	44.16	9.7	316	5.8
MW-10	41.0	53.84	9.48	44.36	10.7	669	6.2
MW-11	12.0	50.04	6.18	43.86	10.0	815	5.6
MW-12	5.4	47.29	3.30	43.99	5.6	446	6.5
MW-13	5.3	46.42	2.20	44.22	4.9	352	6.3
MR-1SS	13.0	50.34	7.65	43.97	9.9	269	6.1
MR-2SS	15.0	50.80	6.54	44.26	11.5	901	6.0

NOTES:

1. Well reference elevations determined at top of PVC well rim, measured in feet relative to benchmark (pin in power pole = 51.38 feet NGVD).
2. Well depth in feet below standpipe/roadbox rim.
3. Water level measured from reference elevation down to water level.
4. Conductivity in micromhos per centimeter corrected to 25 degrees Centigrade.

TABLE 13

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Total Xylenes (ug/l)	Acetone (ug/l)	Chloro-ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	t-1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	2-Butanone (ug/l)
MW-1	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	25	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-2	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	24	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-3	11/9/94	ND (13)	ND (13)	ND (13)	ND (50)	ND (25)	ND (5)	98	44	100	1,100	ND (25)	ND (50)
	11/7/95	ND (130)	ND (130)	ND (130)	ND (500)	ND (250)	ND (130)	ND(130)	160	140	2,200	ND(250)	ND(500)
	12/18/95	ND (25)	ND (25)	ND (25)	ND (100)	ND (50)	ND (25)	170	220	220	3,100	ND (50)	ND (100)
(Blind Dup.)	12/18/95	ND (250)	ND (250)	ND (250)	ND (1,000)	ND (500)	ND (250)	250	360	400	5,300	ND (500)	ND (500)
MW-3D	11/7/95	ND (5)	ND (5)	ND (5)	25	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-4	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-5S	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-5D	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	36	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-6	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	32	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-7	12/18/95	ND (25)	ND (25)	ND (25)	ND (100)	ND (50)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)
MW-8	11/7/95	ND (5)	ND (5)	ND (5)	29	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	6	ND (10)	ND (20)

TABLE 13 (Cont.)

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Total Xylenes (ug/l)	Acetone (ug/l)	Chloro-ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	t-1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	2-Butanone (ug/l)
MW-9	11/7/95	ND (5)	ND (5)	ND (5)	28	ND (10)	ND (5)	9	15	48	5	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	5	12	31	ND (5)	ND (10)	ND (20)
MW-10	11/7/95	ND (5)	ND (5)	ND (5)	24	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-11	11/7/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	13	16	ND (5)	ND (5)	ND (10)	ND (20)
(Blind Dup.)	11/7/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	14	16	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (25)	ND (25)	ND (25)	ND (100)	ND (50)	ND (25)	230	380	ND (25)	ND (25)	ND (50)	ND (100)
MW-12	11/7/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	10	ND (5)	ND (5)	96	ND (10)	ND (20)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (40)	ND (20)	ND (10)	15	ND (10)	ND (10)	150	ND (20)	ND (40)
MW-13	11/7/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MR-1SS	8/31/93	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (3.4)	2.6	3.7	1.4	ND (2)	ND (2)	ND (3.4)
	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	10	ND (5)	ND (5)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MR-2SS	8/31/93	8.6	12.9	324	ND (10)	ND (10)	ND (17.4)	ND (10)	ND (10)	22.6	461	ND (10)	ND (17.4)
	11/9/94	9	9	9	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	240	15	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	31	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	140	14	ND (20)
	12/18/95	5	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	140	12	ND (20)
SW-A	11/9/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
SW-B	11/9/95	ND (5)	ND (5)	ND (5)	43	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
SW-3	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
Trip Blank	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)

TABLE 13 (Cont.)

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Notes:

1. Laboratory analyses by EPA Method 624, data shown in micrograms per liter (ug/l).
2. Practical Quantitation Limit shown in parenthese where compounds not detected (ND) or trace (Tr).
3. Abbreviations are used for the following compounds:

1,1-DCA = 1,1-Dichloroethane	PCE = Tetrachloroethene
1,1,1-TCA = 1,1,1-Trichloroethane	TCE = Trichloroethene
t-1,2-DCE = Trans 1,2-Dichloroethene	

TABLE 14
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
PCB & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Date	PCB	Bis(2-ethylhexyl)-phthalate	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
		ug/l	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*
MW-1	11/9/94	ND (1.0)	ND (200)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-2	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-3	11/9/94	ND (1.0)	ND (200)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
(Blind Dup.)	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-3D	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-4	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-5S	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-5D	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-6	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-7	12/18/95	ND (1.0)	ND (190)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)
MW-8	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-9	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-10	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)

TABLE 14 (cont.)
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
PCB & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Date	PCB	Bis(2-ethylhexyl)-phthalate	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
		ug/l	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*
MW-11	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
(Blind Dup.)	11/8/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-12	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	23	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-13	11/7/95	1.6	ND (94)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)
	12/18/95	3.8	ND (38)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
MR-1SS	11/9/94	ND (1.0)	ND (200)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MR-2SS	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (38)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
SW-A	11/9/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
SW-B	11/9/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
SW-3	11/9/94	ND (5.0)	ND (20)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)

Notes:
1. ( ) = number in parentheses is laboratory Practical Quantitation Limit (PQL)
2. ND = none detected above PQL
3. ug/l = micrograms per liter

TABLE 14 (Cont.)
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
PCB & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzo (a) anthracene (ug/l)	Chrysene (ug/l)	Benzo (b) fluoranthene (ug/l)	Benzo (k) fluoranthene (ug/l)	Benzo (a) pyrene (ug/l)	Indeno (1,2,3-cd) pyrene (ug/l)	Dibenzo (a,h) anthracene (ug/l)	Benzo (g,h,i) perylene (ug/l)
MW-1	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-2	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-3	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
(Blind Dup.)	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-3D	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-4	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-5S	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-5D	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-6	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-7	12/18/95	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)
MW-8	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-9	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)

TABLE 14 (Cont.)
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
PCB & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzo (a) anthracene (ug/l)	Chrysene (ug/l)	Benzo (b) fluoranthene (ug/l)	Benzo (k) fluoranthene (ug/l)	Benzo (a) pyrene (ug/l)	Indeno (1,2,3-cd) pyrene (ug/l)	Dibenzo (a,h) anthracene (ug/l)	Benzo (g,h,i) perylene (ug/l)
MW-10	11/7/95	ND (100)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-11	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
(Blind Dup.)	11/8/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-12	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-13	11/7/95	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)
	12/18/95	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
MR-1SS	8/31/93	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MR-2SS	8/31/93	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
SW-A	11/9/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
SW-B	11/9/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
SW-3	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)

