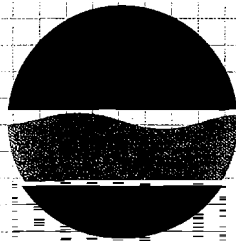


LIMITED SITE DATA SUMMARY REPORT



FORMER BOUCHARD JUNKYARD

Town of New Lebanon
Columbia County , New York
(Site Registry No. 4 11-014)

WORK ASSIGNMENT NO D004446..20

Prepared For

**New York State Department
of Environmental Conservation**

JANUARY 2008



DVIRKA AND BARTILUCCI
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

LIMITED SITE DATA SUMMARY REPORT

FORMER BOUCHARD JUNKYARD SITE
NEW LEBANON, COLUMBIA COUNTY, NEW YORK

(SITE REGISTRY NO. 4-11-014)

WORK ASSIGNMENT NO. D004446-20

Prepared for:

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION

Prepared by:

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
WOODBURY, NEW YORK

JANUARY 2008

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LIMITED SITE DATA SUMMARY REPORT

**FORMER BOUCHARD JUNKYARD SITE
NEW LEBANON, COLUMBIA COUNTY, NEW YORK**

(SITE REGISTRY NO. 4-11-014)

WORK ASSIGNMENT NO. D004446-20

*These documents that follow are **NOT** part of the Contract Documents for the remedial work at the Former Bouchard Junkyard Site. The Department neither represents that the Site conditions will be the same as in the attached document nor considers the attached documents as being comprehensive and an actual description of the Site conditions. The Contractor shall be responsible for performing the remediation work based on the existing conditions at the Site.*

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LIMITED SITE DATA SUMMARY REPORT FORMER BOUCHARD JUNKYARD SITE

TABLE OF CONTENTS

<u>Section</u>	Title	
1.0	INTRODUCTION	1-1
1.1	Site Location, Access and Ownership	1-1
1.2	Site History and Previous Investigations	1-4
2.0	SUMMARY OF REMEDIAL INVESTIGATION	2-1
2.1	Summary of Remedial Investigation Activities	2-1
2.2	Summary of Remedial Investigation Findings	2-9
3.0	SUMMARY OF PRE-DESIGN INVESTIGATION	3-1
3.1	Summary of Pre-Design Investigation Activities	3-1
3.2	Summary of Pre-Design Investigation Findings	3-4
4.0	WETLAND RESTORATION PLAN	4-1

List of Appendices

Geophysical Report	A
Test Pit and Boring Logs	B
Hydraulic Conductivity Data	C
Groundwater and Surface Water Elevation Data	D
Analytical Data	E

List of Figures

1-1	Site Location Map	1-2
1-2	Site Map	1-3
2-1	Grid Network and Topographic Map	2-2
2-2	Sample Locations	2-4
2-3	Test Pit Locations	2-6
2-4	SCG Exceedances in Surface Soil (Laboratory Data Only)	2-12
2-5	SCG Exceedances for PCB in Surface Soil (0 to 0.2 feet)	2-13
2-6	SCG Exceedances in Subsurface Soil (Laboratory Data Only)	2-15

TABLE OF CONTENTS (continued)

List of Figures (continued)

2-7	SCG Exceedances for PCBs in Subsurface Soil (1.0 to 1.5 feet)	2-16
2-8	SCG Exceedances for PCBs in Subsurface Soil (2.0 to 2.5)	2-17
2-9	SCG Exceedances in Surface Water	2-18
2-10	SCG Exceedances in Sediment Samples	2-20
2-11	SCG Exceedances in Groundwater Samples	2-21
3-1	Pre-Design Investigation Soil and Sediment Sample Locations - PCBs	3-2
3-2	Areas with PCBs Exceeding Standards, Criteria and Guidance	3-6
3-3	SCG Exceedances in Soil and Sediment..	3-7
3-4	SCG Exceedances in Groundwater	3-10
3-5	SCG Exceedances in Surface Water	3-13

List of Tables

2-1	Monitoring Well Specifications	2-8
2-2	Summary of Metals Data for Soil	2-10

1.0 INTRODUCTION

The Former Bouchard Junkyard Site, located in the Town of New Lebanon, Columbia County, New York (Figure 1-1), is a New York State Class 2 inactive hazardous waste disposal site, registry number 4-11-014. The New York State Department of Environmental Conservation (NYSDEC) issued a Remedial Design (RD) Work Assignment to Dvirka and Bartilucci Consulting Engineers (D&B) under D&B's State Superfund Standby Contract with the NYSDEC. The RD for this site is being performed with funds allocated under the New York State Superfund Program, as part of New York State's program to investigate and remediate hazardous waste sites.

1.1 Site Location, Access and Ownership

The Former Bouchard Junkyard Site is located in a rural agricultural area on the north side of United States (U.S.) Route 20 in the Town of New Lebanon, Columbia County, New York, approximately 0.25 miles west of the junction of U.S. Route 20 and New York State 22 and 25 miles southeast of the City of Albany, New York.

The approximately 17 acre site is an irregular shaped parcel of land that is relatively flat with a gentle downward slope to the southeast. Topographic relief across the site is less than 30 feet. The site is bounded on the north and east by Lovers Lane, on the south by U.S. Route 20, and on the west by a residential property (see Figure 1-2).

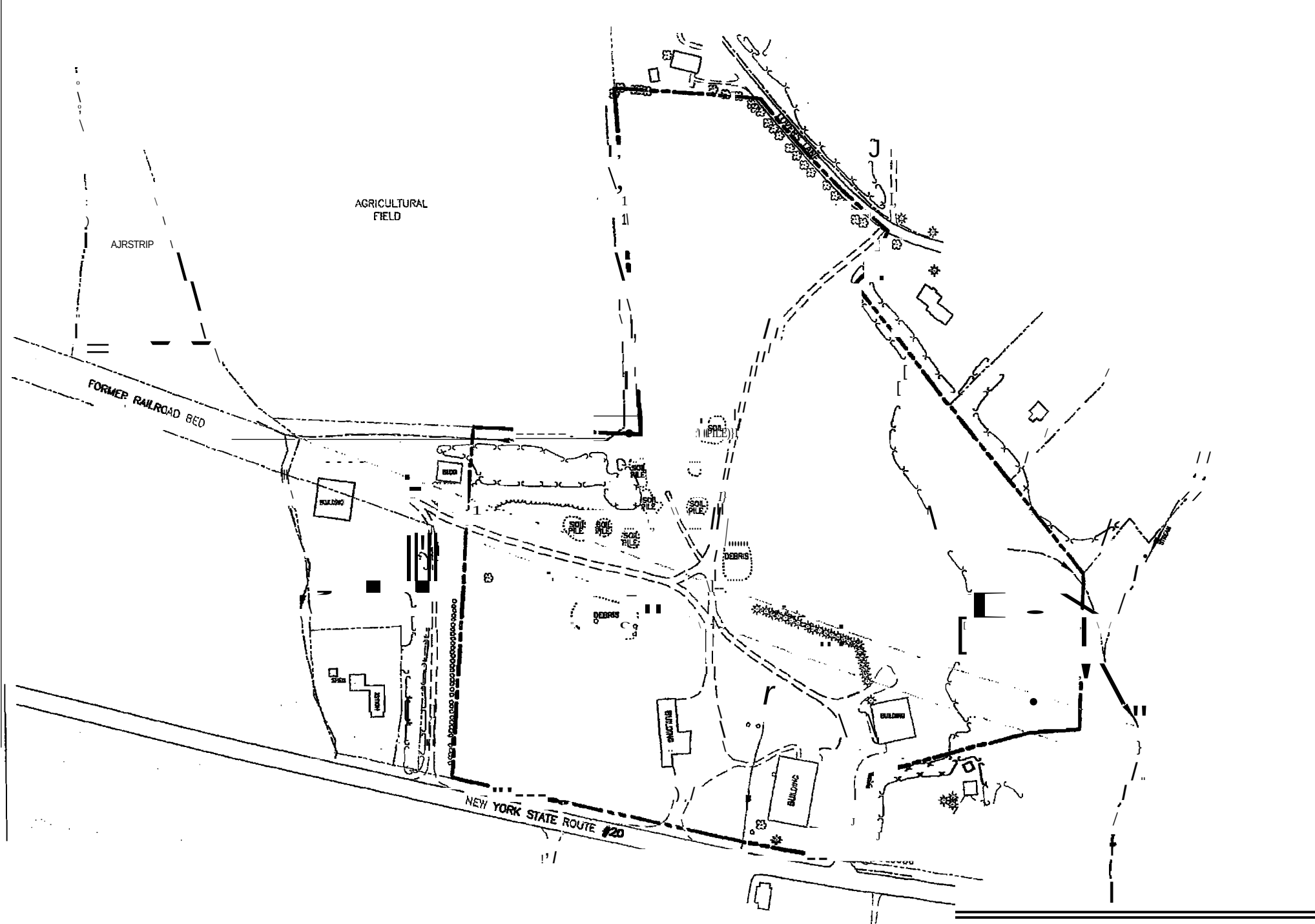
Wyomanock Creek, a New York State Class C (TS) stream, is located southwest of the site and flows from the southeast to northwest. Tributaries flow from north to south along the eastern and western boundaries of the site.

Three buildings are currently located at the site that are or have been used for businesses and are occupied by employees and customers during business hours. The remainder of the property has historically been utilized as farm land, but is not currently used for agricultural purposes. South of the property, across U.S. Route 20, are a construction company

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Dvirka and Bartilucci
Consulting Engineers
A Division of William E. Cosulich Associates, P.E.



LEGEND

	STREAM/DITCH CL (CENTERLINE)
	DIRT/GRAVEL ROAD
	TREE
	EVERGREEN
	BUSH
	BRUSH
	PROPERTY LINE
	TREE LINE

SCALE

100 50 0 100FT.

FORMER BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK

SITE MAP

FIGURE 1-2

and residential properties. Residential properties are also located to the north, east and west of the site. Agricultural lands are situated to the northwest.

Access to the site is via driveways along U.S. Route 20 that lead to gravel parking lots for the three buildings at the site. Dirt/gravel roads traverse the site allowing access to other portions of the property.

1.2 Site History and Previous Investigations

The Former Bouchard Junkyard Site is the location of a former automobile junkyard operated from at least 1959 through February 1969 by Mr. Henry Bouchard. Mr. Edward Weisberg purchased the property from the widow of Mr. Bouchard in February 1969, and continued its use as a junkyard. The former automobile junkyard was ordered closed in 1971 for operating without a license. All salvage was removed from the site in the late 1970's. The property was purchased by Mr. Ralph Chittenden in 1985. Since the removal of the junk cars, a theater group, automobile repair shop and engineering company, which has since moved, have been tenants on the site; however, most of the property has been utilized for agricultural purposes.

In July 1998, General Electric (GE) provided NYSDEC with an internal memorandum, dated October 10, 1980 indicating that drums of oil and Pyranol (polychlorinated biphenyls or PCBs) had either been disposed of or burned at the site. The NYSDEC collected surface and subsurface soil samples and water samples from private water supply wells on or near the property on September 28, 1998. Based on the sampling data and site conditions, NYSDEC listed the site as a Class 2 Inactive Hazardous Waste Disposal Site.

A Remedial Investigation (RI) was conducted at the site in 2001/2002 (D&B 2002). The results of the RI indicate that PCBs are the primary contaminant of concern, and surface soil is the primary medium of concern at the Former Bouchard Junkyard Site. PCBs have also been detected in subsurface soils and surface water sediment. Other contaminants, including semi-

volatile organic compounds (SVOCs) and metals, have been detected slightly above standards, criteria and guidance (SCGs) established for the site in surface soil, subsurface soil, surface water, sediment and groundwater.

A pre-design investigation was performed at the Former Bouchard Junkyard Site in 2005. The pre-design investigation provided additional data regarding the horizontal and vertical extent of site contamination and information for the remedial design.

2.0 SUMMARY OF REMEDIAL INVESTIGATION

2.1 Summary of Remedial Investigation Activities

The Former Bouchard Junkyard Site RI was conducted between October 2001 and May 2002 (D&B 2002). The purpose of the RI was to define the nature and extent of contamination resulting from previous activities at the site. Fieldwork was performed in two phases and consisted of the installation of monitoring wells, water level monitoring, and sampling and analysis of soil, sediment, groundwater, water supply wells and surface water.

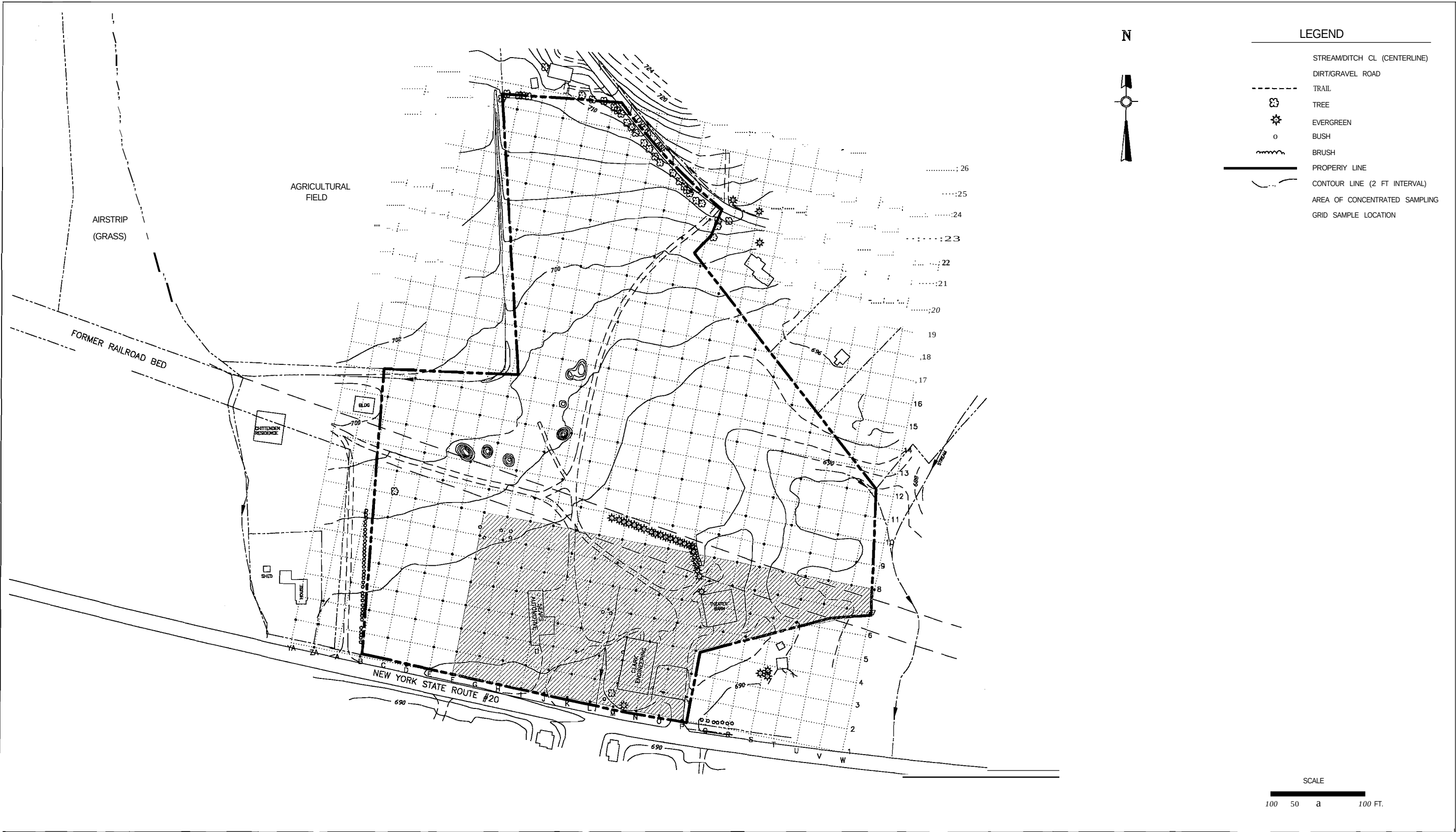
A licensed surveyor established a grid network with 50-foot node spacing across the site prior to conducting soil sampling activities. The grid lines were labeled using an alphanumeric identification system. For labeling purposes, the origin of the grid system was set at the southwest corner of the property. East-west lines were marked and labeled at 50-foot increments with increasing numbers to the north. North-south lines were also marked and labeled at 50-foot increments starting at the southwest property corner with increasing letters to the east (see Figure 2-1).

A geophysical survey was conducted, and included the majority of the 17-acre site. The survey was accomplished using an electromagnetic induction metal detector, EM-61, measuring at stations spacing approximately 8 inches along lines spaced 5 feet apart. The geophysical report and associated mapping are presented in Appendix A.

Unbiased surface soil samples were collected from 243 locations at the site over the period from October 2001 through May 2002. Surface soil samples were collected from the upper 0.2 feet of soil using disposable polyethylene scoops. Unbiased surface soil samples were collected from every other grid node point of the grid network on the site with the exception of developed portion of the site, where samples were collected from every node point of the grid network. Soil samples were not collected from node points situated within the footprint of a building.

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BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK

GRID NETWORK and TOPOGRAPHIC MAP

FIGURE 2-1

Two hundred thirty-nine of the 243 unbiased surface soil samples were analyzed in the field for PCBs using immunoassay methodology. Ten percent (24 samples) of the unbiased soil samples analyzed in the field were also submitted for the laboratory analysis for PCBs for confirmation of field findings. Eight of the 24 samples submitted for PCB confirmatory analysis were also analyzed for Targeted Compound List (TCL) volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, PCBs, Target Analyte List (TAL) metals and cyanide. Four of the 243 unbiased surface soil samples were submitted for laboratory analysis of PCBs only.

Biased surface soil samples were collected from 24 locations at or in the vicinity of the site (see Figure 2-2) between October 2001 and May 2002. Eight of the 24 biased surface soil samples were analyzed in the field for PCBs using immunoassay methodology. Thirteen of the 24 biased surface soil samples were also at the laboratory for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals and cyanide. Three of the 24 biased surface soil samples were submitted for laboratory analysis of PCBs only.

Unbiased shallow subsurface soil samples were collected from 223 locations at the site in November 2001. An additional 136 shallow subsurface soil samples were collected at the site in May 2002. Shallow subsurface soil samples collected in November 2001 were obtained from a depth of approximately 2.0 to 2.5 feet below ground surface (bgs) from every other node point of the grid network on the site, with the exception of the developed portion of the property, where samples were collected from every node point. Shallow subsurface soil samples collected in May 2002 were obtained from a depth of approximately 1.0 to 1.5 feet bgs from grid node points where field analytical results from November 2001 indicated that surface and subsurface soil PCB concentrations exceeded SCGs.

The 223 unbiased shallow subsurface soil samples collected in November 2001 were analyzed in the field for PCBs using immunoassay methodology. Ten percent (22 samples) of the unbiased soil samples analyzed in the field were also submitted for laboratory analysis for confirmation of field findings. Two unbiased shallow subsurface soil samples collected in November 2001 were analyzed at the laboratory for TCL VOCs, SVOCs, pesticides, PCBs, TAL

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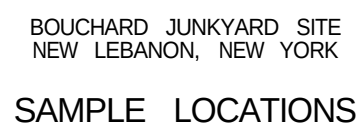


FIGURE 2-2

metals and cyanide. The 136 unbiased shallow subsurface soil samples collected in May 2002 were submitted for laboratory analysis for PCBs.

A total of 34 test pits were excavated at the site in November 2001 (see Figure 2-3). Geophysical results were used to locate test pits at areas that were suspected to have buried materials. Test pits were excavated to a maximum depth of 10 feet, or until groundwater or undisturbed soil was encountered, whichever occurred first. Twenty-nine soil samples were collected from the test pits. Soil samples were obtained from the excavator bucket using disposable polyethylene scoops. Test pit soil samples were analyzed for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals and cyanide. Test Pit and boring logs are presented in Appendix B.

Six subsurface soil samples were collected using a tractor-mounted direct push drill rig in May 2002. Subsurface soil samples were collected from a depth of approximately 4.5 to 5.0 feet bgs. Soil boring samples were analyzed for PCBs.

Five surface water samples (SW-5 through SW-9) were collected in October 2001. Surface water samples were collected at two locations on or adjacent the site and three locations along streams off-site (see Figure 2-2). Seven surface water samples (SW-3 through SW-9) were collected in May 2002. Surface water samples were collected at two locations on or adjacent to the site and five locations along streams off-site (see Figure 2-2). The surface water samples were analyzed for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals, cyanide and hardness.

Sediment samples were collected from nine locations (SD-1 through SD-9) in October 2001. One sediment sample (SD-10) was collected in November 2001. Three sediment samples (SD-11, SD-12 and SD-13) were collected in May 2002. Figure 2-2 identifies the locations of the sediment samples. Sediment samples were analyzed for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals, cyanide and total organic carbon.

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BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK

TEST PIT LOCATIONS

FIGURE 2-3

Six groundwater monitoring wells (MW-1 through MW-6) were installed during the RI. The monitoring wells were installed at locations selected to maximize data regarding groundwater chemistry and flow direction. The locations of the monitoring wells are presented on Figure 2-2. Table 2-1 lists the monitoring well depths and construction specifications. Borings Logs are presented in Appendix B.

Hydraulic conductivity tests were performed on each of the new monitoring wells. Data collected from the slug (falling head) and bail (rising head) tests were analyzed using the Bouwer and Rice (1976) technique for hydraulic conductivity determination. Raw data obtained during the tests are presented in Appendix C.

Water levels were periodically measured at the monitoring wells. Water level rounds were conducted at times of relatively stable weather conditions and within as short a period as possible in order to provide a synoptic view of groundwater conditions. Depth to water level measurements and topographic survey data were used to calculate groundwater elevations and to prepare water table maps. Groundwater and surface water elevation data are presented in Appendix D.

Two groundwater sampling events were conducted during the RI and included groundwater samples from the six monitoring wells (see Figure 2-2). Prior to sampling, field parameters, including pH, specific conductance, turbidity, temperature and salinity were monitored during sampling using a water quality meter. Groundwater samples were collected with new disposable polyethylene bailers. Groundwater samples collected during the first sampling event were analyzed for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals and cyanide. Groundwater samples collected during the second sampling event were analyzed for TCL VOCs and PCBs.

Five water supply wells associated with buildings located on or in the vicinity of the site were sampled during two water supply well sampling events that were conducted during the RI. Figure 2-2 depicts the general locations of the water supply well samples. Water supply well samples were collected from taps in the existing water distribution systems

TABLE 2-1
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION FEASIBILITY STUDY
MONITORING WELL SPECIFICATIONS

BoringID	Total Depth	Screen			Elevation (feet above mean sea level)				
		Top	Bottom	Length	Ground	Top of Casing	Screen Top	Screen Middle	Screen Bottom
MW-1	25.5	15.0	25.0	10.0	707.79	709.90	692.79	687.79	682.79
MW-2	15.0	5.0	15.0	10.0	694.73	697.11	689.73	684.73	679.73
MW-3	19.0	9.0	19.0	10.0	696.25	698.39	687.25	682.25	677.25
MW-4	13.0	3.0	13.0	10.0	690.63	692.96	687.63	682.63	677.63
MW-5	16.0	6.0	16.0	10.0	691.93	694.08	685.93	680.93	675.93
MW-6	14.0	4.0	14.0	10.0	692.02	694.46	688.02	683.02	678.02

at points as close to the wells as possible. Prior to sampling, field parameters, including pH, specific conductance, turbidity, temperature and salinity were monitored during sampling using a water quality meter. Samples collected during the first sampling event were analyzed for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals and cyanide. Samples collected as part of the second sampling event were analyzed for TCL VOCs, PCBs and TAL metals.

2.2 Summary of Remedial Investigation Findings

Surface Soil Samples

Fifty-eight percent of the 252 surface soil samples tested in the field using immunoassay methodologies exhibited PCB concentrations in excess of the SCG of 1 mg/kg. Six percent of the surface soil samples analyzed in the field exhibited PCB concentrations greater than 50 mg/kg, the hazardous waste concentration threshold in New York State. Thirty-two percent of the 28 surface soil samples analyzed for pesticides exhibited concentrations in excess of SCGs. The SCG for total pesticides (10 mg/kg) was exceeded in 14 percent of the samples with the maximum total pesticides concentration of 61 mg/kg.

SVOCs exceeded SCGs in 24 percent of the 21 surface samples collected throughout the site. However, for all surface soil samples, total SVOCs concentrations (maximum concentration of 1 mg/kg) are below the SCGs of 500 mg/kg and 10 mg/kg, respectively.

A number of metals were detected above SCGs in surface soil; however, the concentrations are generally within published background concentrations for the Eastern United States (Breckinridge, et al, 1995). Table 2-2 presents a summary of metals concentrations

detected in site soils, site background sample concentrations and background metals data from literature for the Eastern United States.

Surface soil samples contained no exceedances of SCGs for VOCs or cyanide.

TABLE 2-2
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
SUMMARY OF METALS DATA FOR SOIL

	Recommended Soil Clean-Up Objective* (mg/kg)	SITE SAMPLE DATA 52 soil samples			SITE BACKGROUND SAMPLES (SS-S-246, SS-S-248, SS-S-251)			LITERATURE BACKGROUND VALUES					
		min	max	aver	min	max	aver	1	2	3	4		
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	range (mg/kg)	mean (mg/kg)	(mg/kg)	range (mg/kg)	mean (mg/kg)	(mg/kg)
Aluminum	SB	1,300	166,000	15,469	14,100	16,300	15,233			72,000	700->10,000	3,300	33,000
Antimony	SB	0.8	17.0	4.3	1.0	1.0	1.0			0.66	<1-8.8	0.52	
Arsenic	7.5 or SB	3.9	13.2	7.2	6.2	7.9	7.2	2.1-12.0	6.7	7.2	<0.1-73	4.8	3-12
Barium	300 or SB	17	653	82	61	80	68	300-1,500	765	580	10-1,500	290	15-600
Beryllium	0.16 or SB	0.13	0.75	0.34	0.33	0.46	0.41			0.92	<1-7	0.55	0-1.75
Cadmium	10*	0.14	9.60	2.23	0.00	0.00	0.00			0.35			0.1-1
Calcium	SB	28	15,100	1,268	74	2,810	1,071			24,000	10-28,000	340	130-35,000
Chromium	50*	8.7	79.2	17.1	15.0	16.8	16.2	30-150	80	54	1-1,000	33	1.5-40
Cobalt	30 or SB	4.6	19.9	10.3	9.9	11.8	10.7	5-15	7.5	9.1	<0.3-70	5.9	2.5-60
Copper	25 or SB	3.6	6,950	187	18.2	38.3	28.7	15-50	21	25	<1-700	13	1-50
Iron	2,000 or SB	11,900	82,100	29,590	28,000	30,500	29,467			26,000	10-10,000	1,400	2,000-550,000
Lead	400	5.7	3,460	165	18.9	31.3	25.3	10-30	17	19	<10-300	14	4-500
Magnesium	SB	1,860	8,980	4,997	4,220	5,840	5,133			9,000	5-5,000	210	100-5,000
Manganese	SB	180	11,400	1,019	961	1,320	1,114	200-700	475	550	<2-7,000	260	5-5,000
Mercury	0.1	0.05	0.34	0.12	0.06	0.14	0.10	0.02-0.36	0.07	0.09	0.01-3.4	0.081	0.001-0.2
Nickel	13 or SB	11.4	956	45.0	19.2	23.8	21.3	10-30	18	19	<5-700	11	0.5-25
	SB	215	1,500										
	2 or SB	0	4.5										
	SB	2.9	2.9										
	SB	22.0	280										
Thallium	SB	1.5	5.8										
Vanadium	150 or SB	6.0	23	13	15	18	16			80	<7-300	43	1-300
Zinc	20 or SB	39	6,470	421	73	119	90	47-131	64	60	<5-2,900	40	9-50

Notes:

- 1 - Breckenridge, R.P. and AB. Crockett, Determination of Background Concentrations of Inorganics in Soils and Sediments at Hazardous Waste Sites, USEPA, Engineering Forum Issue, EPA/540/S-96/500, December 1995. Soils on glacial till and drift.
- 2 - Sposito, G., The Chemistry of Soils, Oxford University Press, 1989. Soil.
- 3 - Shacklette, H.T. and J.G. Boerngen, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States. USGS Professional Paper 1270, 1984. Eastern United States.
- 4 - NYSDEC, Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels. NYSDEC Division of Hazardous Waste Remediation. January 24, 1994.

*: as per January 24, 1994 NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels.

Figure 2-4 summarizes exceedances of SCGs in surface soil samples for VOCs, SVOCs, pesticides, PCBs and metals based on laboratory data. Figure 2-5 summarizes exceedances of SCGs for PCBs based on immunoassay field testing in surface soil (0 to 0.2 feet below grade). Tabulated results for all analyses are presented in Appendix E.

Subsurface Soil Samples

The SCG for PCBs in subsurface soil of 10 mg/kg was exceeded in 3 percent of the 223 subsurface soil samples analyzed in the field by immunoassay techniques and 4 percent of the 171 subsurface soil samples submitted for laboratory analysis.

Surface soil samples contained no exceedances of SCGs for VOCs or cyanide. Four subsurface soil samples exhibited total PCB concentrations greater than 50 mg/kg (the NYS hazardous waste threshold concentration), with a maximum concentration of 230 mg/kg.

Pesticides exceeding compound-specific SCGs were identified in ten of the 173 subsurface soil samples that were collected from the site. The total pesticide concentrations for each of these samples, as well as all other samples, did not exceed the SCG of 10 mg/kg.

Individual SVOCs exceeding SCGs were detected in 23 percent of the 31 subsurface soil samples that were collected from the site. Total SVOC concentrations (maximum concentration of 196 mg/kg) did not exceed the SCG in any of the subsurface soil samples; however, total CaPAHs exceeded the SCG (10 mg/kg) in one subsurface soil sample.

A number of metals were detected above SCGs in surface soil; however, the concentrations are generally within published background concentrations for the Eastern United States (see Table 2-2).

Subsurface soil samples contained no exceedances of SCGs for cyanide.

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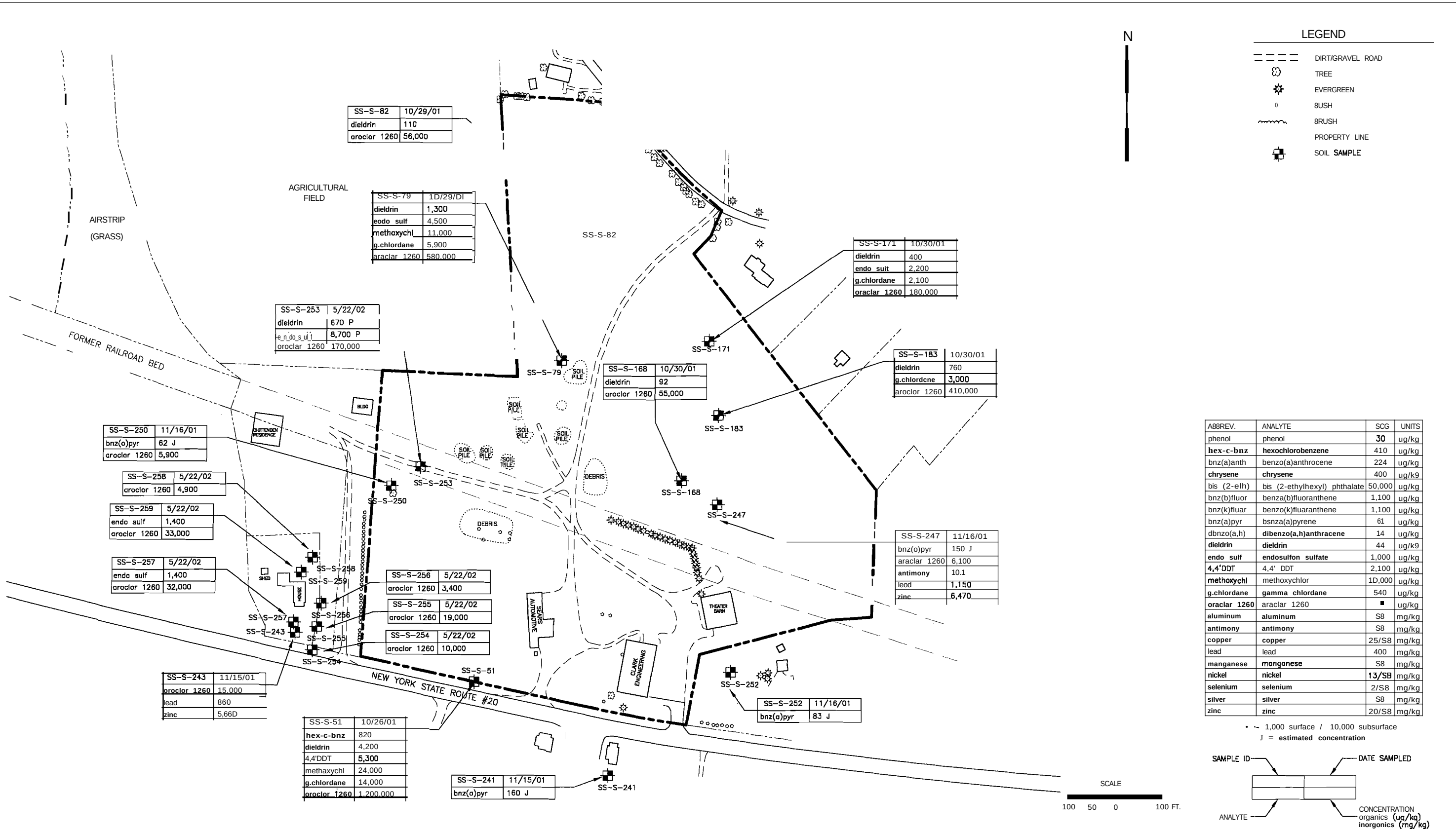


FIGURE 2-5
BOUCHARD JUNKYARD SITE
SCG EXCEEDANCES FOR PCBS IN SURFACE SOIL (0-0.2 feet)
(RaPID ASSAY DATA)

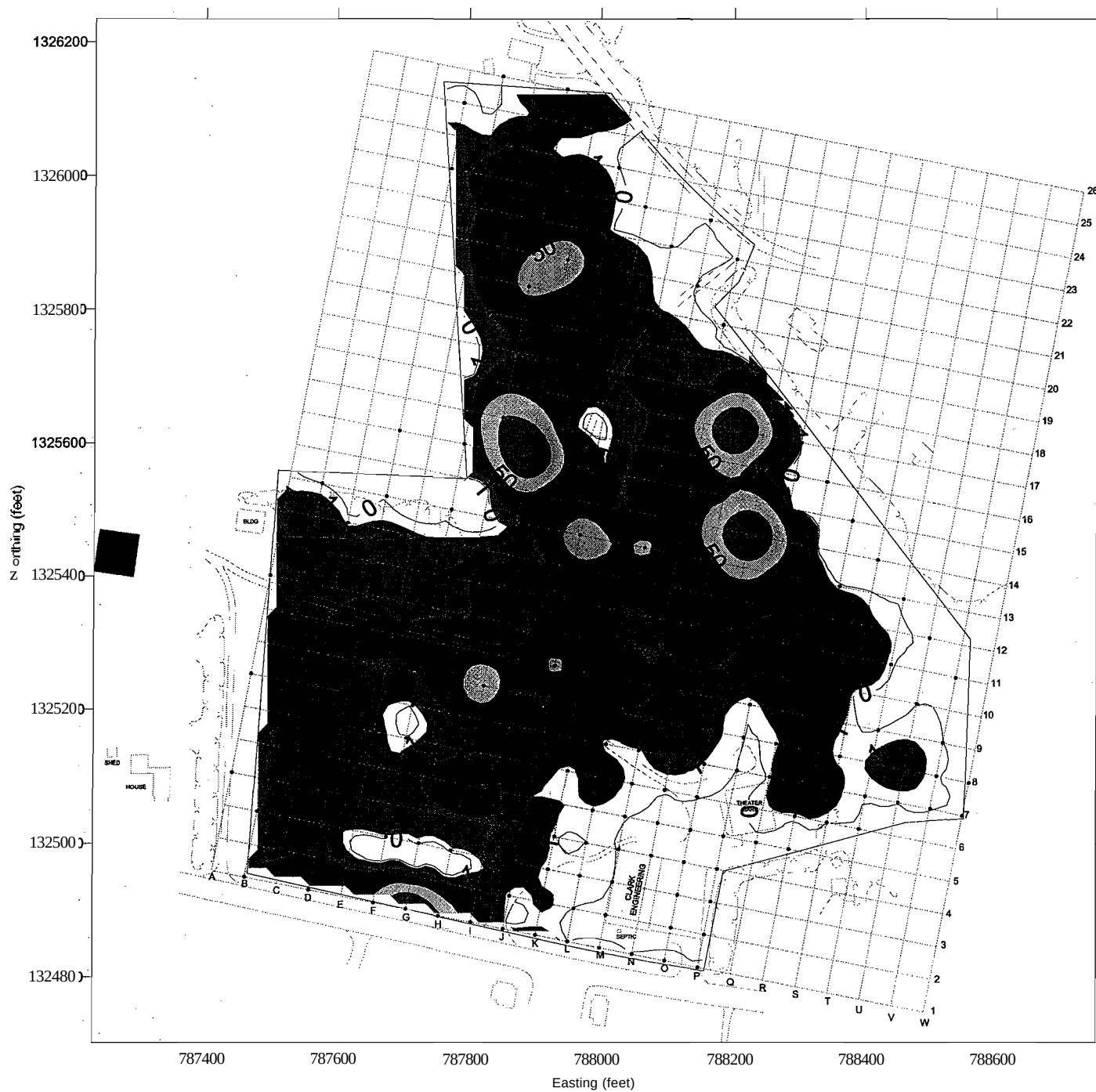


Figure 2-6 summarizes exceedances of SCGs in subsurface soil samples for VOCs, SVOCs, pesticides, PCBs and metals based on laboratory data. Figure 2-7 summarizes exceedances of SCGs for PCBs based on immunoassay field testing in subsurface soil (1.0 to 1.5 feet below grade). Figure 2-8 summarizes exceedances of SCGs for PCBs based on immunoassay field testing in subsurface soil (2.0 to 2.5 feet below grade). Tabulated results for all analyses are presented in Appendix E.

Surface Water Samples

No VOCs, SVOCs, pesticides or PCBs were detected above SCGs in the surface water samples collected as part of the RI.

A number of metals were detected above SCGs in surface water samples collected as part of the RI. It is likely that these metals are either naturally occurring and/or not related to the site.

SCGs were slightly exceeded for one pesticide in one of the seven surface water samples. The specific pesticide that was detected (Heptachlor Epoxide) did not exceed SCGs in any other media sampled at the site.

Figure 2-9 summarizes exceedances of SCGs in surface water samples collected during the RI. Tabulated results for all analyses are presented in Appendix E.

Sediment Samples

PCBs were detected above SCGs in 46 percent of the thirteen sediment samples collected. PCBs were detected in sediment samples collected from on-site and at downgradient off-site locations.

Pesticides were detected above SCGs in 23 percent of the thirteen sediment samples collected. These pesticides were present in samples collected at an on-site location, immediately adjacent to the site and a downgradient on-site location.

FIGURE 2-7
BOUCHARD JUNKYARD SITE
SCG EXCEEDANCES FOR PCBS IN SHALLOW SUBSURFACE SOIL (1.0-1.5 feet)
(LABORATORY DATA)

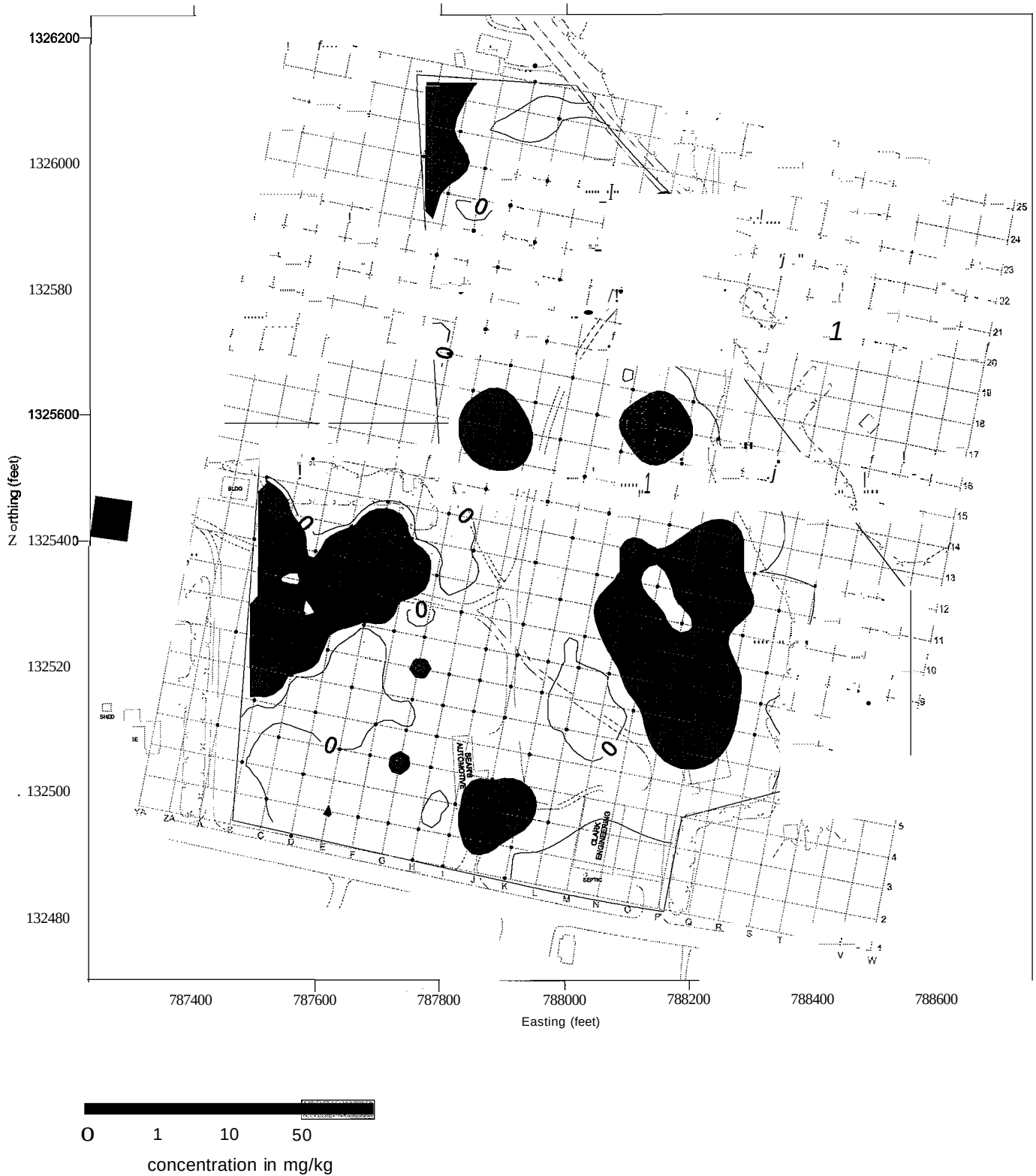
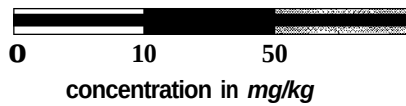
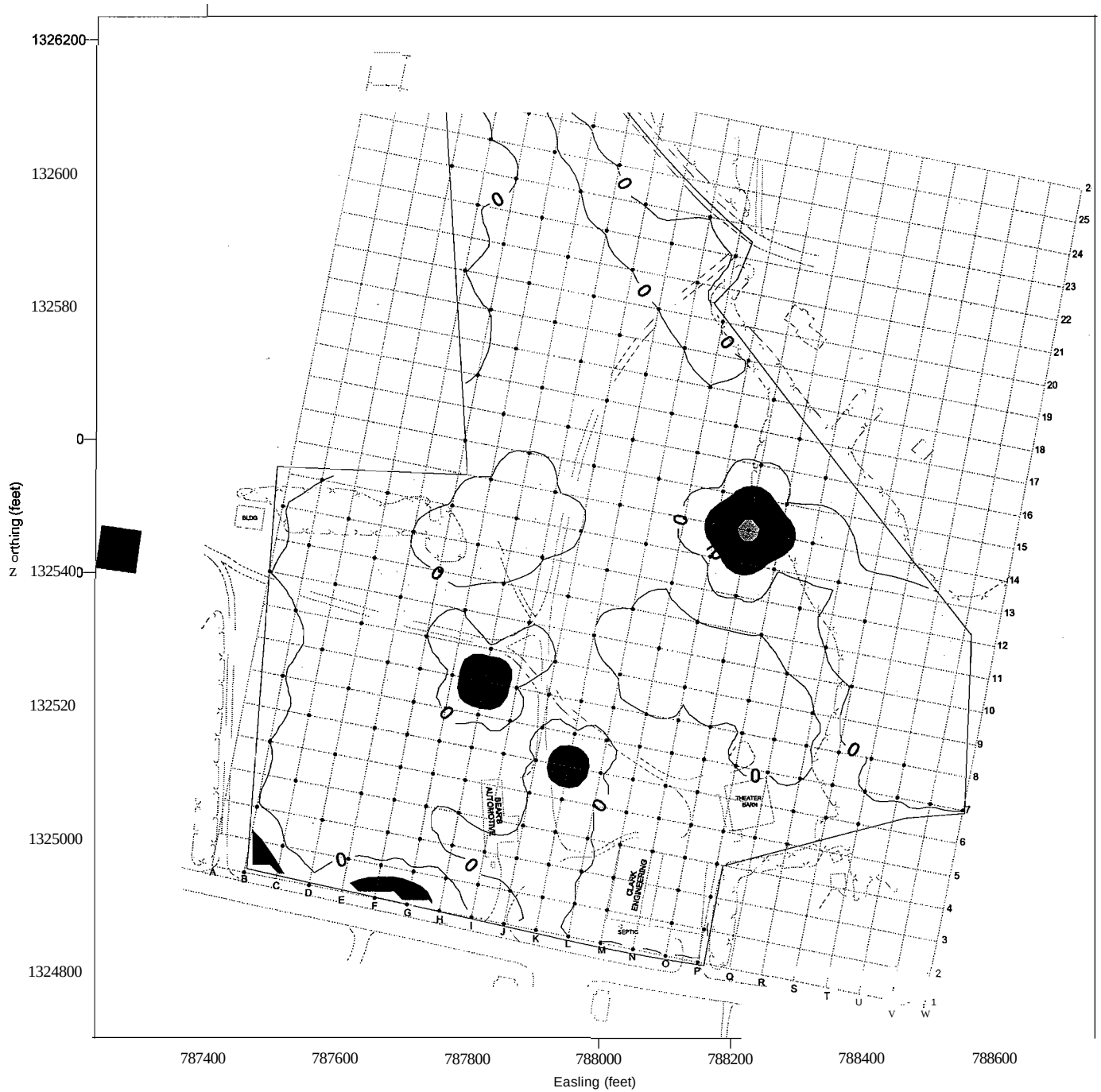
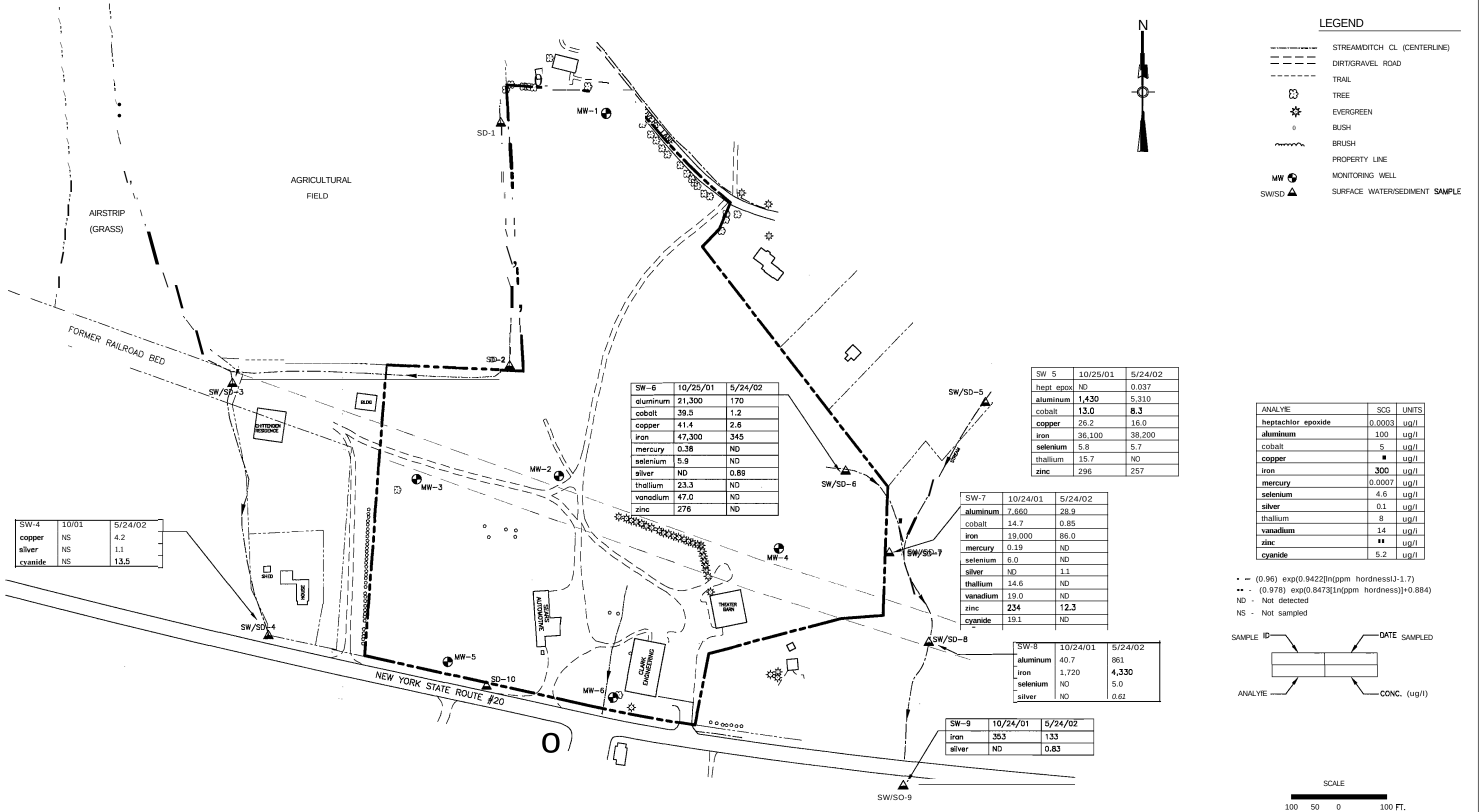


FIGURE 2-8
BOUCHARD JUNKYARD SITE
SCG EXCEEDANCES FOR PCBs IN SHALLOW SUBSURFACE SOIL (2-2.5 feet)
(RaPID ASSAY DATA)



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BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK

SCG EXCEEDANCES IN SURFACE WATER

SVOCs were detected above SCGs in 38 percent of the thirteen sediment samples collected. These SVOCs, which are comprised entirely of PAHs, were detected in sediment samples that were collected from upgradient and downgradient off-site locations and locations that are immediately adjacent roadways.

Metals were detected above SCGs in 100 percent of the thirteen sediment samples. These metals were detected in sediment samples collected at upgradient and downgradient off-site locations.

Surface water sediment samples contained no exceedances of SCGs for VOCs or cyanide.

Figure 2-10 summarizes exceedances of SCGs in sediment samples collected during the RI. Tabulated results for all analyses are presented in Appendix E.

Groundwater Samples

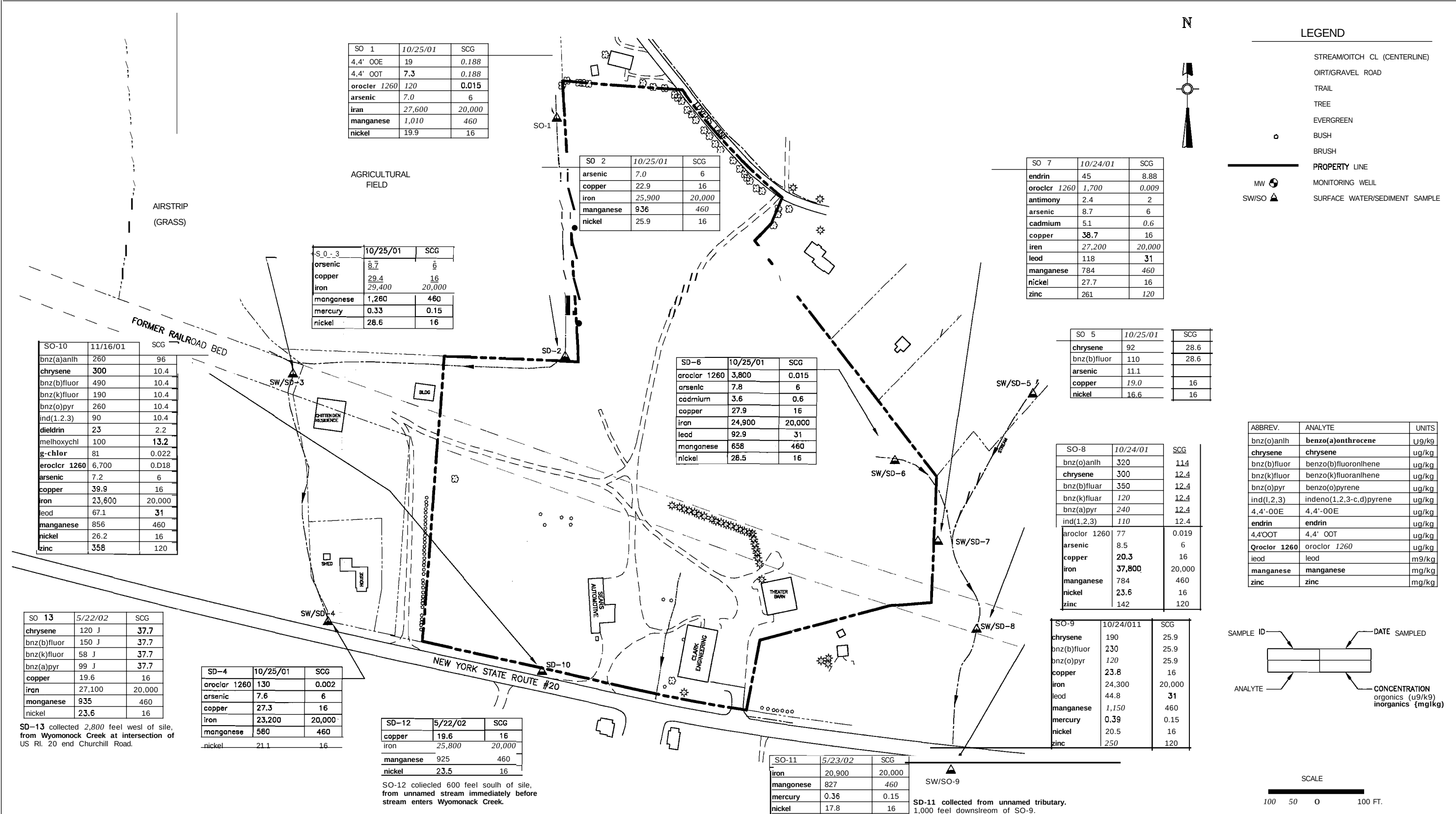
Groundwater samples collected at the site in November 2001 contained no exceedances for VOCs, SVOCs, pesticides, PCBs or cyanide. Groundwater samples collected from the site in May 2002 contained no exceedances of SCGs for VOCs and pesticides. SCGs were exceeded for PCBs in one sample collected in May 2002. Four metals were detected above SCGs, however, the concentrations for these metals in upgradient and downgradient samples are similar and do not appear to increase in the direction of groundwater flow. Figure 2-11 summarizes exceedances of SCGs in groundwater samples collected during the RI. Tabulated results for all analyses are presented in Appendix E.

Water Supply Well Samples

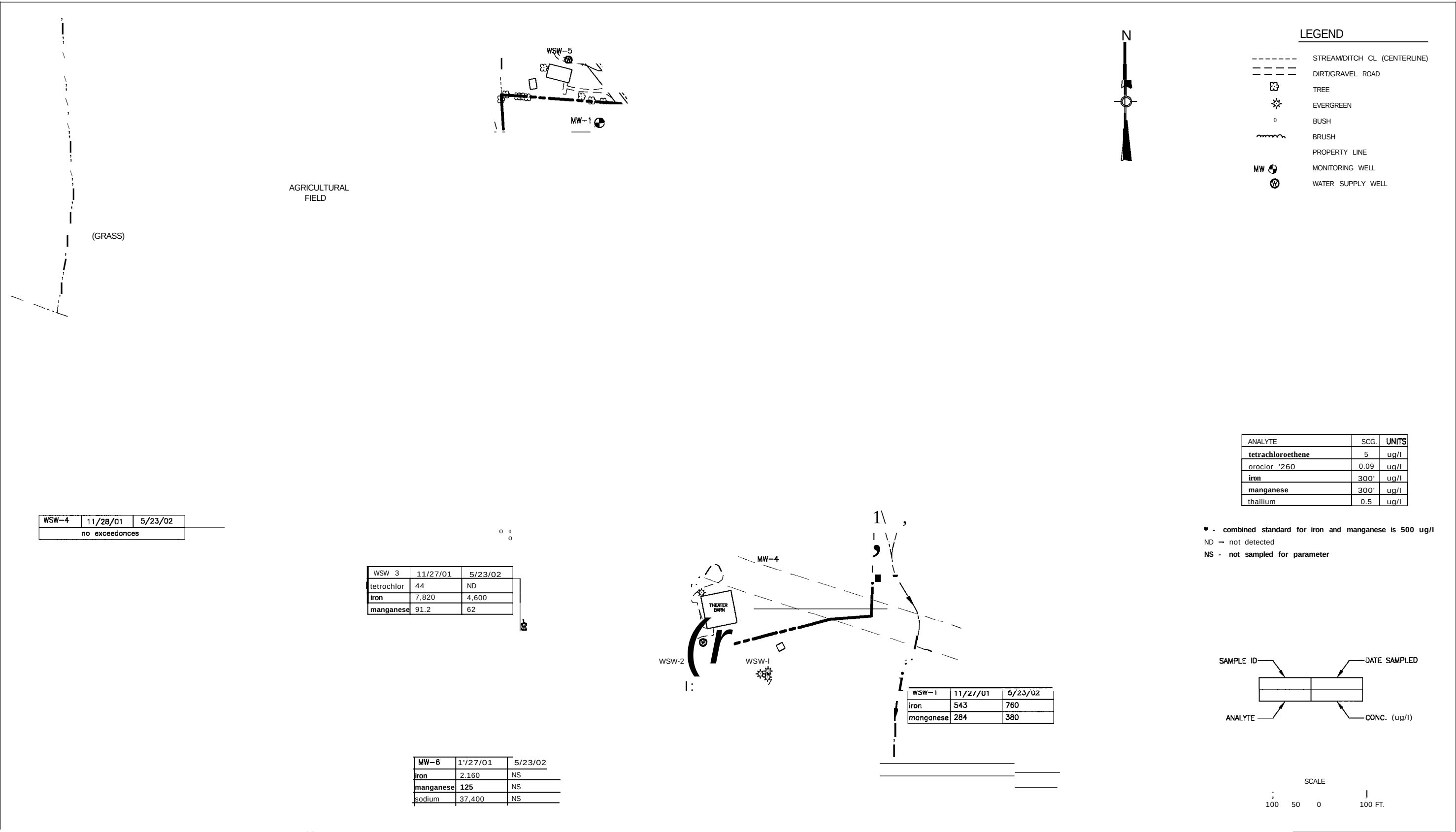
Samples collected from five water supply wells at or adjacent to the site in November 2001 contained no exceedances of SCGs for SVOCs, pesticides, PCBs or cyanide. A second round of samples collected from these five water supply wells in May 2002 contained

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BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK

SCG EXCEEEOANCES IN GROUNDWATER

FIGURE 2-11

no exceedances for VOCs or PCBs (samples were not analyzed for SVOCs or pesticides). SCGs were exceeded for one VOC in one sample. Iron and manganese were the only metals detected above SCGs and exhibited similar concentrations at upgradient and downgradient wells. Figure 2-11 summarizes exceedances of SCGs in groundwater samples collected during the RI. Tabulated results for all analyses are presented in Appendix E.

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3.0 SUMMARY OF PRE-DESIGN INVESTIGATION

3.1 Summary of Pre-Design Investigation Activities

The purpose of the pre-design investigation was to provide site specific information to more accurately define the horizontal and vertical extent of site contamination and obtain additional information required for the remedial design. The pre-design investigation at the Former Bouchard Junkyard Site was performed in March and April 2005 and consisted of the advancing of soil borings, water level monitoring, and sampling and analysis of soil, sediment, groundwater, water supply wells and surface water.

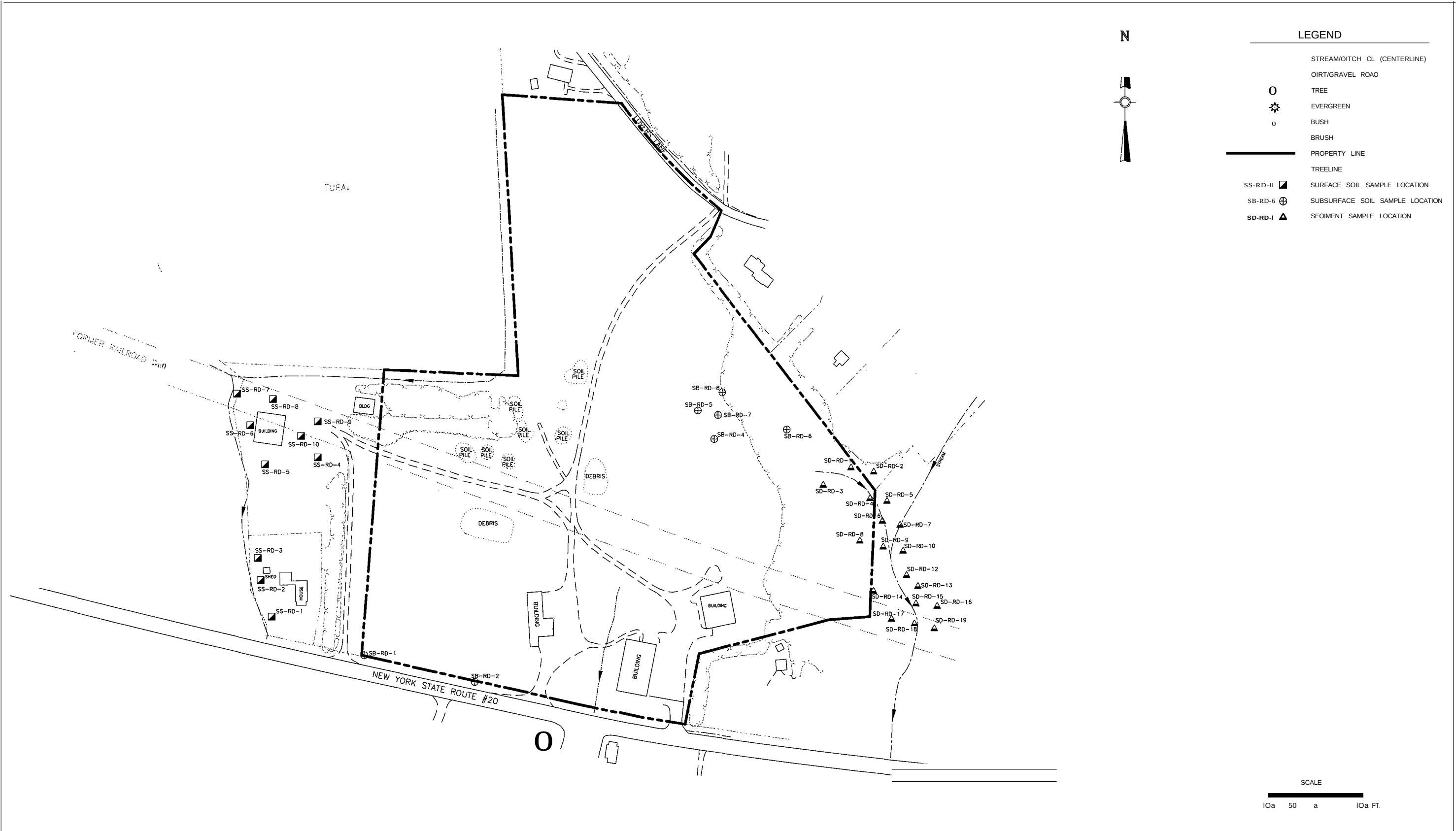
In order to further delineate the extent of surface soil contamination for the purpose of remedial design, 20 surface soil samples were collected at ten locations (SS-RD-1 through SS-RD-10) (see Figure 3-1) from the properties to the west of the site proper. Ten shallow surface soil samples (approximately 0 to 2 inches below ground surface) were collected for PCB analysis. Ten surface soil samples (approximately 6 to 18 inches below ground surface) were collected and archived for possible PCB analysis pending results of the analysis of the shallow surface soil samples.

To further delineate the nature and extent of sediment contamination, 38 sediment samples were collected from 19 locations (see Figure 3-1). The samples were collected from on-site and off-site locations in the wetland area to the east of the site. Nineteen sediment samples collected from approximately 0 to 2 inches below grade were analyzed for PCBs. Nineteen sediment samples collected from approximately 6 to 18 inches below grade were archived for possible PCB analysis pending results of the analysis of the shallow (0 to 2 inch below grade) sediment samples.

Eight soil borings (SB-RD-1 through SB-RD-8) were advanced during the pre-design investigation to determine subsurface soil quality, site geology and geotechnical characteristics required for the design of the remediation system. The locations of the borings are presented on Figure 3-1 and Boring Logs are presented in Appendix B.

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Twenty-four subsurface soil samples were collected to delineate the vertical extent of contamination. All soil samples were collected over six-inch depth intervals. Eight soil samples were collected from depths ranging from 2 to 6.5-feet below ground surface for PCB analysis. Sixteen soil samples were collected from depths ranging from 6 to 10.5-feet below ground surface and archived for possible PCB analysis pending results of the analysis of the shallow subsurface soil samples.

Water levels were obtained from monitoring wells MW-1, MW-3, MW-4, MW-5 and MW-6 (see Figure 3-4) during the pre-design investigation. Water level rounds were completed within as short a period as possible in order to provide a synoptic view of groundwater conditions. Measurements of depths to water and topographic survey data were used to calculate groundwater elevations and to prepare water table maps. Groundwater elevation data are presented in Appendix E.

Groundwater samples were collected from monitoring wells MW-1, MW-3, MW-4, MW-5 and MW-6 (see Figure 3-4) during the pre-design investigation. Each well was purged of at least three volumes of groundwater before sample collection using a new disposable polyethylene bailer. Field parameters, including pH, specific conductance, turbidity and temperature, were monitored during sampling using a Horiba U-10 water quality meter. All of the samples were analyzed for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs, TAL inorganics and cyanide.

As part of the pre-design investigation activities, samples were collected for chemical analysis from water supply wells WSW-1, WSW-2, WSW-3, WSW-4 and WSW-5 (see Figure 3-4). Water supply well samples WSW-1, WSW-3, WSW-4 and WSW-5 were collected from taps in the existing water distribution systems at points as close to the wells as possible. Water supply well sample WSW-2 was collected using a new disposable polyethylene bailer since the power to the building was disconnected and the well pump was subsequently inoperable. Field parameters, including pH, specific conductance, turbidity and temperature, were monitored during sampling using a Horiba U-10 water quality meter. Groundwater samples were collected directly into laboratory-supplied sample containers. The water supply

well water samples were analyzed for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs, TAL metals and cyanide.

Three surface water samples (SW-RD1, SW-RD2 and SW-RD3) were collected as part of the pre-design investigation activities (see Figure 3-5). The samples were collected by submerging the laboratory supplied sample containers and allowing the containers to fill. The surface water samples were analyzed for TCL VOCs, TCL SVOCs, TCL Pest/PCBs, TAL metals and cyanide.

3.2 Summary of Pre-Design Investigation Findings

Based on the results of the Former Bouchard Junkyard Site pre-design investigation, the following conclusions were presented:

Geology/Hydrogeology

Overburden on-site consists predominantly of brown to gray, poorly sorted fine to coarse sand, fine to coarse gravel and silt (0 to 14 feet below grade). A more uniform fine to medium sand with some silt exhibited in subparallel layers exists from 14 feet below grade to 25.5 feet below grade. Glacially derived cobbles and boulder-sized rock fragments were observed during the excavation of test pits during the RI.

Bedrock geology in the vicinity of the site has been mapped as the Walloomsac formation of the Lorraine, Trenton and Black River Groups (Fisher, et. al., 1970). The Walloomsac formation is Middle Ordovician in age, and is composed of slate, phyllite, schist and metagraywacke. Little is known about the geology or hydrogeology of the bedrock at the site. The deepest boring advanced during the investigation activities was terminated at a depth of 25.5 feet below grade. Bedrock at the site is approximately 90 feet deep based on an invoice for the construction of a water supply well at the site.

Groundwater at the site is found at an average depth of 3.4 feet below ground surface with a range of 0.8 feet below ground surface to 8.6 feet below ground surface in unconsolidated material, based on data collected during the pre-design investigation. Groundwater elevations observed during the pre-design investigation are somewhat higher than those observed during the RI and is likely the result of seasonal variations. Groundwater flow at the site is toward the south and is relatively slow based on slug test data.

Surface Soil Quality

The SCA for PCBs in surface soil of 1,000 µg/kg was exceeded in 7 of 15 surface soil samples. Aroclor-1260 was the only Aroclor identified. Aroclor-1260 was detected above its SCA in surface soil samples at concentrations ranging from 1,700 µg/kg to 25,000 µg/kg during the pre-design investigation.

Based on the data from the surface soil samples collected as part of the pre-design investigation, PCB contaminated soils were identified within the lawn and dirt parking areas surrounding the residential properties to the west of the site. PCB contamination was encountered at depths up to 1.5 feet below grade surface in these areas. Contamination identified on the properties has been incorporated into the areal and vertical extent of contamination defined during the RI. Figure 3-2 illustrates the areas of the site where PCBs exceed SCGs and includes approximately 19,850 cubic yards of surface soil from grade to 1.0 feet below grade and approximately 8,500 cubic yards of surface soil from grade to 1.5 feet below grade (28,350 cubic yards total surface soil).

Figure 3-3 summarizes exceedances of SCGs in soil and sediment samples collected during the pre-design investigation. Tabulated results for all analyses are presented in Appendix E.

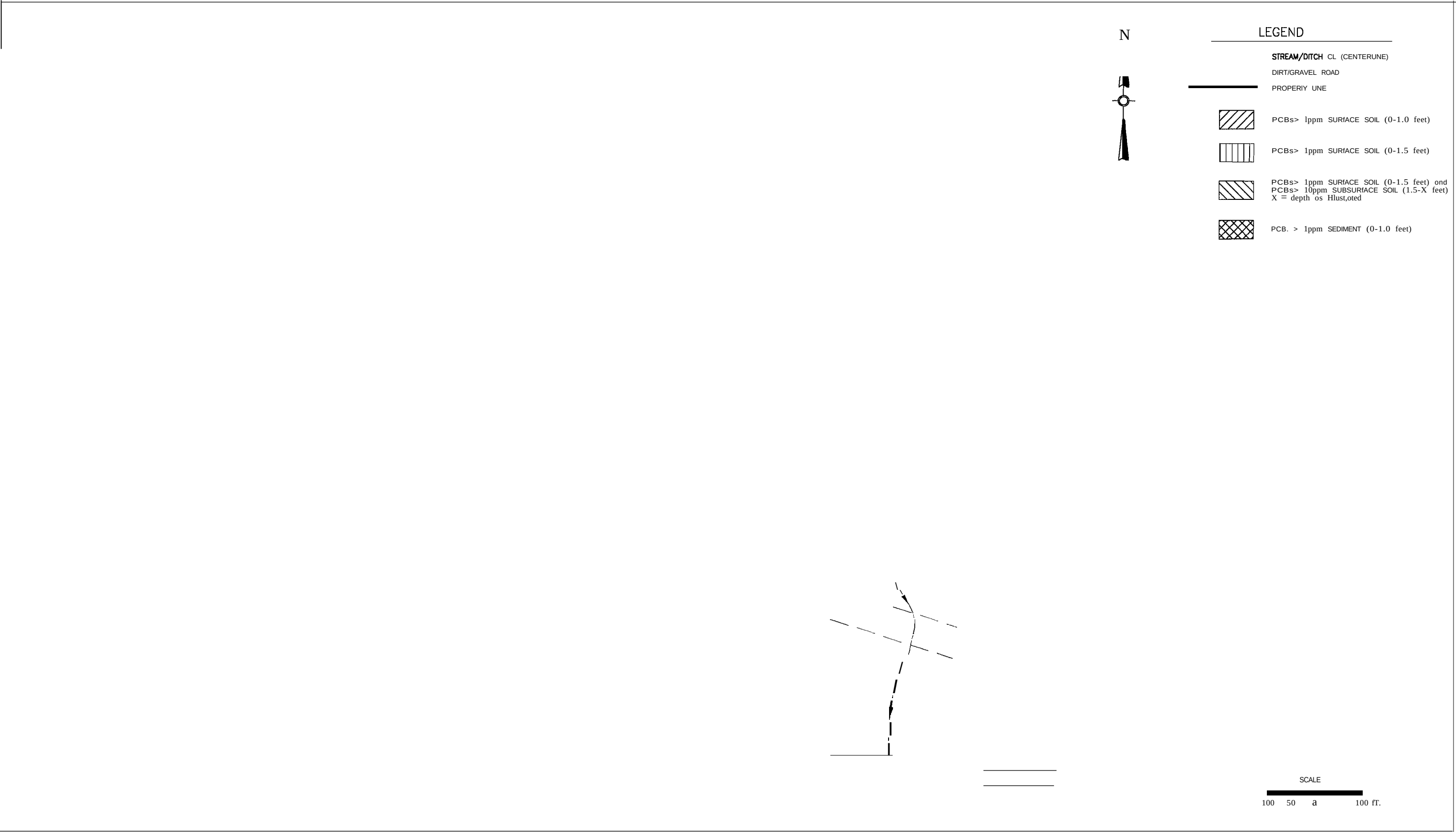
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FORMER BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK
PRE-DESIGN INVESTIGATION
AREAS WITH PCBS EXCEEDING STANDARDS, CRITERIA AND GUIDANCE

FIGURE 3-2



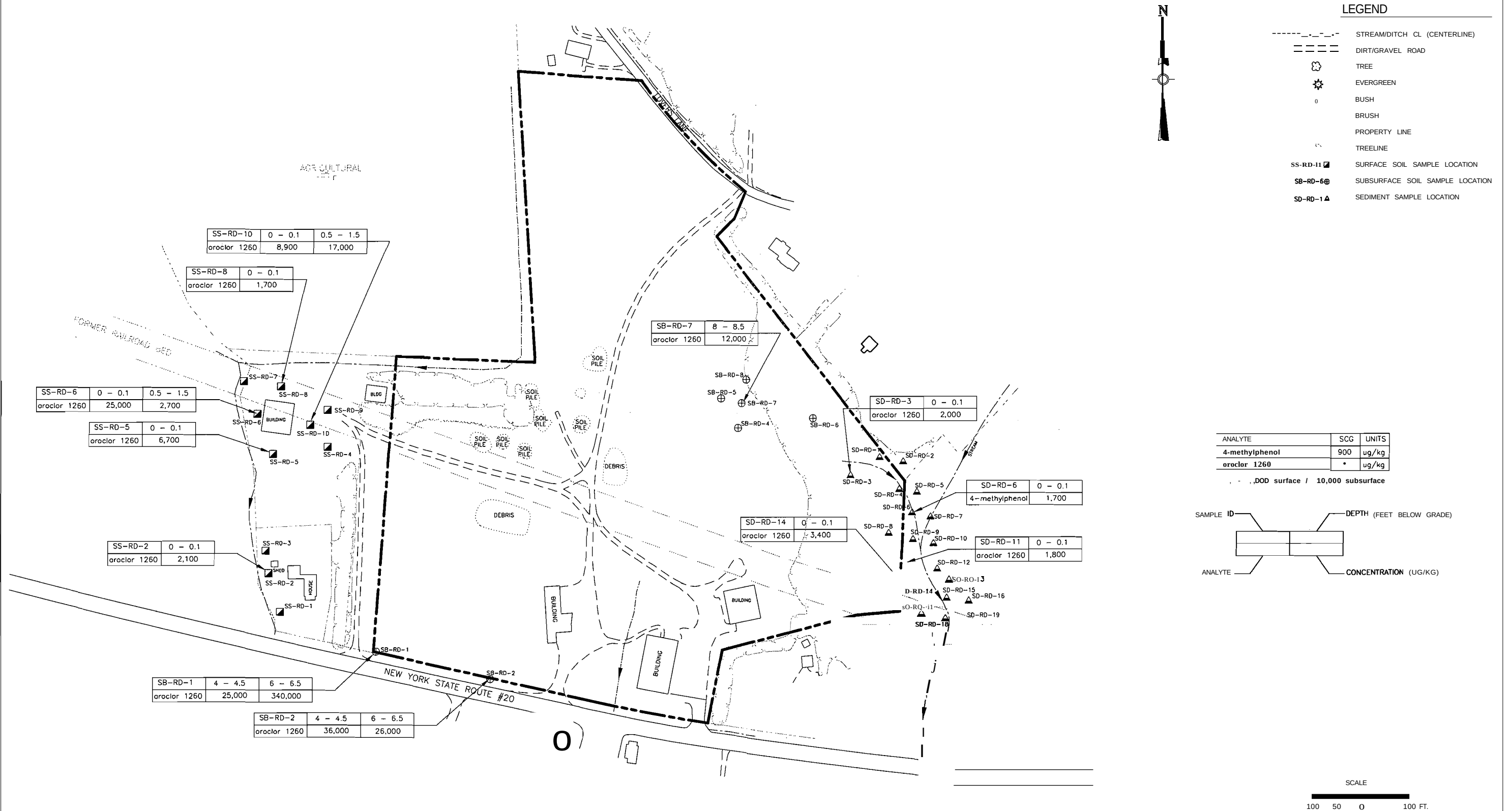
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FORMER BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK
PRE-DESIGN INVESTIGATION
SCG EXCEEDANCES IN SOIL AND SEDIMENT

FIGURE 3-3



Subsurface Soil Sampling

In order to further delineate the extent of soil contamination in the areas of former borings SB-75, SB-183, SB-51 and SB-3, 13 subsurface soil samples were collected for PCBs analysis. The SCG for PCBs in subsurface soil of 10,000 µg/kg was exceeded in 5 of 13 samples. Aroclor-1260 was the only Aroclor identified. Aroclor-1260 was detected above its SCG at concentrations ranging from 12,000 µg/kg to 340,000 µg/kg.

Subsurface PCB contamination identified during the pre-design investigation has been incorporated into the areal and vertical extent of contamination defined during the RI. Figure 3-1 illustrates the areas of the site where PCBs exceed SCGs and includes approximately 2,850 cubic yards of subsurface soil from 1.5 feet to between 6 and 9 feet deep.

Figure 3-3 summarizes exceedances of SCGs in soil and sediment samples collected during the pre-design investigation. Tabulated results for all analyses are presented in Appendix E.

Sediment Quality

Of the 38 soil samples collected for PCB analysis as part of the pre-design investigation, 22 samples were analyzed to delineate the extent of sediment contamination. Five sediment samples were collected for SVOC and TOC analysis. Aroclor-1260 was detected above its SCG in 3 of the 22 sediment samples at concentrations ranging from 1,800 µg/kg to 3,400 µg/kg. The SVOC 4-methylphenol was detected above its SCG of 900 µg/kg in one sample at a concentration of 1,700 µg/kg. No other SVOCs were detected in the sediment samples collected at the site at concentrations above SCGs. TOC was detected in all five samples at concentrations ranging from greater than 31,000 mg/kg to greater than 103,000 mg/kg.

Based on the sediment sample results, PCB concentrations exceeded SCGs in sediment situated on-site and immediately east of the site at depths up to 0.1 feet below grade surface. PCB contamination in these areas has been incorporated into the areal and vertical extent of

contamination defined during the RI. Figure 3-1 illustrates the areas of the site where PCBs exceed SCGs and approximately 350 cubic yards of sediment from grade to 1.0 feet below grade.

Figure 3-3 summarizes exceedances of SCGs in soil and sediment samples collected during the pre-design investigation. Tabulated results for all analyses are presented in Appendix E.

Groundwater Quality

Groundwater samples were collected from five existing monitoring wells (MW-1, MW-3, MW-4, MW-5 and MW-6) located at the site. All samples were analyzed for TCL VOCs, TCL SVOC, TCL pesticides/PCBs, TAL inorganics and cyanide.

VOCs, SVOCs, pesticides and PCBs were not detected above SCGs in any of the five groundwater samples collected during the pre-design investigation. These results are consistent with the results reported in the RI.

SCGs were exceeded for the metals iron and sodium. Iron was detected above its SCG of 300 µg/l in one sample at a concentration of 1,260 µg/l. Sodium was detected above its SCG of 20,000 µg/l in one sample at a concentration of 90,500 µg/l. Total iron and manganese exceeded the combined standard of 500 µg/l for these parameters in one sample at concentration of 1,498 µg/l.

Cyanide was detected above its SCG of 200 µg/l in one sample at a concentration of 328

In general, the metals concentrations identified during the March 2005 sampling event were found to be lower than the concentrations reported in the RI.

Figure 3-4 summarizes exceedances in groundwater samples collected as part of the remedial investigation. Tabulated results for all analyses are presented in Appendix E.

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PRE-DESIGN INVESTIGATION
SCG EXCEEDANCES IN GROUNDWATER

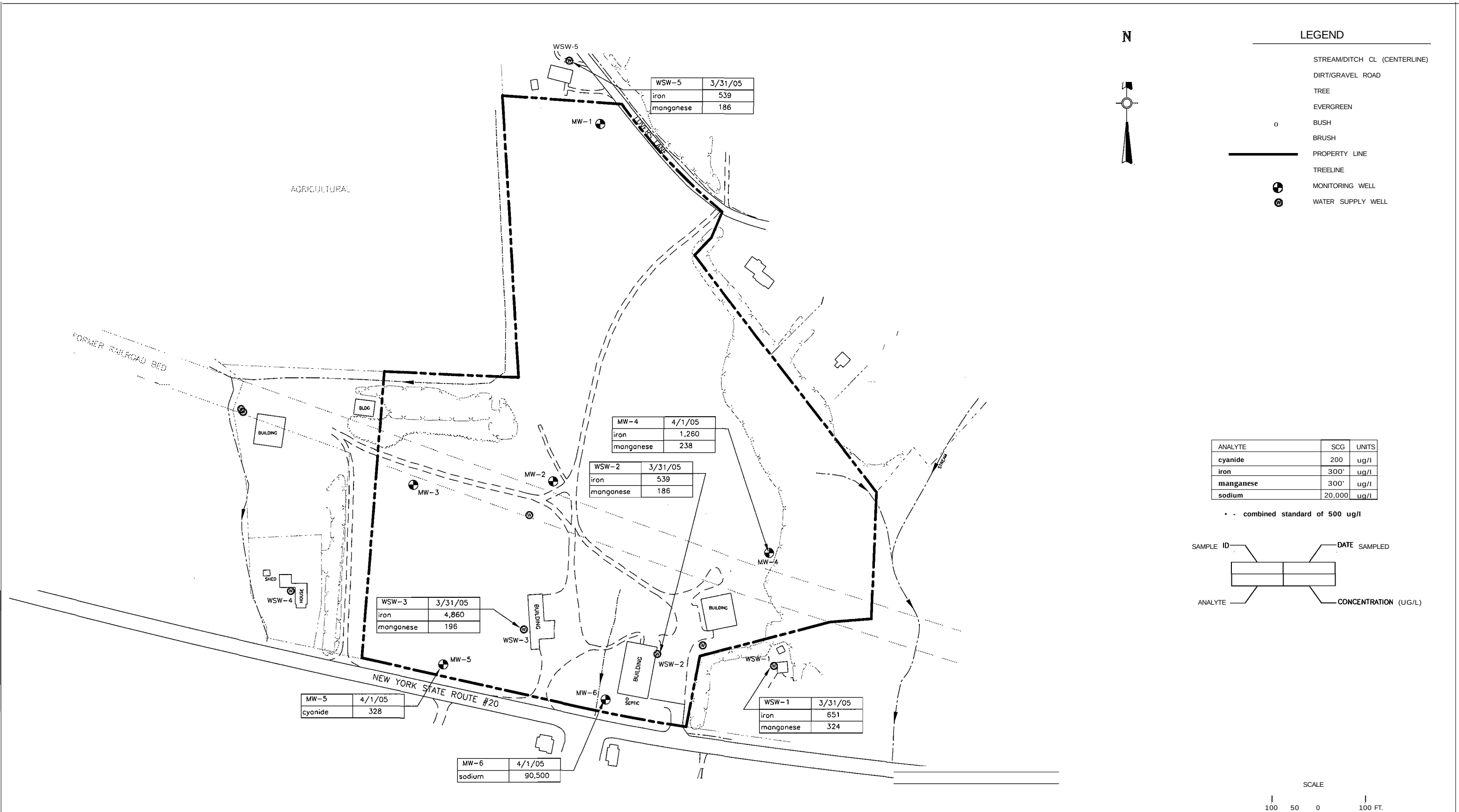


FIGURE 3-4

Water Supply Well Quality

As part of the pre-design investigation activities, samples were collected for chemical analysis from five water supply wells. The water supply well samples were analyzed for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals and cyanide.

VOCs, SVOCs, pesticides and PCBs were not detected above SCGs in any of the five groundwater samples collected during the pre-design investigation and tested for these analytes.

SCGs were exceeded for the metals iron and manganese. Iron was detected above its SCG of 300 µg/l in four samples at concentration ranging from 539 µg/l to 4,860 µg/l. Manganese was detected above its SCG of 300 µg/l in one sample at a concentration of 324 µg/l. Total iron and manganese exceeded the combined standard of 500 µg/l for these parameters in four samples at concentration ranging from 725 µg/l to 5,056 µg/l.

Cyanide was not detected above its SCG in any of the water supply well samples collected during the pre-design investigation.

In general, the concentrations identified during the March 2005 sampling event were found to be similar to the concentrations reported in the RI.

Figure 3-4 summarizes exceedances in groundwater samples collected as part of the remedial investigation. Tabulated results for all analyses are presented in Appendix E.

Surface Water Quality

Three surface water samples were collected as part of the pre-design investigation activities. All of the samples were analyzed for TCL VOCs, TCL SVOC, TCL pesticides/PCBs, TAL inorganics and cyanide.

VOCs, SVOCs, pesticides and PCBs were not detected above SCGs in any of the three surface water samples collected during the pre-design investigation and tested for these analytes. These results are consistent with the results reported in the RI.

SCGs were exceeded for the metals aluminum, copper, iron and silver. Aluminum was detected above its SCG of 100 µg/l in one sample at a concentration of 112 µg/l. Copper was detected above its SCG of 3.1 µg/l in one sample at a concentration of 3.5 µg/l. Iron was detected above its SCG of 300 µg/l in two samples at concentrations of 382 µg/l and 303 µg/l. Silver was detected above its SCG of 0.1 µg/l in one sample at a concentration of 8.9 µg/l.

In general, the metals concentrations identified during the April 2005 sampling event were lower than the concentrations reported in the RI Report.

Figure 3-5 summarizes exceedances in surface water samples collected as part of the remedial investigation. Tabulated results for all analyses are presented in Appendix E.

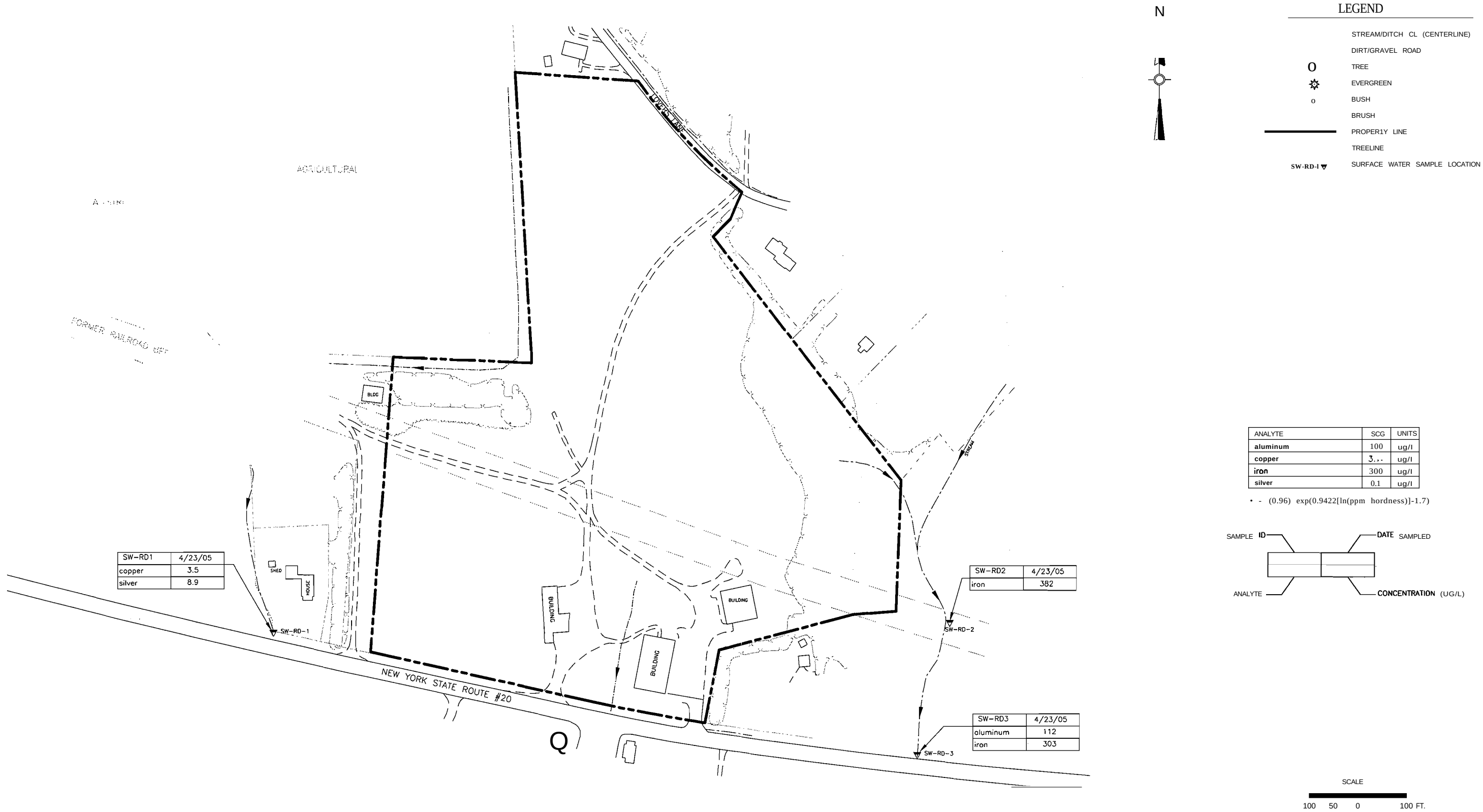
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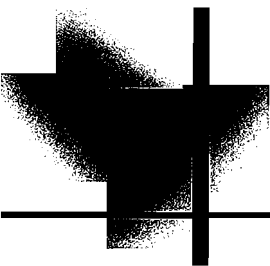
FORMER BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK
PRE - DESIGN INVESTIGATION
SCG EXCEEDANCES IN SURFACE WATER

FIGURE 3-5



4.0 WETLAND RESTORATION PLAN

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RESTORATION PLAN



Wetland Restoration Plan

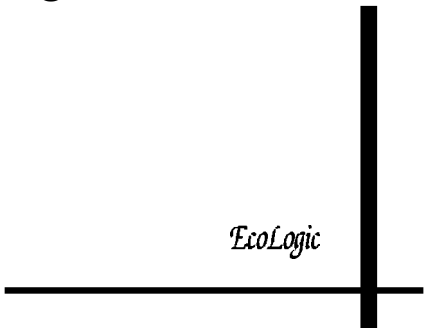
**Former Bouchard Junkyard Site
Town of New Lebanon
Columbia County, New York
(Site Registry NO. 4-11-014)**

Prepared for
Dvirka and Bartilucci Consulting Engineers

Prepared by
EcoLogic LLC
Cazenovia, NY

April 2007

EcoLogic



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Table of Contents

1	BACKGROUND, GOALS AND OBJECTIVES	2
1.1	BACKGROUND	2
1.2	GOALS	5
1.3	PERFORMANCE STANDARDS	7
1.4	TIMEFRAME	10
2	QUALITY CONTROL DOCUMENTATION	12
3	BASELINE MEASUREMENTS	12
3.1	HYDROLOGY	14
3.2	SOILS	16
3.3	VEGETATION	16
4	WETLAND RESTORATION	16
4.1	SUBSTRATE RESTORATION	16
4.2	SELECTION OF FILL MATERIAL	19
4.3	HYDROLOGY	19
4.4	PLANTING	20
4.5	As-Built REPORT	26
5	MONITORING	26
	<u>ATTACHMENT 1</u>	28
	AI-1. EXISTING HYDROLOGIC INFORMATION	28
	AI-2. EXISTING SOILS INFORMATION	29
	AI-3. EXISTING VEGETATION INFORMATION	30

List of Tables

Table 1-1	Wetland Restoration Performance Standards
Table 1-2	Summary of Wetland Restoration Plan Timeframe
Table 3-1	Pre-excavation data collection needs to establish baseline conditions
Table 4-1	Plant species selected for wetland restoration project
Table 4-2	Comparison of container-grown and bare root plant stock
Table 5-1	Restoration plan monitoring program summary

List of Figures

Figure 1-1	Site location, Former Bouchard Junkyard Site
Figure 1-2	Excavation area with regional regulated wetland complex
Figure 1-3	Excavation areas and delineated wetland border
Figure 1-4	Estimated restoration plan time line
Figure 4-1	Substrate Restoration "If-Then" Approach
Figure 5-1	Generalized cross-section of planting plan
Figure 5-2	Generalized wetland restoration planting plan.