Notes:
1. ( ) = number in parentheses is laboratory Practical Quantitation Limit (PQL)
2. ND = none detected above PQL
3. ug/l = micrograms per liter

TABLE 15

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
DISSOLVED INORGANIC ANALYSES

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Arsenic (mg/l)	Cadmium (mg/l)	Lead (mg/l)	Zinc (mg/l)	Total Cyanide (mg/l)
MW-1	11/9/94	ND (0.002)	ND (0.002)	ND (0.002)	ND (0.04)	ND (0.04)
	11/7/95	---	---	ND (0.002)	---	---
	12/18/95	---	---	ND (0.005)	---	---
MW-2	11/9/94	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.04)
	11/7/95	---	---	ND (0.002)	---	---
	12/18/95	---	---	ND (0.005)	---	---
MW-3	11/9/94	**0.003**	ND (0.001)	**0.002**	**0.04**	ND (0.04)
	11/7/95	---	---	ND (0.002)	---	---
	12/18/95	ND (0.002)	---	ND (0.005)	---	---
(Blind Dup.)	12/18/95	---	---	**0.013**	---	---
MW-3D	11/7/95	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
	12/18/95	---	---	ND (0.005)	---	---
MW-4	11/9/94	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
	11/7/95	---	---	ND (0.002)	---	---
	12/18/95	---	---	ND (0.005)	---	---
MW-5S	11/9/94	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
	11/7/95	---	---	ND (0.002)	---	---
	12/18/95	---	---	ND (0.005)	---	---
MW-5D	11/9/94	**0.003**	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
	11/7/95	---	---	ND (0.002)	---	---
	12/18/95	ND (0.002)	---	ND (0.005)	---	---
MW-6	11/9/94	ND (0.002)	**0.002**	**0.006**	ND (0.04)	ND (0.02)
	11/7/95	---	---	ND (0.002)	---	---
	12/18/95	---	---	ND (0.005)	ND (0.04)	---
MW-7	12/18/95	---	---	**0.006**	---	---
MW-8	11/7/95	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
	12/18/95	---	---	ND (0.005)	---	---

TABLE 15 (cont.)

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
DISSOLVED INORGANIC ANALYSES

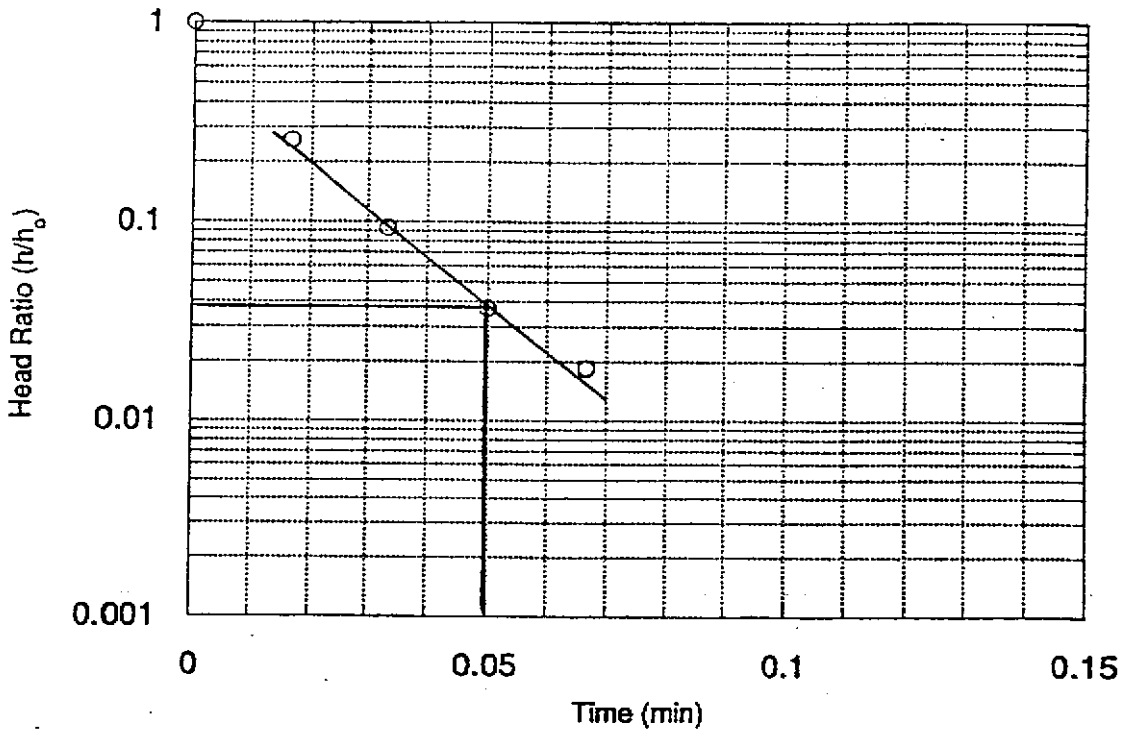
Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Arsenic (mg/l)	Cadmium (mg/l)	Lead (mg/l)	Zinc (mg/l)	Total Cyanide (mg/l)
MW-9	11/7/95	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
	12/18/95	---	---	**0.006**	---	---
MW-10	11/7/95	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
	12/18/95	---	---	ND (0.001)	---	---
MW-11	11/7/95	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
(Blind Dup.)	11/7/95	**0.003**	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.02)
	12/18/95	ND (0.002)	---	ND (0.001)	---	---
MW-12	11/7/95	**0.004**	ND (0.001)	ND (0.02)	**1.4**	ND (0.02)
	12/18/95	ND (0.002)	---	ND (0.001)	**2.0**	---
MW-13	11/7/95	**0.004**	ND (0.001)	**0.004**	**0.56**	ND (0.02)
---	12/18/95	---	---	ND (0.001)	---	---
MR-1SS	8/31/93	ND (0.004)	ND (0.005)	ND (0.001)	ND (0.005)	ND (0.002)
	11/9/94	ND (0.002)	ND (0.001)	ND (0.002)	ND (0.04)	ND (0.04)
	11/7/95	---	---	ND (0.002)	---	---
	12/18/95	---	---	ND (0.001)	---	---
MR-2SS	8/31/93	ND (0.002)	ND (0.005)	**0.029**	**0.025**	ND (0.023)
	11/9/94	ND (0.002)	ND (0.001)	**0.020**	ND (0.04)	ND (0.02)
	11/7/95	---	---	**0.006**	---	---
	12/18/95	---	---	**0.009**	---	---
SW-A	11/9/95	**0.006**	ND (0.001)	**0.010**	**0.11**	ND (0.02)
SW-B	11/9/95	**0.003**	ND (0.001)	**0.005**	ND (0.04)	ND (0.02)
SW-3	11/9/94	ND (0.002)	ND (0.001)	**0.028**	ND (0.04)	ND (0.04)

Notes:
1. Practical Quantitation Limit shown in parentheses where compounds not detected (ND).
2. mg/l = Milligrams per liter
3. --- = Parameter not analyzed.