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*Former Bouchard Junkyard Property, New Lebanon NY
Wetland Restoration Plan*

1 Background, Goals **and** Objectives

The New York State Department of Environmental Conservation (NYSDEC) has issued a remedial design (RD) work assignment to Dvirka and Bartilucci; Consulting Engineers (D&B) under the State Superfund Standby contract for the Former Bouchard Junkyard Site. EcoLogic LLC. (EcoLogic) was retained by D&B to prepare this wetland restoration plan in support of the RD. The purpose of this plan is to provide guidance to restoration of the wetland.

1.1 Background

1.1.1 Site Location

The Former Bouchard Junkyard Site (the Site), is located on the north side of United States (U.S.) Route 20, approximately 400 feet west of Lovers Lane, and approximately 900 feet west of its intersection with New York State Route 22, in the Town of New Lebanon, Columbia County, New York (Figure 1-1).

The Site and the surrounding study area are located in the Hudson River watershed. The Site is situated in the river valley of Wyomanock Creek, across U.S. Route 20 from the Shaker Swamp. Within a half-mile of the Site, land cover types are dominated by a mix of residential and commercial/industrial development, agricultural lands, wetlands, and successional forest.

1.1.2 Site Description

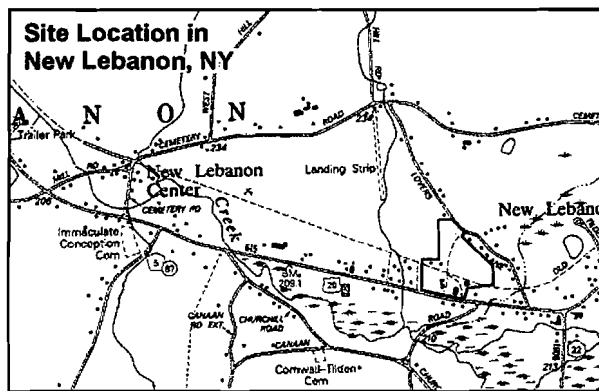
The Site is situated on a relatively flat parcel, sloping gradually toward the southeast. Local natural land surface elevation near the north end of the Site is 713 feet above mean sea level (amsl, North American datum of 1988) and decreases gently in elevation to the southeast to a minimum elevation of 685 feet amsl in the regulated wetland at the southeast end of the Site. Elevations in this wetland range between 685 and 688 feet amsl.

Drainage is primarily to the south and east into the regulated wetland on the southeast side of the Site. This wetland drains via a culvert under U.S. Route 20 to Wyomanock Creek, which flows from southeast to northwest in the vicinity of the Site and drains into Kinderhook Creek approximately 3.2 miles west of the Site.

Shaker Swamp is located to the south and southeast of the Site, across U.S. Route 20. Shaker Swamp is a NYSDEC designated Class 1 (CA-4) wetland. The wetland at the southeast corner of the Site is a small portion of this larger swamp.

Bedrock at the Site is approximately 90 feet deep based on previous investigations performed by others.

The Site is a New York State Class 2 inactive hazardous waste disposal site, Registry No. 4-11-014.



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EcoLogic

Figure 1-1. Site location, Former Bouchard Junkyard Site, New Lebanon, NY

1.1.3 Regulated Wetland

The eastern side of the Site was identified during the 2001 Fish and Wildlife Impact Assessment, which was performed as part of the Remedial Investigation Feasibility for the Site, as a red maple-dominated forested wetland that flanks an intermittent stream tributary to Wyomanock Creek. This forested wetland was identified as the most valuable terrestrial wildlife habitat on the Site, as it provides water, cover, food and a protected travel corridor running north to south. The wetland on-site also provides wildlife with a connection to the larger Shaker Swamp, an area characterized as mixed shallow emergent marsh and shrub swamp associated with Wyomanock Creek (Figure 1-2).

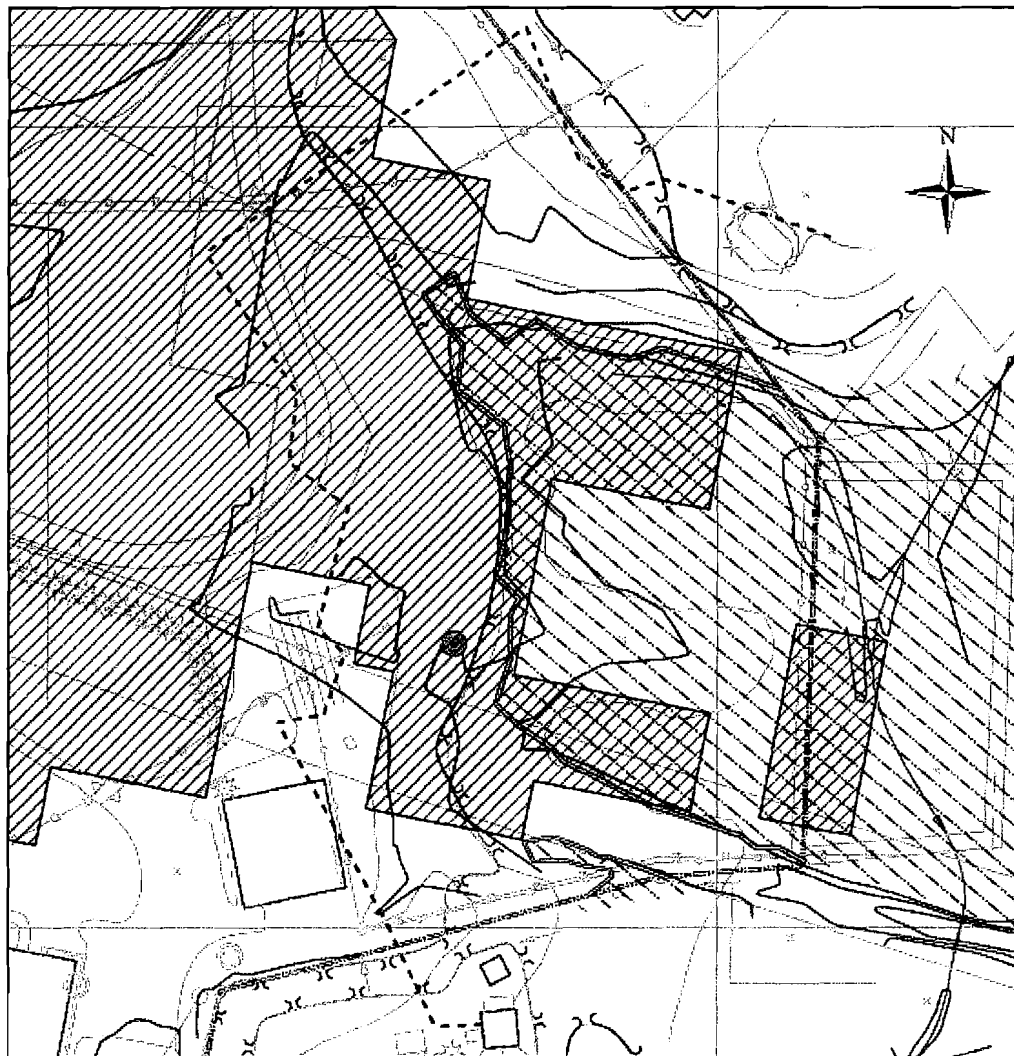
1.1.4 Site Remediation

A Remedial Investigation (RI) was conducted by D&B at the Site in 2001/2002. PCBs were identified as the primary contaminant of concern, and surface soil was identified as the primary medium of concern. Polychlorinated biphenyl (PCBs) were also detected in subsurface soils and in surface water and sediment. Other contaminants (semivolatile organics and metals) were detected slightly above the standards, criteria and guidance (SCGs) established for the Site in surface soil, subsurface soil, surface water, sediment and groundwater.

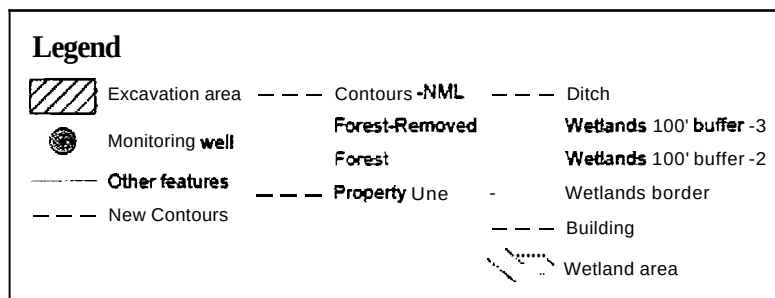
The Site was determined to pose a significant threat to human health and the environment. A Feasibility Study (FS) was prepared for the Site by D&B to identify and screen potentially applicable remedial technologies.

NYSDEC selected excavation and off-site disposal as the amended remedy to eliminate or mitigate the current threats to (a) human health associated with exposure to contaminated soil at the Site, and (b) the environmental threat related to impacts to the sediment of Wyomanock Creek and its tributaries. The remedy specified excavation and off-site disposal of the contaminated soils and sediment, as well as restoring the Site to original elevation by backfilling with clean soil, grading, placement of topsoil, and seeding of excavated and/or filled areas.

As a result of this remediation, approximately $\frac{3}{4}$ of an acre of the regulated wetland on the Site will be impacted by the excavation of contaminated soils and sediments. This acreage does not include the impacted 100 ft buffer zone adjacent to the wetland.



0 55 110 220 330



Excavation detail from CADD files provided by Dvirka & Bartilucci Consulting Engineers.



Figure 1-3. Excavation areas and delineated wetland border, Former Bouchard Junkyard Site, New Lebanon, NY.

Areas of the wetland to be excavated are shown in Figure 1-3. The excavated areas will be restored to pre-disturbance elevations, and trees and shrubs planted to restore the vegetative cover.

By restoring the Site to pre-disturbance conditions, the existing functions and values of this wetland area will be preserved. The wetland presently provides a red maple swamp habitat for wildlife that is fed by groundwater discharge. The area also provides for retention of surface water runoff toward Wyomanock Creek.

1.3 Performance Standards

Quantitative measures of success for this wetland restoration will be defined by the pre- and post-excavation conditions of the hydrology, soils, and vegetation. The restoration of this wetland will be considered successful if the hydrologic, soils, and vegetative measures defined below and in Table 1-1 are met. Cases where the performance standards are not met will be documented and corrective actions will be proposed.

1.3.1 Hydrology

For the restoration of the wetland to be considered a success, the major features of the existing hydrologic regime must be maintained. On this site, the wetland is fed by groundwater, and there is an intermittent surface water stream channel discharging toward the south. If the restoration is successful, post-excavation ground and surface water elevations, flow direction on the Site, and surface water discharge from the wetland will be comparable to that observed pre-excavation (Table 1-1).

Baseline data will be collected prior to excavation (see Section 2.2 Baseline Measurements) for comparison with post-excavation conditions. Since one of the objectives of the project is to restore the ground elevation to pre-excavation levels, the relationship between groundwater, surface water and ground elevations should remain unchanged once the Site is restored. Upon completion of the restoration, the Site should not drain more rapidly or more slowly than was observed during baseline monitoring.

Based on existing data, it is anticipated that groundwater and surface water elevations over time would likely occur within 12 inches of the baseline measurements on a seasonal basis. Baseline measurements collected pre-excavation will confirm or refine this criterion. If this criterion is refined, the rationale for refinement and supporting data used to change the criterion will be documented.

Presently, there is no data for the discharge volume from the wetland to the culvert under Route 20 leading to Wyomanock Creek. The baseline measurements will provide the benchmark for evaluating post-restoration discharge from the wetland.

Matrix	Purpose	Measurements	Criteria
Hydrology	Evaluate changes in groundwater and surface water elevation	Depth to groundwater in monitoring well adjacent to wetland. Depth of surface water using staff gauges.	Ground and surface water elevations should be within 12 inches of the seasonal baseline measurements
	Verify groundwater flow direction	Map the groundwater elevations and flow paths	Verify that groundwater flow direction continues toward the south-southeast.
	Evaluate surface water drainage	Measure water depth at the culvert under Rt. 20 with a staff gauge.	Surface water discharge from the wetland will be within one standard deviation of the seasonal baseline average under normal climate conditions.
Soils	Evaluate condition of fill material introduced to the Site	Measure organic carbon content, pH, redox potential and nutrients (nitrogen and phosphorus).	Measurements should fall within the specified range of the baseline measurements for these parameters.
	Evaluate development of hydric conditions over time	Identify hydric soil characteristics (gleying, mottling, oxidized rhizospheres, hue, value and chroma) using Munsell soil color charts. Use hydrologic measurements to estimate the hydroperiod (extent, frequency and duration of saturated conditions) of the sampling plots.	Hydric soil characteristics will take time to develop, and will first appear in areas with longest saturation period. Document the observations made at four sample sites, along with the frequency and duration of saturation in these areas. The absence of hydric soil characteristics in the short term will not be indicative of restoration failure.
Vegetation	Evaluate community structure in the restored areas on a seasonal basis, starting with the first growing season after restoration	Percent Cover - estimated overall percent cover in the sample plot.	Overall percent cover will be within 30% of the baseline.
		Percent Cover by layer - stratification of the community by layers, using estimated percent cover for canopy, understory, and herbaceous layers.	Percent cover for the understory and herbaceous levels will be within 60% of baseline the first year, 40% the second year, and 30% the third year. Percent cover for the canopy will take longer to develop.
		Percent Cover by species - species composition, using percent cover, will be calculated as percent contribution of species from the total number of species identified in the sample plot.	Species composition will be within 50% of baseline the first year, 40% the second year and 30% the third year as natural colonization takes place.
		Photographs	Photographs will be used to document changes in the vegetative community.
		Presence of invasive species, including both those documented to occur on-site and those discovered in restoration areas.	Invasive species will account for less than 2% of the species in the restoration areas, based on stem count.

1.3.2 Soils

The impacted soils in the wetland will be excavated, and fill material used as needed to restore the excavated areas to original grade. The fill material used at the Site will be selected to match closely with the native hydric soil, using grain size, organic carbon content, bulk density, permeability, pH, redox potential, and nutrients (nitrogen and phosphorus) of the native material as guidance in selecting fill material (see Section 2.2 Baseline Measurements).

Soil sample results in the excavated areas post-excavation will be compared both with pre-excavation soil measurements, and measurements of soils in adjacent, undisturbed areas. Measured characteristics of organic carbon content, pH, redox potential, and nutrients in the restored areas should fall within the specified range (see Section 4.2 Selection of Fill Material) of measurements taken as baseline (Table 1-1).

In addition, visual observations of the presence or absence of hydric soil characteristics (gleying, mottling, oxidized rhizospheres, hue, value and chroma) will be made over time (see Section 1.4 Timeframe) to evaluate both the performance of the fill material and the presence of the appropriate hydrologic regime in the restored areas. Hydric soil characteristics will take time to develop, therefore the absence of these characteristics in restored areas over the short term (e.g. 1 to 3 years) will not be indicative of restoration failure.

1.3.3 Vegetation

Restoration of vegetation is a long-term process, particularly when it comes to restoring a forest canopy. Young trees and shrubs will be planted in the disturbed areas of the Site in an effort to speed development of a new forest canopy and understory. Herbaceous vegetation will be allowed to naturally colonize the disturbed areas from the adjacent, undisturbed areas.

Success of vegetation restoration will be measured in terms of the community structure of the disturbed areas compared with the baseline observations and adjacent undisturbed (control) areas. The community structure should be similar in the disturbed areas as compared with the baseline, given allowances for successional stages of growth that will occur as a result of the disturbance. The comparison will include overall percent cover, species composition, vegetation stratification, and photographic documentation, as well as the presence or absence of invasive species (Table 1-1).

An approvable Invasive Species Management Plan (ISMP) will be developed for this restoration. The ISMP will identify the undesirable species present on-site as well as those which may potentially invade the Site. Control measures to eliminate the target species from restored areas will also be defined. The plan will be implemented during the restoration and post-excavation monitoring periods.

1.4 Timeframe

The timeframe for this restoration project extends from development of an approvable workplan to the end of post-restoration monitoring. Table 1-2 summarizes the timeframe. The starting date for this project will depend on the contract timing and overall project schedule (Figure 1-4).

Table 1-2. Summary of Wetland Restoration Plan Timeframe.

Phase	Activities
Work Plan development	• Develop an approvable workplan for restoration project
Pre-excavation activities	• Establish four sampling sites for soil/vegetation sampling • Install staff gauges for surface water depth monitoring • Conduct baseline sampling • Identify sources for fill material and native plant stock • Select fill material meeting the specifications defined by the baseline sampling results. • Schedule delivery of fill material and plants concurrent with excavation schedule • Develop an Invasive Species Management Plan
Excavation activities	Plants and soils will be removed for disposal off-site. Excavation will be followed by sampling to verify removal of contamination levels to below remedial action objectives.
Restoration activities	• Apply and grade fill material where needed • Plant trees and shrubs • Submit As-Built report
Post-restoration monitoring:	• Collect hydrologic measurements three times during the growing season (May, July and September) for the next five growing seasons. • Collect soils data at four established sampling sites once per growing season for five growing seasons. • Collect vegetation data at four established sampling sites in summer (July-August) for five growing seasons. • Photographic documentation at each of the four established sampling sites, and the surrounding areas. • Submit annual reports

1.4.1 Work Plan Development

An approvable work plan will be developed, submitted, and approved prior to commencing work activities on the Site.

1.4.2 Pre-excavation Activities

During the pre-excavation phase, staff gauges will be installed, four sampling sites will be established, and baseline sampling in the wetland will be

implemented (See Section 3 Baseline Measurements). Photographs documenting the Site conditions will be taken.

Also during this time, sources for fill material and native plant stock will be identified. Fill material will be selected based on the analytical results from the baseline soil samples. The schedule for purchase and delivery of materials will be detailed concurrent with the excavation schedule. The Invasive Species Management Plan will be developed.

1.4.3 Excavation Activities

During the excavation phase, plant materials will be removed from the wetland areas to be excavated and mulched for disposal off-site. Soils will be excavated and disposed of off-site. Samples from the excavation areas will be tested to evaluate whether further excavation is required. Where needed, excavation will continue until the samples meet remedial action objectives. Refer to the project remediation work plan for information about soil erosion and dewatering controls.

Once excavation in an area has been completed, restoration should begin as soon as feasible.

1.4.4 Post-Excavation/Restoration Activities

The restoration phase will begin with applying fill material where needed (e.g. excavated areas greater than six inches), and grading the Site to pre-excavation elevations. Compaction of the fill will be sufficient to remove air pockets, but not too tightly compacted. If the material is too tightly compacted, plant roots will have difficulty becoming established.

Once the fill is in place, trees and shrubs will be planted. Photographs will be taken to document the restoration activities. An As-Built Report will be written to document the final grade, water levels, and corrective actions taken during construction.

1.4.5 Post-Restoration Monitoring

Post-restoration monitoring will extend over five growing seasons past the completion of restoration. Monitoring will include evaluation of hydrology, soils and vegetation. The objective of post-restoration monitoring is to gather observations sufficiently detailed to verify whether the restored wetland areas are comparable with the baseline measurements and adjacent undisturbed (control) areas.

If post-restoration monitoring results indicate that the restoration is not meeting the performance standards after three growing seasons (for example, invasive species have flourished), corrective actions will be taken and the monitoring period extended to verify that the corrective actions have been successful.

The minimum post-restoration monitoring period under this plan would last for five growing seasons. It is anticipated that post-restoration monitoring years 2 through 5 would be included as part of the OM&M plan for this site.

2 Quality Control Documentation

During the restoration process, there will undoubtedly be site conditions not anticipated in this plan, and changes will be required. As part of this restoration project, the procedures to document adjustments made to the restoration plan during construction will be defined. These procedures may include mechanisms such as memoranda to file or periodic status reports to the NYSDEC.

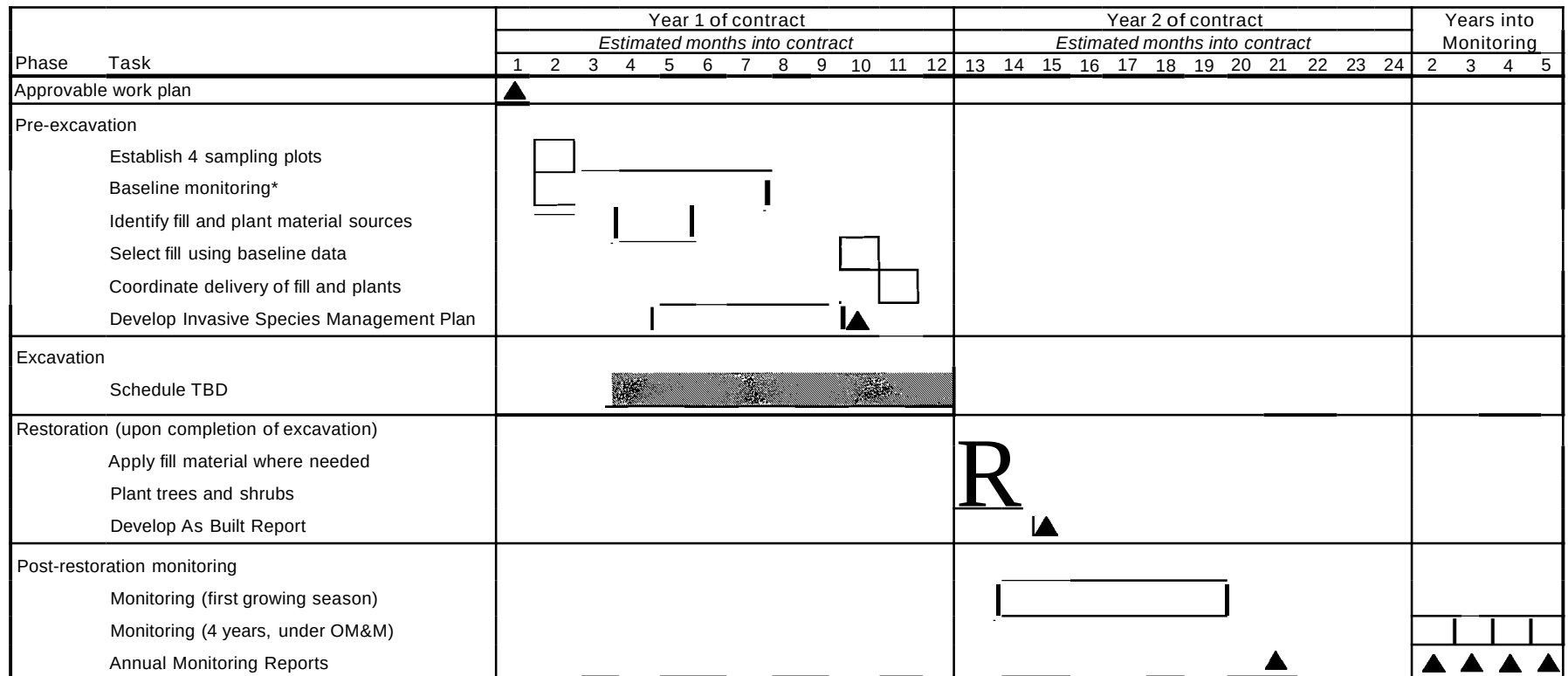
3 Baseline Measurements

Prior to disturbance, measurements of the baseline conditions of the wetland will be gathered for comparison with post-restoration conditions. These measurements should include ground elevation, hydrology, soils and vegetation in the areas that will be excavated as well as areas that will remain undisturbed.

Ground elevations in the wetland area will be surveyed in order to establish the baseline for re-grading the Site post-excavation.

To gather baseline measurements for hydrology, soils and vegetation, establish four sampling sites: three in the areas to be excavated and one as a control in an area that will remain undisturbed. These sampling sites will be used for both pre-excavation baseline measurements and post-excavation monitoring.

Table 3-1 summarizes the data collection needs. The existing data are included as Attachment 1.



Notes:

- *-Baseline monitoring will take place, at minimum, during the growing season unless the overall remediation schedule precludes this period.
- [] Estimated duration of task.
- [] Undefined period; will depend on overall project schedule and field conditions at the time.
- ▲ Deliverable

Figure 1-4. Estimated restoration plan time line, Former Bouchard Junkyard Site, New Lebanon NY

Table 3-1. Pre-excavation data collection needs to establish baseline conditions

Matrix	Existing Data	Data Needed	Purpose
Hydrology	Six groundwater measurements from one monitoring well adjacent to the wetland	- Seasonal groundwater and surface water elevations in the wetland - Seasonal surface water discharge from the wetland - Stream visual assessment	- Characterize the extent and duration of saturated conditions to refine the planting plan - Verify that pre- and post-excavation hydrologic conditions are comparable
Soils	- Total Organic Carbon results from seven locations adjacent to the intermittent stream - Grain size results from two locations adjacent to the intermittent stream.	- Grains size, TOC, bulk density, permeability, pH, redox potential, and nutrients (nitrogen and phosphorus) - Four sampling sites in the wetland (three in areas to be excavated and one in an area to remain undisturbed) - Samples obtained from top 18 inches of soil	- Characterize the native soils - Develop guidelines for selecting fill material that matches the native soils - Provide basis for evaluating performance of fill material post-excavation
Vegetation	Fish and Wildlife Impact Assessment 2001 - list of dominant plant species identified at the Former Bouchard Junkyard Site using the random encounter method.	- Overall percent cover, percent cover by stratified layers (canopy, understory and herbaceous), and species percent cover - Four sampling sites in the wetland (three in areas to be excavated and one in an area to remain undisturbed)	- Verify plant list and planting plan strategy - Provide measurable basis for evaluating whether vegetation communities in the restored wetland areas are comparable with pre-disturbance conditions.

3.1 Hydrology

Baseline measurements for hydrology will include both groundwater and surface water elevations and flow direction in the wetland. The monitoring well adjacent to the wetland will be used to collect groundwater elevation data. Staff gauges will be installed to collect surface water elevation data in the wetland. The

number of staff gauges installed will be sufficient to verify that pre- and post-excavation hydrologic conditions are comparable.

Surface water discharge from the Site will also be monitored. Surface water depth will be measured using a staff gauge at the culvert that runs under u.S. Route 20 to Wyomanock Creek.

Ideally, measurements would be collected for 12 months prior to excavation to establish year-round baseline hydrologic conditions and characterize seasonal variation in the extent and duration of flooding in the wetland. However, should the project remediation schedule preclude a baseline monitoring period of this duration, three measurements collected during one growing season (May, July and September, for example) will be acceptable. If the project schedule is such that there will not be one complete growing season prior to the initiation of excavation activities in the wetland, then monitoring may be shifted to earlier or later in the year.

The excavation in the wetland is not likely to impact the existing hydrologic regime. The depth of the excavation is anticipated to be 18 inches or less, and fill material will be used to restore the ground elevation to within six inches of the original elevation. This will maintain the spatial relationship between the water table and the ground surface.

The rationale for collecting baseline data during the growing season - rather than any other time of the year - is to develop a benchmark to evaluate whether significant changes in the hydrology occur once the forest canopy has been removed. During the growing season, the canopy impacts the hydrologic regime in three ways:

- providing shade which can moderate soil temperatures and reduce evaporation of moisture from the soil
- providing surface area for transpiring moisture that the trees draw from the soil
- intercepting rainfall, which evaporates from the leaves rather than reaching the soil.

Removing the canopy will likely change the evapotranspiration balance in the excavated areas to some degree; without a pre-excavation benchmark for comparison, it will not be possible to evaluate if this change has a significant impact on the hydrology and the success of the restoration effort.

Baseline monitoring in the wetland can be conducted while excavation activities are occurring elsewhere on the Former Bouchard Junkyard site. If the pre-excavation hydrologic monitoring period is unusual (extreme drought or extreme wet conditions), justification for the use of these extreme conditions data for baseline measurements will be documented.

3.2 Soils

Baseline measurements of the native hydric soil will be gathered prior to excavation, from four sampling locations in the wetland: three locations in areas to be impacted, and one location as a control in an area that will remain undisturbed. Measurements will include grain size, organic carbon content, bulk density, permeability, pH, redox potential, and nutrients (nitrogen and phosphorus). These measurements will be used both to select appropriate fill material for the excavation and for post-restoration monitoring.

3.3 Vegetation

Baseline measurements of the community structure at the Site will be gathered from four sampling locations in the wetland: three locations in areas to be impacted, and one location as a control in an area that will remain undisturbed. Pre-excavation baseline data will include percent cover overall, percent cover by vertical stratification (canopy, understory and herbaceous layers), and percent cover by species (community composition). The presence and quantity (stem count) of invasive species will also be documented.

One vegetation sampling event will occur in the summer (July-August) prior to excavation.

If the baseline vegetation survey shows a significant difference in species composition of trees and shrubs from the planting list provided in this restoration plan, the planting list will be revised to more accurately reflect the species composition on-site.

4 Wetland Restoration

The wetland restoration will begin once the excavation is completed (see Section 1.4 Timeframe). Restoration will begin with modifying the substrate, and then the desired vegetation will be planted. It is assumed, based on available information, that excavation in the wetland areas will not exceed 18 inches, and that there will be a 100-ft upland buffer zone.

4.1 Substrate Restoration

An "if-then" approach to restoring the topography and soils of the disturbed wetland area will be implemented (Figure 4-1). During excavation of the contaminated material, samples will be collected to evaluate whether the contaminated material has been removed. If concentrations of target compounds are below the remedial action objectives, then excavation is completed; otherwise, excavation continues and more samples are collected. This cycle continues until all the sample results are less than the remedial action objectives.

The "if-then" approach allows for flexibility based on field conditions for how to restore the substrate:

- Areas excavated to a completed depth of six inches or less will not require fill material, since a six-inch change in elevation would not significantly alter the character of this seasonally-flooded red maple forest].
- Areas excavated to depths greater than six inches will require fill to restore the original elevation.

Removal of the trees and their roots may leave isolated depressions of 10-15 inches in areas where a maximum depth of six inches was excavated. It is preferable to leave the native material alone rather than introduce fill into these depressions. Under natural conditions, when a tree blowdown occurs, a depression is left in the space formerly occupied by the roots. These natural depressions help to create the hummock and hollow topography often seen in forested wetlands.

Where fill material is introduced, it should not be compacted too tightly, to ensure that plants are able to establish a strong root system.

Where stream beds have been excavated, the stream course will be re-established at the original location and elevation. The width, depth and gradient of the channel will also be restored to original condition.

¹ The range of groundwater fluctuations measured in the nearest monitoring well, combined with the range in surface elevation across the wetland, suggests that depth and duration of flooding varies across the wetland based on topographic elevation, over a vertical distance of more than two feet. Based on this information, a six-inch change in elevation of the wetland substrate should not result in a significant change in hydroperiod over most of the wetland.

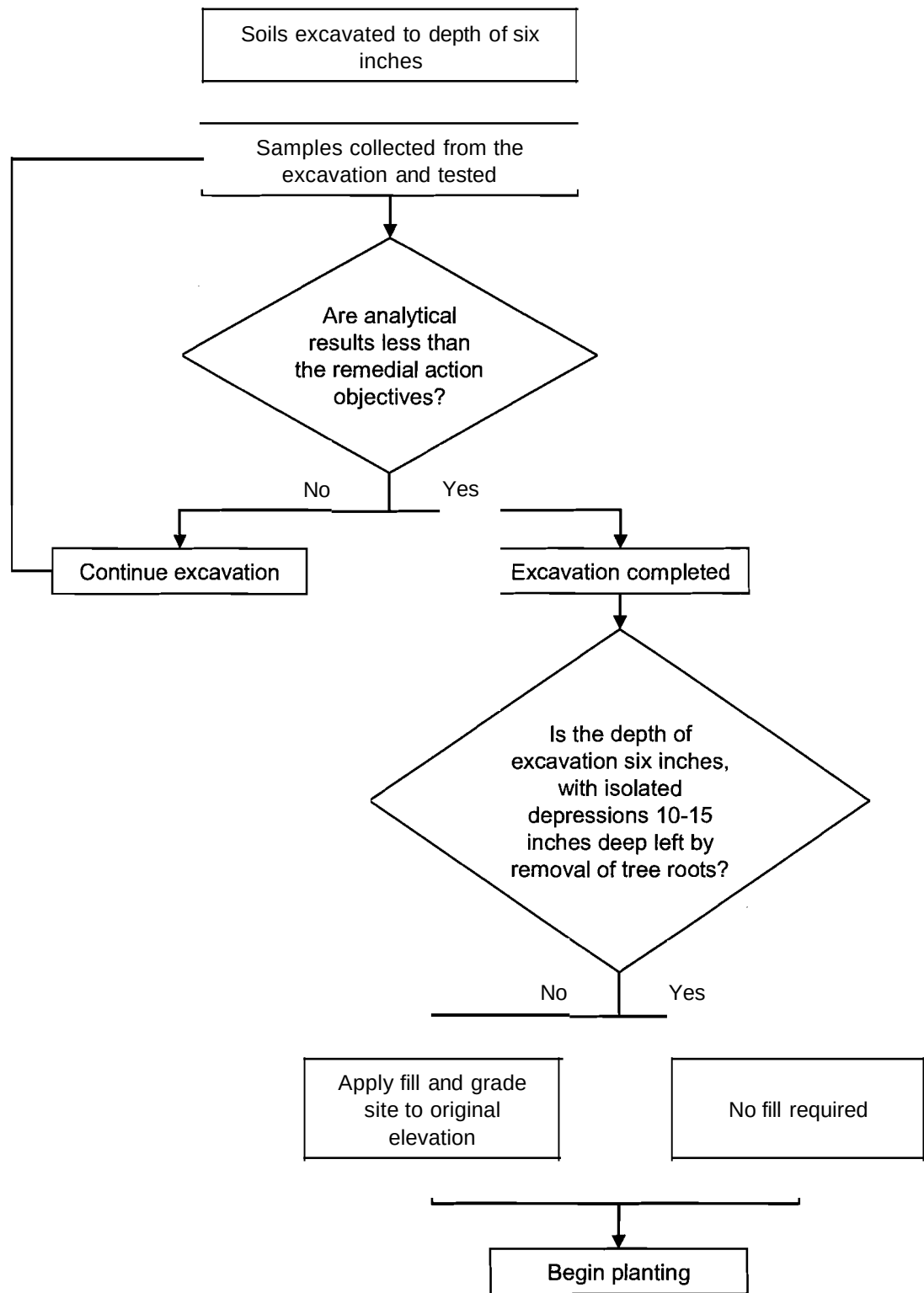


Figure 4-1. Substrate restoration "IfThen" Approach, Former Bouchard Junkyard Site, New Lebanon NY.

4.2 Selection offill material

Wetlands are characterized by hydric soils, which take time to develop naturally under saturated, anaerobic conditions. Chemical and physical properties of the soil - nutrient status, pH, organic matter content and texture - have been correlated with the floristic variation of forested wetlands.² The more closely the fill approximates the existing soils on-site, the more likely it is that the vegetative character of the wetland will be sustained.

There are two sources offill material for this restoration: (1) wetland hydric soils obtained from another site, or (2) clean fill material. Since it is unlikely that wetland hydric soils from another site will be available to coincide with the schedule of this project, fill material will be used.

The fill material selected should match the native material as closely as possible, and be free of invasive species and contamination. Measurements taken of the native material will include grain size, organic carbon content, bulk density, permeability, pH, redox potential, and nutrients (nitrogen and phosphorus). These values will provide guidelines for selecting an appropriate fill material.

Characteristics

Guideline

Primary: gram Size
bulk density
permeability
organic carbon content

within the range of the mean $\pm$ one standard deviation of baseline measurements, or within the maximum/minimum range, whichever is narrower.

Secondary: pH
redox potential
nutrients (nitrogen and phosphorus)

within the maximum and minimum range of baseline measurements

Over time, as the fill is exposed to the hydrologic regime of the wetland, hydric characteristics should develop.

4.3 Hydrology

The hydrologic regime of the wetland will not likely be impacted by the excavation on-site, unless measures are required to dewater the excavation area for work to proceed. Any such measures will be removed once the excavation and grading are completed. It is assumed that remedial activities upgradient of

² Golet, F.C., Calhoun, A.J.K., DeRagon, W.R., Lowry, D.J., and Gold, A.I. Ecology of Red Maple Swamps in the Glaciated Northeast: A Community Profile. U.S. Fish and Wildlife Service National Wetlands Research Center. James A Anen, Project Officer. Biological Report 12. June 1993.

the red maple swamp will not significantly alter the general groundwater flow toward the south-southeast.

As described in the preceding section, stream channels impacted by the excavation will be restored to the original elevation, stream course, channel width, channel depth, and gradient. Stream discharge through the culvert under Route 20 will be restored to pre-excavation conditions.

With the removal of the existing forest, there will likely be a change in the evapotranspiration rate in the impacted area of the wetland. This may result in some variation in the hydrology over the short term, until the canopy is re-established. The degree to which removal of the forest canopy impacts the hydrology can be evaluated using seasonal baseline measurements, local climate data, and measurements obtained during and after restoration.

4.4 Planting

Trees and shrubs will be planted on the Site to begin the restoration of the forest canopy and understory, while herbaceous vegetation will be allowed to re-colonize the Site naturally. Natural re-colonization will likely occur from plants in surrounding, undisturbed areas, and may also occur if a seed bank is exposed at the six-inch excavation depth. Red maple seedlings are likely to volunteer into the restored areas naturally.

4.4.1 Selected species

The tree and shrub species to be planted were selected starting with the list of plants from the Fish and Wildlife Impact Assessment. This list was narrowed down to tree and shrub species likely to occur in red maple swamps that are native to the area and that are not considered invasive (Table 4-1). It is assumed that the other species present in the wetland that are not represented on this planting list will naturally re-colonize the disturbed areas over time. The species selected for planting will provide immediate vegetative cover.

Table 4-1. Plant species selected for wet/and restoration project.

<i>Common Name</i>	<i>Scientific/Botanical Name</i>	<i>Regional wetland indicator status¹</i>	<i>Invasive Status²</i>	<i>Assoc RMSwamp³</i>
TREES				
Balsam Fir	<i>Abies balsamea</i>	FAC		y
Red Maple	<i>Acerrubrum</i>	FAC, FACW+	Weed*	y
Sugar Maple	<i>Acer saccharum</i>	FACU-		y
Paper Birch	<i>Betula papyrifera</i>	FACU		y
White Pine	<i>Pinus strobus</i>	FACU		y
Eastern Hemlock	<i>Tsuga canadensis</i>	FACU		y
American Elm	<i>Ulmus americana</i>	FACW-		y

Table 4-1. Plant species selected for wetland restoration project.

Common Name	Scientific/Botanical Name	Regional wetland indicator status¹	Invasive Status²	Assoc RMSwamp³
ERECT SHRUBS AND WOODY VINES				
Speckled Alder	<i>Alnus rugosa</i>	FACW+		Y
Red Osier Dogwood	<i>Comus sericea (stolonifera)</i>	FACW+		C
Winterberry Holly	<i>Ilex verticillata</i>	FACW+		Y
Elderberry	<i>Sambucus Canadensis</i>	FACW-		Y
Highbush Blueberry	<i>Vaccinium corymbosum</i>	FACW-		C

Notes:

¹Porter B. Reed, Jr. National List of Plant Species That Occur in Wetlands: Northeast (Region 1). Biological Report 88 (26.1) May 1988. U.S. Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory.

²Uva, R.H., J.C. Neal, & J.M. DiTomaso. 1997. *Weeds of the Northeast*. Cornell University Press. Ithaca, New York. 397pp, through the web site USDA NRCS Plants database (<http://plants.usda.gov/index.html>)

³Golet, F.C., Calhoun, A.J.K., DeRagon, W.R., Lowry, D.J., and Gold, A.J. Ecology of Red Maple Swamps in the Glaciated Northeast: A Community Profile. U.S. Fish and Wildlife Service National Wetlands Research Center. James A. Allen, Project Officer. Biological Report 12. June 1993.

* - Red Maple is considered invasive by the source referenced due to its proclivity to volunteer seedlings; since the community being restored is a red maple swamp, this plant is included in the list.

Wetland indicators:

FACU: Facultative upland - usually occur in nonwetlands, but occasionally found in wetlands (probability 1-33%)

FAC: Facultative - equally likely to occur in wetlands or nonwetlands (probability 34-66%)

FACW: Facultative wetland - usually occur in wetlands but occasionally found in nonwetlands (probability 67-99%)

OBL: Obligate wetland - occur almost always under natural conditions in wetlands (probability >99%)

+/-: indicates frequency toward higher end (+) or lower end (-) of category, where higher end is more frequently found in wetlands and lower end is less frequently found in wetlands.

AssocRMSwamp:

Y = Associated with red maple swamp communities in Zone IV (Northeastern Mountains).

C = Known to occur in five calcareous red maple swamps in the Northeast

Species that may be use for the upland buffer zone will include:

American Beech

Paper Birch

White Oak

Red Oak

Red Pine

Eastern Hemlock

White Pine

4.4.2 Planting locations

Under the "if-then" approach, the final limits of the excavation area will be unknown until excavation is completed. Therefore, a specific map detailing the planting location for each individual plant is not possible.

The hydrologic regime of the wetland is a gradient of saturation conditions. Areas at lower elevation (685 ft amsl) will be saturated more frequently and for longer durations than areas at higher elevation (690 ft amsl). Therefore, the planting scheme will use ground elevation to delineate planting layout. This will allow for flexibility in the field once the excavation has been completed and the Site re-graded.

Using the available but limited groundwater elevation data, these planting zones were defined:

- Elevations less than 686 ft amsl will be the wettest areas. In these areas, the most saturation-tolerant species (FACW) should be planted.
- Elevations from 686 to 687 ft amsl may be somewhat drier, but still experience longer saturated conditions. In these areas, a mix of 70% FACW and 30% FAC species should be planted.
- Elevations from 687 to 688 ft amsl may be somewhat drier, experiencing shorter periods of saturation than lower elevations. In these areas, a mixture of 30% FACW and 70% FAC species should be planted.
- Elevations greater than 688 ft amsl will be the driest of the wetland areas, adjacent to the upland. In these areas, a mixture of 50% FAC and 50% FACU species should be planted.

Baseline hydrologic measurements collected prior to excavation may be used to modify these planting zones. For example, the zones from 686 to 687 ft amsl and 687 to 688 amsl may be combined into one zone upon evaluation of the baseline hydrologic measurements. Changes to the plan based on the hydrologic measurements will be documented. Figures 5_1³ and 5-2 represent generalized cross-sectional and plan views of planting by hydrologic regimes by elevation.

³ Based on Zentner, 1. *Enhancement, Restoration and Creation of Freshwater Wetlands*. In Applied Wetlands Science and Technology. Donald M. Kent, editor. 1994, CRC Press.

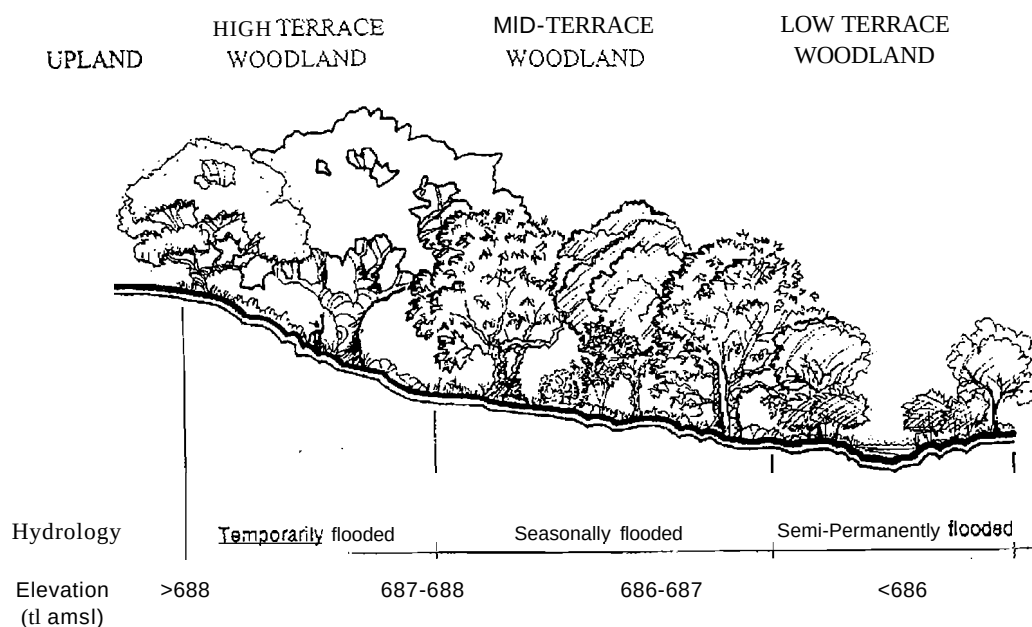


Figure 5-1. Generalized Cross-Section of Planting Plan

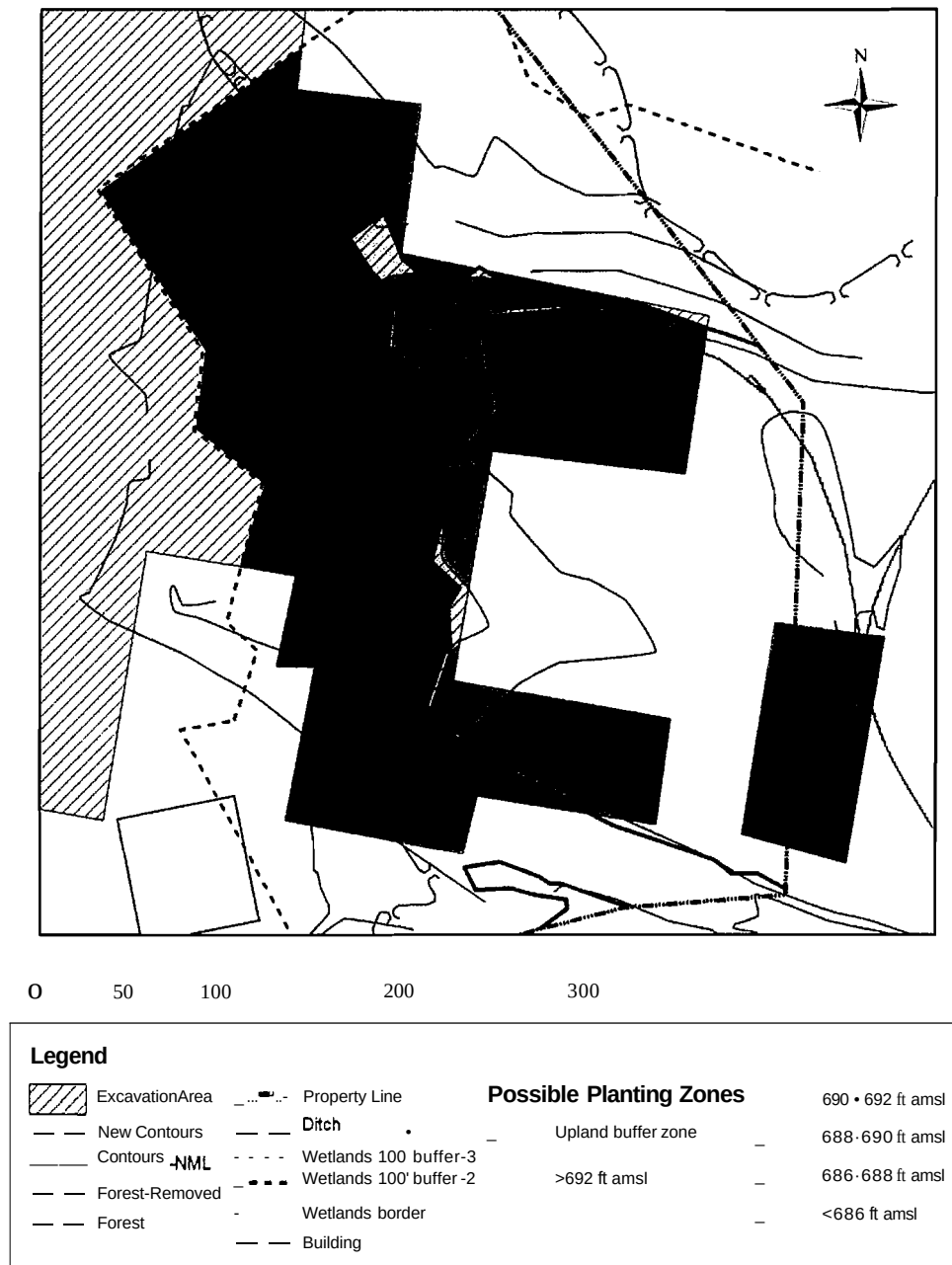
4.4.3 Planting densities and numbers of plants

Average densities of mature stands in forested wetlands range from 500 to 750 trees per acre, roughly equivalent to plantings on 10-foot centers⁴. Other sources indicate a range of 827 to 925 stems (DBH >2.5 cm) per hectares. For this restoration plan, the guideline for planting densities will be one stem for every 130 to 116 square feet, for a rough total of 300 to 336 stems over an estimated 0.36 hectares. The total number of plants required will depend on the final size of the excavated areas, which will not be known until the excavation is complete.

The shrub-to-tree ratio for this restoration plan is 2:1. With a rough estimate of 300 stems total to restore the Site, 200 will be shrubs and 100 will be trees. It is anticipated that red maple seedlings will volunteer vigorously into the restoration areas and contribute to increasing the tree density naturally. A more precise calculation of the number and species of trees and shrubs will be possible once the excavation is completed, and the hydrologic regime is more precisely defined.

⁴ Zentner, J. *Enhancement, Restoration and Creation of Freshwater Wetlands*. In Applied Wetlands Science and Technology. Donald M. Kent, editor. 1994, CRC Press.

⁵ Golet, F.C., Calhoun, A.J.K., DeRagon, W.R., Lowry, D.J., and Gold, A.J. Ecology of Red Maple Swamps in the Glaciated Northeast: A Community Profile. U.S. Fish and Wildlife Service National Wetlands Research Center. James A. Allen, Project Officer. Biological Report 12. June 1993.



Excavation detail from CADD files provided by **Dvirka** & Bartilucci Consulting Engineers.

EcoLogic

Figure 5-2. Generalized wetland restoration planting plan, Former Bouchard Junkyard Site, New Lebanon, NY.

The trees and shrubs will be planted in a natural, random way relative to one another; avoid placing trees and shrubs in rows. The distance between trees should not be less than 8 feet; distance between shrubs not less than 4 feet; and distance between shrubs and trees not less than 4 feet.

4.4.4 Ordering Plants

A literature review indicated that red maple seedlings grown in containers may survive better than other methods.⁶ However, bare-rooted plants may adapt more quickly to site conditions than those planted with container soil. Comparison of both kinds is presented in Table 4_2⁷.

Table 4-2. Comparison of container-grown and bare-rooted plant stock.

	Container-grown	Bare rooted
Availability	Available through out the growing season	Sold late fall through early spring
Cost	Variety of sizes and prices	Less expensive than container grown
Timing	Need not be planted immediately	Plant as soon as possible after purchase
Growth	Better survivability	Establish more quickly and grow better initially
When buying	Look for healthy foliage and strong shoots. Check for insect infestations. Avoid root-bound plants.	Select plants with strong stems and fresh-looking, well-formed roots. Reject any that have already leafed out.

The trees and shrubs purchased for this restoration will include both container-grown (for larger size) and bare-rooted (for smaller size) plants. The amount and kind for each will depend on the project schedule and availability.

Trees and shrubs purchased for this restoration will have a normal habit of growth and be typically characteristic of their respective kinds. Plants will be free from injury. Plants will be nursery grown and bear evidence of proper nursery care normal to current nursery practice. Container grown plants will exhibit a well-rooted condition as evidenced by the firmness of the ball. The outside of the ball will be well netted with healthy working roots which have not been restricted. Plants will have been adequately hardened off before shipment.

The plants selected for use in this wetland environment will be healthy, with reasonably straight trunks and good branching structure (e.g. properly pruned to remove crossing branches).

⁶ Russell S. Walters and Harry W. Yawney. *Red Maple*. In Silvics of North America.

⁷ Sunset Northeastern Garden Book, Anne Halpin, editor. 2001 Sunset Publishing Corporation.

4.5 As-Built Report

An as-built report will be written to document the final elevations and planting layout. The report will include a summary of the corrective actions taken during restoration to address issues that may have occurred during the construction of the project.

5 Monitoring

The monitoring time frame is presented in Section 1.5 Timeframe. This section presents details of the monitoring program. The parameters to be measured are defined under Section 1.3 Performance Standards. The monitoring program is summarized in Table 5-1.

Table 5-1. *Restoration plan monitoring program summary.*

Monitoring	Data Collection	Data Evaluation
Years 1-5	Collect hydrologic measurements every other month during the growing season (May, July and September)	- Compare elevations to baseline conditions - Compare surface water discharge to baseline conditions
	Collect soils data at four established sampling sites once a year	- Compare analytical results with baseline measurements - Document presence or absence of hydric soil characteristics
	Collect vegetation data at four established sampling sites during summer (July-August)	- Compare observed community structure with baseline - Identify invasive species - Determine whether corrective actions are required.
	Assemble local climatological data (precipitation records and drought status) for the monitoring period	- Evaluate hydrologic conditions against recorded precipitation and drought status - Document whether hydrologic measurements occurred during normal, drought, or wet conditions.

The post-restoration monitoring will extend for five growing seasons, and include evaluation of hydrology, soils and vegetation. The objective of monitoring is to gather observations sufficiently detailed to verify whether the restored wetland areas are comparable with the baseline measurements and adjacent undisturbed (control) areas.

Four sampling sites were established for baseline measurements - three were located in excavated areas, and one in an undisturbed area as a control. Soil and vegetation sampling will occur in these sample plots during the summer (July-August) once a year. Staff gauges that were installed at the Site for baseline measurements will be used to monitor post-restoration hydrology three times during the growing season.

During the first growing season, evaluate whether the plantings have survived -- survival should be 80% or greater. Evaluate the plantings and the status of colonization of the herbaceous layer. Document and justify decisions for replanting or not replanting areas that experience die-off of more than 20%.

The soils in the areas where fill was introduced should be evaluated against the baseline measurements as discussed in previous sections, and visually examined for development of hydric characteristics.

The Invasive Species Management Plan will be implemented during post-restoration monitoring. If a non-native invasive species becomes established in the restored areas of the Site, corrective measures defined in the Plan will be used to remove the invasive species. The affected area will be replanted with native, desirable species, and monitored for re-occurrence of the invasive.

Annual reports will be submitted to NYSDEC, and include:

- Identification of disturbances on or adjacent to the Site during the monitoring period
- Description of activities and corrective actions implemented
- Sample location map
- Invasive species assessment
- Data collected during the monitoring period
- Representative site photographs
- Assessment of the degree to which the performance standards are being met.

It is anticipated that the second through fifth years of monitoring will occur under the OM&M plan for the Site.

Attachment 1
Existing Site Data for Wetland Area
Former Bouchard Junkyard Site, New Lebanon, NY

Ai-i. Existing Hydrologic Information

Existing hydrologic data is limited to six measurements taken from one monitoring well adjacent to the wetland area. The monitoring well is identified as "MW-4", and the measurements obtained from this well are:

<u>Date</u>	<u>Feet above mean sea level</u>
11/16/01	687.10
11/26/01	687.19
11/27/01	687.17
5/23/02	688.87
5/24/02	688.84
3/31/05	689.79
Maximum	689.79
Minimum	687.10
Range	2.69 feet
Mean	688.16

Additionally, the Fish and Wildlife Impact Assessment conducted in November 2001 noted the stream channel in the wetland that discharges southward along the southeast property line property line.

<u>Stream Characteristics</u>	<u>FWIA Observations of intermittent stream</u>
Water depth in channel	less than 0.25 meters (approx. 10 inches)
Channel width	approximately 2 meters (6.6 feet)
Gradient	gradual

Elevations in the vicinity of the stream range from 685 to 687 ft amsl. Assuming that the standing water in the stream observed during the FWIA occurred within this elevation range, the elevation of surface water coincides with the November 2001 groundwater elevation measurements taken at MW-4.

AI-2. Existing Soils Information

The USDA Natural Resources Conservation Service (NRCS) soil survey data for the Town of Lebanon categorize the wetland soils on the Former Bouchard Junkyard Site as Limerick silt loam. The Limerick silt loam is defined as a very deep, poorly drained soil, with slopes ranging from 0 to 3 percent. The parent material consists of alluvium that is dominantly silt and very fine sand. Depth to the top of a seasonal high water table ranges from 0 to 18 inches, and annual flooding is frequent. The Limerick silt loam is a hydric soil, based on criteria 2B3⁸.

As part of the previous investigations, some data have been gathered for inorganic analytes and contaminants in soils and sediments. The data applicable to this wetland restoration plan were generally collected in the vicinity of the stream that discharges southward along the southeast edge of the property. Two of the parameters analyzed - total organic carbon and grain size - at locations in the wetland provide some information to assist with the restoration of the wetland soils.

Summary of available Total Organic Carbon (TOC) data in the wetland.

Sample Date	Location	Sample Depth (inches)	TOC (%)
10/25/01	SD-6	0-6	2.26
10/24/01	SD-7	0-6	3.54
3/29/05	SD-RD-1	0-2	7.6
3/30/05	SD-RD-5	0-2	8.9
3/30/05	SD-RD-8	0-2	10.3
3/29/05	SD-RD-11	0-2	9.2
3/29/05	SD-RD-17	0-2	3.1

Summary of available Grain Size data in the wetland (analyzed May 2005).

Sample	Depth (ft)	Silt-Clay Soil (%)	Sand (%)	Gravel (%)	Boulders Cobbles (%)	Total (%)
SD-RD-6	0.5-1.5	17.1	35.6	47.3	0	100
SD-RD-18	0.5-1.5	11.6	55.9	32.5	0	100

⁸ Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that are poorly drained or very poorly drained and have a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.

Al-3. Existing Vegetation Information

A FWIA was conducted as part of the remedial investigation of the Former Bouchard Junk Yard site. In the FWIA, the eastern side of the Site was identified as a red maple-dominated forested wetland that flanks an intermittent stream tributary to Wyomanock Creek. This forested wetland was identified as the most valuable terrestrial wildlife habitat on the Site, as it provides water, cover, food, and a protected travel corridor running north to south. The wetland on-site also provides wildlife with a connection to the larger Shaker Swamp, an area characterized as mixed shallow emergent marsh and shrub swamp associated with Wyomanock Creek.

The FWIA listed dominant species of plants identified at the Site using the random encounter method. It should be noted that listed species are not limited to the red maple swamp area, but include the entire site of the Former Bouchard Junkyard (FWIA 2001: Table 3-2).

**FWIA 2001: TABLE 3-2
Vegetation on the Bouchards Junkyard Site**

Common Name	Scientific/Botanical Name
TREES	
Cottonwood	<i>Populus deltoides</i>
Sugar Maple	<i>Acer saccharum</i>
Red Pine	<i>Pinus resinosa</i>
Black Cherry	<i>Prunus serotina</i>
Cherry, (cultivated variety)	<i>Prunus sv.</i>
White Pine	<i>Pinus strobus</i>
Balsam Fir	<i>Abies balsamea</i>
White Oak	<i>Quercus alba</i>
Blue Spruce	<i>Picea pungens</i>
Eastern Hemlock	<i>Tsuga canadensis</i>
Norway Spruce	<i>Picea abies</i>
American Elm	<i>Ulmus americana</i>
Speckled Alder	<i>Alnus rugosa</i>
American Beech	<i>Fagus grandifolia</i>
Paper Birch	<i>Betula vavryi(era</i>
Red Oak	<i>Quercus rubra</i>
Black Oak	<i>Quercus velutina</i>
Tree of Heaven	<i>Ailanthus altissima</i>
Red Maple	<i>Acer rubrum</i>
SHRUBS	
Staghorn Sumac	<i>Rhus typhina</i>
Multiflora Rose	<i>Rosa multiflora</i>
Tartarian Honeysuckle	<i>Lonicera tatarica</i>
Red Osier Dogwood	<i>Comus sericea (stoloni(era</i>
Blackberry	<i>Rubus alleghaniensis</i>
Lilac	<i>Syringa vulgaris</i>
Meadowsweet	<i>Svirea tomentosa</i>
Arrowood	<i>Viburnum dentatum</i>
Elderberry	<i>Sambucus Canadensis</i>
Highbush Blueberry	<i>Vaccinium corymbosum</i>
Winterberry Holly	<i>flex verticillata</i>
Japanese Barberry	<i>Berberis thunbergii</i>
VINES	
Japanese Honeysuckle	<i>Lonicera ;avonica</i>
FORBS	
Gill-Over-the-Ground (Ground Ivy)	<i>Glechoma hederacea</i>
Bedstraw	<i>Gallium sv.</i>
Day Lily	<i>Hemerocallis(ulva</i>
Daisy Fleabane	<i>Erigeron annuus</i>

FWIA 2001: TABLE 3-2, CONTINUED.
Vegetation on the Bouchards Junkyard Site

Common Plantain	<i>Plantago major</i>
Violet, Northern Blue (7)	<i>Viola septentrionalis</i>
Garlic Mustard	<i>Alliaria officinalis</i>
Pokeweed	<i>Phytolacca americana</i>
Wild Strawberry	<i>Fragaria virginiana</i>
Horsetail	<i>Equisetum arvense</i>
Shrubby Cinquefoil	<i>Potentilla fruticosa</i>
Watercress	<i>Nasturtium officinale</i>
Dandelion	<i>Taraxacum officinale</i>
Crown Vetch	<i>Coronilla varia</i>
Canada Goldemod	<i>Solidago canadensis</i>
Ragweed	<i>Ambrosia artemisiaefolia</i>
Queen Anne's Lace	<i>Daucus carota</i>
Red Clover	<i>Trifolium repens</i>
New England Aster	<i>Aster novae-angliae</i>
Small White Aster	<i>Aster vimineus</i>
Common Milkweed	<i>Asclepias syriaca</i>
Moss	<i>Sphagnum</i> sp.
Cinnamon fern	<i>Osmunda cinnamomea</i>
Lady Fern	<i>Athyrium filix-femina</i>
Common Mullein	<i>Verbascum thapsus</i>
Burdock	<i>Arctium minus</i>
Canada Thistle	<i>Cirsium arvense</i>
GRASSES, SEDGES, & RUSHES	
Crabgrass	<i>Digitaria sanguinalis</i>
Kentucky Bluegrass	<i>Poa pratensis</i>
Reed Canary Grass	<i>Phalaris arundinacea</i>
Wood Reed Grass	<i>Cinna latifolia</i>
Tussock Sedge	<i>Carex stricta</i>

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APPENDIX A

GEOPHYSICAL REPORT

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**GEOPHYSICAL SURVEY
BOUCHARDS JUNKYARD SITE
NEW LEBANON , NEW YORK**

D&B PROJECT NO. 1913

Prepared for:

Dvirka & Bartilucci Consulting Engineers
P.O. Box 56
5879 Fisher Road
East Syracuse, New York 13057-0056

Prepared by:

Hager-Richter Geoscience, Inc.
8 Industrial Way - D10
Salem, New Hampshire 03079

File 01J70
November, 2001

Geophysical Survey
Work Assignment - Bouchard's Junkyard
New Lebanon, New York
D&B File No. 1913
File 01J70 November, 2001

THE SURVEY

James Coffman and William Desmarais of Hager-Richter conducted the field operations on October 29 - November 1 and November 5, 2001. The project was coordinated with Mr. Gerry Gould of D&B. Mr. Sean Pepling was the D&B site representative and specified the area of interest at the Site. Preliminary results of the geophysical survey were transmitted to D&B on November 7, 2001.

The geophysical survey was conducted using a Geonics EM61 time domain electromagnetic induction metal detector. The EM61 was designed specifically for detecting buried metal objects such as USTs, drums, and utilities. An air-cored 1-meter square transmitter coil generates a pulsed primary magnetic field in the earth, thereby inducing eddy currents in nearby metal objects. The decay of the eddy current produces a secondary magnetic field that is sensed by two receiver coils, one coincident with the transmitter and one positioned 40 cm above the main coil. By measuring the secondary magnetic field after the current in the ground has dissipated but before the current in metal objects has dissipated, the instrument responds only to the secondary magnetic field produced by metal objects. Two channels of secondary response are measured in mV and are recorded on a digital data logger. The system is generally operated by pulling the coils as a trailer with an odometer mounted on the axle to trigger the data collection.

EM data were acquired at approximately 8-inch intervals along lines spaced 5 feet apart across the accessible portions of the area of interest. Several portions of the area of interest were inaccessible to the geophysical survey because of thick vegetation, debris, soil piles, and swampy areas. A survey grid was established and generally staked on 50-foot centers by others prior to the geophysical survey.

LIMITATIONS OF THE METHOD

The data from an EM61 survey are affected by surface metal debris, and its depth sensitivity is limited to about 15 feet. The instrument is relatively cumbersome, and works best where the 1-meter square transmit and receive coils can be hand pulled in a small trailer.

Detection and identification should be clearly differentiated. Detection is the recognition of the presence of a metal object, and the electromagnetic method is excellent for such purposes. Identification, on the other hand, is determination of the nature of the causative body (i.e., what is the body -- a cache of drums, automobile, white goods, etc.?). Although the EM data cannot be used to *identify* all buried metal objects, they provide excellent guides to the identification of some objects. For example, buried metal utilities produce anomalies with lengths many times their widths.

Geophysical Survey
Work Assignment - Bouchard's Junkyard
New Lebanon, New York
D&B File No. 1913
File 01J70 November, 2001

In addition to the high amplitude anomalies outlined on Plate 3, several broad areas of lower amplitude EM anomalies (light blue in color on Plate 3) are scattered across the survey area. The low amplitude anomalies might indicate areas of smaller amounts of metal.

LIMITATIONS

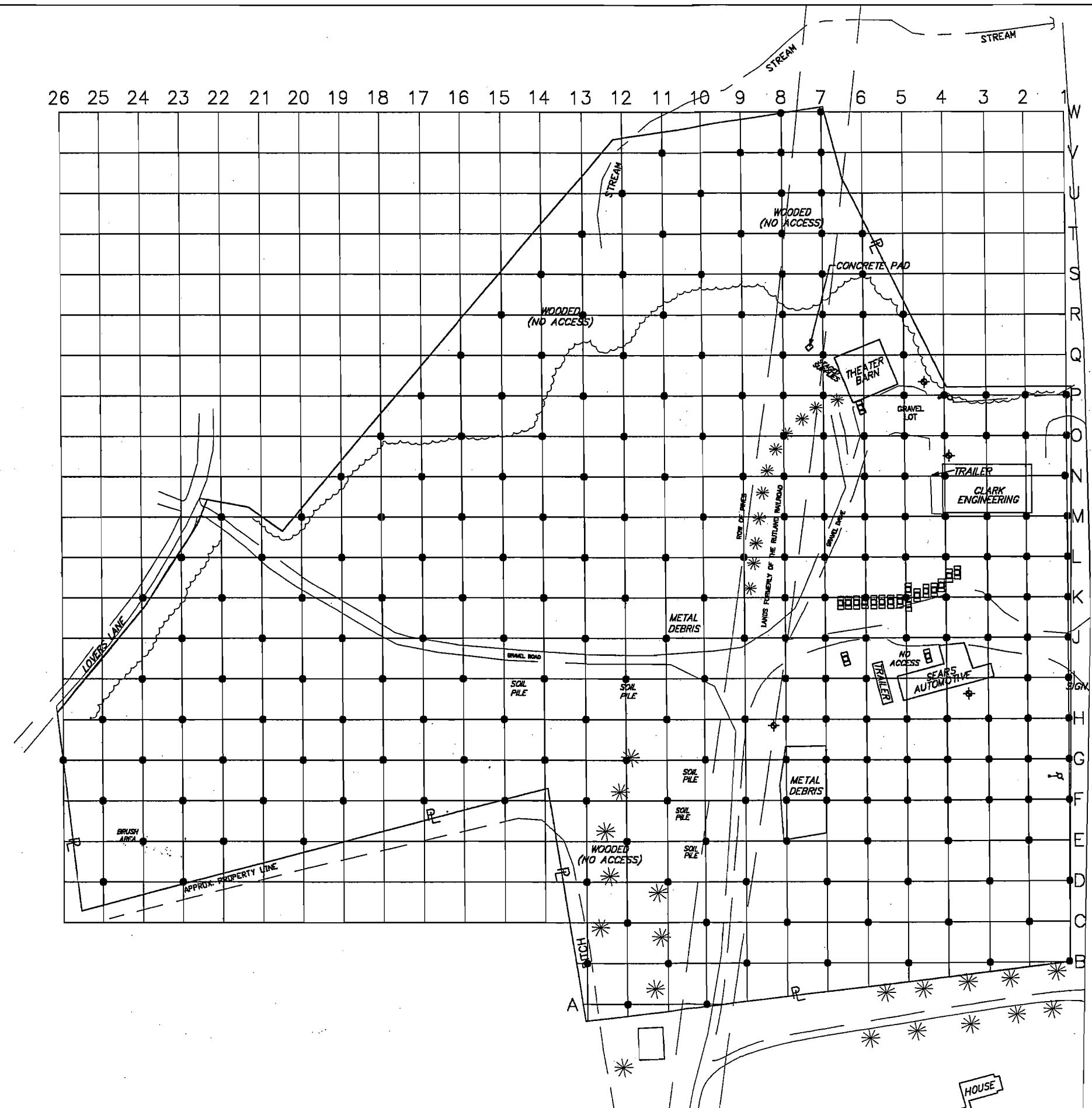
This letter report was prepared for the exclusive use of Dvirka & Bartilucci Consulting Engineers and the New York State Department of Environmental Conservation (collectively, Client). No other party shall be entitled to rely on this Report or any information, documents, records, data, interpretations, advice or opinions given to Client by Hager-Richter Geoscience, Inc. (H-R) in the performance of its work. The Report relates solely to the specific project for which H-R has been retained and shall not be used or relied upon by Client or any third party for any variation or extension of this project, any other project or any other purpose without the express written permission of H-R. Any unpermitted use by Client or any third party shall be at Client's or such third party's own risk and without any liability to H-R.

H-R has used reasonable care, skill, competence and judgment in the performance of its services for this project consistent with professional standards for those providing similar services at the same time, in the same locale, and under like circumstances. Unless otherwise stated, the work performed by H-R should be understood to be exploratory and interpretational in character and any results, findings or recommendations contained in this Report or resulting from the work proposed may include decisions which are judgmental in nature and not necessarily based solely on pure science or engineering. It should be noted that our conclusions might be modified if subsurface conditions were better delineated with additional subsurface exploration including, but not limited to, test pits, soil borings with collection of soil and water samples, and laboratory testing.

Except as expressly provided in this limitations section, H-R makes no other representation or warranty of any kind whatsoever, oral or written, expressed or implied; and all implied warranties of merchantability and fitness for a particular purpose, are hereby disclaimed.



HAGER-RICHTER GEOSCIENCE, INC.
Salem, New Hampshire



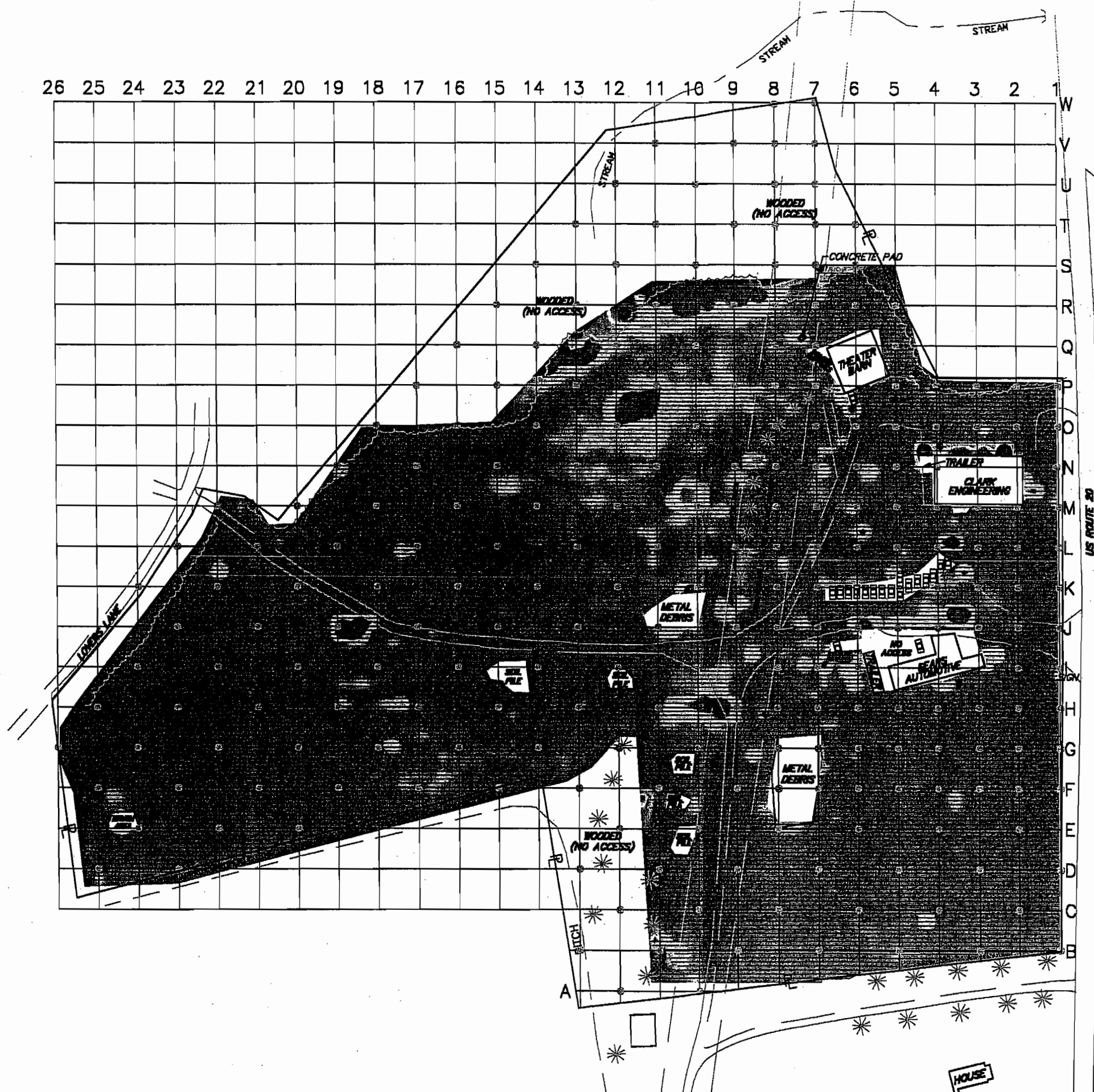
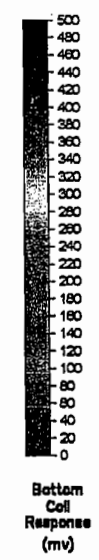
LEGEND

- GEOPHYSICAL SURVEY AREA
- ⊕ MONITORING WELL
- VEHICLE
- ⊕ UTILITY POLE WITH GUY WIRE
- PROPERTY LINE
- STAKE
- ~ TREE-LINE

SCALE (feet)
0 60 120

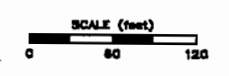
NOTE:
Modified from site plan provided by Dvirka and Bartlucet.

PLATE 1
SITE PLAN
BOUCHARDS JUNKYARD SITE
NEW LEBANON, NEW YORK
FILE 01J70 NOVEMBER, 2001
HAGER-RICHTER GEOSCIENCE, INC.
SALEM, NEW HAMPSHIRE



LEGEND

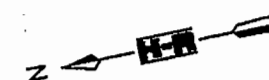
- DATA STATION
- GEOPHYSICAL SURVEY AREA
- MONITORING WELL
- VEHICLE
- UTILITY POLE WITH GUY WIRE
- PROPERTY LINE
- STAKE
- TREE-LINE



NOTES:

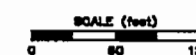
1. Modified from site plan provided by Dvika and Bartlucel.
2. Data were acquired with Geonics EM61.

PLATE 2 EM61 SURVEY BOUCHARDS JUNKYARD SITE NEW LEBANON, NEW YORK	
FILE 01J70	NOVEMBER, 2001
HAGER-RICHTER GEOSCIENCE, INC. SALEM, NEW HAMPSHIRE	



LEGEND

- AREA OF POSSIBLE BURIED METAL
- ANOMALY ATTRIBUTED TO EFFECTS OF SURFACE METAL OBJECTS. THE PRESENCE OR ABSENCE OF BURIED METAL WITHIN THIS AREA CANNOT BE DETERMINED ON THE BASIS OF THE GEOPHYSICAL DATA ALONE.
- GEOPHYSICAL SURVEY AREA
- MONITORING WELL
- VEHICLE
- UTILITY POLE WITH GUY WIRE
- PROPERTY LINE
- STAKE
- THICK LINE



NOTE:

Modified from site plan provided by Dutka and Bartlucal.

PLATE 3
INTERPRETATION
BOUCHARDS JUNKYARD SITE
NEW LEBANON, NEW YORK
FILE 01J70 NOVEMBER, 2001
HAGER-RICHTER GEOSCIENCE, INC.
SALEM, NEW HAMPSHIRE

APPENDIX B

TEST PIT AND BORING LOGS

NO TEXT THIS PAGE

Contractor: <u>Parratt-Wolff</u> Operator: <u>Brad Palmer</u> Does Richard Inspector: <u>Sean Pepling</u> Equip Type: <u>CASE 580L</u>			Dvirka and Bartilucci Test Pit Log Project Name: <u>Bouchards Junkyard RI/FS</u> Project #: <u>1913 - 2A</u>		Pit No. TP- <u>1</u> Sheet 1 of <u>1</u> Pit Location: <u>B-10.5</u>													
Groundwater Observations Water level: <table border="1" style="width:100%; height: 20px;"><tr><td></td><td></td><td></td></tr></table> Time: <table border="1" style="width:100%; height: 20px;"><tr><td></td><td></td><td></td></tr></table> Date: <table border="1" style="width:100%; height: 20px;"><tr><td></td><td></td><td></td></tr></table> Depth of pit: <table border="1" style="width:100%; height: 20px;"><tr><td></td><td></td><td></td></tr></table>															Start: <u>11/12/01 - 1032</u> Finish: <u>11/12/01 - 1105</u> Weather: <u>Partly cloudy, mid 30s F,</u> <u>5-10 mph from NW</u>		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Description		Comments													
		1	<u>Grass/rocks</u> <u>Med Brown SILT, some f.m. SAND, some f.c. gravel</u> <u>(dry) (firm)</u>		<u>- metal fragments at</u> <u>2.5 ft by - thin, rusted,</u> <u>possible drum pieces</u> <u>- old metal frame to</u> <u>car seat at north</u> <u>end of pit at 1.5 ft by</u> <u>Pit 20 ft long N-S</u> <u>1050-SP collects</u> <u>soil sample</u> <u>TP-5-1C</u>													
		2																
		3																
		4																
		5																
		6																
		7	<u>End of pit at ~6.0 ft by</u>															
		8																
		9																
		10																
		11																
		12																
		13																
		14																
		15																
		16																
		17																
		18																
		19																
		20																
Stratigraphic Summary:																		

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Do-9 Rickman</i> Inspector: Sean Pepling Equip Type: Case 580L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>7 2</u> Sheet 1 of <u>1</u> Pit Location: <i>E+10.8</i> <i>E+30, 10+20' →</i> <i>E+16, 9+40'</i>	
Groundwater Observations Water level Time Date Depth of pit			Start: 11/12/01 - 1108 Finish: 11/14/01 - 1150 Weather: Partly cloudy, mid 30's F 5-10 mph breeze NW		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Description		Comments	
		1	Grass			
		2	Med brown f. in SAND and SILT, some f.c gravel (sub rounded), dry, loose.			
		3			- old wheel rim at 4.5 ft bg at center of pit - tire rim at 2 ft bg at SE end of pit - voltage regulator, scrap steel	
		4	becomes dark grey			
		5				
		6				
		7	Bottom of pit @ 6.0 ft bg		1145 - collected soil sample TP-2 - (6.0) from soil excavated at 6 ft bg at SE end of TP-2	
		8	20 ft long ~~500~~ <i>E+30, 10.2 → E+10, 9.8</i>			
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19				
		20				
Stratigraphic Summary:						

Contractor: Parratt-Wolff Operator: Brad Palmer ^{Dev: Richard} Inspector: Sean Pepling Equip Type: Case 580L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>3</u> Sheet 1 of <u>1</u> Pit Location: F+15', S+35' → F+25', 6+5'	
Groundwater Observations Water level Time Date Depth of pit			Start: 11/12/01 1152 Finish: 11/12/01 1235 Weather: Partly cloudy, mid 30's F, 5-10 mph from NW		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Description		Comments	
		1	Grass Med brown to orange brown f.m. SAND and SILT, some f.c. gravel (dry) (compact)		No evidence of buried objects	
		2	Same w/ more gravel and cobbles			
		3	25' - - - - - Lt brown f.m. SAND, some f.c. gravel (dry) (loose)			
		4				
		5				
		6				
		7				
		8	Bottom of pit ~ 7 ft below		No Samples	
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19	F+15, S+35 → F+25, 6+5'			
		20	20 ft long			
Stratigraphic Summary:						

Contractor: Parratt-Wolff Operator: Brad Palmer Inspector: Sean Pepling Equip Type: Case 580L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>4</u> Sheet 1 of <u>1</u> Pit Location: B+35, 4+25 → B+35, 4+10	
Groundwater Observations Water level Time Date Depth of pit			Start: 11/12/01 - 1313 Finish: 11/12/01 - 1345 Weather: Partly cloudy, mid 30s°F, 5-10 mph from NW		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Description		Comments	
		1	Grass/weeds Med brown SILT, and f.c gravel, little f.c sand (dry)		metal object at 1. ft bg at B+35, 4+15, 5" x 1.5" x 0.5" 1" threaded nipple at one end, threaded opening at other end	
		2				
		3				
		4	becomes light brown grey f.c SAND, some f.c gravel and cobbles, little silt (damp)		- chard wood 4' bg	
		5				
		6				
		7				
		8				
		9				
		10	moist becomes wet at 9.5 ft bg			
		11	Bottom of pit at 10 ft bg			
		12				
		13				
		14				
		15				
		16			B30 - collected soil sample TP-4 (3.0) at B+35, 4+15	
		17				
		18				
		19	B+35, 4+25 → B+35, 4+10			
		20				
Stratigraphic Summary:						

Contractor: Parratt-Wolff Operator: Brad Palmer <i>B. Palmer</i> Inspector: Sean Pepling Equip Type:			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>5</u> Sheet 1 of <u>1</u> Pit Location: D+25', 4+35' D+25', 4+20'	
Groundwater Observations Water level Time Date Depth of pit			Start: <u>11/12/01 - 1347</u> Finish: <u>11/12/01 - 1402</u> Weather: <u>Partly cloudy, low 40's F,</u> <u>5-15 mph from NW</u>		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Description			Comments
		1	Grass/weeds			Metal lid 1.4' diam, thin metal, rusted 1 ft bg at south end of pit.
		2	Red brown SILT, some f.c. sand and f.c. gravel, cobbles (dry)			
		3	becomes light brown grey f.c. sand, some f.c. gravel, trace silt (dry)			
		4				
		5				
		6	Bottom of Pit 5' ft lg.			
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19	D+25, 4+35 →			
		20	D+25, 4+20			
Stratigraphic Summary:						

Contractor: Parratt-Wolff Operator: ~~Brad Palmer~~ <i>Brady Palmer</i> Inspector: Sean Pepling Equip Type: <i>Case 580L</i>			Dvirka and Bartilucci Test Pit Log Project Name: <i>Bouchards Junkyard RI/FS</i> Project #: <i>1913 - 2A</i>		Pit No. TP- <i>6</i> Sheet 1 of <i>1</i> Pit Location: <i>E+40, 3+20 →</i> <i>E+40, 3+35</i>	
Groundwater Observations Water level Time Date Depth of pit			Start: <i>11/12/01 - 1404</i> Finish: <i>11/12/01 - 1429</i> Weather: <i>Partly cloudy, low 40°F</i> <i>10-15 mph from NW</i>		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Description		Comments	
		1	<i>Grass/weeds</i>		<i>Centrim, big wrench,</i> <i>steel pipe (approx 3')</i> <i>steel plate, steel bar,</i> <i>hub cap</i>	
		2	<i>med-brown SILT and f.c gravel, some</i>			
		3	<i>fine sand (dry-damp)</i>			
		4				
		5			<i>Discolored orange brown</i> <i>and black on west wall</i> <i>at E+40, 3+30 at depth</i> <i>of 3.5 ft lg</i>	
		6				
		7	<i>Bottom of pit 6.5 ft lg</i>			
		8				
		9			<i>1414 - collect soil</i> <i>sample TP-6 (3.5')</i> <i>from 3.5 ft lg, west</i> <i>wall at E+40, 3+30</i>	
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19			<i>E+40, 3+20 → E+40, 3+35</i> <i>15 ft long</i>	
		20				
Stratigraphic Summary:						

Contractor: Parratt-Wolff Operator: Brad Palmer Inspector: Sean Pepling Equip Type: Case 58CL			Dvirka and Bartilucci Test Pit Log		Pit No. TP- <u>7</u> Sheet 1 of <u>1</u> Pit Location: <u>H, 9+10'</u> <u>H, 10+15'</u>
Groundwater Observations			Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Plot Plan (see location map)
Water level			Start: 11/12/01 - 1435		
Time			Finish: 11/12/01 - 1540		
Date			Weather: Partly cloudy, low 40's F, 10-15 mph from NW		
Depth of pit					
USCS Classification	Sample No.	Depth	Description		Comments
		1	Glass/wire mesh		Glass, lug wrench, drive shaft brackets, spring, shock + mount, melted glass, hubcap, starter, trim, wheel assembly, frame section, metal. All within 1.5 ft of grade.
		2	Black SILT, some f.c. sand and gravel, dry		
		3	medium brown SILT, some f.c. sand and gravel (Pump)		
		4			
		5			
		6			
		7	Bottom of pit 6 ft. bg.		
		8	Shallower to north - dig to below observed debris and moved on.		
		9			
		10			
		11			
		12			
		13			
		14			
		15			
		16			
		17			
		18			
		19	H, 9+10' → H, 10+15' (55' length)		
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Brad Palmer</i> Inspector: Sean Pepling Equip Type: Case 550L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>10</u> Sheet 1 of <u>1</u> Pit Location: H+35, 20+25 → H+35, 19+35
Groundwater Observations Water level Time Date Depth of pit			Start: <u>11/13/01 - 0808</u> Finish: <u>11/13/01 - 1123</u> Weather: <u>Partly cloudy, cold upper 20s F</u> <u>Wind calm</u>		Plot Plan <i>and</i> H+35, 20 → I, 20 (see location map)
USCS Classification	Sample No.	Depth	Description		Comments
		1	Grass/Woods med brown SILT, some f.c gravel, little f.c sand (dry) - - orange brown SILT, some f.c gravel, little f.c sand (damp)		No buried objects observed.
		2	DK brown SILT and f.c SAND, some f.c gravel (damp)		
		3			
		4	DK brown-gray f.c SAND, some f.c gravel, little silt (damp)		
		5			
		6	Lt brown SILT and CLAY (damp) - - -		
		7	Bottom of Pit at 6.5 ft by		
		8			
		9			
		10			
		11			
		12			1030 SP collects soil sample TP-5-106.0 at H+35, 20
		13			
		14			
		15			
		16			
		17			
		18			
		19	H+35, 20+25 → H+35, 19+35 H+35, 20 → I, 20		
		20			
Stratigraphic Summary:					

Contractor: <u>Parratt-Wolff</u> Operator: <u>Brad Palmer</u> Inspector: <u>Sean Pepling</u> Equip Type: <u>Case 580L</u>			Dvirka and Bartilucci Test Pit Log Project Name: <u>Bouchards Junkyard RI/FS</u> Project #: <u>1913-2A</u>		Pit No. TP- <u>11</u> Sheet 1 of <u>1</u> Pit Location: <u>R+35,7 → R+25,7</u>													
Groundwater Observations Water level: <table border="1" style="width:100%; height: 40px;"><tr><td> </td><td> </td><td> </td></tr></table> Time: <table border="1" style="width:100%; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> Date: <table border="1" style="width:100%; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> Depth of pit: <table border="1" style="width:100%; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table>															Start: <u>11/13/01-1125</u> Finish: <u>11/13/01-1210</u> Weather: <u>Partly cloudy, w: 230's F</u> <u>w: 10-2 mph from NW</u>		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Description	Comments														
		1	mod brown SILT, some f.c sand, some f.c gravel (damp)	Surface - 1 ft bg - lined/tine chrome trim No buried objects below 1 ft bg.														
		2	lt-mod grey, f.c SAND, some f.c gravel,															
		3	some silt (damp)															
		4	Bottom of pit 3.5 ft bg															
		5																
		6																
		7																
		8																
		9																
		10																
		11																
		12																
		13																
		14																
		15		1145 SP collects Soil sample TP-S-11(2.5) from R+30,7 at 2.5 ft bg														
		16																
		17																
		18	R+35,7															
		19	R+25,7															
		20																
Stratigraphic Summary:																		