Disk 3621

WELL MW-8



L = 85.6 cm
T_o = 3.0 sec
K = 2.85 x 10^{-2} cm/sec

NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_o is time of recovery to 37 percent of initial change (h/h_o = 0.37).

ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
A	PRELIMINARY				

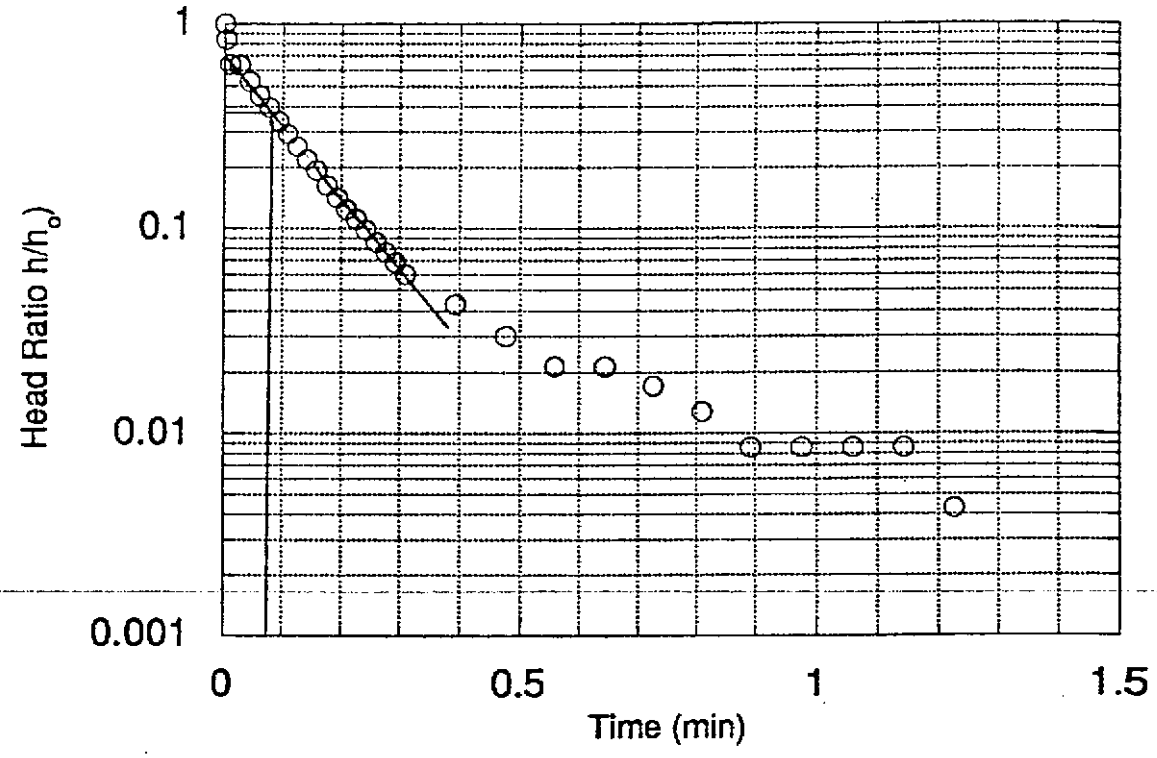
CleanHarbors
Environmental Services, Inc.
Remedial Technologies Division
12 MERCER ROAD
NATICK, MASSACHUSETTS 01760
(508) 650-6910

MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS

WELL MW-8 SLUG TEST

PROJECT NO. EN-170	DWG. NO.
SCALE: NA	

WELL MW-9



L = 165.2 cm
T_o = 5.0 sec
K = 1.16×10^{-2} cm/sec

NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_o is time of recovery to 37 percent of initial change ($h/h_o = 0.37$).

ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
A	PRELIMINARY				

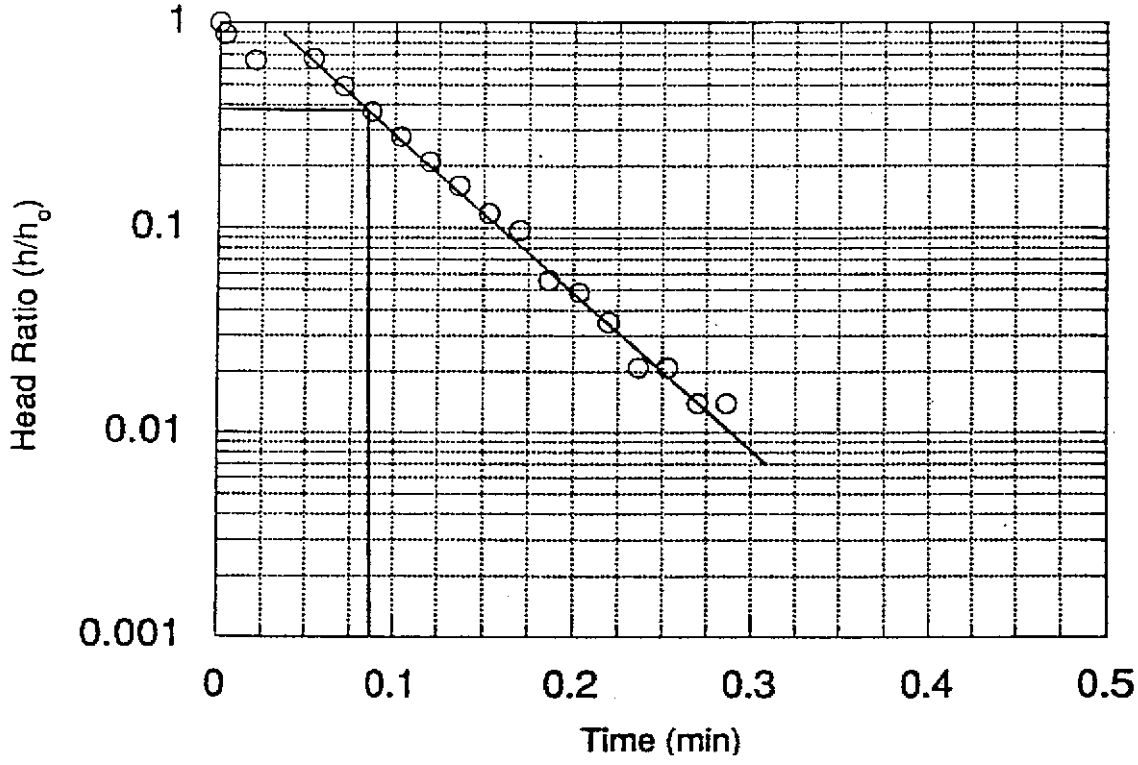
CleanHarbors
Environmental Services, Inc.
Remedial Technologies Division
12 MERCER ROAD
NATICK, MASSACHUSETTS 01760
(508) 650-6910

MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS

WELL MW-9 SLUG TEST

PROJECT NO. EN-170	DWG. NO.
SCALE: NA	

WELL MW-10



$L = 152.4$ cm
$T_o = 5.16$ sec
$K = 1.18 \times 10^{-2}$ cm/sec

NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_o is time of recovery to 37 percent of initial change ($h/h_o = 0.37$).

ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
A	PRELIMINARY				

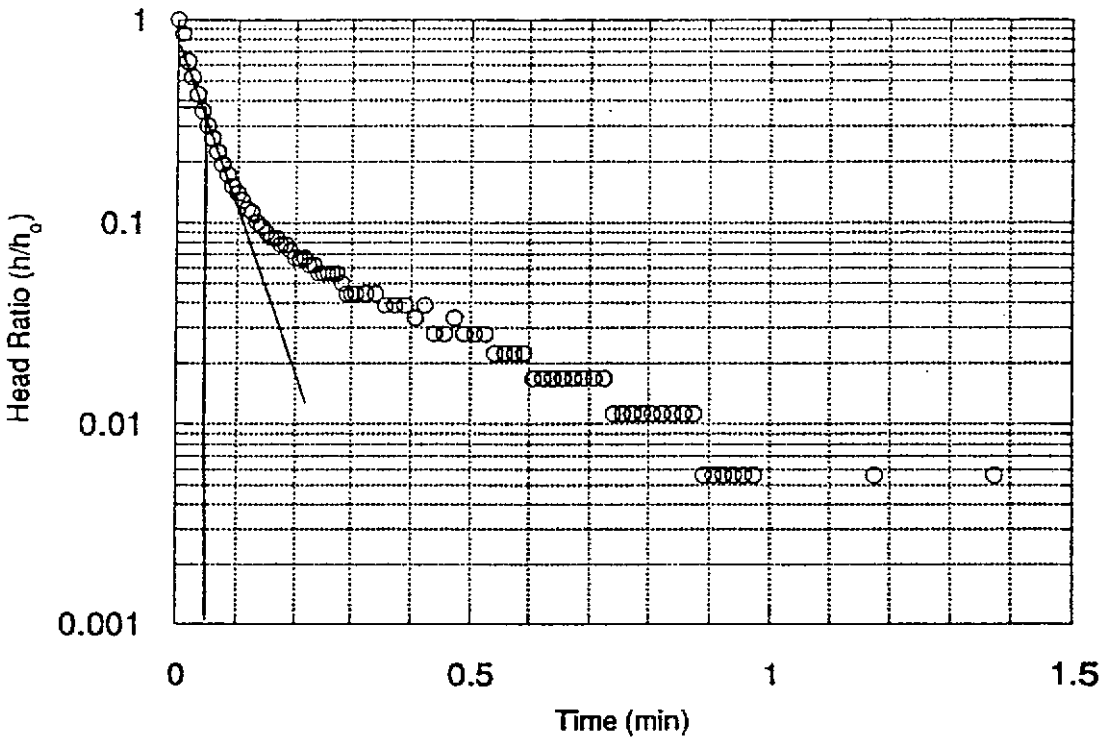
CleanHarbors
Environmental Services, Inc.
Remedial Technologies Division
12 MERCER ROAD
NATICK, MASSACHUSETTS 01760
(508) 650-6910

MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS

WELL MW-10 SLUG TEST

PROJECT NO. EN-170	DWG. NO.
SCALE: NA	

WELL MW-11



L = 182.6 cm
T_o = 2.41 sec
K = 2.25×10^{-2} cm/sec

NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_o is time of recovery to 37 percent of initial change (h/h_o = 0.37).

ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
A	PRELIMINARY				

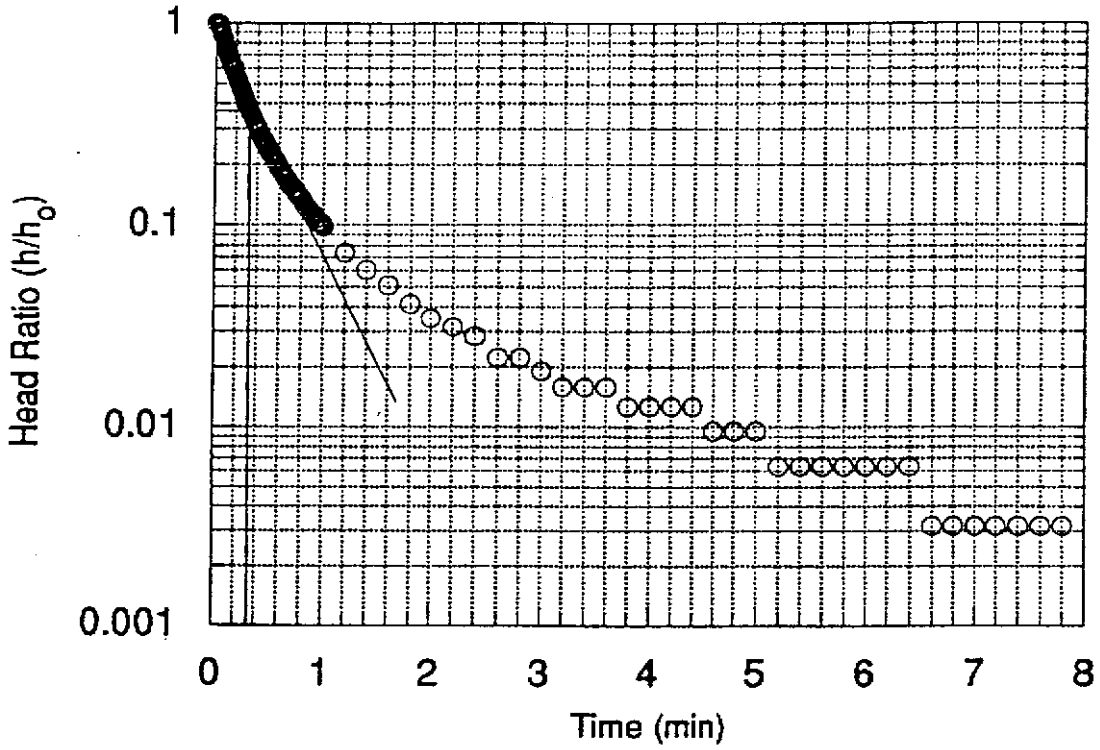
Clean Harbors
Environmental Services, Inc.
Remedial Technologies Division
12 MERCER ROAD
NATICK, MASSACHUSETTS 01760
(508) 650-6910

MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS

WELL MW-11 SLUG TEST

PROJECT NO. EN-170	DWG. NO.
SCALE: NA	

WELL MW-12



$L = 91.4$ cm
$T_o = 19.24$ sec
$K = 2.64 \times 10^{-3}$ cm/sec

NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_o is time of recovery to 37 percent of initial change ($h/h_o = 0.37$).

ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
A	PRELIMINARY				

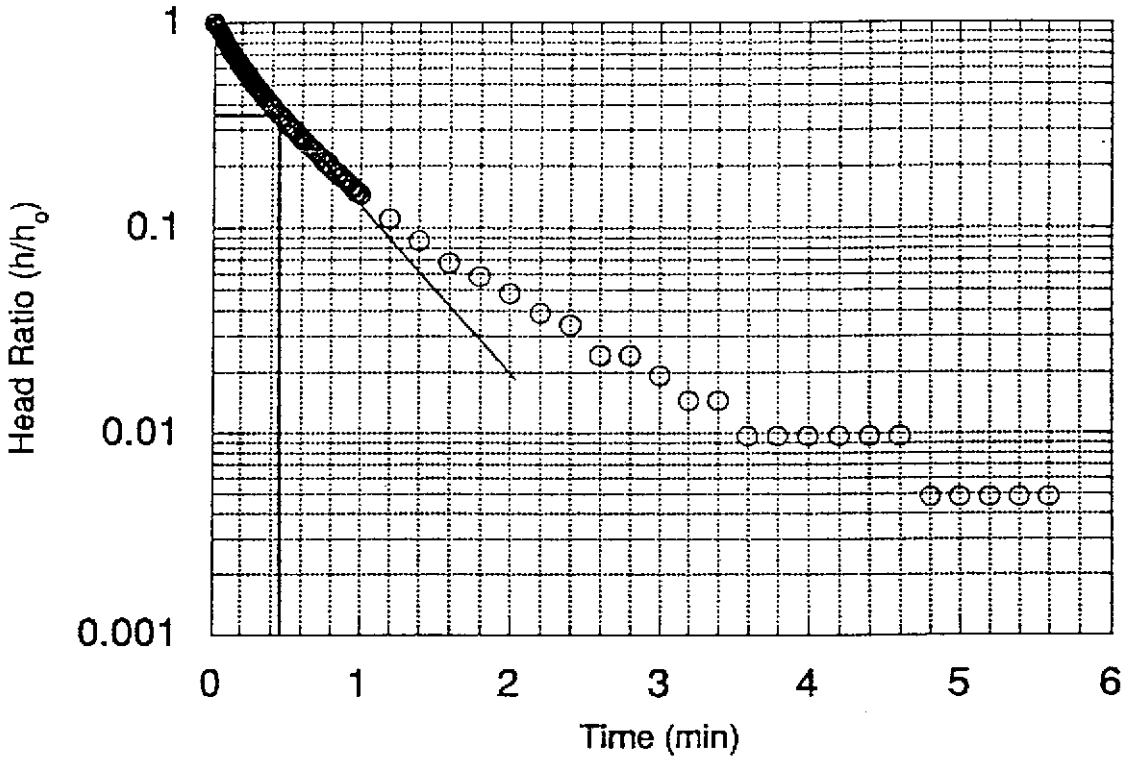
Clean Harbors
Environmental Services, Inc.
Remedial Technologies Division
12 MERCER ROAD
NATICK, MASSACHUSETTS 01760
(508) 650-6910

MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS

WELL MW-12 SLUG TEST

PROJECT NO. EN-170	DWG. NO.
SCALE: NA	

WELL MW-13



L = 91.4 cm
T_o = 25.47 sec
K = 2.00 x 10^{-3} cm/sec

NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_o is time of recovery to 37 percent of initial change (h/h_o = 0.37).

ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
A	PRELIMINARY				

CleanHarbors
Environmental Services, Inc.
Remedial Technologies Division
12 MERCER ROAD
NATICK, MASSACHUSETTS 01760
(508) 650-6910

MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS

WELL MW-13 SLUG TEST

PROJECT NO. EN-170	DWG. NO.
SCALE: NA	

SLUG TEST DATA - WELL MW-8

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_O)
0.0000	0.00	44.59	0.540	1.0000
0.0166	1.00	44.99	0.140	0.2593
0.0333	2.00	45.08	0.050	0.0926
0.0500	3.00	45.11	0.020	0.0370
0.0666	4.00	45.12	0.010	0.0185
0.0833	5.00	45.13	0.000	0.0000
0.1000	6.00	45.13	0.000	0.0000
0.1166	7.00	45.13	0.000	0.0000
0.1333	8.00	45.13	0.000	0.0000