Contractor: Parratt-Wolff Operator: Brad Palmer Inspector: Sean Pepling Equip Type:			Dvirka and Bartilucci Test Pit Log		Pit No. TP- <u>12</u> Sheet 1 of <u>1</u> Pit Location: <u>H+40', 11+30'</u> <u>H+40', 11+10'</u>
Groundwater Observations			Start: <u>11/13/01 - 1246</u> Finish: <u>11/15/01 1354</u> Weather: <u>Clear, mid 40's F,</u> <u>wind 0-2 mph from NW</u>		Plot Plan (see location map)
Water level					
Time					
Date					
Depth of pit					
USCS Classification	Sample No.	Depth	Description	Comments	
		1	Gravel Lt-med brown f. m SAND, some f. gravel, little silt (damp dry)		
		2	0.2' thick zone black coloring - same stratigraphy		
		3			
		4			
		5			
		6			
		7			
		8			
		9		- water @ 8 ft 6 in	
		10			
		11			
		12			
		13			
		14			
		15			
		16			
		17			
		18	H+40, 11+30' → H+40 11+10'	1325 SP collects soil sample TP-S-12 (0.5') at H+40, 11+12' east well at 0.5' by	
		19	H	1340 SP collects soil sample TP-S-12 (2.0') at H+40, 11+12' east well at 2.0' by	
		20			
Stratigraphic Summary:					

Contractor: <u>Parratt-Wolff</u> Operator: <u>Brad Palmer</u> Davis Richmond Inspector: <u>Sean Pepling</u> Equip Type: <u>Case 580L</u>			Dvirka and Bartilucci Test Pit Log Project Name: <u>Bouchards Junkyard RI/FS</u> Project #: <u>1913-2A</u>		Pit No. TP- <u>13</u> Sheet 1 of <u>1</u> Pit Location: <u>H+30, 13 → I+10, 13</u>
Groundwater Observations Water level Time Date Depth of pit			Start: <u>11/13/01-1356</u> Finish: <u>11/13/01-1500</u> Weather: <u>Clear, mid 40°F,</u> <u>Wind 0-2 mph from NW</u>		Plot Plan (see location map)
USCS Classification	Sample No.	Depth	Grass/Woods Description Comments		
		1	med. brown SILT and f.c SAND, some f.c gravel (damp) 0.5 - 0.7 dark grey-black f.c SAND, some f.c gravel, some silt (damp)		
		2	med-dark brown f.c SAND, some f.c gravel, little silt (damp)		
		3			
		4			
		5			
		6			
		7			
		8	Bottom of pit @ 7 ft bg		
		9			
		10			
		11			
		12			
		13			
		14			
		15			
		16			
		17			
		18	H+30, 13 → I+10, 13		
		19			
		20			
Stratigraphic Summary:					

1430 SP collects
 Soil sample
 TP-5-13 (0.5) at
 I+5, 13 at 2 ft bg
 0.5

Contractor: Parratt-Wolff Operator: Brad Palmer Inspector: Sean Pepling Equip Type:			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>14</u> Sheet 1 of <u>1</u> Pit Location: I+45, 19+10 → I+45, 18+40'	
Groundwater Observations Water level Time Date Depth of pit			Start: 11/13/01 - 1504 Finish: 11/13/01 - 1645 Weather: clear, upper 30's F, wind 0-2 mph from SW		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Grass/weed	Description	Comments	
		1		Dark brown SILT and f.c SAND, some f.c gravel (damp)	tires/rims, car seat, hub cap, metal pipe, radiator hose, heater hose, car door, car trim, floor mat, gas tank debris limited to upper 2.5 ft of grade, starts at I+40, 19 extends to south, east, & west.	
		2		Med brown f.c SAND and f.c gravel, (damp)		
		3				
		4		med brown-grey SILT and CLAY (damp)		
		5				
		6				
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16		I+45, 19+10 → I+45, 18+40	1615 SP collar-L3 Sample TP-5-14 (3.0) at J-2, 19-5	
		17				
		18				
		19				
		20				
Stratigraphic Summary:						

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Palmer</i> Inspector: Sean Pepling Equip Type: Cast 550L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>15</u> Sheet 1 of <u>1</u> Pit Location: J+15', 18+30' → J+15', 18+20' Plot Plan (see location map)													
Groundwater Observations <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 30%;">Water level</td><td style="width: 30%;"></td><td style="width: 30%;"></td></tr> <tr><td>Time</td><td></td><td></td></tr> <tr><td>Date</td><td></td><td></td></tr> <tr><td>Depth of pit</td><td></td><td></td></tr> </table>			Water level			Time			Date			Depth of pit			Start: 11/14/01 - 0811 Finish: 11/14/01 - 0830 Weather: Mostly cloudy, low 30's F Wind calm			
Water level																		
Time																		
Date																		
Depth of pit																		
USCS Classification	Sample No.	Depth	Grass/weeds	Description	Comments													
		1		Med brown SILT, some fine SAND, little fine gravel (damp)	debris - head light rim, scrap metal - ex. parts white "salt" crystalline mass at 1.0 ft bg at NW corner pit.													
		2		Black f.c. SAND, some fine gravel, little silt (damp)														
		3		Med brown f.c. SAND, some f.c. gravel, little silt (damp)														
		4		Bottom of pit 3.0 ft bg														
		5																
		6																
		7																
		8																
		9																
		10																
		11																
		12																
		13																
		14																
		15																
		16																
		17																
		18		J+15', 18+30' → J+15', 18+20'	OS22 - SP collects soil sample TP 5-15 (1.0) from J+15', 18+15 at 1.0' bg from white No PID readings above background (0)													
		19																
		20																
Stratigraphic Summary:																		

Contractor: Parratt-Wolff Operator: Brad Palmer (Parratt-Wolff) Inspector: Sean Pepling Equip Type: CASE 580L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>16</u> Sheet 1 of <u>1</u> Pit Location: J, 18+15' → J, 17+45' Plot Plan (see location map)
Groundwater Observations Water level Time Date Depth of pit			Start: 11/14/01 - 0831 Finish: 11/14/01 - 0850 Weather: Mostly cloudy, low 30's F Wind calm		
USCS Classification	Sample No.	Depth	Grass/Woods	Description	Comments
		1		Med-dark brown f.c. sand, some SILT, little f.c. gravel (damp)	radiator hose, sheet metal, gas ket debris limited to upper 1.0 ft of grade, extends from N end pit to J, 18+5'
		2		lt-med brown f.c. sand, some f.c. gravel, little silt (damp)	
		3			
		4		Med brown gray SILT, some clay (damp)	
		5		Bottom of pit 3.5 ft by et N end Bottom of pit. 2.0 ft by et S end	
		6			
		7			
		8			
		9			
		10			
		11			
		12			
		13			
		14			
		15			
		16			No PID readings above background (6) No Sample collected
		17			
		18		J, 18+15' → J, 17+45'	
		19			
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Devs. R. Chennel</i> Inspector: Sean Pepling Equip Type: <i>CES 580L</i>			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>17</u> Sheet 1 of <u>1</u> Pit Location: <i>I+35, 18+30 →</i> <i>I+25, 18+30</i>
Groundwater Observations Water level Time Date Depth of pit			Start: <i>11/14/01 - 0853</i> Finish: <i>11/14/01 - 0920</i> Weather:		Plot Plan (see location map)
USCS Classification	Sample No.	Depth	Description		Comments
		1	Med brown f.c sand, some silt, some f.c gravel (damp)		Chrome trim, steel frame, sheet metal limited to upper 2ft Extends from east to west, west limit at I+29, 18+30
		2			
		3	Lt-med brown SILT and CLAY (damp) mottling @ 2.5-3.0ft bg		
		4			
		5	Bottom of pit at 4 ft bg		No PJD readings above background (a) No sample collected
		6			
		7			
		8			
		9			
		10			
		11			
		12			
		13			
		14			
		15	I+35, 18+30 →		
		16	I+25, 18+30		
		17			
		18			
		19			
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Ray Palmer</i> Inspector: Sean Pepling Equip Type: Casp 550L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>18</u> Sheet 1 of <u>1</u> Pit Location: 0+35, 12+25' → 0+30', 12+25'	
Groundwater Observations Water level Time Date Depth of pit			Start: <u>11/14/01 - 0940</u> Finish: <u>11/14/01 - 1020</u> Weather: <u>Mostly cloudy, warm low 40's F,</u> <u>wind calm</u>		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Description		Comments	
		1	Dark brown SILT and f.c. SAND, little f.c. gravel (damp)		No buried objects placed out Chrome trim, wire within 2 ft of grade	
		2	Dark brown f.c. SAND, some f.c. gravel, little silt (damp)			
		3	Lt brown grey f.c. SAND and f.c. gravel, little silt (damp)			
		4	becomes dark brown			
		5				
		6	Med brown silt and clay (wet)		Water @ 5.5 ft + 6 ft	
		7	Bottom of pit @ 6 ft bg			
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19	0+35, 12+25' → 0+30, 12+25		No PID readings above background (c)	
		20			No Sample collected	
Stratigraphic Summary:						

Contractor: Parratt-Wolff Operator: Brad Palmer ^{DESS} Inspector: Sean Pepling Equip Type: Case 580L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>19</u> Sheet 1 of <u>1</u> Pit Location: O+25, 11+13' → O+40, 11+13'
Groundwater Observations Water level Time Date Depth of pit			Start: 11/14/01 - 1037 Finish: 11/14/01 - 1128 Weather: Overcast, m. 240's F Wind calm		Plot Plan (see location map)
USCS Classification	Sample No.	Depth	Description		Comments
		1	Brown to black f.c SAND, some f.c gravel, some silt (damp)		Debris - car seat, fuel tank, muffler, car door, glass, floor mats, tires, wheels, chrome trim, hub cap, plastic, springs mixed w/ soil, entire length of pit to bottom of pit.
		2			
		3			
		4			
		5	S.1 medgy f.c SAND, little f.c gravel (wet)		
		6	Bottom of pit at 5.3 ft bg.		water @ 5.1' bg
		7			No PID or CGI readings above background
		8			
		9			
		10			
		11			
		12			1105. SP collects soil sample TP-19 (5.0) from 5 ft bg at east end of pit bottom at O+40, 11+13'
		13			
		14			
		15			
		16	O+25, 11+13'		
		17	O+40, 11+13'		
		18			
		19			
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Boys</i> Inspector: Sean Pepling Equip Type: Case 580L			Dvirka and Bartilucci Test Pit Log		Pit No. TP- <u>20</u> Sheet 1 of <u>1</u> Pit Location: <u>0+15, 11+40</u> <u>N+40, 11+40</u>
Groundwater Observations			Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Plot Plan (see location map)
Water level			Start: <u>11/14/01 - 1130</u>	Finish: <u>11/14/01 - 1225</u> Weather: <u>Overcast, Warm 40's F</u> <u>Wind calm</u>	
Time					
Date					
Depth of pit					
USCS Classification	Sample No.	Depth	Class/Notes	Description	Comments
		1		DK brown - f.c SAND, some f.c gravel, little silt (damp)	debris - weather strip, shock + mount, tires, wheel, spring, wood - tree branches, gas tank, car seat, extends from 0+15 ft to bottom of pit from 0+15, 11+40 to 0, 11+40
		2		oil ft layer Black f.c sand (at east end) DK brown - orange brown f.c SAND, some f.c gravel, little silt (damp)	
		3		DK brown - grey f.c SAND, some silt, some f.c gravel (moist) - wood in this zone	
		4		DK grey f.c SAND and f.c gravel, trace silt (moist)	
		5			
		6		Bottom of Pit @ 5.5 ft bg	
		7			
		8			
		9			
		10			
		11			
		12			
		13			1200-SP collect soil sample
		14			TP-5-20 (1C) at
		15			0+15, 11+40' from 1 ft bg - black zone
		16			
		17			
		18		0+15, 11+40' → N+40, 11+40	
		19			No PID readings above background (0)
		20			

Stratigraphic Summary:

Contractor: Parratt-Wolff Operator: Brad Palmer ^{Dow Richmond} Inspector: Sean Pepling Equip Type: Case 680L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- 21 Sheet 1 of 1 Pit Location: O+40, 11+25 P+10, 11+25 Plot Plan (see location map)													
Groundwater Observations <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 30%;">Water level</td><td style="width: 30%;"></td><td style="width: 40%;"></td></tr> <tr><td>Time</td><td></td><td></td></tr> <tr><td>Date</td><td></td><td></td></tr> <tr><td>Depth of pit</td><td></td><td></td></tr> </table>			Water level			Time			Date			Depth of pit			Start: 11/14/01 - 1334 Finish: 11/14/01 - 1415 Weather: Overcast, raining (moderate) low 40's F, wind calm <i>Grass/Weeds</i>			
Water level																		
Time																		
Date																		
Depth of pit																		
USCS Classification	Sample No.	Depth	Description		Comments													
		1	Dark brown-black f.c SAND and SILT, little f.c gravel (damp)		debris - hubcap, glass, wood - tree trunks, Chrometrim, glass													
		2	Med brown f.c SAND, some f.c Gravel, little silt (damp)															
		3																
		4	Med-dk grey SILT, some clay, little mic gravel (moist)		glass fragments													
		5	Bottom of pit @ 4.5 ft bg															
		6			1405-57 collects Soil sample TP-5-21 (4.5') and HS, HSD, HSB at east end - P+5, 11+25 at depth of 4.5 ft bg													
		7																
		8																
		9																
		10																
		11																
		12																
		13																
		14																
		15																
		16	O+40, 11+25' → P+10, 11+25		No PID readings above backsground													
		17																
		18																
		19																
		20																
Stratigraphic Summary:																		

Contractor: <u>Parratt-Wolff</u> Operator: <u>Brad Palmer</u> Inspector: <u>Sean Pepling</u> Equip Type: <u>CASE 580L</u>			Dvirka and Bartilucci Test Pit Log Project Name: <u>Bouchards Junkyard RI/FS</u> Project #: <u>1913 - 2A</u>		Pit No. TP- <u>22</u> Sheet 1 of <u>1</u> Pit Location: <u>M+20', 10+15' →</u> <u>M+10', 10+15'</u>															
Groundwater Observations Water level: <table border="1" style="width: 100%; height: 10px;"><tr><td></td><td></td><td></td></tr></table> Time: <table border="1" style="width: 100%; height: 10px;"><tr><td></td><td></td><td></td></tr></table> Date: <table border="1" style="width: 100%; height: 10px;"><tr><td></td><td></td><td></td></tr></table> Depth of pit: <table border="1" style="width: 100%; height: 10px;"><tr><td></td><td></td><td></td></tr></table>															Start: <u>11/14/01 - 1422</u> Finish: <u>11/14/01 - 1522</u> Weather: <table border="1" style="width: 100%; height: 10px;"><tr><td></td></tr></table> <table border="1" style="width: 100%; height: 10px;"><tr><td></td></tr></table>				Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Grass/weeds	Description	Comments															
		1		Dark brown f.c SAND, some f.c Gravel, cobbles, little silt. (damp)	debris: starter, frame piece, sheet metal, tires & wheels (lots) entire length of pit to depth of 6 ft bg															
		2																		
		3																		
		4																		
		5																		
		6																		
		7																		
		8		Bottom of pit at 7.0 ft bg	1455-SP collects soil sample TP-S-22(6.5) from 6.5 ft bg at M+5, 10+15'															
		9																		
		10																		
		11																		
		12																		
		13																		
		14																		
		15																		
		16																		
		17																		
		18		M+20, 10+15' → M+10', 10+15'	No PID readings above background (0)															
		19																		
		20																		
Stratigraphic Summary:																				

Contractor: <u>Parratt-Wolff</u> Operator: <u>Brad Palmer</u> (Doc's Picture) Inspector: <u>Sean Pepling</u> Equip Type: <u>CASE 580L</u>			Dvirka and Bartilucci Test Pit Log Project Name: <u>Bouchards Junkyard RI/FS</u> Project #: <u>1913 - 2A</u>		Pit No. TP- <u>23</u> Sheet 1 of <u>1</u> Pit Location: <u>R+35, 10+40</u> <u>R+20, 10+40</u>													
Groundwater Observations Water level: <table border="1" style="width:100%; height: 10px;"><tr><td></td><td></td><td></td></tr></table> Time: <table border="1" style="width:100%; height: 10px;"><tr><td></td><td></td><td></td></tr></table> Date: <table border="1" style="width:100%; height: 10px;"><tr><td></td><td></td><td></td></tr></table> Depth of pit: <table border="1" style="width:100%; height: 10px;"><tr><td></td><td></td><td></td></tr></table>															Start: <u>11/14/01-1538</u> Finish: _____ Weather: _____ _____ _____		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Grass/Weeds	Description	Comments													
		1		Dark black-brown f.c SAND, some f.c gravel, cobbles, little silt (damp)	Drums and tires exposed at surface													
		2			debris (buried) tires, wheels, frame pieces, pipes, hubcaps, duct (hooter), chrome trim, distributor cap, glass, hooter hose, floor pan water at 5ft lg debris located within upper 4ft of grade, throughout length of pit wood branches at 3.5-4.0 ft 1600 SP collects soil sample TP-5-23(4.5) at R+25', 10+40'													
		3																
		4																
		5		Dark brown-gray SILT and CLAY (moist)														
		6		Bottom of pit at 5.0ft lg														
		7																
		8																
		9																
		10																
		11																
		12																
		13																
		14																
		15																
		16																
		17		R+35, 10+40 → R+35, 190?														
		18		R+20, 10+40														
		19																
		20																
Stratigraphic Summary: _____ _____ _____ _____																		

Contractor: <u>Parratt-Wolff</u> Operator: <u>Brad Palmer</u> Inspector: <u>Sean Pepling</u> Equip Type: <u>CASE 580L</u>			Dvirka and Bartilucci Test Pit Log Project Name: <u>Bouchards Junkyard RI/FS</u> Project #: <u>1913 - 2A</u>		Pit No. TP- <u>24</u> Sheet 1 of <u>1</u> Pit Location: <u>E+10', 23+45' →</u> <u>E+10', 23+35'</u>									
Groundwater Observations Water level: <table border="1" style="width:100%; height: 20px;"><tr><td></td><td></td></tr></table> Time: <table border="1" style="width:100%; height: 20px;"><tr><td></td><td></td></tr></table> Date: <table border="1" style="width:100%; height: 20px;"><tr><td></td><td></td></tr></table> Depth of pit: <table border="1" style="width:100%; height: 20px;"><tr><td></td><td></td></tr></table>											Start: <u>11/13/01 - 0733</u> Finish: <u>11/15/01 - 0755</u> Weather: <u>Overcast, low 40's F,</u> <u>wind calm</u>		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Grass/Woods	Description	Comments									
		1		Red brown f.c SAND, some f.c Gravel, little silt (damp)										
		2			wood-branches at 2.5 ft bg chrome tire pieces at 4 ft bg at North end of pit.									
		3												
		4												
		5		LT grey brown SILT and CLAY (damp)										
		6		Bottom of pit 5.0 ft bg										
		7												
		8												
		9												
		10												
		11			0745 SP collects Soil sample TP-5-24(4.5) from 4.5 ft bg at E+10', 23+40									
		12												
		13												
		14												
		15			No PID readings above background									
		16												
		17												
		18		E+10', 23+45' → E+10', 23+35'										
		19												
		20												
Stratigraphic Summary:														

Contractor: Parratt-Wolff Operator: ~~Brad Palmer~~ ^{Don Richmond} Inspector: Sean Pepling Equip Type: Case 586L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>25</u> Sheet 1 of <u>1</u> Pit Location: F+5, 21 → F+15, 21	
Groundwater Observations Water level Time Date Depth of pit			Start: <u>11/13/01 - 0756</u> Finish: <u>11/15/01 - 0812</u> Weather: <u>Overcast, low 40's F</u> <u>wind calm</u>		Plot Plan (see location map)	
USCS Classification	Sample No.	Depth	Grass/Weeds	Description	Comments	
		1		Dark brown SILT, some f.c. sand, little gravel (damp)	No evidence of buried objects	
		2		Med orange brown f.c. sand, some fine gravel, little silt (damp)		
		3		Med brown to Med grey brown f.c. sand, some f.c. gravel, little silt (damp)		
		4				
		5		Light grey brown SILT and CLAY (damp)		
		6		Bottom of pit @ 5.0 ft by	No PID readings above background (0) 0807 SP collects soil sample TP-25 (4.0) from 4 ft by at F+10, 21.	
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19				
		20				
Stratigraphic Summary:						

Contractor: <u>Parrott-Walsh</u> Operator: <u>Doug Richmond</u> Inspector: <u>S. Repling</u> Equip Type: <u>Casp 580L</u>			Dvirka and Bartilucci Test Pit Log		Pit No. TP- <u>26</u> Sheet 1 of <u>1</u> Pit Location: <u>I, 15+25' →</u> <u>H+25, 15+25'</u>
Groundwater Observations			Start: <u>11/15/11 - 0818</u> Finish: <u>11/15/11 - 0910</u> Weather: <u>Overcast, low 40s F</u> <u>Wind calm</u>		Plot Plan (see location map)
Water level					
Time					
Date					
Depth of pit					
USCS Classification	Sample No.	Depth	Grass/Weeds	Description	Comments
		1		DK brown f. sand, some silt, little f.c gravel (damp)	debris - rubber jacket w/ metal attachment, thin sheet metal piece, glass limited to upper 1.0 ft of p. hole
		2		Med brown f.c SAND, some f.c gravel, little silt (damp)	
		3			
		4			
		5			
		6			
		7		Med brown-grey f.c SAND and f.c GRAVEL, trace silt (moist)	
		8			
		9		Bottom of pit @ 8.5 ft b.g.	
		10			
		11			
		12			
		13			No PDS readings above background (0)
		14			
		15			
		16			
		17		I, 15+25' → H+25, 15+25'	OS10 SP collects soil sample TP-S-26(4.0) from N wall at 4.0 ft b.g. at H+35, 15+25'
		18			
		19			
		20			

Stratigraphic Summary:

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Don't cut</i> Inspector: Sean Pepling Equip Type: Case 580L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>27</u> Sheet 1 of <u>1</u> Pit Location: F+35, 13+40 F+35, 14+5'
Groundwater Observations Water level Time Date Depth of pit			Start: 11/15/01 - 0912 Finish: 11/13/01 - 1015 Weather: Overcast, mid 40°F Wind calm		Plot Plan (see location map)
USCS Classification	Sample No.	Depth	Grass/Woods Description		Comments
		1	DK grey brown-black f.c SAND, little silt (damp)		No evidence of buried objects
		2	Med brown f.c SAND and f.c GRAVEL, little silt (damp)		
		3			
		4			
		5	Med brown SILT and CLAY		
		6			
		7	Bottom of pit 6.5 ft by		
		8			
		9			
		10			No red readings above background
		11			
		12			
		13			1000 SP collected soil sample TP-5-27(210)
		14			from 2 ft by at F+35, 14
		15			
		16	F+35, 13+40 →		
		17	F+35, 14+5		
		18			
		19			
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Don Palmer</i> Inspector: Sean Pepling Equip Type: Case 550L			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>28</u> Sheet 1 of <u>1</u> Pit Location: <u>L+5, 15 → L+15, 15</u>
Groundwater Observations Water level Time Date Depth of pit			Start: <u>11/15/01 - 1020</u> Finish: <u>11/15/01 - 1048</u> Weather: <u>Overcast, mid 40s F</u> <u>wind calm</u>		Plot Plan (see location map)
USCS Classification	Sample No.	Depth	Gross/Weeds	Description	Comments
		1		Med dk brown SILT and f. sand, trace c gravel (damp)	No evidence of buried objects
		2		Med brown f. c SAND and gravel, little silt (damp)	
		3			
		4			
		5		Med brown SILT and CLAY (damp-moist)	No RED readings above back ground (0)
		6		Bottom of pit 5.5 ft bg	
		7			
		8			
		9			
		10			
		11			
		12			
		13			
		14			
		15			No SP collects soil sample TP-5-28(4.0) from 4 ft bg at L+10, 15
		16			
		17		L+5, 15 → L+15, 15	
		18			
		19			
		20			
Stratigraphic Summary:					

Contractor: <u>Parratt-Wolff</u> Operator: <u>Brad Palmer</u> Inspector: <u>Sean Pepling</u> Equip Type: _____			Dvirka and Bartilucci Test Pit Log Project Name: <u>Bouchards Junkyard RI/FS</u> Project #: <u>1913-2A</u>		Pit No. TP- <u>29</u> Sheet 1 of <u>1</u> Pit Location: <u>0+5, 14 →</u> <u>N+45, 14</u>
Groundwater Observations Water level _____ Time _____ Date _____ Depth of pit _____			Start: <u>11/15/01 - 1050</u> Finish: <u>11/15/01 - 1120</u> Weather: <u>Overcast, low 50's F</u> <u>Wind 2-4</u>		Plot Plan (see location map)
USCS Classification	Sample No.	Depth	Cross / Weeds	Description	Comments
		1		DK brown f.c SAND, some silt, little gravel (dump)	No evidence of buried objects
		2		med. range f.c SAND, some f.c gravel, some silt (dump)	
		3		med-dark brown f.c SAND and f.c GRAVEL, little silt (dump)	"PCB-like" odor 4.5-5.5 ft bg
		4			
		5			water at 5.0 ft bg
		6		Bottom of pit @ 5.5 ft bg	
		7			
		8			
		9			1100-SP collects soil sample TP-29 (5.0) from 5 ft bg at 0, 14
		10			
		11			
		12			
		13			
		14			
		15			
		16			
		17			
		18		0+5, 14 →	
		19		N+45, 14	
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer ^{DOUG} Inspector: Sean Pepling Equip Type: <u>CASE 580L</u>			Dvirka and Bartilucci Test Pit Log		Pit No. TP- <u>30</u> Sheet 1 of <u>1</u> Pit Location: <u>E+45' 1+7' →</u> <u>E+35' 1+7'</u>
Groundwater Observations			Start: <u>11/15/01 - 11/25</u> Finish: <u>11/15/01 - 1210</u> Weather: <u>Overcast, mid 50°SE</u> <u>Wind calm</u>		Plot Plan (see location map)
Water level					
Time					
Date					
Depth of pit					
USCS Classification	Sample No.	Depth	Grass	Description	Comments
		1		DK-med brown f.c SAND, and f.c GRAVEL, little silt (damp)	No evidence of buried objects
		2			
		3		dark zone 3-3.5 ft by	
		4			
		5		lt brown SILT and CLAY, little trace f. gravel (damp) - mottled	
		6		Bottom of pit 5.5 ft by	No elevated PID readings above background (0)
		7			
		8			
		9			
		10			
		11			
		12			
		13			
		14			
		15			
		16			1150 SP collects soil sample TP-S-30(S.D) from 5 ft by at E+40' 1+7'
		17			
		18			
		19		E+45' 1+7' → E+35' 1+7'	
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer <i>Days Rich</i> Inspector: Sean Pepling Equip Type: Case 580L			Dvirka and Bartilucci Test Pit Log		Pit No. TP- <u>3/</u> Sheet 1 of <u>1</u> Pit Location: <u>B+2,7</u> <u>B+12,7</u>
Groundwater Observations			Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Plot Plan (see location map)
Water level			Start: <u>11/15/01 - 1212</u>	Finish: <u>11/15/01 - 1236</u>	
Time			Weather: <u>Mostly cloudy, wpa 50°F</u> <u>Wind calm</u>		
Date					
Depth of pit					
USCS Classification	Sample No.	Depth	Grass/Weeds	Description	Comments
		1		Med-dark brown f.c. sand, some silt, some f.c. gravel (damp)	No evidence of buried objects
		2		Med-orange-brown f.c. sand, some f.c. gravel, little silt (damp)	
		3		Med grey brown f.c. sand and f.c. gravel, little silt (damp)	
		4			
		5			
		6			
		7			
		8			
		9			
		10		Bottom of pit 8 ft by	No elevated PID readings above background (0)
		11			
		12			
		13			
		14			
		15			
		16		B+2,7 → B+12,7	1228 SP collects soil Sample TP-S-31(8.0) from 8 ft by at B+7,7
		17			
		18			
		19			
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer ^{Davis} ^{Rickman} Inspector: Sean Pepling Equip Type: Case 5802			Dvirka and Bartilucci Test Pit Log Project Name: Bouchards Junkyard RI/FS Project #: 1913 - 2A		Pit No. TP- <u>32</u> Sheet 1 of <u>1</u> Pit Location: D+15', 10+25' → D+15', 9+25'
Groundwater Observations Water level Time Date Depth of pit			Start: 11/15/01 - 1238 Finish: 11/15/01 1335 Weather: Overcast, mid 50's F, Wind calm		Plot Plan (see location map)
USCS Classification	Sample No.	Depth	Grass/Weeds	Description	Comments
		1		DK brown f.c SAND, some f.c gravel, little silt (damp)	ballast, coal at south end of track starting at D+15, 9+35' and extending south zone is 1ft thick at north end from 1.5 to 2.5ft by tapers thinner and shallower to south, 0.5ft thick from 0.5 to 1ft by at south end wood log 2ft by at D+15, 9+40'
		2		orange-brown f.c SAND, some f.c gravel, little silt	
		3		DK brown grey f.c SAND and f.c GRAVEL, trace silt (damp)	
		4			
		5			
		6		Bottom of pit 5ft by at North end 3ft by at south end	
		7			
		8		Same	
		9			
		10			
		11		Extended north end to 10ft by	1320 SP collects Soil sample TP-S-32 (10.0) from D+15', 10+20' from 2' depth of 10ft by
		12			
		13			
		14			
		15			
		16			
		17		D+15', 10+25'	
		18		D+15', 10+9+25'	
		19			
		20			
Stratigraphic Summary:					

Contractor: <u>Parratt-Wolff</u> Operator: <u>Brad Palmer</u> DOW's Pickman Inspector: <u>Sean Pepling</u> Equip Type: <u>Case 580L</u>			Dvirka and Bartilucci Test Pit Log Project Name: <u>Bouchards Junkyard RI/FS</u> Project #: <u>1913 - 2A</u>		Pit No. TP- <u>33</u> Sheet 1 of <u>1</u> Pit Location:
Groundwater Observations Water level Time Date Depth of pit			Start: <u>11/15/01 - 1340</u> Finish: <u>11/15/01 - 1450</u> Weather: <u>Partly cloudy, warm 65°F, wind calm</u>		Plot Plan (see location map)
USCS Classification	Sample No.	Depth	Description		Comments
		1	Dark brown f.c. SAND, some f.c. gravel, little silt (clump)		No evidence of buried objects
		2	Med brown f.c. SAND and f.c. GRAVEL, little silt (clump)		
		3	Med brown f.m. SAND, little c. sand, trace silt (moist) (well sorted)		water at 6ft bg 1422 SP collects Soil sample TP- S-33(S.S) from 5.5 ft bg at N+35, 8+40
		4			
		5			
		6			
		7			
		8			
		9	Bottom of pit @ 8ft bg		
		10			
		11			
		12			
		13			
		14			
		15			
		16	N+35, 8+40		
		17	N+35, 8+30		
		18			
		19			
		20			
Stratigraphic Summary:					

Contractor: Parratt-Wolff Operator: Brad Palmer Inspector: Sean Pepling Equip Type: CASE 580L			Dvirka and Bartilucci Test Pit Log		Pit No. TP- 34 Sheet 1 of 1 Pit Location: K+5, 6+15' & K+5, 6+25'
Groundwater Observations			Project Name: Bouchards Junkyard RI/FS Project #: 1913-2A		Plot Plan (see location map)
Water level			Start: 11/15/01 - 1455	Finish: 11/15/01 - 1533 Weather: Overcast, Upper 50's F, 0-2 mph from SW	
Time					
Date					
Depth of pit					
USCS Classification	Sample No.	Depth	Description	Comments	
		1	dk brown f. m sand, some silt, little f. gravel (comp)	debris - starter, glass	
		2	med dk brown - f. c SAND, some gravel, little silt (comp)		
		3			
		4	Med grey SILT and CLAY (moist) little f. m gravel		
		5		water at 5.0 ft by	
		6	Bottom of pit @ 5.2 ft by		
		7			
		8		No PID readings above back ground	
		9			
		10			
		11		1515-SP collects soil sample	
		12		TP-34 (4.5) from 4.5 ft by at K+5, 6+15'	
		13			
		14			
		15			
		16	K+5, 6+15' → K+5, 6+25'		
		17			
		18			
		19			
		20			

Stratigraphic Summary:

Driller: <u>Parratt-Wolff - Doug Thorne / J Archard</u> Inspector: <u>Sean Pepling / G. Gould</u> Rig Type: <u>Mobil B-57</u> Drilling Method: <u>Hollow Stem Auger</u>	Dvirka and Bartilucci Boring Log Project Name: <u>Bouchards RI/FS</u> Project #: <u>1913-2A</u> Boring Depth: <u>25.5</u>	Boring ID: <u>HW-1</u> Sheet <u>1</u> of <u>2</u> Location: _____ <u>E+36' 25+5'</u>

	Groundwater Observations Date: <u>11/14/01</u> Time: <u>8:00</u> DTW: <u>none</u> Casing/Total Depth: <u>14'</u>	Start (Date & Time): <u>11/13/01-1505</u> Finish (Date & Time): <u>11/14/01 11:00</u> Weather: <u>P. Sunny 50°F</u> Elevation of Ground Surface: _____	Location Sketch:

Sample Interval	Sample No.	Blows	PTD (ppm)	Field Description	Well Schematic	Comments
0-2	1507	5	0.0	Rec=0.9 med brown SILT, some f.m sand, trace f.m gravel (damp) (firm)		2' PVC stick-up
2-4	1511	15	0.0	Rec=1.1, same		
4-6	1523	14	0.0	Rec=1.0 same		
6-8	1527	13	0.0	Rec=1.2 same		
8-10	1535	5	0.0	Rec=1.2 Med brown SILT and f. SAND (firm) (moist)		
10-12	1545	8	0.0	same Rec=0.9		
12-14	1550	18	0.0	Rec=0.9 same		
14-16	8:16	14	0.0	moist brown f.m sand, some silt - in subparallel layers		
16-18	8:20	15	0.0	moist brown f.m sand, some silt - in subparallel layers		
18-20	8:30	5	0.0	Wet brown f.m sand		
20		5				

Soil Stratigraphy Summary _____	Resume boring at 8:00 am 11/14/01 - logged by G Gould

Driller: <u>Parratt-Wolff - Doug Thoma</u> <u>J. Richmond</u> Inspector: <u>Sean Pepling</u> <u>G. Gexel</u> Rig Type: <u>Mobil B-57</u> Drilling Method: <u>Hollow Stem Auger</u>	Dvirka and Bartilucci Boring Log Project Name: <u>Bouchards RI/FS</u> Project #: <u>1913-2A</u> Boring Depth: _____	Boring ID: <u>MW1</u> Sheet <u>2</u> of <u>2</u> Location: _____

Date Time DTW Casing/Total Depth	Groundwater Observations	Start (Date & Time): _____	Location Sketch:
		Finish (Date & Time): _____	
		Weather: _____	
		Elevation of Ground Surface: _____	

Sample Interval	Sample No.	Blows	Field Description	Well Schematic	Comments
			10	#0 Sand pack 111 10 slot screen	
			25		
			30	#0 Sand pack	
			35		
			40		

Soil Stratigraphy Summary _____

Driller: Parratt-Wolff
 Inspector: Sean Pepling
 Rig Type: Mobile B-57
 Drilling Method: Hollow Stem Auger

Dvirka and Bartilucci Boring Log
 Project Name: Bouchards RI/FS
 Project #: 1913-2A
 Boring Depth: 75'

Boring ID: KW-2
 Sheet 1 of 1
 Location: H+30, 10

Date Time DTW Casing/Total Depth	Groundwater Observations		Start (Date & Time): <u>11/13/01 - 1247</u>	Location Sketch:
			Finish (Date & Time): <u>11/13/01</u>	
			Weather: <u>Clear, mid 40's F, wind 0-2 mph from NW</u>	
			Elevation of Ground Surface: _____	

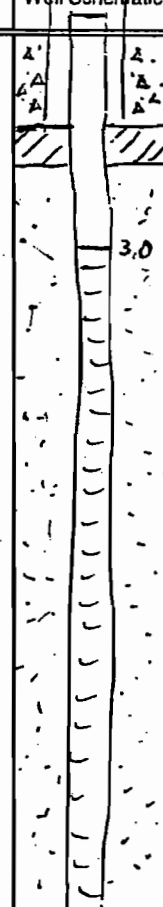
Sample Interval	Sample No.	Blows	RLD (ppm)	Field Description	Well Schematic	Comments
0-2	1250	7	0.0	Brown-Black, f.c SAND and SILT, some s.c gravel (dump) (dense) rec=0.6		
2-4	1252	9	0.0	lt brown f.c SAND, some f.c Gravel, trace silt (dry) (dense) rec=0.4		
4-6	1303	8	0.0	Same rec=0.6		
6-8	1305	8	0.0	dark brown f.c SAND, some f.c Gravel, little silt (dump) (compact) rec=0.1		
8-10	1317	24	0.0	Same rec=0.2 (wet)		
10-12						
12-14						
14-16						
16-18						
18-20						
20-22						
22-24						
24-26						
26-28						
28-30						
30-32						
32-34						
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66-68						
68-70						
70-72						
72-74						
74-76						

Soil Stratigraphy Summary _____

bouchards boring log.xls

Driller: Parratt-WolffInspector: Sean PeplingRig Type: Mobile B-57Drilling Method: Hollow Stem Auger**Dvirka and Bartilucci Boring Log**Project Name: Bouchards RI/FSProject #: 1913-2ABoring Depth: 13Boring ID: MW-4Sheet 1 of 1Location: Rt 16, S + 40'

Date Time DTW Casing/Total Depth	Groundwater Observations		Start (Date & Time): <u>11/13/01-1038</u>	Location Sketch: 
			Finish (Date & Time): <u>11/13/01-1220</u>	
			Weather: <u>Clear, mid 40's F,</u>	
			Wind: <u>0-2 mph from NW</u>	
			Elevation of Ground Surface: _____	

Sample Interval	Sample No.	Blows	PJD (PPD)	Field Description	Well Schematic	Comments
0-2	1038	3	0.0	DK brown SILT and f.c Gravel, little f.c Sand (damp) (Pilot) rec=0.5		1.5
		3				2.0
		4				
		5				
2-4	1040	5	0.0	Lt brown gray f.c SAND, some silt, little m.c Sand (damp) (compact) rec=0.7		
		5				
		7				
		8				
4-6	1048	6	0.0	Med gray f.c SAND, some m.c sand and f.m gravel, little silt (wet) (compact)		
		6				
		5				
		6				
6-8	1050	6	0.0	Med gray f.c SAND, some f.c Gravel, some silt (wet) (compact)		
		7				
		5				
		5				
		</				

[illegible]

Soil Stratigraphy Summary _____

Drilling Method: 2 1/4" HSA Auger with
2' 2" Long SS with 140 lb hammer

Boring Depth: 12.0

Location:

Casing/Total Depth 12.0

Elevation of Ground Surface:

Between H-G + G-G

Soil Stratigraphy Summary

Driller: <u>J Percy</u>	Dvirka and Bartilucci Boring Log Project Name: <u>Boulevard Junkyard</u> Project #: <u>2327</u> Boring Depth: <u>6.5</u>	Boring ID: <u>RD</u>
Inspector: <u>J Magda</u>		Sheet <u>1</u> of <u>1</u>
Rig Type: <u>NA</u>		Location: _____
Drilling Method: <u>Hand Auger</u>		_____

Date Time DTW Casing/Total Depth	Groundwater Observations		Start (Date & Time): 3/29/05 1315	Location Sketch: 
	3/29/05		Finish (Date & Time): 3/29/05 1335	
	3.5	3rd wet	Weather: Cloudy wind 0-10	
	1320		mph Temp 43°F	
	6.5		Elevation of Ground Surface: _____	

[illegible]

Soil Stratigraphy Summary

Boring ID: RD-7
Sheet 1 of 1
Location: _____

Soil Stratigraphy Summary

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APPENDIX C

HYDRAULIC CONDUCTIVITY DATA

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**BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
HYDRAULIC CONDUCTIVITY TESTING RESULTS**

(results presented in cm/s)

Well	Slug	Bail	Geometric Mean
MW-01	2.57E-04	4.43E-04	3.37E-04
MW-02	2.11E-05	1.46E-04	5.55E-05
MW-03	5.49E-04	7.09E-03	1.97E-03
MW-04	2.38E-03	3.38E-03	2.84E-03
MW-05	9.06E-04	6.96E-04	7.94E-04
MW-06	2.61E-04	2.34E-04	2.47E-04

Geometric mean - overburden wells 5.23E-04

Slug/Bail Test Data Sheet

For use with Hermit Datalogger and Bouwer & Rice Data Reduction Methods

Job Name: Bouchards Junkyard Job No: 1913 Site Name: _____

On-Site personnel: S. Pepling

Well ID: 40-1

Well Characteristics

Well Depth: 27.88 ft Well Radius (Inches), Rc= 1"
 Depth to water (static): 22.61 ft Boring Radius (inches), Rw= 4"
 Water Level above well bottom, Lw= _____ Screen Thick. (feet), Le= 10'
 Saturated Aq. Thick. (feet), H= _____

Equipment Specs

Hermit Unit No. 1KC-811

Slug diameter 1"

Slug length 60"

Transducer (PSI): 10 psi

Transducer Serial No. 204239

Slug (Falling Head) Test

Date: 11/27/01
 Start Time: 1108
 Hermit Ref. value (depth to water) 22.61
 XD = _____
 Hermit Test No: Test 0

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)

Finish Time 1200 Finish DTW 22.59

Time: 1640 Date: 12/3/01

Download file (Header & data) MW1in

Download file (data only) _____

Bail (Rising Head) Test

Date: 11/27/01
 Start Time: 1200
 Hermit Ref. value (depth to water) 22.61
 XD = _____
 Hermit Test No: 0 Step 1

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)

Finish Time _____ Finish DTW _____

Time: 1645 Date: 12/3/01

Download file (Header & data) MW1out

Download file (data only) _____

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard
SITE: Bouchards Junkyard

JOB #: 1913

TEST DATE: 11/27/01
TEST TYPE: Slug In

WELL: MW-1

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 22.61 (ft below top of casing)

change	actual				
time	head	head	(h-h)/	log head	best
(secs)	(feet)	change	H ₀	change	fit

22.61 (pre-slug head)

6	22.54	0.08	1.00	-1.119	-0.780
6	22.42	0.19	2.54	-0.714	-0.781
6	22.44	0.17	2.29	-0.759	-0.781
7	22.18	0.43	5.67	-0.366	-0.782
7	22.24	0.37	4.88	-0.431	-0.782
7	21.77	0.84	11.12	-0.073	-0.783
7	22.26	0.36	4.67	-0.450	-0.784
8	22.44	0.18	2.34	-0.750	-0.785
8	21.64	0.97	12.75	-0.014	-0.785
8	22.11	0.51	6.67	-0.295	-0.786
8	21.80	0.82	10.75	-0.088	-0.787
9	22.00	0.61	8.04	-0.214	-0.787
9	22.22	0.40	5.21	-0.402	-0.788
9	21.56	1.05	13.87	0.023	-0.788
9	22.29	0.32	4.25	-0.491	-0.789
9	22.48	0.13	1.71	-0.886	-0.789
10	21.83	0.79	10.37	-0.103	-0.790
10	22.14	0.48	6.29	-0.321	-0.790
10	22.14	0.47	6.25	-0.323	-0.791
10	21.92	0.69	9.12	-0.159	-0.791
10	23.38	-0.76	-10.03	-0.118	-0.792
11	21.91	0.70	9.21	-0.155	-0.793
11	22.34	0.27	3.54	-0.570	-0.793
11	22.21	0.41	5.33	-0.393	-0.794
11	22.40	0.21	2.79	-0.674	-0.794
11	22.08	0.54	7.04	-0.272	-0.795
12	22.43	0.18	2.42	-0.735	-0.795
12	22.29	0.32	4.21	-0.495	-0.796
12	22.37	0.25	3.25	-0.607	-0.796
12	22.39	0.23	3.00	-0.642	-0.797
12	22.34	0.28	3.63	-0.559	-0.797
13	22.48	0.13	1.71	-0.886	-0.798
13	22.27	0.34	4.54	-0.462	-0.798
13	22.42	0.19	2.54	-0.714	-0.799
13	22.39	0.22	2.88	-0.660	-0.799
13	22.38	0.24	3.13	-0.623	-0.800
14	22.41	0.20	2.67	-0.693	-0.801
14	22.39	0.22	2.88	-0.660	-0.801
14	22.43	0.18	2.42	-0.735	-0.802
14	22.40	0.21	2.79	-0.674	-0.802
14	22.40	0.21	2.75	-0.680	-0.803
15	22.42	0.20	2.58	-0.708	-0.803
15	22.40	0.21	2.79	-0.674	-0.804
15	22.50	0.11	1.50	-0.943	-0.804
15	22.34	0.27	3.54	-0.570	-0.805
15	22.45	0.17	2.21	-0.775	-0.805
16	22.40	0.21	2.75	-0.680	-0.806
16	22.41	0.20	2.63	-0.699	-0.806
16	22.42	0.19	2.54	-0.714	-0.807
16	22.42	0.20	2.58	-0.708	-0.808
16	22.42	0.20	2.58	-0.708	-0.808
17	22.31	0.30	4.00	-0.517	-0.809

WELL CHARACTERISTICS

Well Radius, R_c = 1.00 in
Boring Radius, R_w = 3.80 in
Water Level above well bottom, L_w = 5.27 ft
Saturated Screen Thickness, L_s = 5.27 ft
Saturated Aquifer Thickness, H = 5.27 ft

Regression Output:

Constant -0.764
Std Err of Y Est 0.080
R Squared 0.964
No. of Observations 68
Degrees of Freedom 66

X Coefficient(s) -0.00267
Std Err of Coef. 6.35E-05

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

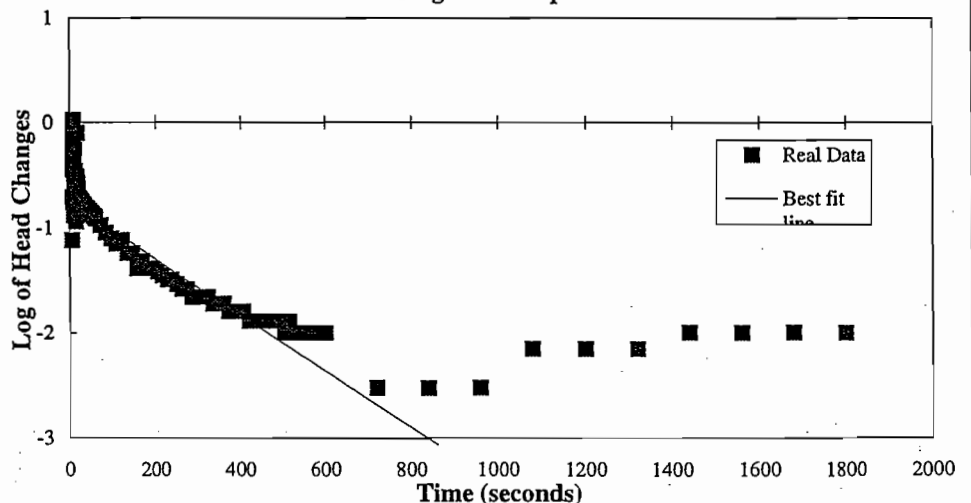
A= 1.95
B= 0.30
C= 1.50

R_c = 2.54 cm
R_{eq} = 2.54 cm
R_w = 9.65 cm
L_s = 160.63 cm
L_w = 160.63 cm
H = 160.63 cm
L_s/R_w = 17
Y₀ = 0.17
Y₁ = 0.16
t = 7.20
ln(R_c/R_w) = 2.08

$$K = ((R_c^2) * \ln(R_c/R_w) / 2L_s) * (1/t * \ln(y_0/y_1))$$

$$K \text{ (cm/s)} = 2.57E-04$$

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-1 SLUG IN		0.227	22.41	0.733	22.47	9.00	22.60
SE1000C		0.230	22.39	0.750	22.47	9.20	22.60
Environmental Logger		0.233	22.43	0.767	22.47	9.40	22.60
12/03 16:43		0.237	22.40	0.783	22.47	9.60	22.60
		0.240	22.40	0.800	22.47	9.80	22.60
Unit# 00811 Test 0		0.243	22.42	0.817	22.47	10.0	22.60
		0.247	22.40	0.833	22.48	12.0	22.61
INPUT 1: Level (F) TOC		0.250	22.50	0.850	22.48	14.0	22.61
		0.253	22.34	0.867	22.48	16.0	22.61
Reference 22.610		0.257	22.45	0.883	22.48	18.0	22.61
Linearity 0.050		0.260	22.40	0.900	22.48	20.0	22.61
Scale factor 10.000		0.263	22.41	0.917	22.48	22.0	22.61
Offset 0.010		0.267	22.42	0.933	22.48	24.0	22.60
Delay mSEC 50.000		0.270	22.42	0.950	22.49	26.0	22.60
		0.273	22.42	0.967	22.49	28.0	22.60
Step 0 11/27 11:08:26		0.277	22.31	0.983	22.49	30.0	22.60
		0.280	22.41	1.00	22.49	32.0	22.60
Elapsed		0.283	22.44	1.20	22.51	34.0	22.60
Time INPUT 1		0.287	22.39	1.40	22.52	36.0	22.60
0.000	22.61	0.290	21.82	1.60	22.53	38.0	22.60
0.100	22.54	0.293	22.75	1.80	22.54	40.0	22.60
0.103	22.42	0.297	22.34	2.00	22.54	42.0	22.60
0.107	22.44	0.300	22.39	2.20	22.56	44.0	22.60
0.110	22.18	0.303	22.45	2.40	22.56	46.0	22.60
0.113	22.24	0.307	22.36	2.60	22.57	48.0	22.60
0.120	21.77	0.310	22.42	2.80	22.57	50.0	22.60
0.123	22.26	0.313	22.38	3.00	22.57	52.0	22.60
0.127	22.44	0.317	22.36	3.20	22.57		
0.130	21.64	0.320	22.44	3.40	22.58		
0.133	22.11	0.323	22.40	3.60	22.58		
0.140	21.80	0.327	22.39	3.80	22.58		
0.143	22.00	0.330	22.42	4.00	22.58		
0.147	22.22	0.333	22.40	4.20	22.58		
0.150	21.56	0.350	22.42	4.40	22.59		
0.153	22.29	0.367	22.42	4.60	22.59		
0.157	22.48	0.383	22.43	4.80	22.59		
0.160	21.83	0.400	22.43	5.00	22.59		
0.163	22.14	0.417	22.43	5.20	22.59		
0.167	22.14	0.433	22.44	5.40	22.59		
0.170	21.92	0.450	22.44	5.60	22.59		
0.173	23.38	0.467	22.44	5.80	22.59		
0.177	21.91	0.483	22.44	6.00	22.59		
0.180	22.34	0.500	22.45	6.20	22.60		
0.183	22.21	0.517	22.45	6.40	22.60		
0.187	22.40	0.533	22.45	6.60	22.60		
0.190	22.08	0.550	22.45	6.80	22.60		
0.193	22.43	0.567	22.45	7.00	22.60		
0.197	22.29	0.583	22.45	7.20	22.60		
0.200	22.37	0.600	22.45	7.40	22.60		
0.203	22.39	0.617	22.46	7.60	22.60		
0.207	22.34	0.633	22.46	7.80	22.60		
0.210	22.48	0.650	22.46	8.00	22.60		
0.213	22.27	0.667	22.46	8.20	22.60		
0.217	22.42	0.683	22.46	8.40	22.60		
0.220	22.39	0.700	22.46	8.60	22.60		
0.223	22.38	0.717	22.47	8.80	22.60		

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard
SITE: Bouchards Junkyard

JOB #: 1913

TEST DATE: 11/27/01
TEST TYPE: Slug Out

WELL: MW-1

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 22.60 (ft below top of casing)

change	actual				
time	head	head	(h-h)/	log head	best
(secs)	(feet)	change	H ₀	change	fit

22.60 (pre-slug head)

3	23.93	-1.33	1.00	0.124	-0.723
3	22.68	-0.08	0.06	-1.086	-0.724
3	23.23	-0.63	0.48	-0.199	-0.725
3	23.26	-0.65	0.49	-0.184	-0.726
3	23.89	-1.29	0.97	0.110	-0.727
4	23.47	-0.87	0.65	-0.060	-0.728
4	23.66	-1.06	0.80	0.027	-0.729
4	23.77	-1.17	0.88	0.070	-0.730
4	23.75	-1.15	0.86	0.060	-0.731
4	23.77	-1.17	0.88	0.069	-0.731
5	23.73	-1.13	0.85	0.052	-0.732
5	23.76	-1.16	0.87	0.064	-0.733
5	23.71	-1.11	0.84	0.046	-0.734
5	23.74	-1.14	0.86	0.058	-0.735
5	23.70	-1.10	0.83	0.041	-0.736
6	23.71	-1.11	0.83	0.044	-0.737
6	23.70	-1.10	0.83	0.041	-0.738
6	23.67	-1.07	0.81	0.031	-0.739
6	23.68	-1.08	0.81	0.034	-0.740
6	23.70	-1.10	0.82	0.039	-0.741
7	23.64	-1.04	0.78	0.015	-0.742
7	23.66	-1.06	0.80	0.027	-0.743
7	23.66	-1.06	0.80	0.027	-0.743
7	23.67	-1.07	0.80	0.029	-0.744
7	23.65	-1.05	0.79	0.020	-0.745
8	23.64	-1.04	0.78	0.015	-0.746
8	23.63	-1.03	0.78	0.013	-0.747
8	23.66	-1.06	0.80	0.024	-0.748
8	23.66	-1.06	0.80	0.027	-0.749
8	23.61	-1.01	0.76	0.005	-0.750
9	23.63	-1.03	0.77	0.012	-0.751
9	23.58	-0.98	0.74	-0.007	-0.752
9	23.60	-1.00	0.75	-0.001	-0.753
9	23.59	-0.99	0.74	-0.006	-0.754
9	23.59	-0.99	0.74	-0.006	-0.754
10	23.57	-0.97	0.73	-0.013	-0.755
10	23.57	-0.97	0.73	-0.014	-0.756
10	23.56	-0.96	0.72	-0.018	-0.757
10	23.57	-0.97	0.73	-0.015	-0.758
10	23.57	-0.97	0.73	-0.011	-0.759
11	23.58	-0.98	0.74	-0.010	-0.760
11	23.56	-0.95	0.72	-0.020	-0.761
11	23.52	-0.92	0.70	-0.034	-0.762
11	23.52	-0.92	0.69	-0.037	-0.763
11	23.55	-0.95	0.71	-0.024	-0.764
12	23.53	-0.93	0.70	-0.033	-0.765
12	23.52	-0.92	0.69	-0.037	-0.766
12	23.51	-0.91	0.69	-0.039	-0.766
12	23.51	-0.91	0.68	-0.042	-0.767
12	23.51	-0.90	0.68	-0.043	-0.768
13	23.50	-0.90	0.68	-0.046	-0.769
13	23.49	-0.89	0.67	-0.051	-0.770

WELL CHARACTERISTICS

Well Radius, $R_c =$ 1.00 in
 Boring Radius, $R_w =$ 3.80 in
 Water Level above well bottom, $L_w =$ 5.27 ft
 Saturated Screen Thickness, $L_s =$ 5.27 ft
 Saturated Aquifer Thickness, $H =$ 5.27 ft

Regression Output:

Constant -0.711
 Std Err of Y Est 0.060
 R Squared 0.972
 No. of Observations 21
 Degrees of Freedom 19

 X Coefficient(s) -0.00461
 Std Err of Coef. 0.00018

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

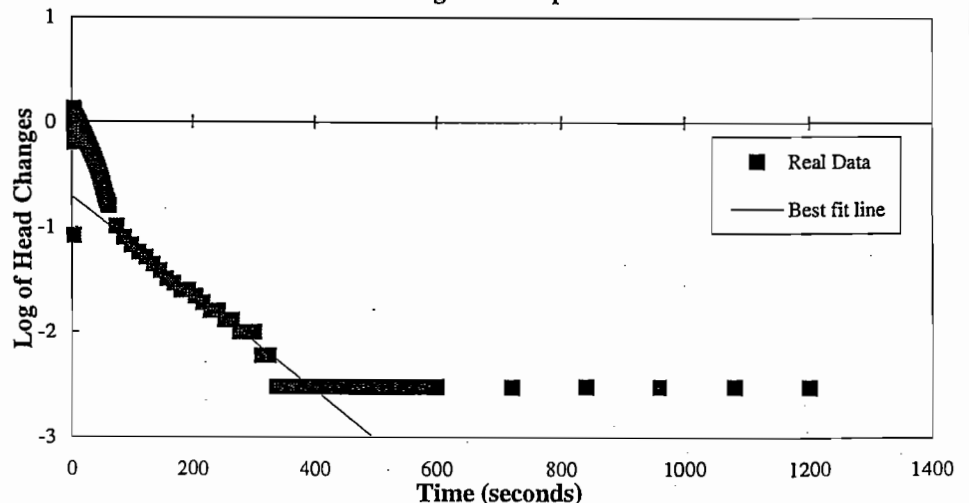
A= 1.95
 B= 0.30
 C= 1.50

$R_c =$ 2.54 cm
 $R_{eq} =$ 2.54 cm
 $R_w =$ 9.65 cm
 $L_s =$ 160.63 cm
 $L_w =$ 160.63 cm
 $H =$ 160.63 cm
 $L_s/R_w =$ 17
 $Y_0 =$ 0.19
 $Y_1 =$ 0.19
 $t =$ 3.60
 $\ln(R_c/R_w) =$ 2.08

$$K = ((R_c^2) * \ln(R_c/R_w) / 2L_s) * (1/t * \ln(y_0/y_1))$$

$$K \text{ (cm/s)} = 4.43E-04$$

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-1 SLUG OUT		0.163	23.57	0.417	23.23	5.2	22.61
SE1000C		0.167	23.56	0.433	23.21	5.4	22.61
Environmental Logger		0.170	23.57	0.450	23.19	5.6	22.60
12/03 16:46		0.173	23.57	0.467	23.17	5.8	22.60
		0.177	23.58	0.483	23.15	6.0	22.60
Unit# 00811 Test 0		0.180	23.56	0.500	23.14	6.2	22.60
		0.183	23.52	0.517	23.12	6.4	22.60
INPUT 1: Level (F) TOC		0.187	23.52	0.533	23.10	6.6	22.60
		0.190	23.55	0.550	23.09	6.8	22.60
Reference 22.610		0.193	23.53	0.567	23.07	7.0	22.60
Linearity 0.050		0.197	23.52	0.583	23.06	7.2	22.60
Scale factor 10.000		0.200	23.51	0.600	23.04	7.4	22.60
Offset 0.010		0.203	23.51	0.617	23.02	7.6	22.60
Delay mSEC 50.000		0.207	23.51	0.633	23.01	7.8	22.60
		0.210	23.50	0.650	22.99	8.0	22.60
Step 1 11/27 12:01:18		0.213	23.49	0.667	22.98	8.2	22.60
		0.217	23.49	0.683	22.96	8.4	22.60
Elapsed		0.220	23.48	0.700	22.95	8.6	22.60
Time INPUT 1		0.223	23.47	0.717	22.94	8.8	22.60
0.000	22.60	0.227	23.47	0.733	22.92	9.0	22.60
0.043	23.93	0.230	23.47	0.750	22.91	9.2	22.60
0.047	22.68	0.233	23.46	0.767	22.89	9.4	22.60
0.050	23.23	0.237	23.46	0.783	22.88	9.6	22.60
0.053	23.26	0.240	23.45	0.800	22.87	9.8	22.60
0.057	23.89	0.243	23.45	0.817	22.86	10	22.60
0.060	23.47	0.247	23.45	0.833	22.84	12	22.60
0.063	23.66	0.250	23.44	0.850	22.83	14	22.60
0.067	23.77	0.253	23.44	0.867	22.82	16	22.60
0.070	23.75	0.257	23.43	0.883	22.81	18	22.60
0.073	23.77	0.260	23.43	0.900	22.80	20	22.60
0.077	23.73	0.263	23.42	0.917	22.79	22	22.60
0.080	23.76	0.267	23.42	0.933	22.78	24	22.60
0.083	23.71	0.270	23.41	0.950	22.78	26	22.60
0.087	23.74	0.273	23.41	0.967	22.77	28	22.60
0.090	23.70	0.277	23.40	0.983	22.76	30	22.60
0.093	23.71	0.280	23.40	1.0	22.76	32	22.60
0.097	23.70	0.283	23.40	1.2	22.70	34	22.60
0.100	23.67	0.287	23.39	1.4	22.68	36	22.60
0.103	23.68	0.290	23.39	1.6	22.67	38	22.60
0.107	23.70	0.293	23.38	1.8	22.66	40	22.60
0.110	23.64	0.297	23.38	2.0	22.65	42	22.60
0.113	23.66	0.300	23.38	2.2	22.64	44	22.60
0.117	23.66	0.303	23.37	2.4	22.64	46	22.60
0.120	23.67	0.307	23.37	2.6	22.63	48	22.60
0.123	23.65	0.310	23.36	2.8	22.63	50	22.60
0.127	23.64	0.313	23.36	3.0	22.63	52	22.60
0.130	23.63	0.317	23.35	3.2	22.63	54	22.60
0.133	23.66	0.320	23.35	3.4	22.62	56	22.60
0.137	23.66	0.323	23.34	3.6	22.62	58	22.60
0.140	23.61	0.327	23.34	3.8	22.62	60	22.60
0.143	23.63	0.330	23.34	4.0	22.62		
0.147	23.58	0.333	23.33	4.2	22.61		
0.150	23.60	0.350	23.31	4.4	22.61		
0.153	23.59	0.367	23.29	4.6	22.61		
0.157	23.59	0.383	23.27	4.8	22.61		
0.160	23.57	0.400	23.25	5.0	22.61		

Slug/Bail Test Data Sheet

For use with Hermit Datalogger and Bouwer & Rice Data Reduction Methods

Job Name: Boucher's Junk Yard

Job No: 1917

Site Name: _____

On-Site personnel: G. Gould

Well ID: MW-2

Well Characteristics

Well Depth: 17.58 ^{17.74}

Well Radius (Inches), Rc= 1"

Depth to water (static): 11.07

Boring Radius (inches), Rw= 4"

Water Level above well bottom, Lw= _____

Screen Thick. (feet), Le= 10'

Saturated Aq. Thick. (feet), H= _____

Equipment Specs

Slug diameter 1"

Hermit Unit No. 811

Slug length 60"

Transducer (PSI): _____

Transducer Serial No. _____

Slug (Falling Head) Test

Date: 11/21/01

Start Time: 16:43

Hermit Ref. value (depth to water) 11.07

XD = 4.90

Hermit Test No: 5

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)
0.00	11.06		
0.50	10.80		
3	10.83		
7	10.86		
10	10.87		
16	10.90		
60	10.95		
850	10.98		

Finish Time 7:07 ^{11/21/01} Finish DTW _____

Time: 1655

Date: 12/3/01

Download file (Header & data) MW2 in

Download file (data only) _____

Bail (Rising Head) Test

Date: 11/28/01

Start Time: 7:10

Hermit Ref. value (depth to water) 10.97

XD = 4.99

Hermit Test No: 6

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)
7	11.26		
10	11.19		
20	11.09		
32	11.05		

Finish Time 7:44 Finish DTW 11.07

Time: 1700

Date: 12/3/01

Download file (Header & data) MW2 out

Download file (data only) _____

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard

JOB #: 1913

SITE: Bouchards Junkyard

TEST DATE: 11/27/01

WELL: MW-2

TEST TYPE: Slug In

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 11.07 (ft below top of casing)

change time (secs)	actual head (feet)	head change	(h-h) H ₀	log head change	best fit

11.07 (pre-slug head)

2	10.85	0.22	1.00	-0.666	-0.573
2	10.91	0.16	0.75	-0.790	-0.573
2	10.55	0.52	2.41	-0.284	-0.573
2	10.28	0.80	3.68	-0.100	-0.573
3	9.33	1.74	8.05	0.240	-0.573
3	9.96	1.12	5.16	0.047	-0.573
3	10.87	0.20	0.91	-0.706	-0.574
3	10.23	0.84	3.88	-0.076	-0.574
3	10.27	0.80	3.69	-0.098	-0.574
4	10.09	0.98	4.53	-0.009	-0.574
4	10.38	0.69	3.21	-0.159	-0.574
4	10.82	0.25	1.16	-0.600	-0.574
4	9.50	1.57	7.27	0.196	-0.574
4	10.08	1.00	4.61	-0.002	-0.574
5	13.26	-2.19	-10.13	0.340	-0.574
5	10.77	0.30	1.41	-0.517	-0.574
5	9.97	1.10	5.07	0.040	-0.574
5	10.68	0.39	1.81	-0.409	-0.574
5	10.53	0.55	2.52	-0.264	-0.574
6	10.48	0.59	2.73	-0.230	-0.574
6	10.62	0.45	2.08	-0.347	-0.574
6	10.53	0.54	2.51	-0.266	-0.574
6	10.63	0.44	2.06	-0.353	-0.574
6	10.59	0.48	2.23	-0.317	-0.574
7	10.63	0.44	2.02	-0.360	-0.574
7	10.63	0.44	2.06	-0.353	-0.574
7	10.65	0.42	1.95	-0.376	-0.575
7	10.65	0.42	1.94	-0.379	-0.575
7	10.66	0.41	1.88	-0.391	-0.575
8	10.67	0.40	1.86	-0.396	-0.575
8	10.68	0.39	1.82	-0.406	-0.575
8	10.68	0.39	1.79	-0.412	-0.575
8	10.69	0.38	1.76	-0.420	-0.575
8	10.70	0.37	1.73	-0.427	-0.575
9	10.70	0.37	1.70	-0.434	-0.575
9	10.71	0.37	1.69	-0.438	-0.575
9	10.71	0.36	1.66	-0.446	-0.575
9	10.72	0.36	1.64	-0.450	-0.575
9	10.72	0.35	1.63	-0.453	-0.575
10	10.72	0.35	1.62	-0.457	-0.575
10	10.72	0.35	1.60	-0.461	-0.575
10	10.73	0.34	1.58	-0.466	-0.575
10	10.73	0.34	1.57	-0.470	-0.575
10	10.73	0.34	1.56	-0.474	-0.575
11	10.74	0.33	1.54	-0.478	-0.575
11	10.74	0.33	1.53	-0.481	-0.576
11	10.74	0.33	1.51	-0.485	-0.576
11	10.75	0.32	1.50	-0.491	-0.576
11	10.75	0.32	1.50	-0.491	-0.576
12	10.75	0.32	1.48	-0.495	-0.576
12	10.75	0.32	1.48	-0.495	-0.576
12	10.75	0.32	1.47	-0.499	-0.576

WELL CHARACTERISTICS

Well Radius, $R_c =$ 1.00 in
 Boring Radius, $R_w =$ 3.80 in
 Water Level above well bottom, $L_w =$ 6.67 ft
 Saturated Screen Thickness, $L_s =$ 6.67 ft
 Saturated Aquifer Thickness, $H =$ 6.67 ft

Regression Output:

Constant -0.573
 Std Err of Y Est 0.008
 R Squared 0.974
 No. of Observations 76
 Degrees of Freedom 74

X Coefficient(s) -0.00026
 Std Err of Coef. 4.87E-06

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

A= 2.20
 B= 0.30
 C= 1.70

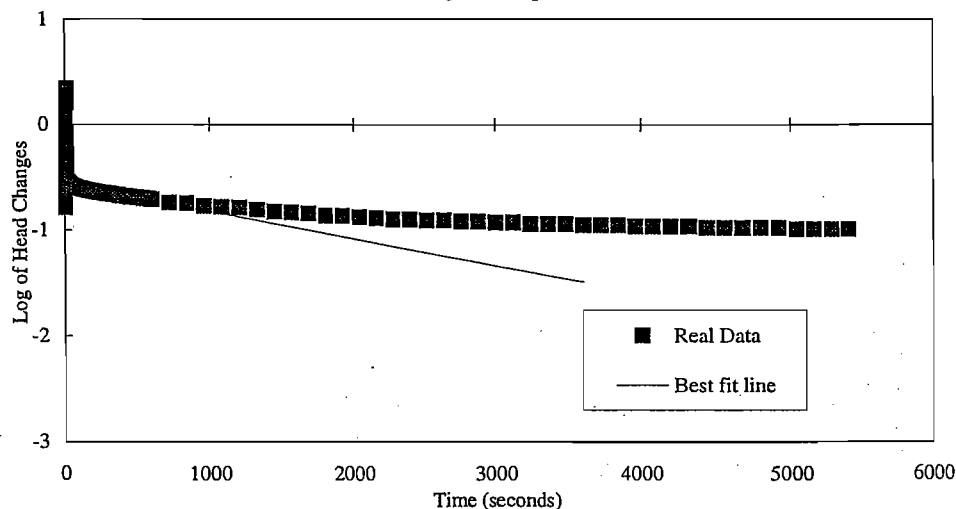
$R_c =$ 2.54 cm
 $R_{eq} =$ 2.54 cm
 $R_w =$ 9.65 cm
 $L_s =$ 203.30 cm
 $L_w =$ 203.30 cm
 $H =$ 203.30 cm
 $L_e/R_w =$ 21
 $Y_0 =$ 0.27
 $Y_1 =$ 0.27
 $t =$ 2.80

$\ln(R_e/R_w) =$ 2.26

$K = ((R_c^2) * \ln(R_e/R_w)/2L_s) * (1/t * \ln(y_0/y_1))$

K (cm/s) = 2.11E-05

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-2 SLUG IN		0.150	10.71	0.350	10.79	4.4	10.85
SE1000C		0.153	10.72	0.367	10.79	4.6	10.85
Environmental Logger		0.157	10.72	0.383	10.79	4.8	10.85
12/03 16:55		0.160	10.72	0.400	10.79	5.0	10.85
		0.163	10.72	0.417	10.79	5.2	10.85
Unit# 00811 Test 5		0.167	10.73	0.433	10.80	5.4	10.85
		0.170	10.73	0.450	10.80	5.6	10.85
INPUT 1: Level (F) TOC		0.173	10.73	0.467	10.80	5.8	10.85
		0.177	10.74	0.483	10.80	6.0	10.85
Reference 11.070		0.180	10.74	0.500	10.80	6.2	10.86
Linearity 0.050		0.183	10.74	0.517	10.80	6.4	10.86
Scale factor 10.000		0.187	10.75	0.533	10.80	6.6	10.86
Offset 0.010		0.190	10.75	0.550	10.80	6.8	10.86
Delay mSEC 50.000		0.193	10.75	0.567	10.80	7.0	10.86
		0.197	10.75	0.583	10.80	7.2	10.86
Step 0 11/27 16:43:25		0.200	10.75	0.600	10.80	7.4	10.86
		0.203	10.75	0.617	10.80	7.6	10.87
Elapsed		0.207	10.76	0.633	10.80	7.8	10.87
Time INPUT 1		0.210	10.76	0.650	10.80	8.0	10.87
0.000 11.07		0.213	10.76	0.667	10.80	8.2	10.87
0.030 10.85		0.217	10.76	0.683	10.80	8.4	10.87
0.033 10.91		0.220	10.76	0.700	10.81	8.6	10.87
0.037 10.55		0.223	10.76	0.717	10.81	8.8	10.87
0.040 10.28		0.227	10.77	0.733	10.81	9.0	10.87
0.043 9.33		0.230	10.77	0.750	10.81	9.2	10.87
0.047 9.96		0.233	10.77	0.767	10.81	9.4	10.87
0.050 10.87		0.237	10.77	0.783	10.81	9.6	10.87
0.053 10.23		0.240	10.77	0.800	10.81	9.8	10.88
0.057 10.27		0.243	10.77	0.817	10.81	10	10.88
0.060 10.09		0.247	10.77	0.833	10.81	12	10.89
0.063 10.38		0.250	10.77	0.850	10.81	14	10.89
0.067 10.82		0.253	10.77	0.867	10.81	16	10.90
0.070 9.50		0.257	10.78	0.883	10.81	18	10.91
0.073 10.08		0.260	10.78	0.900	10.81	20	10.91
0.077 13.26		0.263	10.78	0.917	10.81	22	10.91
0.080 10.77		0.267	10.78	0.933	10.81	24	10.92
0.083 9.97		0.270	10.78	0.950	10.81	26	10.92
0.087 10.68		0.273	10.78	0.967	10.81	28	10.93
0.090 10.53		0.277	10.78	0.983	10.81	30	10.93
0.093 10.48		0.280	10.78	1.0	10.81	32	10.93
0.097 10.62		0.283	10.78	1.2	10.82	34	10.94
0.100 10.53		0.287	10.78	1.4	10.82	36	10.94
0.103 10.63		0.290	10.78	1.6	10.82	38	10.94
0.107 10.59		0.293	10.78	1.8	10.82	40	10.94
0.110 10.63		0.297	10.78	2.0	10.83	42	10.95
0.113 10.63		0.300	10.78	2.2	10.83	44	10.95
0.117 10.65		0.303	10.78	2.4	10.83	46	10.95
0.120 10.65		0.307	10.79	2.6	10.83	48	10.95
0.123 10.66		0.310	10.79	2.8	10.84	50	10.95
0.127 10.67		0.313	10.79	3.0	10.84	52	10.95
0.130 10.68		0.317	10.79	3.2	10.84	54	10.96
0.133 10.68		0.320	10.79	3.4	10.84	56	10.96
0.137 10.69		0.323	10.79	3.6	10.84	58	10.96
0.140 10.70		0.327	10.79	3.8	10.84	60	10.96
0.143 10.70		0.330	10.79	4.0	10.85	62	10.96
0.147 10.71		0.333	10.79	4.2	10.85	64	10.96

66	10.96	685	10.98
68	10.96	700	10.98
70	10.96	715	10.98
72	10.96	730	10.98
74	10.97	745	10.98
76	10.97	760	10.98
78	10.97	775	10.98
80	10.97	790	10.98
82	10.97	805	10.98
84	10.97	820	10.98
86	10.97	835	10.98
88	10.97	850	10.98
90	10.97		
92	10.97		
94	10.97		
96	10.97		
98	10.97		
100	10.97		
115	10.98		
130	10.98		
145	10.98		
160	10.98		
175	10.98		
190	10.98		
205	10.98		
220	10.98		
235	10.98		
250	10.98		
265	10.98		
280	10.98		
295	10.98		
310	10.98		
325	10.98		
340	10.98		
355	10.98		
370	10.98		
385	10.98		
400	10.98		
415	10.98		
430	10.98		
445	10.98		
460	10.98		
475	10.98		
490	10.98		
505	10.98		
520	10.98		
535	10.98		
550	10.98		
565	10.98		
580	10.98		
595	10.98		
610	10.98		
625	10.98		
640	10.98		
655	10.98		
670	10.98		

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard

JOB #: 1913

SITE: Bouchards Junkyard

TEST DATE: 11/27/01

WELL: MW-2

TEST TYPE: Slug Out

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 10.97 (ft below top of casing)

change time (secs)	actual head (feet)	head change	(h-h) H ₀	log head change	best fit

10.97 (pre-slug head)

0	11.04	-0.07	1.00	-1.161	0.062
0	12.94	-1.97	28.61	0.295	0.061
1	11.44	-0.47	6.87	-0.324	0.061
1	11.38	-0.41	5.91	-0.389	0.061
1	11.55	-0.58	8.39	-0.237	0.060
1	11.97	-1.00	14.45	-0.001	0.060
1	12.21	-1.24	18.01	0.084	0.059
2	12.29	-1.32	19.12	0.120	0.059
2	12.60	-1.63	23.61	0.212	0.059
2	12.62	-1.65	23.93	0.218	0.058
2	12.49	-1.52	21.96	0.180	0.058
2	12.56	-1.59	22.97	0.200	0.058
3	12.54	-1.57	22.70	0.195	0.057
3	12.53	-1.56	22.61	0.193	0.057
3	12.51	-1.54	22.29	0.187	0.057
3	12.47	-1.50	21.68	0.175	0.056
3	12.49	-1.52	21.96	0.180	0.056
4	12.50	-1.53	22.10	0.183	0.056
4	12.50	-1.53	22.14	0.184	0.055
4	12.47	-1.50	21.78	0.177	0.055
4	12.52	-1.55	22.42	0.189	0.055
4	12.49	-1.52	22.06	0.182	0.054
5	12.46	-1.49	21.64	0.174	0.054
5	12.48	-1.51	21.91	0.180	0.053
5	12.47	-1.50	21.74	0.176	0.053
5	12.46	-1.49	21.64	0.174	0.053
5	12.46	-1.49	21.64	0.174	0.052
6	12.45	-1.48	21.51	0.171	0.052
6	12.45	-1.48	21.46	0.171	0.052
6	12.45	-1.48	21.41	0.169	0.051
6	12.44	-1.47	21.36	0.168	0.051
6	12.44	-1.47	21.28	0.167	0.051
7	12.44	-1.47	21.23	0.166	0.050
7	12.43	-1.46	21.19	0.165	0.050
7	12.43	-1.46	21.13	0.164	0.050
7	12.42	-1.45	21.04	0.162	0.049
7	12.42	-1.45	21.00	0.161	0.049
8	12.42	-1.45	20.96	0.160	0.048
8	12.41	-1.44	20.86	0.158	0.048
8	12.41	-1.44	20.81	0.157	0.048
8	12.40	-1.43	20.77	0.156	0.047
8	12.40	-1.43	20.72	0.155	0.047
9	12.40	-1.43	20.68	0.154	0.047
9	12.39	-1.42	20.64	0.154	0.046
9	12.39	-1.42	20.59	0.153	0.046
9	12.38	-1.41	20.49	0.150	0.046
9	12.38	-1.41	20.45	0.150	0.045
10	12.38	-1.41	20.41	0.149	0.045
10	12.38	-1.41	20.36	0.148	0.045
10	12.37	-1.40	20.32	0.147	0.044
10	12.37	-1.40	20.26	0.146	0.044
10	12.37	-1.40	20.22	0.145	0.043

WELL CHARACTERISTICS

Well Radius, R_c = 1.00 in
 Boring Radius, R_w = 3.80 in
 Water Level above well bottom, L_w = 6.77 ft
 Saturated Screen Thickness, L_s = 6.77 ft
 Saturated Aquifer Thickness, H = 6.77 ft

Regression Output:

Constant 0.062
 Std Err of Y Est 0.020
 R Squared 0.981
 No. of Observations 51
 Degrees of Freedom 49
 X Coefficient(s) -0.00178
 Std Err of Coef. 3.5E-05

BOUWER/RICE

R_c = 2.54 cm

SLUG TEST CALCULATIONS

R_{eq} = 2.54 cm

R_w = 9.65 cm

From Fig.2,

L_s = 206.35 cm

Bouwer&Rice,1989:

L_w = 206.35 cm

A= 2.20

H = 206.35 cm

B= 0.30

L_s/R_w = 21

C= 1.70

Y_o = 1.15

Y_t = 1.15

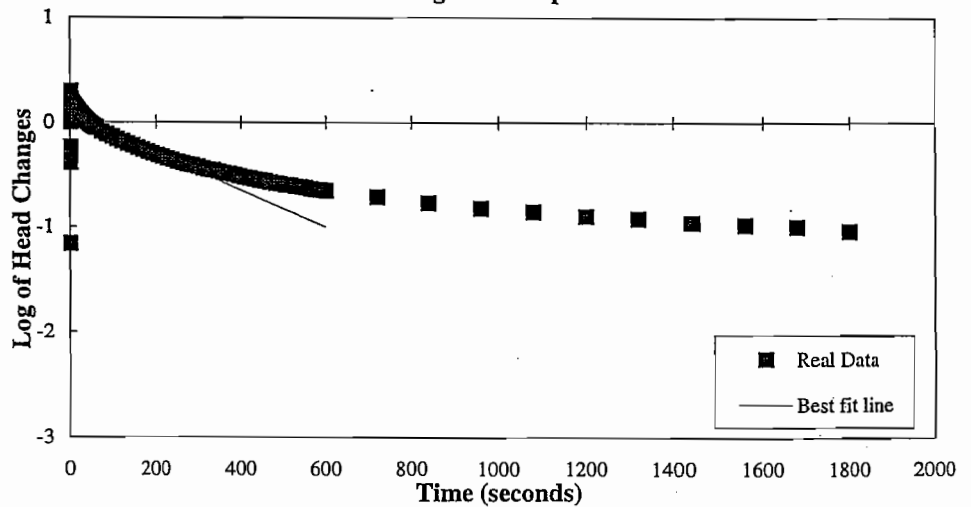
t = 1.20

$\ln(R_c/R_w)$ = 2.28

$$K = ((R_c^2) * \ln(R_c/R_w)/2L_s) * (1/t * \ln(y_o/y_t))$$

K (cm/s) = 1.46E-04

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-2 SLUG OUT		0.123	12.42	0.310	12.23	2.8	11.51
SE1000C		0.127	12.42	0.313	12.23	3.0	11.49
Environmental Logger		0.130	12.41	0.317	12.23	3.2	11.47
12/03 16:59		0.133	12.41	0.320	12.22	3.4	11.45
		0.137	12.40	0.323	12.22	3.6	11.44
Unit# 00811 Test 6		0.140	12.40	0.327	12.22	3.8	11.42
		0.143	12.40	0.330	12.21	4.0	11.41
INPUT 1: Level (F) TOC		0.147	12.39	0.333	12.21	4.2	11.39
		0.150	12.39	0.350	12.20	4.4	11.38
Reference 10.970		0.153	12.38	0.367	12.18	4.6	11.37
Linearity 0.050		0.157	12.38	0.383	12.17	4.8	11.36
Scale factor 10.000		0.160	12.38	0.400	12.15	5.0	11.35
Offset 0.010		0.163	12.38	0.417	12.14	5.2	11.33
Delay mSEC 50.000		0.167	12.37	0.433	12.13	5.4	11.32
		0.170	12.37	0.450	12.11	5.6	11.32
Step 0 11/28 07:10:29		0.173	12.37	0.467	12.10	5.8	11.31
		0.177	12.36	0.483	12.09	6.0	11.30
Elapsed		0.180	12.36	0.500	12.07	6.2	11.29
Time INPUT 1		0.183	12.35	0.517	12.07	6.4	11.29
0.000 10.97		0.187	12.35	0.533	12.05	6.6	11.28
0.003 11.04		0.190	12.35	0.550	12.04	6.8	11.27
0.007 12.94		0.193	12.34	0.567	12.03	7.0	11.26
0.010 11.44		0.197	12.34	0.583	12.02	7.2	11.26
0.013 11.38		0.200	12.34	0.600	12.01	7.4	11.25
0.017 11.55		0.203	12.33	0.617	12.00	7.6	11.25
0.020 11.97		0.207	12.33	0.633	11.99	7.8	11.24
0.023 12.21		0.210	12.33	0.650	11.98	8.0	11.23
0.027 12.29		0.213	12.32	0.667	11.97	8.2	11.23
0.030 12.60		0.217	12.32	0.683	11.97	8.4	11.22
0.033 12.62		0.220	12.32	0.700	11.96	8.6	11.22
0.037 12.49		0.223	12.32	0.717	11.95	8.8	11.21
0.040 12.56		0.227	12.31	0.733	11.94	9.0	11.21
0.043 12.54		0.230	12.31	0.750	11.94	9.2	11.21
0.047 12.53		0.233	12.30	0.767	11.93	9.4	11.20
0.050 12.51		0.237	12.30	0.783	11.92	9.6	11.20
0.053 12.47		0.240	12.30	0.800	11.92	9.8	11.19
0.057 12.49		0.243	12.29	0.817	11.91	10	11.19
0.060 12.50		0.247	12.29	0.833	11.90	12	11.16
0.063 12.50		0.250	12.29	0.850	11.89	14	11.14
0.067 12.47		0.253	12.28	0.867	11.89	16	11.12
0.070 12.52		0.257	12.28	0.883	11.88	18	11.11
0.073 12.49		0.260	12.28	0.900	11.88	20	11.10
0.077 12.46		0.263	12.27	0.917	11.88	22	11.09
0.080 12.48		0.267	12.27	0.933	11.87	24	11.08
0.083 12.47		0.270	12.27	0.950	11.86	26	11.07
0.087 12.46		0.273	12.26	0.967	11.86	28	11.07
0.090 12.46		0.277	12.26	0.983	11.86	30	11.06
0.093 12.45		0.280	12.26	1.0	11.85		
0.097 12.45		0.283	12.25	1.2	11.78		
0.100 12.45		0.287	12.25	1.4	11.74		
0.103 12.44		0.290	12.25	1.6	11.70		
0.107 12.44		0.293	12.25	1.8	11.66		
0.110 12.44		0.297	12.24	2.0	11.63		
0.113 12.43		0.300	12.24	2.2	11.60		
0.117 12.43		0.303	12.24	2.4	11.57		
0.120 12.42		0.307	12.23	2.6	11.54		

Slug/Bail Test Data Sheet

For use with Hermit Datalogger and Bouwer & Rice Data Reduction Methods

Job Name: _____ Job No: _____ Site Name: _____

On-Site personnel: G Gould

Well ID: MW-3

Well Characteristics

Well Depth: 21.05⁹⁸ 21.32 Well Radius (Inches), Rc= _____
 Depth to water (static): 12.95 Boring Radius (inches), Rw= _____
 Water Level above well bottom, Lw= _____ Screen Thick. (feet), Le= _____
 Saturated Aq. Thick. (feet), H= _____

Equipment Specs

Hermit Unit No. 811

Slug diameter 1"

Transducer (PSI): 10

Slug length 60'

Transducer Serial No. _____

Slug (Falling Head) Test

Date: 11/21/01
 Start Time: 15:52
 Hermit Ref. value (depth to water) 12.95
 XD = 6.63
 Hermit Test No: 3

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)
0.10	12.53		
0.25	12.90		
0.90	12.86		
3.00	12.86		
5.00	12.86		
8.00	12.86		
9.00	12.86		
12.00	12.87		

Finish Time 16:07 Finish DTW 12.95

Time: 1702 Date: 12/3/01

Download file (Header & data) MW3in

Download file (data only) _____

Bail (Rising Head) Test

Date: 11/27/01
 Start Time: 16:09
 Hermit Ref. value (depth to water) 12.95
 XD = 6.71
 Hermit Test No: 4

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)
0.07	13.05		
0.05	13.71		
0.10	13.21		
0.20	12.94		
0.30	12.95		
6.00	12.94		
9.00	12.94		
10.00	12.94		

Finish Time 16:22 Finish DTW 12.97

Time: 1708 Date: 12/3/01

Download file (Header & data) MW3out

Download file (data only) _____

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard

JOB #: 1913

SITE: Bouchards Junkyard

TEST DATE: 11/27/01

WELL: MW-3

TEST TYPE: Slug In

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 12.95 (ft below top of casing)

change actual

time head head (h-h)/ log head best
(secs) (feet) change H₀ change fit

12.95 (pre-slug head)

2	12.21	0.73	1.00	-0.134	-0.934
2	11.53	1.42	1.93	0.151	-0.935
2	12.61	0.33	0.46	-0.475	-0.938
2	12.35	0.60	0.81	-0.223	-0.940
3	12.18	0.76	1.04	-0.117	-0.941
3	12.37	0.58	0.79	-0.237	-0.943
3	12.58	0.36	0.50	-0.439	-0.944
3	12.02	0.93	1.26	-0.032	-0.946
3	12.58	0.37	0.50	-0.435	-0.947
4	12.27	0.68	0.92	-0.169	-0.949
4	11.77	1.17	1.59	0.069	-0.950
4	12.13	0.81	1.11	-0.089	-0.952
4	12.31	0.63	0.86	-0.199	-0.953
4	12.25	0.70	0.95	-0.157	-0.955
5	12.50	0.45	0.61	-0.351	-0.957
5	12.98	-0.04	-0.05	-1.456	-0.960
5	12.59	0.36	0.49	-0.442	-0.961
5	12.64	0.31	0.42	-0.513	-0.963
6	12.78	0.16	0.22	-0.785	-0.964
6	12.32	0.63	0.85	-0.203	-0.966
6	12.53	0.41	0.56	-0.382	-0.967
6	12.91	0.04	0.05	-1.420	-0.969
6	12.83	0.11	0.16	-0.943	-0.970
7	12.22	0.73	0.99	-0.138	-0.973
7	12.11	0.84	1.14	-0.076	-0.975
7	12.92	0.02	0.03	-1.658	-0.978
8	12.71	0.23	0.32	-0.631	-0.979
8	12.73	0.22	0.30	-0.656	-0.981
8	12.75	0.20	0.27	-0.701	-0.982
8	12.75	0.19	0.26	-0.714	-0.984
8	12.76	0.18	0.25	-0.738	-0.986
9	12.77	0.18	0.24	-0.752	-0.987
9	12.78	0.17	0.23	-0.775	-0.989
9	12.78	0.16	0.22	-0.785	-0.990
9	12.79	0.16	0.21	-0.801	-0.992
9	12.79	0.15	0.21	-0.810	-0.993
10	12.80	0.15	0.20	-0.827	-0.995
10	12.80	0.15	0.20	-0.839	-0.996
10	12.80	0.14	0.19	-0.848	-0.998
10	12.81	0.14	0.19	-0.857	-0.999
10	12.81	0.14	0.19	-0.866	-1.001
10	12.81	0.13	0.18	-0.876	-1.002
11	12.82	0.13	0.18	-0.889	-1.004
11	12.82	0.13	0.18	-0.889	-1.005
11	12.82	0.13	0.17	-0.900	-1.007
11	12.82	0.12	0.17	-0.910	-1.008
12	12.82	0.12	0.17	-0.910	-1.010
12	12.83	0.12	0.16	-0.921	-1.011
12	12.83	0.12	0.16	-0.921	-1.013
12	12.83	0.12	0.16	-0.932	-1.014
12	12.83	0.12	0.16	-0.932	-1.016
13	12.83	0.11	0.16	-0.943	-1.018

WELL CHARACTERISTICS

Well Radius, $R_c =$ 1.00 in
 Boring Radius, $R_w =$ 3.80 in
 Water Level above well bottom, $L_w =$ 8.37 ft
 Saturated Screen Thickness, $L_s =$ 8.37 ft
 Saturated Aquifer Thickness, $H =$ 8.37 ft

Regression Output:

Constant -0.921
 Std Err of Y Est 0.015
 R Squared 0.476
 No. of Observations 15
 Degrees of Freedom 13