SLUG TEST DATA - WELL MW-9

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_0)
0.0000	0.00	42.90	2.340	1.0000
0.0033	0.20	43.29	1.950	0.8333
0.0100	0.60	43.75	1.490	0.6368
0.0267	1.60	43.76	1.480	0.6325
0.0433	2.60	44.01	1.230	0.5256
0.0600	3.60	44.19	1.050	0.4487
0.0767	4.60	44.32	0.920	0.3932
0.0933	5.60	44.45	0.790	0.3376
0.1100	6.60	44.56	0.680	0.2906
0.1267	7.60	44.65	0.590	0.2521
0.1433	8.60	44.73	0.510	0.2179
0.1600	9.60	44.79	0.450	0.1923
0.1767	10.60	44.86	0.380	0.1624
0.1933	11.60	44.91	0.330	0.1410
0.2097	12.58	44.95	0.290	0.1239
0.2267	13.60	44.98	0.260	0.1111
0.2433	14.60	45.01	0.230	0.0983
0.2600	15.60	45.04	0.200	0.0855
0.2767	16.60	45.06	0.180	0.0769
0.2933	17.60	45.08	0.160	0.0684
0.3100	18.60	45.10	0.140	0.0598
0.3934	23.60	45.14	0.100	0.0427
0.4767	28.60	45.17	0.070	0.0299
0.5600	33.60	45.19	0.050	0.0214
0.6434	38.60	45.19	0.050	0.0214
0.7267	43.60	45.20	0.040	0.0171
0.8100	48.60	45.21	0.030	0.0128
0.8934	53.60	45.22	0.020	0.0085
0.9767	58.60	45.22	0.020	0.0085
1.0600	63.60	45.22	0.020	0.0085
1.1434	68.60	45.22	0.020	0.0085
1.2267	73.60	45.23	0.010	0.0043
1.3067	78.40	45.24	0.000	0.0000
1.3933	83.60	45.24	0.000	0.0000
1.4767	88.60	45.24	0.000	0.0000

SLUG TEST DATA - WELL MW-10

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_o)
0.0000	0.00	43.93	1.440	1.0000
0.0033	0.20	44.10	1.270	0.8819
0.0200	1.20	44.42	0.950	0.6597
0.0533	3.20	44.40	0.970	0.6736
0.0700	4.20	44.66	0.710	0.4931
0.0866	5.20	44.84	0.530	0.3681
0.1033	6.20	44.97	0.400	0.2778
0.1200	7.20	45.07	0.300	0.2083
0.1366	8.20	45.14	0.230	0.1597
0.1533	9.20	45.20	0.170	0.1181
0.1700	10.20	45.23	0.140	0.0972
0.1866	11.20	45.29	0.080	0.0556
0.2033	12.20	45.30	0.070	0.0486
0.2200	13.20	45.32	0.050	0.0347
0.2366	14.20	45.34	0.030	0.0208
0.2533	15.20	45.34	0.030	0.0208
0.2700	16.20	45.35	0.020	0.0139
0.2866	17.20	45.35	0.020	0.0139
0.3033	18.20	45.37	0.000	0.0000

SLUG TEST DATA - WELL MW-11

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_O)
0.0000	0.00	42.24	1.790	1.0000
0.0083	0.50	42.50	1.530	0.8547
0.0166	1.00	42.92	1.110	0.6201
0.0250	1.50	43.10	0.930	0.5196
0.0333	2.00	43.26	0.770	0.4302
0.0416	2.50	43.39	0.640	0.3575
0.0500	3.00	43.49	0.540	0.3017
0.0583	3.50	43.56	0.470	0.2626
0.0666	4.00	43.63	0.400	0.2235
0.0750	4.50	43.68	0.350	0.1955
0.0833	5.00	43.72	0.310	0.1732
0.0916	5.50	43.76	0.270	0.1508
0.1000	6.00	43.78	0.250	0.1397
0.1083	6.50	43.80	0.230	0.1285
0.1166	7.00	43.82	0.210	0.1173
0.1250	7.50	43.83	0.200	0.1117
0.1333	8.00	43.85	0.180	0.1006
0.1416	8.50	43.86	0.170	0.0950
0.1500	9.00	43.87	0.160	0.0894
0.1583	9.50	43.88	0.150	0.0838
0.1666	10.00	43.88	0.150	0.0838
0.1750	10.50	43.89	0.140	0.0782
0.1833	11.00	43.89	0.140	0.0782
0.1916	11.50	43.90	0.130	0.0726
0.2000	12.00	43.91	0.120	0.0670
0.2083	12.50	43.91	0.120	0.0670
0.2166	13.00	43.91	0.120	0.0670
0.2250	13.50	43.92	0.110	0.0615
0.2333	14.00	43.92	0.110	0.0615
0.2416	14.50	43.93	0.100	0.0559
0.2500	15.00	43.93	0.100	0.0559
0.2583	15.50	43.93	0.100	0.0559
0.2666	16.00	43.93	0.100	0.0559
0.2750	16.50	43.93	0.100	0.0559
0.2833	17.00	43.94	0.090	0.0503
0.2916	17.50	43.95	0.080	0.0447
0.3000	18.00	43.95	0.080	0.0447
0.3083	18.50	43.95	0.080	0.0447
0.3250	19.50	43.95	0.080	0.0447
0.3416	20.50	43.95	0.080	0.0447
0.3583	21.50	43.96	0.070	0.0391
0.3750	22.50	43.96	0.070	0.0391
0.3916	23.50	43.96	0.070	0.0391
0.4083	24.50	43.97	0.060	0.0335
0.4250	25.50	43.96	0.070	0.0391
0.4416	26.50	43.98	0.050	0.0279

SLUG TEST DATA - WELL MW-11
(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_O)
0.4583	27.50	43.98	0.050	0.0279
0.4750	28.50	43.97	0.060	0.0335
0.4916	29.50	43.98	0.050	0.0279
0.5083	30.50	43.98	0.050	0.0279
0.5250	31.50	43.98	0.050	0.0279
0.5416	32.50	43.99	0.040	0.0223
0.5583	33.50	43.99	0.040	0.0223
0.5750	34.50	43.99	0.040	0.0223
0.5916	35.50	43.99	0.040	0.0223
0.6083	36.50	44.00	0.030	0.0168
0.6250	37.50	44.00	0.030	0.0168
0.6416	38.50	44.00	0.030	0.0168
0.6583	39.50	44.00	0.030	0.0168
0.6750	40.50	44.00	0.030	0.0168
0.6916	41.50	44.00	0.030	0.0168
0.7080	42.48	44.00	0.030	0.0168
0.7250	43.50	44.00	0.030	0.0168
0.7416	44.50	44.01	0.020	0.0112
0.7583	45.50	44.01	0.020	0.0112
0.7750	46.50	44.01	0.020	0.0112
0.7916	47.50	44.01	0.020	0.0112
0.8083	48.50	44.01	0.020	0.0112
0.8250	49.50	44.01	0.020	0.0112
0.8416	50.50	44.01	0.020	0.0112
0.8583	51.50	44.01	0.020	0.0112
0.8750	52.50	44.01	0.020	0.0112
0.8916	53.50	44.02	0.010	0.0056
0.9083	54.50	44.02	0.010	0.0056
0.9250	55.50	44.02	0.010	0.0056
0.9416	56.50	44.02	0.010	0.0056
0.9583	57.50	44.02	0.010	0.0056
0.9750	58.50	44.02	0.010	0.0056
1.1750	70.50	44.02	0.010	0.0056
1.3750	82.50	44.02	0.010	0.0056
1.5750	94.50	44.02	0.010	0.0056
1.7750	106.5	44.02	0.010	0.0056
1.9750	118.5	44.03	0.000	0.0000