 X Coefficient(s) -0.00762
 Std Err of Coef. 0.002218

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

A= 2.25
 B= 0.35
 C= 1.80

$R_c =$ 2.54 cm

$R_{eq} =$ 2.54 cm

$R_w =$ 9.65 cm

$L_s =$ 255.12 cm

$L_w =$ 255.12 cm

$H =$ 255.12 cm

$L_s/R_w =$ 26

$Y_o =$ 0.12

$Y_t =$ 0.11

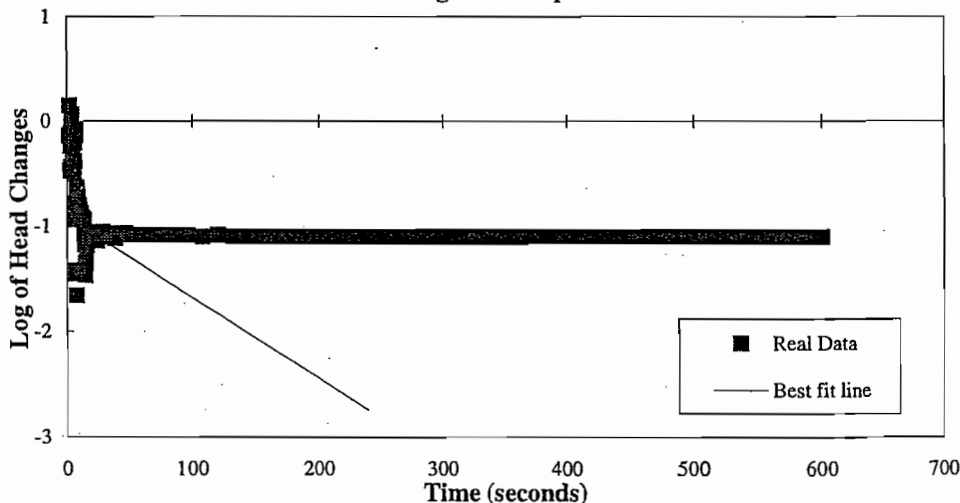
$t =$ 2.80

$\ln(R_e/R_w) =$ 2.48

$K = ((R_c^2) * \ln(R_e/R_w)/2L_s) * (1/t * \ln(y_o/y_t))$

K (cm/s) = 5.49E-04

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-3 SLUG IN		0.160	12.80	0.400	12.87	5.0	12.87
SE1000C		0.163	12.80	0.417	12.86	5.2	12.87
Environmental Logger		0.167	12.80	0.433	12.86	5.4	12.87
12/03 17:02		0.170	12.81	0.450	12.86	5.6	12.87
		0.173	12.81	0.467	12.86	5.8	12.87
Unit# 00811 Test 3		0.177	12.81	0.483	12.87	6.0	12.87
		0.180	12.82	0.500	12.86	6.2	12.87
INPUT 1: Level (F) TOC		0.183	12.82	0.517	12.86	6.4	12.87
		0.187	12.82	0.533	12.86	6.6	12.87
Reference 12.950		0.190	12.82	0.550	12.86	6.8	12.87
Linearity 0.050		0.193	12.82	0.567	12.86	7.0	12.87
Scale factor 10.000		0.197	12.83	0.583	12.86	7.2	12.87
Offset 0.010		0.200	12.83	0.600	12.86	7.4	12.87
Delay mSEC 50.000		0.203	12.83	0.617	12.86	7.6	12.87
		0.207	12.83	0.633	12.87	7.8	12.87
Step 0 11/27 15:52:27		0.210	12.83	0.650	12.86	8.0	12.87
		0.213	12.83	0.667	12.86	8.2	12.87
Elapsed		0.217	12.83	0.683	12.86	8.4	12.87
Time INPUT 1		0.220	12.83	0.700	12.86	8.6	12.87
0.000	12.95	0.223	12.84	0.717	12.86	8.8	12.87
0.027	12.21	0.227	12.84	0.733	12.86	9.0	12.87
0.030	11.53	0.230	12.87	0.750	12.86	9.2	12.87
0.037	12.61	0.233	12.88	0.767	12.86	9.4	12.87
0.040	12.35	0.237	12.91	0.783	12.86	9.6	12.87
0.043	12.18	0.240	12.90	0.800	12.86	9.8	12.87
0.047	12.37	0.243	12.90	0.817	12.86	10	12.87
0.050	12.58	0.247	12.90	0.833	12.86	12	12.87
0.053	12.02	0.250	12.90	0.850	12.86	14	12.87
0.057	12.58	0.253	12.90	0.867	12.86		
0.060	12.27	0.257	12.86	0.883	12.86		
0.063	11.77	0.260	12.90	0.900	12.86		
0.067	12.13	0.263	12.88	0.917	12.86		
0.070	12.31	0.267	12.86	0.933	12.86		
0.073	12.25	0.270	12.86	0.950	12.86		
0.077	12.50	0.273	12.86	0.967	12.86		
0.083	12.98	0.277	12.86	0.983	12.86		
0.087	12.59	0.280	12.86	1.0	12.86		
0.090	12.64	0.283	12.86	1.2	12.86		
0.093	12.78	0.287	12.86	1.4	12.86		
0.097	12.32	0.290	12.86	1.6	12.86		
0.100	12.53	0.293	12.86	1.8	12.87		
0.103	12.91	0.297	12.86	2.0	12.86		
0.107	12.83	0.300	12.86	2.2	12.87		
0.113	12.22	0.303	12.86	2.4	12.87		
0.117	12.11	0.307	12.86	2.6	12.87		
0.123	12.92	0.310	12.86	2.8	12.87		
0.127	12.71	0.313	12.86	3.0	12.87		
0.130	12.73	0.317	12.86	3.2	12.87		
0.133	12.75	0.320	12.86	3.4	12.87		
0.137	12.75	0.323	12.86	3.6	12.87		
0.140	12.76	0.327	12.86	3.8	12.87		
0.143	12.77	0.330	12.86	4.0	12.87		
0.147	12.78	0.333	12.86	4.2	12.87		
0.150	12.78	0.350	12.86	4.4	12.87		
0.153	12.79	0.367	12.86	4.6	12.87		
0.157	12.79	0.383	12.86	4.8	12.87		

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard
SITE: Bouchards Junkyard

JOB #: 1913

TEST DATE: 11/27/01
TEST TYPE: Slug Out

WELL: MW-3

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 12.95 (ft below top of casing)

change time (secs)	actual head (feet)	head change	(h-h) H ₀	log head change	best fit

12.95 (pre-slug head)

0	13.18	-0.23	1.00	-0.642	-0.563
0	13.99	-1.04	4.57	0.018	-0.582
1	13.58	-0.63	2.75	-0.203	-0.602
1	13.09	-0.14	0.60	-0.866	-0.622
1	13.22	-0.27	1.19	-0.565	-0.641
1	13.29	-0.34	1.50	-0.466	-0.661
1	13.33	-0.38	1.65	-0.424	-0.681
2	13.47	-0.52	2.26	-0.287	-0.700
2	13.74	-0.79	3.44	-0.105	-0.720
2	13.79	-0.84	3.69	-0.075	-0.740
2	13.95	-1.00	4.40	0.002	-0.759
2	13.97	-1.02	4.47	0.008	-0.779
3	13.92	-0.97	4.26	-0.012	-0.799
3	13.84	-0.89	3.89	-0.053	-0.818
3	13.78	-0.83	3.64	-0.081	-0.838
3	13.72	-0.77	3.37	-0.114	-0.858
3	13.67	-0.72	3.14	-0.146	-0.877
4	13.62	-0.67	2.92	-0.177	-0.898
4	13.57	-0.62	2.74	-0.205	-0.917
4	13.53	-0.58	2.54	-0.237	-0.936
4	13.49	-0.54	2.36	-0.269	-0.957
4	13.45	-0.50	2.21	-0.298	-0.976
5	13.42	-0.47	2.05	-0.330	-0.995
5	13.39	-0.44	1.92	-0.360	-1.016
5	13.36	-0.41	1.78	-0.393	-1.035
5	13.32	-0.37	1.64	-0.428	-1.055
5	13.30	-0.35	1.55	-0.451	-1.075
6	13.28	-0.33	1.44	-0.483	-1.094
6	13.25	-0.30	1.33	-0.517	-1.114
6	13.24	-0.29	1.25	-0.545	-1.134
6	13.21	-0.26	1.15	-0.582	-1.153
6	13.19	-0.24	1.07	-0.614	-1.173
7	13.18	-0.23	1.01	-0.636	-1.193
7	13.16	-0.21	0.93	-0.674	-1.212
7	13.15	-0.20	0.86	-0.708	-1.232
7	13.13	-0.18	0.80	-0.738	-1.252
7	13.12	-0.17	0.75	-0.767	-1.271
8	13.11	-0.16	0.69	-0.801	-1.291
8	13.10	-0.15	0.64	-0.839	-1.311
8	13.09	-0.14	0.60	-0.866	-1.330
8	13.08	-0.13	0.55	-0.900	-1.350
8	13.07	-0.12	0.53	-0.921	-1.370
9	13.06	-0.11	0.48	-0.959	-1.389
9	13.05	-0.10	0.46	-0.983	-1.409
9	13.05	-0.10	0.42	-1.022	-1.429
9	13.04	-0.09	0.39	-1.056	-1.448
9	13.03	-0.08	0.36	-1.086	-1.468
10	13.03	-0.08	0.35	-1.102	-1.488
10	13.02	-0.07	0.32	-1.143	-1.507
10	13.02	-0.07	0.30	-1.161	-1.527
10	13.01	-0.06	0.28	-1.201	-1.547
10	13.01	-0.06	0.26	-1.222	-1.566

WELL CHARACTERISTICS

Well Radius, $R_c =$ 1.00 in
 Boring Radius, $R_w =$ 3.80 in
 Water Level above well bottom, $L_w =$ 8.37 ft
 Saturated Screen Thickness, $L_s =$ 8.37 ft
 Saturated Aquifer Thickness, $H =$ 8.37 ft

Regression Output:

Constant -0.543
 Std Err of Y Est 0.080
 R Squared 0.986
 No. of Observations 8
 Degrees of Freedom 6

 X Coefficient(s) -0.09838
 Std Err of Coef. 0.004864

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

A= 2.25
 B= 0.35
 C= 1.80

$R_c =$ 2.54 cm

$R_{eq} =$ 2.54 cm

$R_w =$ 9.65 cm

$L_s =$ 255.12 cm

$L_w =$ 255.12 cm

$H =$ 255.12 cm

$L_s/R_w =$ 26

$Y_0 =$ 0.29

$Y_1 =$ 0.22

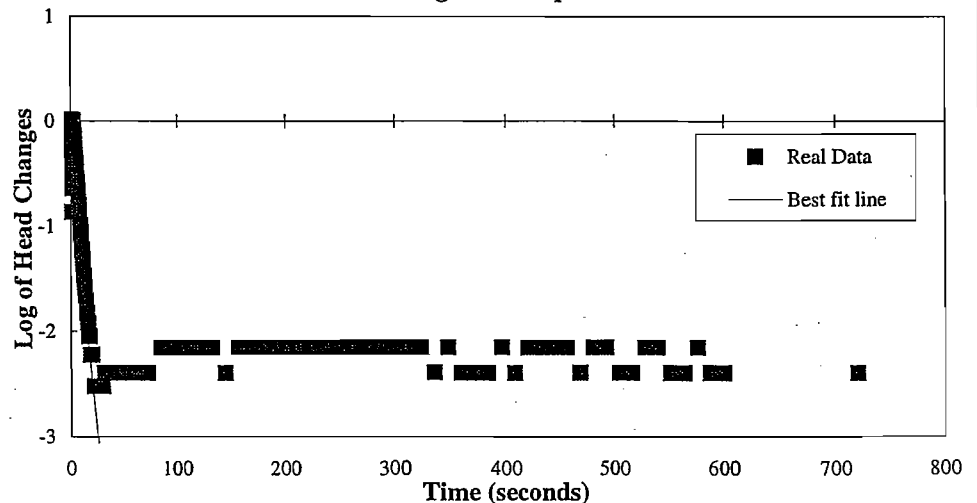
$t =$ 1.20

$\ln(R_c/R_w) =$ 2.48

$$K = ((R_c^2) * \ln(R_c/R_w) / 2L_s) * (1/t * \ln(y_0/y_1))$$

K (cm/s) = 7.09E-03

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-3 SLUG OUT	0.123	13.12	0.310	12.96	2.8	12.94
SE1000C	0.127	13.11	0.313	12.96	3.0	12.94
Environmental Logger	0.130	13.10	0.317	12.96	3.2	12.94
12/03 17:08	0.133	13.09	0.320	12.96	3.4	12.94
	0.137	13.08	0.323	12.96	3.6	12.94
Unit# 00811 Test 4	0.140	13.07	0.327	12.96	3.8	12.94
	0.143	13.06	0.330	12.96	4.0	12.94
INPUT 1: Level (F) TOC	0.147	13.05	0.333	12.96	4.2	12.94
	0.150	13.05	0.350	12.95	4.4	12.94
Reference 12.950	0.153	13.04	0.367	12.95	4.6	12.94
Linearity 0.050	0.157	13.03	0.383	12.95	4.8	12.94
Scale factor 10.000	0.160	13.03	0.400	12.95	5.0	12.94
Offset 0.010	0.163	13.02	0.417	12.95	5.2	12.94
Delay mSEC 50.000	0.167	13.02	0.433	12.95	5.4	12.94
	0.170	13.01	0.450	12.95	5.6	12.95
Step 0 11/27 16:09:36	0.173	13.01	0.467	12.95	5.8	12.94
	0.177	13.01	0.483	12.95	6.0	12.95
Elapsed	0.180	13.00	0.500	12.95	6.2	12.95
Time INPUT 1	0.183	13.00	0.517	12.95	6.4	12.95
0.000 12.95	0.187	12.99	0.533	12.95	6.6	12.94
0.003 13.18	0.190	12.99	0.550	12.95	6.8	12.95
0.007 13.99	0.193	12.99	0.567	12.95	7.0	12.94
0.010 13.58	0.197	12.99	0.583	12.95	7.2	12.94
0.013 13.09	0.200	12.98	0.600	12.95	7.4	12.94
0.017 13.22	0.203	12.98	0.617	12.95	7.6	12.94
0.020 13.29	0.207	12.98	0.633	12.95	7.8	12.95
0.023 13.33	0.210	12.98	0.650	12.95	8.0	12.94
0.027 13.47	0.213	12.98	0.667	12.95	8.2	12.94
0.030 13.74	0.217	12.98	0.683	12.95	8.4	12.95
0.033 13.79	0.220	12.98	0.700	12.95	8.6	12.95
0.037 13.95	0.223	12.97	0.717	12.95	8.8	12.94
0.040 13.97	0.227	12.97	0.733	12.95	9.0	12.94
0.043 13.92	0.230	12.97	0.750	12.95	9.2	12.95
0.047 13.84	0.233	12.97	0.767	12.95	9.4	12.95
0.050 13.78	0.237	12.97	0.783	12.95	9.6	12.94
0.053 13.72	0.240	12.97	0.800	12.95	9.8	12.95
0.057 13.67	0.243	12.97	0.817	12.95	10	12.95
0.060 13.62	0.247	12.97	0.833	12.95	12	12.95
0.063 13.57	0.250	12.97	0.850	12.95		
0.067 13.53	0.253	12.97	0.867	12.95		
0.070 13.49	0.257	12.96	0.883	12.95		
0.073 13.45	0.260	12.96	0.900	12.95		
0.077 13.42	0.263	12.96	0.917	12.95		
0.080 13.39	0.267	12.96	0.933	12.95		
0.083 13.36	0.270	12.96	0.950	12.95		
0.087 13.32	0.273	12.96	0.967	12.95		
0.090 13.30	0.277	12.96	0.983	12.95		
0.093 13.28	0.280	12.96	1.0	12.95		
0.097 13.25	0.283	12.96	1.2	12.95		
0.100 13.24	0.287	12.96	1.4	12.94		
0.103 13.21	0.290	12.96	1.6	12.94		
0.107 13.19	0.293	12.96	1.8	12.94		
0.110 13.18	0.297	12.96	2.0	12.94		
0.113 13.16	0.300	12.96	2.2	12.94		
0.117 13.15	0.303	12.96	2.4	12.95		
0.120 13.13	0.307	12.96	2.6	12.94		

Slug/Bail Test Data Sheet

For use with Hermit Datalogger and Bouwer & Rice Data Reduction Methods

Job Name: Bouchard's J.Y. Job No: 1913 Site Name: Bouchard's

On-Site personnel: G. Gould, S. Pepling

Well ID: MW-4

Well Characteristics

Well Depth: 45.47 ^{15.70} Well Radius (Inches), Rc= 1"
 Depth to water (static): 5.77 Boring Radius (inches), Rw= 4"
 Water Level above well bottom, Lw= _____ Screen Thick. (feet), Le= 10'
 Saturated Aq. Thick. (feet), H= _____

Equipment Specs

Hermit Unit No. 811 Slug diameter 1"
 Transducer (PSI): 10 Slug length 60"
 Transducer Serial No. 204279

Slug (Falling Head) Test

Date: 11/27/01
 Start Time: 14:57
 Hermit Ref. value (depth to water) 5.77
 XD = 8.10
 Hermit Test No: 1

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)
0.10	5.59		
1.00	5.75		
2.00	5.75		
5.00	5.76		
8.00	5.76		
10.00	5.76		
20.00	5.76		
28.00	5.76		

Finish Time 15:28 Finish DTW 5.77

Time: 1711 Date: 12/3/01

Download file (Header & data) MW4 in

Download file (data only) _____

Bail (Rising Head) Test

Date: 11/27/01
 Start Time: 15:29
 Hermit Ref. value (depth to water) 5.77
 XD = 8.11
 Hermit Test No: 2

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)
0.00	6.88		
0.02	6.00		
0.05	6.61		
0.08	6.27		
0.80	5.76		
3.00	5.76		
8.00	5.75		
10.00	5.75		

Finish Time 15:40 Finish DTW 5.77

Time: 1722 Date: 12/3/01

Download file (Header & data) MW4 out

Download file (data only) _____

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard
SITE: Bouchards Junkyard

JOB #: 1913

TEST DATE: 11/27/01

TEST TYPE: Slug In

WELL: MW-4

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head		5.77 (ft below top of casing)				
change	actual					
time	head	head	(h-h)/	log head	best	
(secs)	(feet)	change	H ₀	change	fit	
	5.77	(pre-slug head)				
0	5.72	0.05	1.00	-1.268	-0.640	
0	5.37	0.40	7.41	-0.398	-0.647	
1	5.15	0.62	11.46	-0.208	-0.655	
1	4.67	1.10	20.39	0.042	-0.662	
1	4.11	1.66	30.67	0.219	-0.670	
1	3.92	1.85	34.19	0.266	-0.677	
1	3.63	2.14	39.65	0.331	-0.685	
2	3.61	2.16	40.00	0.334	-0.692	
2	5.38	0.39	7.17	-0.412	-0.699	
2	4.82	0.95	17.69	-0.020	-0.707	
2	6.15	-0.38	-7.09	-0.417	-0.714	
2	5.74	0.03	0.59	-1.495	-0.722	
3	5.34	0.43	7.93	-0.369	-0.729	
3	5.17	0.60	11.17	-0.220	-0.736	
3	5.22	0.55	10.22	-0.258	-0.744	
3	5.34	0.44	8.06	-0.362	-0.751	
3	5.39	0.38	7.11	-0.416	-0.759	
4	5.40	0.37	6.87	-0.431	-0.766	
4	5.42	0.35	6.52	-0.453	-0.774	
4	5.44	0.33	6.11	-0.481	-0.781	
4	5.46	0.31	5.76	-0.507	-0.789	
4	5.48	0.29	5.41	-0.535	-0.796	
5	5.50	0.27	5.06	-0.564	-0.803	
5	5.51	0.26	4.81	-0.585	-0.811	
5	5.53	0.24	4.54	-0.611	-0.818	
5	5.54	0.23	4.30	-0.635	-0.826	
5	5.55	0.22	4.11	-0.654	-0.833	
6	5.56	0.21	3.89	-0.678	-0.840	
6	5.57	0.20	3.70	-0.699	-0.848	
6	5.58	0.19	3.54	-0.719	-0.855	
6	5.59	0.18	3.35	-0.742	-0.863	
6	5.60	0.18	3.24	-0.757	-0.870	
7	5.60	0.17	3.13	-0.772	-0.878	
7	5.61	0.16	3.00	-0.790	-0.885	
7	5.61	0.16	2.89	-0.807	-0.892	
7	5.62	0.15	2.76	-0.827	-0.900	
7	5.63	0.14	2.65	-0.845	-0.907	
8	5.63	0.14	2.59	-0.854	-0.915	
8	5.64	0.13	2.48	-0.873	-0.922	
8	5.64	0.13	2.41	-0.886	-0.930	
8	5.65	0.12	2.30	-0.907	-0.937	
8	5.65	0.12	2.24	-0.917	-0.945	
9	5.65	0.12	2.19	-0.928	-0.952	
9	5.66	0.11	2.13	-0.939	-0.959	
9	5.66	0.11	2.06	-0.955	-0.967	
9	5.66	0.11	2.00	-0.967	-0.974	
9	5.67	0.11	1.94	-0.979	-0.981	
10	5.67	0.10	1.89	-0.991	-0.989	
10	5.67	0.10	1.89	-0.991	-0.996	
10	5.67	0.10	1.83	-1.004	-1.004	
10	5.67	0.10	1.78	-1.018	-1.011	
10	5.68	0.09	1.70	-1.036	-1.019	

WELL CHARACTERISTICS

Well Radius, R _c =	1.00 in
Boring Radius, R _w =	3.80 in
Water Level above well bottom, L _w =	9.93 ft
Saturated Screen Thickness, L _s =	9.93 ft
Saturated Aquifer Thickness, H =	9.93 ft

Regression Output:

Constant	-0.633
Std Err of Y Est	0.056
R Squared	0.937
No. of Observations	81
Degrees of Freedom	79
X Coefficient(s)	-0.03712
Std Err of Coef.	0.001084

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

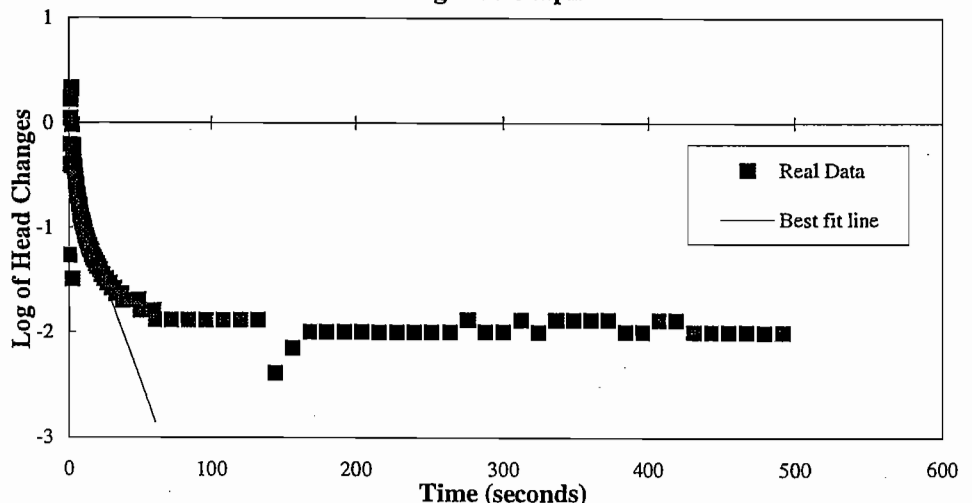
A=	2.40
B=	0.35
C=	2.00

R _c =	2.54 cm
R _{eq} =	2.54 cm
R _w =	9.65 cm
L _s =	302.67 cm
L _w =	302.67 cm
H =	302.67 cm
L _s /R _w =	31
Y ₀ =	0.23
Y _t =	0.21
t =	1.20

$$K = ((R_c^2) * \ln(R_e/R_w)/2L_s) * (1/t * \ln(y_0/y_t))$$

$$K \text{ (cm/s)} = 2.38E-03$$

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-4 SLUG IN		0.123	5.63	0.310	5.73	2.8	5.76
SE1000C		0.127	5.63	0.313	5.73	3.0	5.76
Environmental Logger		0.130	5.64	0.317	5.73	3.2	5.76
12/03 17:11		0.133	5.64	0.320	5.73	3.4	5.76
		0.137	5.65	0.323	5.73	3.6	5.76
Unit# 00811 Test 1		0.140	5.65	0.327	5.73	3.8	5.76
		0.143	5.65	0.330	5.73	4.0	5.76
INPUT 1: Level (F) TOC		0.147	5.66	0.333	5.73	4.2	5.76
		0.150	5.66	0.350	5.73	4.4	5.76
Reference 5.770		0.153	5.66	0.367	5.74	4.6	5.76
Linearity 0.050		0.157	5.67	0.383	5.74	4.8	5.76
Scale factor 10.000		0.160	5.67	0.400	5.74	5.0	5.76
Offset 0.010		0.163	5.67	0.417	5.74	5.2	5.76
Delay mSEC 50.000		0.167	5.67	0.433	5.74	5.4	5.76
		0.170	5.67	0.450	5.74	5.6	5.76
Step 0 11/27 14:57:28		0.173	5.68	0.467	5.74	5.8	5.76
		0.177	5.68	0.483	5.74	6.0	5.76
Elapsed		0.180	5.68	0.500	5.74	6.2	5.76
Time INPUT 1		0.183	5.68	0.517	5.74	6.4	5.76
0.000	5.77	0.187	5.69	0.533	5.75	6.6	5.76
0.003	5.72	0.190	5.69	0.550	5.75	6.8	5.76
0.007	5.37	0.193	5.69	0.567	5.75	7.0	5.76
0.010	5.15	0.197	5.69	0.583	5.75	7.2	5.76
0.013	4.67	0.200	5.69	0.600	5.75	7.4	5.76
0.017	4.11	0.203	5.69	0.617	5.75	7.6	5.76
0.020	3.92	0.207	5.70	0.633	5.75	7.8	5.76
0.023	3.63	0.210	5.70	0.650	5.75	8.0	5.76
0.027	3.61	0.213	5.70	0.667	5.75	8.2	5.76
0.030	5.38	0.217	5.70	0.683	5.75	8.4	5.76
0.033	4.82	0.220	5.70	0.700	5.75	8.6	5.76
0.037	6.15	0.223	5.70	0.717	5.75	8.8	5.76
0.040	5.74	0.227	5.70	0.733	5.75	9.0	5.76
0.043	5.34	0.230	5.71	0.750	5.75	9.2	5.76
0.047	5.17	0.233	5.71	0.767	5.75	9.4	5.76
0.050	5.22	0.237	5.71	0.783	5.75	9.6	5.76
0.053	5.34	0.240	5.71	0.800	5.75	9.8	5.76
0.057	5.39	0.243	5.71	0.817	5.75	10	5.76
0.060	5.40	0.247	5.71	0.833	5.75	12	5.76
0.063	5.42	0.250	5.71	0.850	5.75	14	5.76
0.067	5.44	0.253	5.71	0.867	5.75	16	5.76
0.070	5.46	0.257	5.72	0.883	5.75	18	5.76
0.073	5.48	0.260	5.72	0.900	5.75	20	5.76
0.077	5.50	0.263	5.72	0.917	5.75	22	5.76
0.080	5.51	0.267	5.72	0.933	5.75	24	5.76
0.083	5.53	0.270	5.72	0.950	5.75	26	5.76
0.087	5.54	0.273	5.72	0.967	5.75	28	5.76
0.090	5.55	0.277	5.72	0.983	5.75	30	5.76
0.093	5.56	0.280	5.72	1.0	5.76		
0.097	5.57	0.283	5.72	1.2	5.76		
0.100	5.58	0.287	5.72	1.4	5.76		
0.103	5.59	0.290	5.72	1.6	5.76		
0.107	5.60	0.293	5.72	1.8	5.76		
0.110	5.60	0.297	5.72	2.0	5.76		
0.113	5.61	0.300	5.73	2.2	5.76		
0.117	5.61	0.303	5.73	2.4	5.77		
0.120	5.62	0.307	5.73	2.6	5.76		

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard
SITE: Bouchards Junkyard

JOB #: 1913

TEST DATE: 11/27/01
TEST TYPE: Slug Out

WELL: MW-4

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 5.77 (ft below top of casing)

change	actual				
time	head	head	(h-h)	log head	best
(secs)	(feet)	change	H ₀	change	fit

	5.77	(pre-slug head)			
0	6.74	-0.97	1.00	-0.015	-0.510
0	6.89	-1.12	1.16	0.048	-0.520
1	5.74	0.03	-0.03	-1.538	-0.531
1	5.53	0.24	-0.25	-0.618	-0.541
1	6.20	-0.43	0.45	-0.366	-0.552
1	6.56	-0.79	0.81	-0.105	-0.563
1	5.87	-0.10	0.10	-1.009	-0.573
2	6.00	-0.23	0.24	-0.636	-0.583
2	6.11	-0.34	0.35	-0.466	-0.594
2	6.21	-0.44	0.46	-0.357	-0.605
2	6.68	-0.91	0.94	-0.043	-0.615
2	6.76	-0.99	1.02	-0.005	-0.626
3	6.58	-0.81	0.84	-0.089	-0.636
3	6.84	-1.07	1.11	0.029	-0.647
3	6.77	-1.00	1.03	-0.001	-0.657
3	6.67	-0.90	0.93	-0.046	-0.668
3	6.62	-0.85	0.88	-0.071	-0.678
4	6.56	-0.79	0.81	-0.105	-0.689
4	6.51	-0.74	0.77	-0.130	-0.700
4	6.46	-0.69	0.71	-0.161	-0.710
4	6.42	-0.65	0.67	-0.190	-0.721
4	6.38	-0.61	0.64	-0.212	-0.731
5	6.34	-0.57	0.59	-0.246	-0.742
5	6.30	-0.53	0.55	-0.274	-0.752
5	6.28	-0.51	0.52	-0.295	-0.763
5	6.24	-0.47	0.49	-0.329	-0.773
5	6.21	-0.44	0.46	-0.354	-0.784
6	6.18	-0.41	0.42	-0.389	-0.794
6	6.15	-0.38	0.40	-0.417	-0.805
6	6.13	-0.36	0.37	-0.442	-0.816
6	6.11	-0.34	0.35	-0.466	-0.826
6	6.09	-0.32	0.33	-0.495	-0.837
7	6.07	-0.30	0.31	-0.521	-0.847
7	6.06	-0.29	0.30	-0.545	-0.858
7	6.04	-0.27	0.28	-0.575	-0.868
7	6.02	-0.25	0.26	-0.597	-0.879
7	6.01	-0.24	0.25	-0.625	-0.889
8	6.00	-0.23	0.23	-0.648	-0.900
8	5.98	-0.21	0.22	-0.674	-0.911
8	5.97	-0.20	0.21	-0.695	-0.921
8	5.96	-0.19	0.20	-0.721	-0.931
8	5.95	-0.18	0.19	-0.745	-0.942
9	5.94	-0.17	0.18	-0.759	-0.953
9	5.93	-0.16	0.17	-0.785	-0.963
9	5.93	-0.16	0.16	-0.810	-0.974
9	5.92	-0.15	0.15	-0.830	-0.984
9	5.91	-0.14	0.15	-0.848	-0.995
10	5.91	-0.14	0.14	-0.866	-1.005
10	5.90	-0.13	0.13	-0.889	-1.016
10	5.89	-0.12	0.13	-0.910	-1.026
10	5.89	-0.12	0.12	-0.921	-1.037
10	5.88	-0.11	0.12	-0.943	-1.048

WELL CHARACTERISTICS

Well Radius, $R_c =$ 1.00 in
Boring Radius, $R_w =$ 3.80 in
Water Level above well bottom, $L_w =$ 9.93 ft
Saturated Screen Thickness, $L_s =$ 9.93 ft
Saturated Aquifer Thickness, $H =$ 9.93 ft

Regression Output:

Constant -0.499
Std Err of Y Est 0.042
R Squared 0.963
No. of Observations 21
Degrees of Freedom 19

X Coefficient(s) -0.05273
Std Err of Coef. 0.002371

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

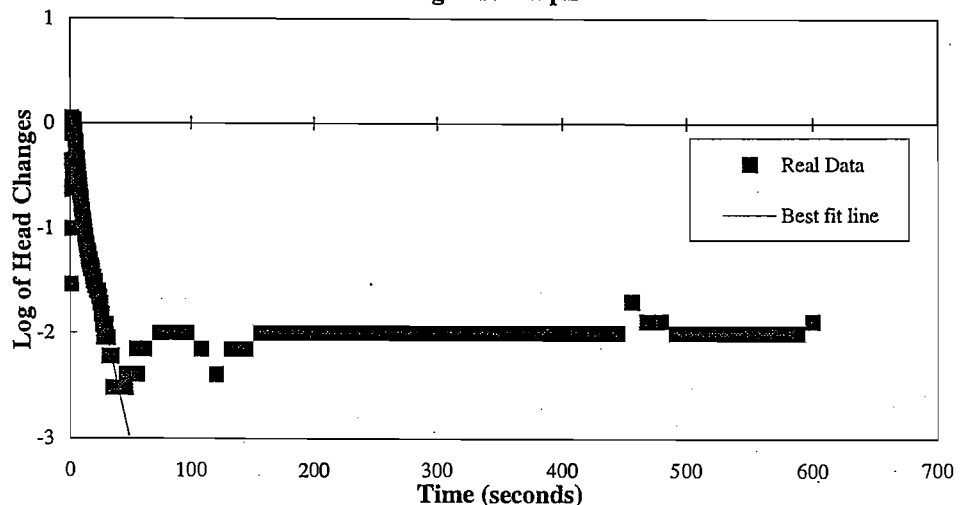
A= 2.40
B= 0.35
C= 2.00

$R_c =$ 2.54 cm
 $R_{eq} =$ 2.54 cm
 $R_w =$ 9.65 cm
 $L_s =$ 302.67 cm
 $L_w =$ 302.67 cm
 $H =$ 302.67 cm
 $L_s/R_w =$ 31
 $Y_0 =$ 0.32
 $Y_t =$ 0.27
 $t =$ 1.20
 $\ln(R_e/R_w) =$ 2.61

$$K = ((R_c^2) * \ln(R_e/R_w) / 2L_s) * (1/t * \ln(y_0/y_t))$$

K (cm/s) = 3.38E-03

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-4 SLUG OUT		0.123	6.01	0.310	5.80	2.8	5.76
SE1000C		0.127	6.00	0.313	5.80	3.0	5.76
Environmental Logger		0.130	5.98	0.317	5.80	3.2	5.76
12/03 17:21		0.133	5.97	0.320	5.80	3.4	5.76
		0.137	5.96	0.323	5.80	3.6	5.76
Unit# 00811 Test 2		0.140	5.95	0.327	5.80	3.8	5.76
		0.143	5.94	0.330	5.80	4.0	5.76
INPUT 1: Level (F) TOC		0.147	5.93	0.333	5.80	4.2	5.76
		0.150	5.93	0.350	5.80	4.4	5.76
Reference 5.770		0.153	5.92	0.367	5.80	4.6	5.76
Linearity 0.050		0.157	5.91	0.383	5.79	4.8	5.76
Scale factor 10.000		0.160	5.91	0.400	5.79	5.0	5.76
Offset 0.010		0.163	5.90	0.417	5.79	5.2	5.76
Delay mSEC 50.000		0.167	5.89	0.433	5.78	5.4	5.76
		0.170	5.89	0.450	5.78	5.6	5.76
Step 0 11/27 15:29:54		0.173	5.88	0.467	5.78	5.8	5.76
		0.177	5.88	0.483	5.78	6.0	5.76
Elapsed		0.180	5.87	0.500	5.78	6.2	5.76
Time INPUT 1		0.183	5.87	0.517	5.78	6.4	5.76
0.000	5.77	0.187	5.87	0.533	5.78	6.6	5.76
0.003	6.74	0.190	5.86	0.550	5.78	6.8	5.76
0.007	6.89	0.193	5.86	0.567	5.77	7.0	5.76
0.010	5.74	0.197	5.86	0.583	5.77	7.2	5.76
0.013	5.53	0.200	5.85	0.600	5.77	7.4	5.76
0.017	6.20	0.203	5.85	0.617	5.77	7.6	5.75
0.020	6.56	0.207	5.85	0.633	5.77	7.8	5.76
0.023	5.87	0.210	5.85	0.650	5.77	8.0	5.76
0.027	6.00	0.213	5.84	0.667	5.77	8.2	5.76
0.030	6.11	0.217	5.84	0.683	5.77	8.4	5.76
0.033	6.21	0.220	5.84	0.700	5.77	8.6	5.76
0.037	6.68	0.223	5.84	0.717	5.77	8.8	5.76
0.040	6.76	0.227	5.83	0.733	5.77	9.0	5.76
0.043	6.58	0.230	5.83	0.750	5.77	9.2	5.76
0.047	6.84	0.233	5.83	0.767	5.77	9.4	5.76
0.050	6.77	0.237	5.83	0.783	5.77	9.6	5.76
0.053	6.67	0.240	5.83	0.800	5.77	9.8	5.76
0.057	6.62	0.243	5.82	0.817	5.77	10	5.76
0.060	6.56	0.247	5.82	0.833	5.77		
0.063	6.51	0.250	5.82	0.850	5.77		
0.067	6.46	0.253	5.82	0.867	5.77		
0.070	6.42	0.257	5.82	0.883	5.76		
0.073	6.38	0.260	5.82	0.900	5.77		
0.077	6.34	0.263	5.82	0.917	5.76		
0.080	6.30	0.267	5.81	0.933	5.76		
0.083	6.28	0.270	5.81	0.950	5.76		
0.087	6.24	0.273	5.81	0.967	5.76		
0.090	6.21	0.277	5.81	0.983	5.76		
0.093	6.18	0.280	5.81	1.0	5.76		
0.097	6.15	0.283	5.81	1.2	5.76		
0.100	6.13	0.287	5.81	1.4	5.76		
0.103	6.11	0.290	5.81	1.6	5.76		
0.107	6.09	0.293	5.81	1.8	5.76		
0.110	6.07	0.297	5.81	2.0	5.77		
0.113	6.06	0.300	5.80	2.2	5.76		
0.117	6.04	0.303	5.80	2.4	5.76		
0.120	6.02	0.307	5.80	2.6	5.76		

For use with Hermit Datalogger and Bouwer & Rice Data Reduction Methods

Well ID: MW-5

Transducer Serial No. _____

Hermit Test No: 10

Time (min)	WL (feet)	Time (min)	WL (feet)

Download file (data only)

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard
SITE: Bouchards Junkyard

JOB #: 1913

TEST DATE: 11/28/01

WELL: MW-5

TEST TYPE: Slug In

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 8.81 (ft below top of casing)

change	actual	head	(h-h)/	log head	best
time	head	head	H ₀	change	fit
(secs)	(feet)	change			

	8.81	(pre-slug head)			
1	8.09	0.72	1.00	-0.143	-0.098
1	7.62	1.19	1.65	0.075	-0.101
1	8.10	0.71	0.99	-0.146	-0.104
1	8.06	0.76	1.05	-0.122	-0.107
1	8.21	0.60	0.84	-0.220	-0.109
2	8.20	0.61	0.85	-0.213	-0.112
2	7.83	0.98	1.37	-0.007	-0.115
2	7.91	0.90	1.25	-0.047	-0.118
2	7.86	0.95	1.32	-0.023	-0.120
2	7.47	1.34	1.86	0.128	-0.123
3	7.25	1.56	2.17	0.193	-0.126
3	7.66	1.15	1.60	0.061	-0.129
3	7.72	1.09	1.52	0.038	-0.132
3	7.41	1.40	1.95	0.147	-0.134
3	7.63	1.18	1.63	0.071	-0.137
4	8.11	0.70	0.98	-0.152	-0.140
4	8.14	0.67	0.93	-0.177	-0.143
4	7.93	0.88	1.22	-0.056	-0.145
4	7.82	0.99	1.37	-0.006	-0.148
4	8.26	0.55	0.76	-0.260	-0.151
5	8.30	0.51	0.71	-0.294	-0.154
5	8.28	0.53	0.73	-0.278	-0.157
5	7.99	0.83	1.15	-0.084	-0.159
5	7.87	0.94	1.31	-0.026	-0.162
5	7.97	0.84	1.17	-0.075	-0.165
6	8.12	0.70	0.97	-0.158	-0.168
6	8.16	0.65	0.91	-0.185	-0.170
6	8.10	0.71	0.99	-0.146	-0.173
6	8.05	0.76	1.06	-0.117	-0.176
6	8.07	0.75	1.03	-0.128	-0.179
7	8.12	0.70	0.97	-0.158	-0.182
7	8.13	0.68	0.94	-0.170	-0.184
7	8.12	0.69	0.96	-0.162	-0.187
7	8.11	0.70	0.97	-0.154	-0.190
7	8.12	0.69	0.96	-0.162	-0.193
8	8.14	0.67	0.93	-0.175	-0.195
8	8.15	0.66	0.92	-0.180	-0.198
8	8.15	0.66	0.92	-0.180	-0.201
8	8.15	0.66	0.92	-0.180	-0.204
8	8.16	0.65	0.90	-0.187	-0.207
9	8.17	0.64	0.89	-0.191	-0.209
9	8.17	0.64	0.89	-0.195	-0.212
9	8.18	0.63	0.88	-0.198	-0.215
9	8.18	0.63	0.87	-0.202	-0.218
9	8.19	0.63	0.87	-0.204	-0.221
10	8.19	0.62	0.86	-0.208	-0.223
10	8.20	0.61	0.85	-0.213	-0.226
10	8.20	0.61	0.85	-0.215	-0.229
10	8.21	0.60	0.84	-0.220	-0.232
10	8.21	0.60	0.83	-0.222	-0.234
11	8.21	0.60	0.83	-0.225	-0.237
11	8.22	0.59	0.82	-0.229	-0.240

WELL CHARACTERISTICS

Well Radius, $R_c =$ 1.00 in
 Boring Radius, $R_w =$ 3.80 in
 Water Level above well bottom, $L_w =$ 9.66 ft
 Saturated Screen Thickness, $L_s =$ 9.66 ft
 Saturated Aquifer Thickness, $H =$ 9.66 ft

Regression Output:

Constant -0.090
 Std Err of Y Est 0.006
 R Squared 0.999
 No. of Observations 51
 Degrees of Freedom 49
 X Coefficient(s) -0.01391
 Std Err of Coef. 5.84E-05

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

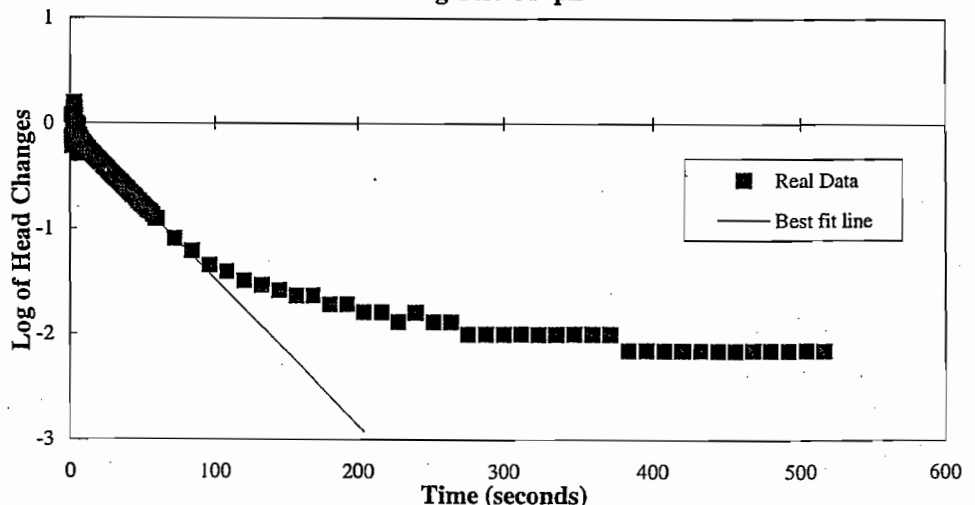
A= 2.40
 B= 0.35
 C= 2.00

$R_c =$ 2.54 cm
 $R_{eq} =$ 2.54 cm
 $R_w =$ 9.65 cm
 $L_s =$ 294.44 cm
 $L_w =$ 294.44 cm
 $H =$ 294.44 cm
 $L_s/R_w =$ 31
 $Y_0 =$ 0.81
 $Y_1 =$ 0.77
 $t =$ 1.60
 $\ln(R_c/R_w) =$ 2.58

$$K = ((R_c^2) * \ln(R_c/R_w)/2L_s) * (1/t * \ln(y_0/y_1))$$

K (cm/s) = 9.06E-04

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-5 SLUG IN		0.130	8.15	0.317	8.36	3.2	8.79
SE1000C		0.133	8.15	0.320	8.37	3.4	8.79
Environmental Logger		0.137	8.15	0.323	8.37	3.6	8.79
12/03 17:31		0.140	8.16	0.327	8.37	3.8	8.80
		0.143	8.17	0.330	8.38	4.0	8.79
Unit# 00811 Test 9		0.147	8.17	0.333	8.38	4.2	8.80
		0.150	8.18	0.350	8.39	4.4	8.80
INPUT 1: Level (F) TOC		0.153	8.18	0.367	8.41	4.6	8.80
		0.157	8.19	0.383	8.42	4.8	8.80
Reference 8.810		0.160	8.19	0.400	8.43	5.0	8.80
Linearity 0.050		0.163	8.20	0.417	8.45	5.2	8.80
Scale factor 10.000		0.167	8.20	0.433	8.46	5.4	8.80
Offset 0.010		0.170	8.21	0.450	8.47	5.6	8.80
Delay mSEC 50.000		0.173	8.21	0.467	8.48	5.8	8.80
		0.177	8.21	0.483	8.49	6.0	8.80
Step 0 11/28 10:16:01		0.180	8.22	0.500	8.50	6.2	8.80
		0.183	8.22	0.517	8.51	6.4	8.80
Elapsed		0.187	8.23	0.533	8.52	6.6	8.80
Time INPUT 1		0.190	8.23	0.550	8.53	6.8	8.80
0.000 8.81		0.193	8.24	0.567	8.54	7.0	8.80
0.010 8.09		0.197	8.24	0.583	8.55	7.2	8.80
0.013 7.62		0.200	8.25	0.600	8.56	7.4	8.80
0.017 8.10		0.203	8.25	0.617	8.57	7.6	8.80
0.020 8.06		0.207	8.25	0.633	8.57	7.8	8.80
0.023 8.21		0.210	8.26	0.650	8.58	8.0	8.80
0.027 8.20		0.213	8.26	0.667	8.59	8.2	8.80
0.030 7.83		0.217	8.26	0.683	8.59	8.4	8.80
0.033 7.91		0.220	8.27	0.700	8.60	8.6	8.80
0.037 7.86		0.223	8.27	0.717	8.60	8.8	8.80
0.040 7.47		0.227	8.27	0.733	8.61	9.0	8.80
0.043 7.25		0.230	8.28	0.750	8.62	9.2	8.81
0.047 7.66		0.233	8.28	0.767	8.63	9.4	8.80
0.050 7.72		0.237	8.29	0.783	8.63	9.6	8.81
0.053 7.41		0.240	8.29	0.800	8.64	9.8	8.81
0.057 7.63		0.243	8.29	0.817	8.64	10	8.80
0.060 8.11		0.247	8.30	0.833	8.65	12	8.81
0.063 8.14		0.250	8.30	0.850	8.65	14	8.81
0.067 7.93		0.253	8.31	0.867	8.66	16	8.81
0.070 7.82		0.257	8.31	0.883	8.66	18	8.81
0.073 8.26		0.260	8.31	0.900	8.66	20	8.81
0.077 8.30		0.263	8.32	0.917	8.67		
0.080 8.28		0.267	8.32	0.933	8.67		
0.083 7.99		0.270	8.32	0.950	8.68		
0.087 7.87		0.273	8.33	0.967	8.69		
0.090 7.97		0.277	8.33	0.983	8.69		
0.093 8.12		0.280	8.33	1.0	8.69		
0.097 8.16		0.283	8.33	1.2	8.73		
0.100 8.10		0.287	8.34	1.4	8.75		
0.103 8.05		0.290	8.34	1.6	8.77		
0.107 8.07		0.293	8.34	1.8	8.77		
0.110 8.12		0.297	8.35	2.0	8.78		
0.113 8.13		0.300	8.35	2.2	8.78		
0.117 8.12		0.303	8.35	2.4	8.78		
0.120 8.11		0.307	8.35	2.6	8.79		
0.123 8.12		0.310	8.36	2.8	8.79		
0.127 8.14		0.313	8.36	3.0	8.79		