SLUG TEST DATA - WELL MW-12

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_O)
0.0000	0.00	47.50	3.150	1.0000
0.0083	0.50	47.49	3.140	0.9968
0.0166	1.00	47.48	3.130	0.9936
0.0250	1.50	47.43	3.080	0.9778
0.0333	2.00	47.33	2.980	0.9460
0.0416	2.50	47.23	2.880	0.9143
0.0500	3.00	47.14	2.790	0.8857
0.0583	3.50	47.05	2.700	0.8571
0.0666	4.00	46.97	2.620	0.8317
0.0750	4.50	46.89	2.540	0.8063
0.0833	5.00	46.81	2.460	0.7810
0.0916	5.50	46.74	2.390	0.7587
0.1000	6.00	46.67	2.320	0.7365
0.1083	6.50	46.61	2.260	0.7175
0.1166	7.00	46.54	2.190	0.6952
0.1250	7.50	46.48	2.130	0.6762
0.1333	8.00	46.42	2.070	0.6571
0.1416	8.50	46.36	2.010	0.6381
0.1500	9.00	46.30	1.950	0.6190
0.1583	9.50	46.25	1.900	0.6032
0.1666	10.00	46.20	1.850	0.5873
0.1750	10.50	46.25	1.900	0.6032
0.1833	11.00	46.11	1.760	0.5587
0.1916	11.50	46.06	1.710	0.5429
0.2000	12.00	46.01	1.660	0.5270
0.2083	12.50	45.97	1.620	0.5143
0.2166	13.00	45.93	1.580	0.5016
0.2250	13.50	45.89	1.540	0.4889
0.2333	14.00	45.85	1.500	0.4762
0.2416	14.50	45.81	1.460	0.4635
0.2500	15.00	45.78	1.430	0.4540
0.2583	15.50	45.74	1.390	0.4413
0.2666	16.00	45.71	1.360	0.4317
0.2750	16.50	45.68	1.330	0.4222
0.2833	17.00	45.65	1.300	0.4127
0.2916	17.50	45.62	1.270	0.4032
0.3000	18.00	45.59	1.240	0.3936
0.3083	18.50	45.56	1.210	0.3841
0.3166	19.00	45.53	1.180	0.3746
0.3250	19.50	45.50	1.150	0.3651
0.3333	20.00	45.48	1.130	0.3587
0.3500	21.00	45.43	1.080	0.3429
0.3666	22.00	45.38	1.030	0.3270
0.3833	23.00	45.34	0.990	0.3143
0.4000	24.00	45.30	0.950	0.3016
0.4166	25.00	45.26	0.910	0.2889

SLUG TEST DATA - WELL MW-12
(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_O)
0.4333	26.00	45.22	0.870	0.2762
0.4500	27.00	45.19	0.840	0.2667
0.4666	28.00	45.16	0.810	0.2571
0.4833	29.00	45.13	0.780	0.2476
0.5000	30.00	45.10	0.750	0.2381
0.5166	31.00	45.07	0.720	0.2286
0.5333	32.00	45.05	0.700	0.2222
0.5500	33.00	45.02	0.670	0.2127
0.5666	34.00	45.00	0.650	0.2063
0.5833	35.00	44.98	0.630	0.2000
0.6000	36.00	44.95	0.600	0.1905
0.6166	37.00	44.93	0.580	0.1841
0.6333	38.00	44.91	0.560	0.1778
0.6500	39.00	44.89	0.540	0.1714
0.6666	40.00	44.88	0.530	0.1683
0.6833	41.00	44.86	0.510	0.1619
0.7000	42.00	44.84	0.490	0.1556
0.7166	43.00	44.83	0.480	0.1524
0.7333	44.00	44.82	0.470	0.1492
0.7500	45.00	44.80	0.450	0.1429
0.7666	46.00	44.79	0.440	0.1397
0.7833	47.00	44.78	0.430	0.1365
0.8000	48.00	44.77	0.420	0.1333
0.8166	49.00	44.75	0.400	0.1270
0.8333	50.00	44.74	0.390	0.1238
0.8500	51.00	44.73	0.380	0.1206
0.8666	52.00	44.72	0.370	0.1175
0.8833	53.00	44.71	0.360	0.1143
0.9000	54.00	44.70	0.350	0.1111
0.9166	55.00	44.70	0.350	0.1111
0.9333	56.00	44.69	0.340	0.1079
0.9500	57.00	44.68	0.330	0.1048
0.9666	58.00	44.67	0.320	0.1016
0.9833	59.00	44.67	0.320	0.1016
1.0000	60.00	44.66	0.310	0.0984
1.2000	72.00	44.58	0.230	0.0730
1.4000	84.00	44.54	0.190	0.0603
1.6000	96.00	44.51	0.160	0.0508
1.8000	108.00	44.48	0.130	0.0413
2.0000	120.00	44.46	0.110	0.0349
2.2000	132.00	44.45	0.100	0.0317
2.4000	144.00	44.44	0.090	0.0286
2.6000	156.00	44.42	0.070	0.0222
2.8000	168.00	44.42	0.070	0.0222
3.0000	180.00	44.41	0.060	0.0190

SLUG TEST DATA - WELL MW-12
(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_o)
3.2000	192.00	44.40	0.050	0.0159
3.4000	204.00	44.40	0.050	0.0159
3.6000	216.00	44.40	0.050	0.0159
3.8000	228.00	44.39	0.040	0.0127
4.0000	240.00	44.39	0.040	0.0127
4.2000	252.00	44.39	0.040	0.0127
4.4000	264.00	44.39	0.040	0.0127
4.6000	276.00	44.38	0.030	0.0095
4.8000	288.00	44.38	0.030	0.0095
5.0000	300.00	44.38	0.030	0.0095
5.2000	312.00	44.37	0.020	0.0064
5.4000	324.00	44.37	0.020	0.0064
5.6000	336.00	44.37	0.020	0.0064
5.8000	348.00	44.37	0.020	0.0064
6.0000	360.00	44.37	0.020	0.0064
6.2000	372.00	44.37	0.020	0.0064
6.4000	384.00	44.37	0.020	0.0064
6.6000	396.00	44.36	0.010	0.0032
6.8000	408.00	44.36	0.010	0.0032
7.0000	420.00	44.36	0.010	0.0032
7.2000	432.00	44.36	0.010	0.0032
7.4000	444.00	44.36	0.010	0.0032
7.6000	456.00	44.36	0.010	0.0032
7.8000	468.00	44.36	0.010	0.0032
8.0000	480.00	44.35	0.000	0.0000

SLUG TEST DATA - WELL MW-13

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_O)
0.0000	0.00	46.51	2.070	1.0000
0.0083	0.50	46.51	2.070	1.0000
0.0166	1.00	46.45	2.010	0.9710
0.0250	1.50	46.40	1.960	0.9469
0.0333	2.00	46.35	1.910	0.9227
0.0416	2.50	46.30	1.860	0.8986
0.0500	3.00	46.26	1.820	0.8792
0.0583	3.50	46.22	1.780	0.8599
0.0666	4.00	46.18	1.740	0.8406
0.0750	4.50	46.14	1.700	0.8213
0.0833	5.00	46.10	1.660	0.8019
0.0916	5.50	46.06	1.620	0.7826
0.1000	6.00	46.02	1.580	0.7633
0.1083	6.50	45.99	1.550	0.7488
0.1166	7.00	45.96	1.520	0.7343
0.1250	7.50	45.93	1.490	0.7198
0.1333	8.00	45.90	1.460	0.7053
0.1416	8.50	45.86	1.420	0.6860
0.1500	9.00	45.84	1.400	0.6763
0.1583	9.50	45.81	1.370	0.6618
0.1666	10.00	45.78	1.340	0.6473
0.1750	10.50	45.76	1.320	0.6377
0.1833	11.00	45.72	1.280	0.6184
0.1916	11.50	45.70	1.260	0.6087
0.2000	12.00	45.68	1.240	0.5990
0.2083	12.50	45.66	1.220	0.5894
0.2166	13.00	45.63	1.190	0.5749
0.2250	13.50	45.61	1.170	0.5652
0.2333	14.00	45.59	1.150	0.5556
0.2416	14.50	45.57	1.130	0.5459
0.2500	15.00	45.54	1.100	0.5314
0.2583	15.50	45.52	1.080	0.5217
0.2666	16.00	45.50	1.060	0.5121
0.2750	16.50	45.48	1.040	0.5024
0.2833	17.00	45.46	1.020	0.4928
0.2916	17.50	45.45	1.010	0.4879
0.3000	18.00	45.43	0.990	0.4783
0.3083	18.50	45.41	0.970	0.4686
0.3166	19.00	45.39	0.950	0.4589
0.3250	19.50	45.38	0.940	0.4541
0.3333	20.00	45.36	0.920	0.4444
0.3500	21.00	45.33	0.890	0.4300
0.3666	22.00	45.30	0.860	0.4155
0.3833	23.00	45.27	0.830	0.4010
0.4000	24.00	45.24	0.800	0.3865
0.4166	25.00	45.22	0.780	0.3768

SLUG TEST DATA - WELL MW-13
(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_O)
0.4333	26.00	45.19	0.750	0.3623
0.4500	27.00	45.17	0.730	0.3527
0.4666	28.00	45.15	0.710	0.3430
0.4833	29.00	45.13	0.690	0.3333
0.5000	30.00	45.10	0.660	0.3188
0.5166	31.00	45.08	0.640	0.3092
0.5333	32.00	45.06	0.620	0.2995
0.5500	33.00	45.05	0.610	0.2947
0.5666	34.00	45.03	0.590	0.2850
0.5833	35.00	45.01	0.570	0.2754
0.6000	36.00	44.99	0.550	0.2657
0.6166	37.00	44.98	0.540	0.2609
0.6333	38.00	44.96	0.520	0.2512
0.6500	39.00	44.95	0.510	0.2464
0.6666	40.00	44.94	0.500	0.2415
0.6833	41.00	44.93	0.490	0.2367
0.7000	42.00	44.91	0.470	0.2271
0.7166	43.00	44.90	0.460	0.2222
0.7333	44.00	44.89	0.450	0.2174
0.7500	45.00	44.87	0.430	0.2077
0.7666	46.00	44.86	0.420	0.2029
0.7833	47.00	44.86	0.420	0.2029
0.8000	48.00	44.84	0.400	0.1932
0.8166	49.00	44.83	0.390	0.1884
0.8333	50.00	44.82	0.380	0.1836
0.8500	51.00	44.82	0.380	0.1836
0.8666	52.00	44.80	0.360	0.1739
0.8833	53.00	44.80	0.360	0.1739
0.9000	54.00	44.79	0.350	0.1691
0.9166	55.00	44.78	0.340	0.1643
0.9333	56.00	44.77	0.330	0.1594
0.9500	57.00	44.76	0.320	0.1546
0.9666	58.00	44.75	0.310	0.1498
0.9833	59.00	44.75	0.310	0.1498
1.0000	60.00	44.74	0.300	0.1449
1.2000	72.00	44.67	0.230	0.1111
1.4000	84.00	44.62	0.180	0.0870
1.6000	96.00	44.58	0.140	0.0676
1.8000	108.00	44.56	0.120	0.0580
2.0000	120.00	44.54	0.100	0.0483
2.2000	132.00	44.52	0.080	0.0386
2.4000	144.00	44.51	0.070	0.0338
2.6000	156.00	44.49	0.050	0.0242
2.8000	168.00	44.49	0.050	0.0242
3.0000	180.00	44.48	0.040	0.0193

SLUG TEST DATA - WELL MW-13
(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h_o)
3.2000	192.00	44.47	0.030	0.0145
3.4000	204.00	44.47	0.030	0.0145
3.6000	216.00	44.46	0.020	0.0097
3.8000	228.00	44.46	0.020	0.0097
4.0000	240.00	44.46	0.020	0.0097
4.2000	252.00	44.46	0.020	0.0097
4.4000	264.00	44.46	0.020	0.0097
4.6000	276.00	44.46	0.020	0.0097
4.8000	288.00	44.45	0.010	0.0048
5.0000	300.00	44.45	0.010	0.0048
5.2000	312.00	44.45	0.010	0.0048
5.4000	324.00	44.45	0.010	0.0048
5.6000	336.00	44.45	0.010	0.0048
5.8000	348.00	44.44	0.000	0.0000