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard
SITE: Bouchards Junkyard

JOB #: 1913

TEST DATE: 11/28/01
TEST TYPE: Slug Out

WELL: MW-5

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head		8.80 (ft below top of casing)				
change	actual					
time	head	head	(h-h)/	log head	best	
(secs)	(feet)	change	H ₀	change	fit	
	8.80	(pre-slug head)				
0	8.92	-0.12	1.00	-0.921	-0.078	
1	9.62	-0.82	6.81	-0.088	-0.080	
1	10.12	-1.32	11.01	0.121	-0.082	
1	9.51	-0.71	5.88	-0.151	-0.084	
1	9.10	-0.30	2.53	-0.517	-0.086	
1	8.83	-0.03	0.28	-1.469	-0.088	
2	8.81	-0.01	0.05	-2.222	-0.090	
2	9.69	-0.89	7.44	-0.049	-0.093	
2	9.83	-1.03	8.58	0.012	-0.095	
2	9.58	-0.78	6.47	-0.110	-0.097	
2	10.01	-1.21	10.06	0.082	-0.099	
3	10.32	-1.52	12.67	0.182	-0.101	
3	10.14	-1.34	11.19	0.128	-0.103	
3	9.94	-1.14	9.53	0.058	-0.106	
3	10.06	-1.26	10.51	0.101	-0.108	
3	10.12	-1.32	10.98	0.120	-0.110	
4	9.98	-1.18	9.79	0.070	-0.112	
4	10.01	-1.21	10.11	0.084	-0.114	
4	10.02	-1.22	10.16	0.086	-0.116	
4	9.94	-1.14	9.53	0.058	-0.118	
4	9.97	-1.17	9.72	0.067	-0.120	
5	9.95	-1.15	9.58	0.061	-0.123	
5	9.89	-1.09	9.11	0.039	-0.125	
5	9.90	-1.10	9.18	0.042	-0.127	
5	9.91	-1.11	9.27	0.046	-0.129	
5	9.90	-1.10	9.13	0.040	-0.131	
6	9.86	-1.06	8.87	0.027	-0.133	
6	9.87	-1.07	8.89	0.028	-0.135	
6	9.87	-1.07	8.93	0.030	-0.138	
6	9.85	-1.05	8.77	0.022	-0.140	
6	9.85	-1.05	8.73	0.020	-0.142	
7	9.84	-1.04	8.63	0.015	-0.144	
7	9.82	-1.02	8.53	0.010	-0.146	
7	9.81	-1.01	8.44	0.006	-0.148	
7	9.80	-1.00	8.37	0.002	-0.150	
7	9.79	-0.99	8.26	-0.004	-0.153	
8	9.79	-0.98	8.21	-0.007	-0.155	
8	9.78	-0.98	8.13	-0.011	-0.157	
8	9.77	-0.97	8.05	-0.015	-0.159	
8	9.76	-0.96	7.97	-0.020	-0.161	
8	9.75	-0.95	7.89	-0.024	-0.163	
9	9.74	-0.94	7.81	-0.028	-0.165	
9	9.73	-0.93	7.73	-0.032	-0.167	
9	9.72	-0.92	7.65	-0.037	-0.170	
9	9.71	-0.91	7.58	-0.041	-0.172	
9	9.70	-0.90	7.49	-0.046	-0.174	
10	9.69	-0.89	7.44	-0.049	-0.176	
10	9.68	-0.88	7.37	-0.054	-0.178	
10	9.67	-0.87	7.28	-0.058	-0.180	
10	9.67	-0.87	7.23	-0.061	-0.183	
10	9.66	-0.86	7.15	-0.067	-0.185	
11	9.65	-0.85	7.08	-0.071	-0.187	

WELL CHARACTERISTICS

Well Radius, R_c = 1.00 in
Boring Radius, R_w = 3.80 in
Water Level above well bottom, L_w = 9.67 ft
Saturated Screen Thickness, L_s = 9.67 ft
Saturated Aquifer Thickness, H = 9.67 ft

Regression Output:

Constant -0.073
Std Err of Y Est 0.030
R Squared 0.959
No. of Observations 51
Degrees of Freedom 49

X Coefficient(s) -0.01069
Std Err of Coef. 0.000315

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice, 1989:

A= 2.40
B= 0.35
C= 2.00

R_c = 2.54 cm

R_{eq} = 2.54 cm

R_w = 9.65 cm

L_s = 294.74 cm

L_w = 294.74 cm

H = 294.74 cm

L_c/R_w = 31

Y_o = 0.84

Y_t = 0.82

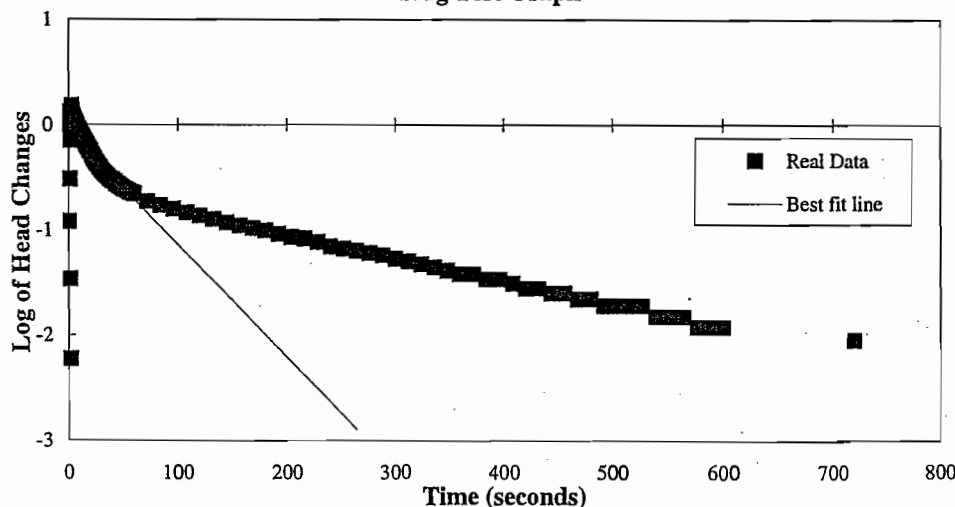
t = 1.40

$\ln(R_c/R_w)$ = 2.58

$K = ((R_c^2) * \ln(R_c/R_w) / 2L_s) * (1/t * \ln(y_o/y_t))$

K (cm/s) = 6.96E-04

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-5 SLUG OUT		0.127	9.79	0.313	9.38	3.0	8.90
SE1000C		0.130	9.78	0.317	9.37	3.2	8.89
Environmental Logger		0.133	9.77	0.320	9.37	3.4	8.89
12/03 17:36		0.137	9.76	0.323	9.36	3.6	8.88
		0.140	9.75	0.327	9.36	3.8	8.88
Unit# 00811 Test 10		0.143	9.74	0.330	9.35	4.0	8.87
		0.147	9.73	0.333	9.35	4.2	8.87
INPUT 1: Level (F) TOC		0.150	9.72	0.350	9.32	4.4	8.86
		0.153	9.71	0.367	9.30	4.6	8.86
Reference 8.800		0.157	9.70	0.383	9.28	4.8	8.86
Linearity 0.050		0.160	9.69	0.400	9.26	5.0	8.85
Scale factor 10.000		0.163	9.68	0.417	9.24	5.2	8.85
Offset 0.010		0.167	9.67	0.433	9.22	5.4	8.85
Delay mSEC 50.000		0.170	9.67	0.450	9.21	5.6	8.84
		0.173	9.66	0.467	9.20	5.8	8.84
Step 0 11/28 10:38:57		0.177	9.65	0.483	9.18	6.0	8.84
		0.180	9.64	0.500	9.17	6.2	8.84
Elapsed		0.183	9.63	0.517	9.16	6.4	8.83
Time INPUT 1		0.187	9.62	0.533	9.15	6.6	8.83
0.000 8.80		0.190	9.62	0.550	9.14	6.8	8.83
0.007 8.92		0.193	9.61	0.567	9.14	7.0	8.83
0.010 9.62		0.197	9.60	0.583	9.13	7.2	8.83
0.013 10.12		0.200	9.60	0.600	9.12	7.4	8.83
0.017 9.51		0.203	9.59	0.617	9.11	7.6	8.83
0.020 9.10		0.207	9.58	0.633	9.10	7.8	8.82
0.023 8.83		0.210	9.57	0.650	9.10	8.0	8.82
0.027 8.81		0.213	9.56	0.667	9.09	8.2	8.82
0.030 9.69		0.217	9.56	0.683	9.09	8.4	8.82
0.033 9.83		0.220	9.55	0.700	9.09	8.6	8.82
0.037 9.58		0.223	9.54	0.717	9.08	8.8	8.82
0.040 10.01		0.227	9.54	0.733	9.07	9.0	8.82
0.043 10.32		0.230	9.53	0.750	9.07	9.2	8.82
0.047 10.14		0.233	9.52	0.767	9.06	9.4	8.82
0.050 9.94		0.237	9.52	0.783	9.06	9.6	8.81
0.053 10.06		0.240	9.51	0.800	9.06	9.8	8.81
0.057 10.12		0.243	9.50	0.817	9.05	10	8.81
0.060 9.98		0.247	9.49	0.833	9.05	12	8.81
0.063 10.01		0.250	9.49	0.850	9.04	14	8.80
0.067 10.02		0.253	9.48	0.867	9.04	16	8.80
0.070 9.94		0.257	9.48	0.883	9.04	18	8.80
0.073 9.97		0.260	9.47	0.900	9.03	20	8.80
0.077 9.95		0.263	9.46	0.917	9.03		
0.080 9.89		0.267	9.46	0.933	9.03		
0.083 9.90		0.270	9.45	0.950	9.03		
0.087 9.91		0.273	9.44	0.967	9.03		
0.090 9.90		0.277	9.44	1.0	9.02		
0.093 9.86		0.280	9.43	1.0	9.02		
0.097 9.87		0.283	9.43	1.2	8.99		
0.100 9.87		0.287	9.42	1.4	8.97		
0.103 9.85		0.290	9.41	1.6	8.96		
0.107 9.85		0.293	9.41	1.8	8.95		
0.110 9.84		0.297	9.41	2.0	8.94		
0.113 9.82		0.300	9.40	2.2	8.93		
0.117 9.81		0.303	9.39	2.4	8.92		
0.120 9.80		0.307	9.39	2.6	8.91		
0.123 9.79		0.310	9.38	2.8	8.90		

Slug/Bail Test Data Sheet

For use with Hermit Datalogger and Bouwer & Rice Data Reduction Methods

Job Name: Bouchard J.Y

Job No: 1917

Site Name: _____

On-Site personnel: _____

Well ID: MW-6

Well Characteristics

Well Depth: 16.54 ^{16.77}

Well Radius (Inches), Rc= _____

Depth to water (static): 8.27

Boring Radius (inches), Rw= _____

Water Level above well bottom, Lw= _____

Screen Thick.(feet), Le= _____

Saturated Aq. Thick.(feet), H= _____

Equipment Specs

Slug diameter 1

Hermit Unit No. 811

Slug length 60"

Transducer (PSI): 10

Transducer Serial No. _____

Slug (Falling Head) Test

Date: 11/28/01

Start Time: 7:59

Hermit Ref. value (depth to water) 8.21

XD = 6.68

Hermit Test No: 7

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)
3	7.90		
8	8.16		
10	8.18		
20	8.23		
28	8.24		

Finish Time 8:30 Finish DTW 8.24

Time: 1739

Date: 12/3/01

Download file (Header & data) MW6in

Download file (data only)

Bail (Rising Head) Test

Date: 11/28/01

Start Time: 8:32

Hermit Ref. value (depth to water) 8.24

XD = 6.65

Hermit Test No: 8

Backup data

(read from Hermit display)

Time (min)	WL (feet)	Time (min)	WL (feet)
4	8.52		
10	8.30		
88	8.24		

Finish Time 10:02 Finish DTW 8.25

Time: 1742

Date: 12/3/01

Download file (Header & data) MW600+

Download file (data only)

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard
SITE: Bouchards Junkyard

JOB #: 1913

TEST DATE: 11/28/01
TEST TYPE: Slug In

WELL: MW-6

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 8.21 (ft below top of casing)

change	actual	head	(h-h) change	log head	best
time	head	head	H ₀	change	fit
(secs)	(feet)	change			

	8.21	(pre-slug head)			
1	6.54	1.67	1.00	0.222	0.056
1	7.26	0.95	0.57	-0.022	0.056
1	7.55	0.66	0.39	-0.183	0.055
1	8.20	0.01	0.01	-1.886	0.054
1	6.53	1.68	1.01	0.226	0.053
2	5.17	3.04	1.82	0.483	0.053
2	7.06	1.15	0.69	0.061	0.052
2	6.51	1.70	1.02	0.230	0.051
2	5.79	2.42	1.45	0.384	0.051
2	7.03	1.18	0.71	0.070	0.050
3	6.90	1.31	0.78	0.116	0.049
3	8.15	0.06	0.04	-1.194	0.048
3	7.42	0.79	0.47	-0.105	0.048
3	6.10	2.11	1.27	0.324	0.047
3	6.93	1.28	0.77	0.109	0.046
4	7.34	0.87	0.52	-0.059	0.045
4	6.76	1.45	0.87	0.160	0.045
4	6.82	1.39	0.84	0.144	0.044
4	7.09	1.12	0.67	0.049	0.043
4	6.96	1.25	0.75	0.096	0.042
5	6.90	1.31	0.78	0.116	0.042
5	7.00	1.21	0.73	0.083	0.041
5	7.00	1.21	0.73	0.083	0.040
5	6.97	1.24	0.75	0.094	0.039
5	7.00	1.21	0.73	0.084	0.039
6	7.02	1.20	0.72	0.077	0.038
6	7.01	1.20	0.72	0.080	0.037
6	7.02	1.20	0.72	0.077	0.036
6	7.03	1.18	0.71	0.073	0.036
6	7.03	1.18	0.71	0.072	0.035
7	7.04	1.17	0.70	0.069	0.034
7	7.05	1.16	0.70	0.066	0.033
7	7.05	1.16	0.70	0.064	0.033
7	7.05	1.16	0.69	0.063	0.032
7	7.07	1.14	0.69	0.058	0.031
8	7.07	1.14	0.69	0.058	0.031
8	7.07	1.14	0.68	0.056	0.030
8	7.08	1.13	0.68	0.054	0.029
8	7.08	1.13	0.68	0.053	0.028
8	7.09	1.13	0.67	0.051	0.028
9	7.09	1.12	0.67	0.049	0.027
9	7.09	1.12	0.67	0.048	0.026
9	7.10	1.11	0.67	0.046	0.025
9	7.10	1.11	0.66	0.044	0.025
9	7.10	1.11	0.66	0.044	0.024
10	7.11	1.10	0.66	0.041	0.023
10	7.11	1.10	0.66	0.040	0.022
10	7.12	1.09	0.66	0.039	0.022
10	7.12	1.09	0.65	0.038	0.021
10	7.12	1.09	0.65	0.036	0.020
11	7.12	1.09	0.65	0.036	0.019
11	7.13	1.08	0.65	0.035	0.019

WELL CHARACTERISTICS

Well Radius, R_c = 1.00 in
 Boring Radius, R_w = 3.80 in
 Water Level above well bottom, L_w = 8.56 ft
 Saturated Screen Thickness, L_s = 8.56 ft
 Saturated Aquifer Thickness, H = 8.56 ft

Regression Output:

Constant 0.059
 Std Err of Y Est 0.003
 R Squared 0.997
 No. of Observations 53
 Degrees of Freedom 51
 X Coefficient(s) -0.00371
 Std Err of Coef. 2.73E-05

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice,1989:

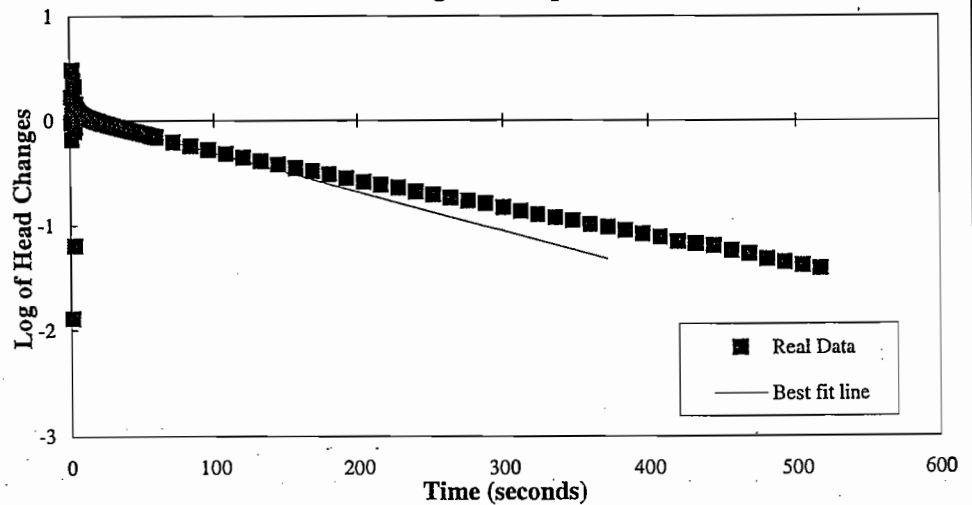
A= 2.30
 B= 0.35
 C= 1.90

R_c = 2.54 cm
 R_{eq} = 2.54 cm
 R_w = 9.65 cm
 L_s = 260.91 cm
 L_w = 260.91 cm
 H = 260.91 cm
 L_s/R_w = 27
 Y_0 = 1.14
 Y_t = 1.13
 t = 1.60
 $\ln(R_e/R_w)$ = 2.48

$$K = ((R_c^2) * \ln(R_e/R_w) / 2L_s) * (1/t * \ln(y_0/y_t))$$

K (cm/s) = 2.61E-04

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-6 SLUG IN		0.130	7.07	0.317	7.23	3.2	7.93
SE1000C		0.133	7.08	0.320	7.23	3.4	7.95
Environmental Logger		0.137	7.08	0.323	7.23	3.6	7.97
12/03 17:40		0.140	7.09	0.327	7.24	3.8	7.98
		0.143	7.09	0.330	7.24	4.0	8.00
Unit# 00811 Test 7		0.147	7.09	0.333	7.24	4.2	8.01
		0.150	7.10	0.350	7.25	4.4	8.03
INPUT 1: Level (F) TOC		0.153	7.10	0.367	7.26	4.6	8.04
		0.157	7.10	0.383	7.27	4.8	8.05
Reference 8.210		0.160	7.11	0.400	7.28	5.0	8.06
Linearity 0.050		0.163	7.11	0.417	7.29	5.2	8.07
Scale factor 10.000		0.167	7.12	0.433	7.30	5.4	8.08
Offset 0.010		0.170	7.12	0.450	7.31	5.6	8.09
Delay mSEC 50.000		0.173	7.12	0.467	7.32	5.8	8.10
		0.177	7.12	0.483	7.32	6.0	8.11
Step 0 11/28 07:59:43		0.180	7.13	0.500	7.33	6.2	8.11
		0.183	7.13	0.517	7.34	6.4	8.12
Elapsed		0.187	7.13	0.533	7.34	6.6	8.13
Time INPUT 1		0.190	7.14	0.550	7.35	6.8	8.13
0.000 8.21		0.193	7.14	0.567	7.36	7.0	8.14
0.010 6.54		0.197	7.14	0.583	7.37	7.2	8.14
0.013 7.26		0.200	7.15	0.600	7.38	7.4	8.15
0.017 7.55		0.203	7.15	0.617	7.38	7.6	8.15
0.020 8.20		0.207	7.15	0.633	7.39	7.8	8.16
0.023 6.53		0.210	7.15	0.650	7.40	8.0	8.16
0.027 5.17		0.213	7.15	0.667	7.40	8.2	8.17
0.030 7.06		0.217	7.16	0.683	7.41	8.4	8.17
0.033 6.51		0.220	7.16	0.700	7.41	8.6	8.17
0.037 5.79		0.223	7.16	0.717	7.42	8.8	8.18
0.040 7.03		0.227	7.17	0.733	7.43	9.0	8.18
0.043 6.90		0.230	7.17	0.750	7.43	9.2	8.18
0.047 8.15		0.233	7.17	0.767	7.44	9.4	8.18
0.050 7.42		0.237	7.17	0.783	7.45	9.6	8.18
0.053 6.10		0.240	7.18	0.800	7.45	9.8	8.19
0.057 6.93		0.243	7.18	0.817	7.46	10	8.19
0.060 7.34		0.247	7.18	0.833	7.46	12	8.21
0.063 6.76		0.250	7.19	0.850	7.47	14	8.22
0.067 6.82		0.253	7.19	0.867	7.47	16	8.23
0.070 7.09		0.257	7.19	0.883	7.48	18	8.23
0.073 6.96		0.260	7.19	0.900	7.49	20	8.24
0.077 6.90		0.263	7.20	0.917	7.49	22	8.24
0.080 7.00		0.267	7.20	0.933	7.50	24	8.24
0.083 7.00		0.270	7.20	0.950	7.50	26	8.24
0.087 6.97		0.273	7.20	0.967	7.51	28	8.24
0.090 7.00		0.277	7.20	0.983	7.51	30	8.24
0.093 7.02		0.280	7.21	1.0	7.52		
0.097 7.01		0.283	7.21	1.2	7.59		
0.100 7.02		0.287	7.21	1.4	7.64		
0.103 7.03		0.290	7.22	1.6	7.69		
0.107 7.03		0.293	7.22	1.8	7.73		
0.110 7.04		0.297	7.22	2.0	7.77		
0.113 7.05		0.300	7.22	2.2	7.80		
0.117 7.05		0.303	7.22	2.4	7.83		
0.120 7.05		0.307	7.22	2.6	7.86		
0.123 7.07		0.310	7.23	2.8	7.88		
0.127 7.07		0.313	7.23	3.0	7.91		

Hydraulic Conductivity Calculations Using the Bouwer and Rice Method¹

JOB NAME: Bouchards Junkyard

JOB #: 1913

SITE: Bouchards Junkyard

TEST DATE: 11/28/01

WELL: MW-6

TEST TYPE: Slug Out

file slugv501 revised 12/29/98 by GG

DATA

Equilibrium head 8.24 (ft below top of casing)

change actual

time head head (h-h)/ log head best
(secs) (feet) change H₀ change fit

8.24 (pre-slug head)

0	9.85	-1.61	1.00	0.205	0.152
1	11.35	-3.11	1.93	0.492	0.151
1	9.20	-0.96	0.60	-0.017	0.151
1	9.89	-1.65	1.03	0.217	0.149
1	9.39	-1.15	0.72	0.061	0.149
2	10.06	-1.82	1.14	0.261	0.148
2	9.74	-1.50	0.94	0.177	0.147
2	9.82	-1.58	0.98	0.198	0.147
2	9.79	-1.55	0.97	0.191	0.146
2	9.75	-1.51	0.94	0.180	0.145
3	9.78	-1.54	0.96	0.187	0.145
3	9.74	-1.50	0.93	0.175	0.144
3	9.75	-1.51	0.94	0.180	0.143
3	9.73	-1.49	0.93	0.173	0.143
3	9.74	-1.50	0.93	0.175	0.142
4	9.72	-1.48	0.92	0.169	0.141
4	9.72	-1.48	0.92	0.169	0.141
4	9.71	-1.47	0.91	0.166	0.140
4	9.70	-1.46	0.91	0.165	0.139
4	9.70	-1.46	0.91	0.163	0.139
5	9.69	-1.45	0.91	0.162	0.138
5	9.69	-1.45	0.90	0.160	0.138
5	9.68	-1.44	0.90	0.160	0.137
5	9.68	-1.44	0.90	0.157	0.136
5	9.67	-1.43	0.89	0.157	0.136
6	9.67	-1.43	0.89	0.156	0.135
6	9.67	-1.43	0.89	0.154	0.134
6	9.66	-1.42	0.89	0.153	0.134
6	9.66	-1.42	0.88	0.151	0.133
6	9.65	-1.41	0.88	0.150	0.132
7	9.65	-1.41	0.88	0.149	0.132
7	9.65	-1.41	0.88	0.148	0.131
7	9.64	-1.40	0.87	0.147	0.130
7	9.64	-1.40	0.87	0.146	0.130
7	9.64	-1.40	0.87	0.145	0.129
8	9.63	-1.39	0.87	0.144	0.128
8	9.63	-1.39	0.87	0.143	0.128
8	9.63	-1.39	0.86	0.142	0.127
8	9.62	-1.38	0.86	0.140	0.126
8	9.62	-1.38	0.86	0.140	0.126
9	9.61	-1.37	0.86	0.138	0.125
9	9.61	-1.37	0.85	0.137	0.124
9	9.61	-1.37	0.85	0.137	0.124
9	9.61	-1.37	0.85	0.136	0.123
9	9.60	-1.36	0.85	0.135	0.122
10	9.60	-1.36	0.85	0.134	0.122
10	9.60	-1.36	0.85	0.133	0.121
10	9.60	-1.36	0.84	0.132	0.120
10	9.59	-1.35	0.84	0.131	0.120
10	9.59	-1.35	0.84	0.130	0.119
11	9.59	-1.35	0.84	0.129	0.118
11	9.59	-1.35	0.84	0.129	0.118

WELL CHARACTERISTICS

Well Radius, R_c = 1.00 in
 Boring Radius, R_w = 3.80 in
 Water Level above well bottom, L_w = 8.53 ft
 Saturated Screen Thickness, L_s = 8.53 ft
 Saturated Aquifer Thickness, H = 8.53 ft

Regression Output:

Constant 0.153
 Std Err of Y Est 0.002
 R Squared 0.999
 No. of Observations 36
 Degrees of Freedom 34
 X Coefficient(s) -0.00329
 Std Err of Coef. 1.65E-05

BOUWER/RICE

SLUG TEST CALCULATIONS

From Fig.2,

Bouwer&Rice, 1989:

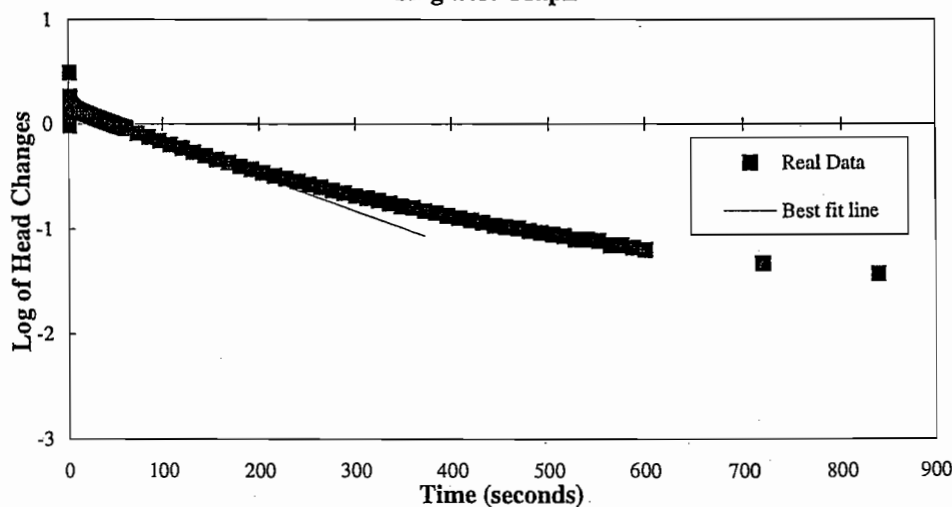
A= 2.25
 B= 0.35
 C= 1.80

R_c = 2.54 cm
 R_{eq} = 2.54 cm
 R_w = 9.65 cm
 L_s = 259.99 cm
 L_w = 259.99 cm
 H = 259.99 cm
 L_s/R_w = 27
 Y₀ = 1.42
 Y_t = 1.41
 t = 1.60
 ln(R_c/R_w) = 2.49

$$K = ((R_c^2) * \ln(R_c/R_w) / 2L_s) * (1/t * \ln(y_0/y_t))$$

K (cm/s) = 2.34E-04

Slug Test Graph



¹Bouwer, H. 1989. "The Bouwer and Rice Slug Test - An Update", Ground Water, Vol. 27, No.3, pp.304-309.

MW-6 SLUG OUT		0.130	9.63	0.317	9.49	3.2	8.61
SE1000C		0.133	9.63	0.320	9.49	3.4	8.58
Environmental Logger		0.137	9.62	0.323	9.49	3.6	8.56
12/03 17:42		0.140	9.62	0.327	9.48	3.8	8.54
		0.143	9.61	0.330	9.48	4.0	8.52
Unit# 00811 Test 8		0.147	9.61	0.333	9.48	4.2	8.50
		0.150	9.61	0.350	9.47	4.4	8.49
INPUT 1: Level (F) TOC		0.153	9.61	0.367	9.46	4.6	8.47
		0.157	9.60	0.383	9.45	4.8	8.46
Reference 8.240		0.160	9.60	0.400	9.44	5.0	8.45
Linearity 0.050		0.163	9.60	0.417	9.43	5.2	8.44
Scale factor 10.000		0.167	9.60	0.433	9.42	5.4	8.43
Offset 0.010		0.170	9.59	0.450	9.41	5.6	8.41
Delay mSEC 50.000		0.173	9.59	0.467	9.40	5.8	8.40
		0.177	9.59	0.483	9.39	6.0	8.40
Step 0 11/28 08:32:34		0.180	9.59	0.500	9.38	6.2	8.39
		0.183	9.58	0.517	9.37	6.4	8.38
Elapsed		0.187	9.58	0.533	9.36	6.6	8.37
Time INPUT 1		0.190	9.58	0.550	9.35	6.8	8.37
0.000 8.24		0.193	9.57	0.567	9.34	7.0	8.36
0.007 9.85		0.197	9.57	0.583	9.34	7.2	8.35
0.010 11.35		0.200	9.57	0.600	9.33	7.4	8.35
0.013 9.20		0.203	9.57	0.617	9.32	7.6	8.34
0.020 9.89		0.207	9.56	0.633	9.31	7.8	8.34
0.023 9.39		0.210	9.56	0.650	9.30	8.0	8.34
0.027 10.06		0.213	9.56	0.667	9.29	8.2	8.33
0.030 9.74		0.217	9.56	0.683	9.29	8.4	8.33
0.033 9.82		0.220	9.55	0.700	9.28	8.6	8.33
0.037 9.79		0.223	9.55	0.717	9.27	8.8	8.32
0.040 9.75		0.227	9.55	0.733	9.26	9.0	8.32
0.043 9.78		0.230	9.55	0.750	9.25	9.2	8.32
0.047 9.74		0.233	9.54	0.767	9.24	9.4	8.31
0.050 9.75		0.237	9.54	0.783	9.24	9.6	8.31
0.053 9.73		0.240	9.54	0.800	9.23	9.8	8.31
0.057 9.74		0.243	9.54	0.817	9.22	10	8.30
0.060 9.72		0.247	9.54	0.833	9.22	12	8.29
0.063 9.72		0.250	9.53	0.850	9.21	14	8.28
0.067 9.71		0.253	9.53	0.867	9.20	16	8.27
0.070 9.70		0.257	9.53	0.883	9.19	18	8.27
0.073 9.70		0.260	9.53	0.900	9.18	20	8.26
0.077 9.69		0.263	9.53	0.917	9.18	22	8.26
0.080 9.69		0.267	9.52	0.933	9.17	24	8.26
0.083 9.68		0.270	9.52	0.950	9.16	26	8.26
0.087 9.68		0.273	9.52	0.967	9.16	28	8.25
0.090 9.67		0.277	9.52	0.983	9.15	30	8.25
0.093 9.67		0.280	9.51	1.0	9.15	32	8.25
0.097 9.67		0.283	9.51	1.2	9.05	34	8.26
0.100 9.66		0.287	9.51	1.4	8.99	36	8.25
0.103 9.66		0.290	9.51	1.6	8.93	38	8.25
0.107 9.65		0.293	9.50	1.8	8.87	40	8.25
0.110 9.65		0.297	9.50	2.0	8.82	42	8.25
0.113 9.65		0.300	9.50	2.2	8.78	44	8.25
0.117 9.64		0.303	9.50	2.4	8.73	46	8.25
0.120 9.64		0.307	9.50	2.6	8.70	48	8.25
0.123 9.64		0.310	9.49	2.8	8.66	50	8.25
0.127 9.63		0.313	9.49	3.0	8.63	52	8.25

54	8.25
56	8.25
58	8.25
60	8.25
62	8.25
64	8.25
66	8.25
68	8.26
70	8.26
72	8.26
74	8.26
76	8.26
78	8.26
80	8.25
82	8.26
84	8.25
86	8.26
88	8.25
90	8.25

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APPENDIX D

GROUNDWATER AND SURFACE WATER ELEVATION DATA

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**Groundwater Level Measurements
Bouchard Junkyard Site
November 16, 2001**

Well ID	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)	Depth Below Ground Surface (feet)
MW-01	22.45	687.45	20.34
MW-02	11.00	686.11	8.62
MW-03	12.92	685.47	10.78
MW-04	5.86	687.10	3.53
MW-05	8.84	685.24	6.69
MW-06	8.34	686.12	5.90
SG-1	NM	NM	NA
SG-2	NM	NM	NA

**Groundwater Level Measurements
Bouchard Junkyard Site
November 26, 2001**

Well ID	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)	Depth Below Ground Surface (feet)
MW-01	22.60	687.30	20.49
MW-02	10.97	686.14	8.59
MW-03	12.96	685.43	10.82
MW-04	5.77	687.19	3.44
MW-05	8.81	685.27	6.66
MW-06	8.25	686.21	5.81
SG-1	NM	NM	NA
SG-2	NM	NM	NA

**Groundwater Level Measurements
Bouchard Junkyard Site
November 27, 2001**

Well ID	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)	Depth Below Ground Surface (feet)
MW-01	22.64	687.26	20.53
MW-02	10.97	686.14	8.59
MW-03	12.98	685.41	10.84
MW-04	5.79	687.17	3.46
MW-05	8.80	685.28	6.65
MW-06	8.25	686.21	5.81
SG-1	Dry	NA	NA
SG-2	2.95	687.01	NA

Groundwater Level Measurements
Bouchard Junkyard Site
May 23, 2002

Well ID	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)	Depth Below Ground Surface (feet)
MW-01	16.36	693.54	14.25
MW-02	6.72	690.39	4.34
MW-03	7.50	690.89	5.36
MW-04	4.09	688.87	1.76
MW-05	4.55	689.53	2.40
MW-06	5.34	689.12	2.90
SG-1	5.03	689.28	NA
SG-2	2.75	687.21	NA

Groundwater Level Measurements
Bouchard Junkyard Site
May 24, 2002

Well ID	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)	Depth Below Ground Surface (feet)
MW-01	16.26	693.64	14.15
MW-02	6.74	690.37	4.36
MW-03	7.51	690.88	5.37
MW-04	4.12	688.84	1.79
MW-05	4.59	689.49	2.44
MW-06	5.36	689.10	2.92
SG-1	5.05	689.26	NA
SG-2	2.80	687.16	NA

Table D-1
Bouchard Junkyard Site
Groundwater Elevation Summary
(feet above mean sea level)

Well ID	11/16/01	11/26/01	11/27/01	5/23/02	5/24/02	3/31/05	Max	Min	Range
MW-01	687.45	687.30	687.26	693.54	693.64	699.18	699.18	687.26	11.92
MW-02	686.11	686.14	686.14	690.39	690.37	690.69	690.69	686.11	4.58
MW-03	685.47	685.43	685.41	690.89	690.88	692.43	692.43	685.41	7.02
MW-04	687.10	687.19	687.17	688.87	688.84	689.79	689.79	687.10	2.69
MW-05	685.24	685.27	685.28	689.53	689.49	690.68	690.68	685.24	5.44
MW-06	686.12	686.21	686.21	689.12	689.10	689.96	689.96	686.12	3.84
SG-1	NM	NM	NA	689.28	689.26	NM	689.28	689.26	0.02
SG-2	NM	NM	687.01	687.21	687.16	NM	687.21	687.01	0.20

Notes:
 NM - Not measured.

Table D-2
Groundwater Level Measurements
Bouchard Junkyard Site
March 31, 2005

Well ID	Depth to Groundwater* (feet)	Groundwater Elevation (feet amsl)	Depth Below Ground Surface (feet)
MW-01	10.72	699.18	8.61
MW-02	6.42	690.69	4.04
MW-03	5.96	692.43	3.82
MW-04	3.17	689.79	0.84
MW-05	3.40	690.68	1.25
MW-06	4.50	689.96	2.06
SG-1	NM	NM	NM
SG-2	NM	NM	NM

Notes:

* - Measured relative to top of well casing.

feet amsl - Feet above mean sea level (NAVD 88).

NM - Not measured.

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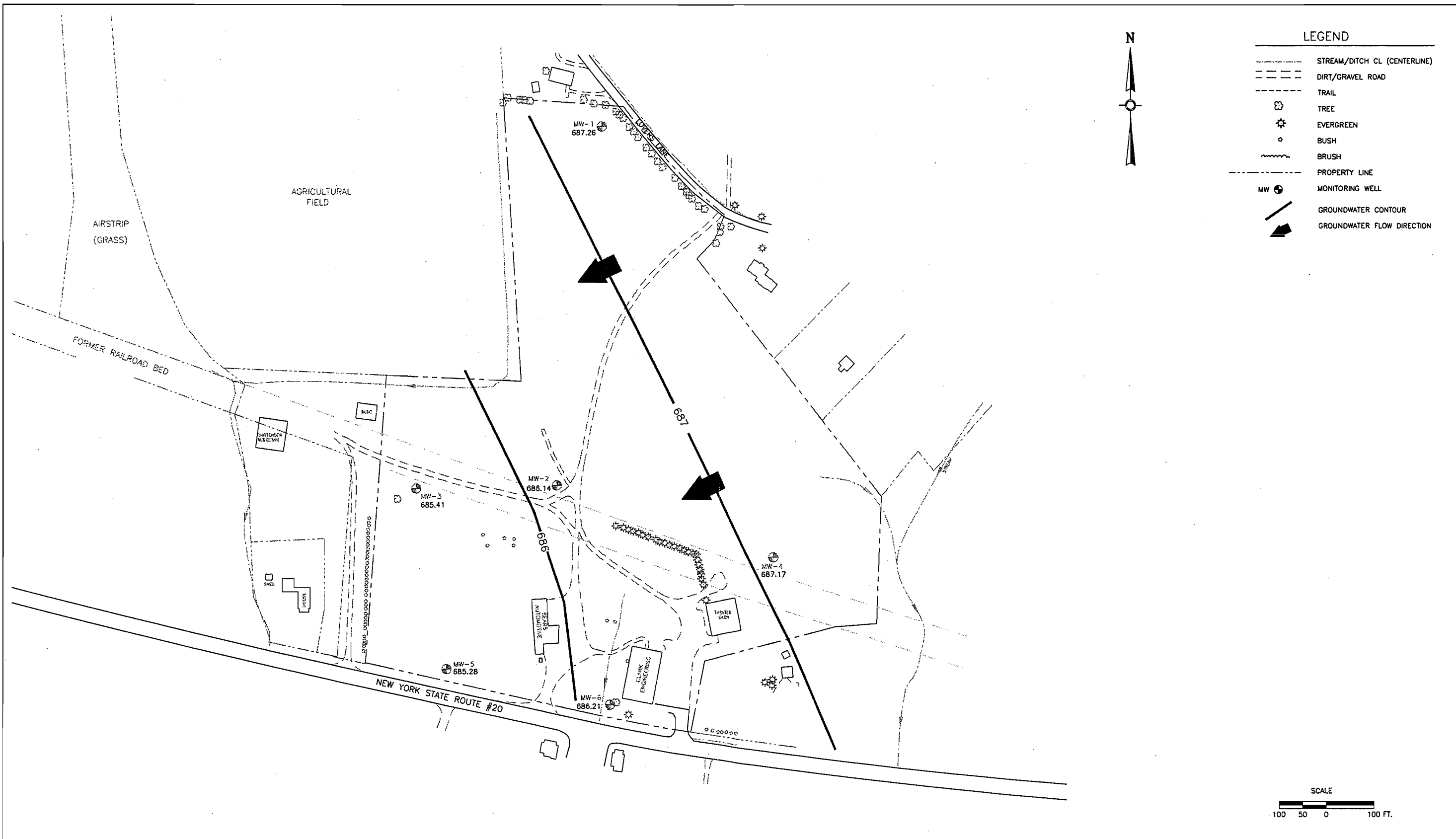


FIGURE D -2
FORMER BOUCHARD JUNKYARD SITE
WATER TABLE SURFACE ELEVATION
NOVEMBER 27, 2001

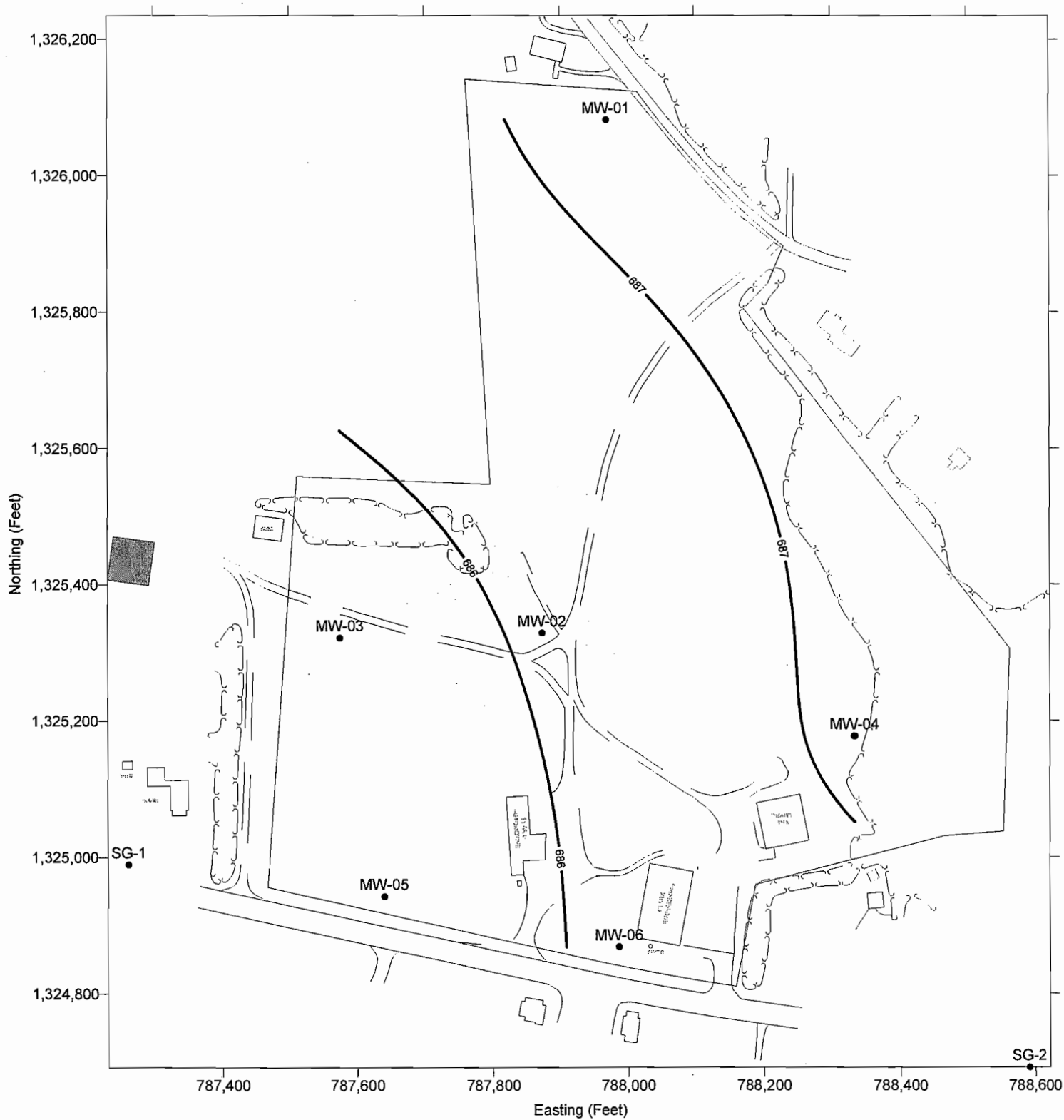


FIGURE D -3
FORMER BOUCHARD JUNKYARD SITE
WATER TABLE SURFACE ELEVATION
MAY 24, 2002

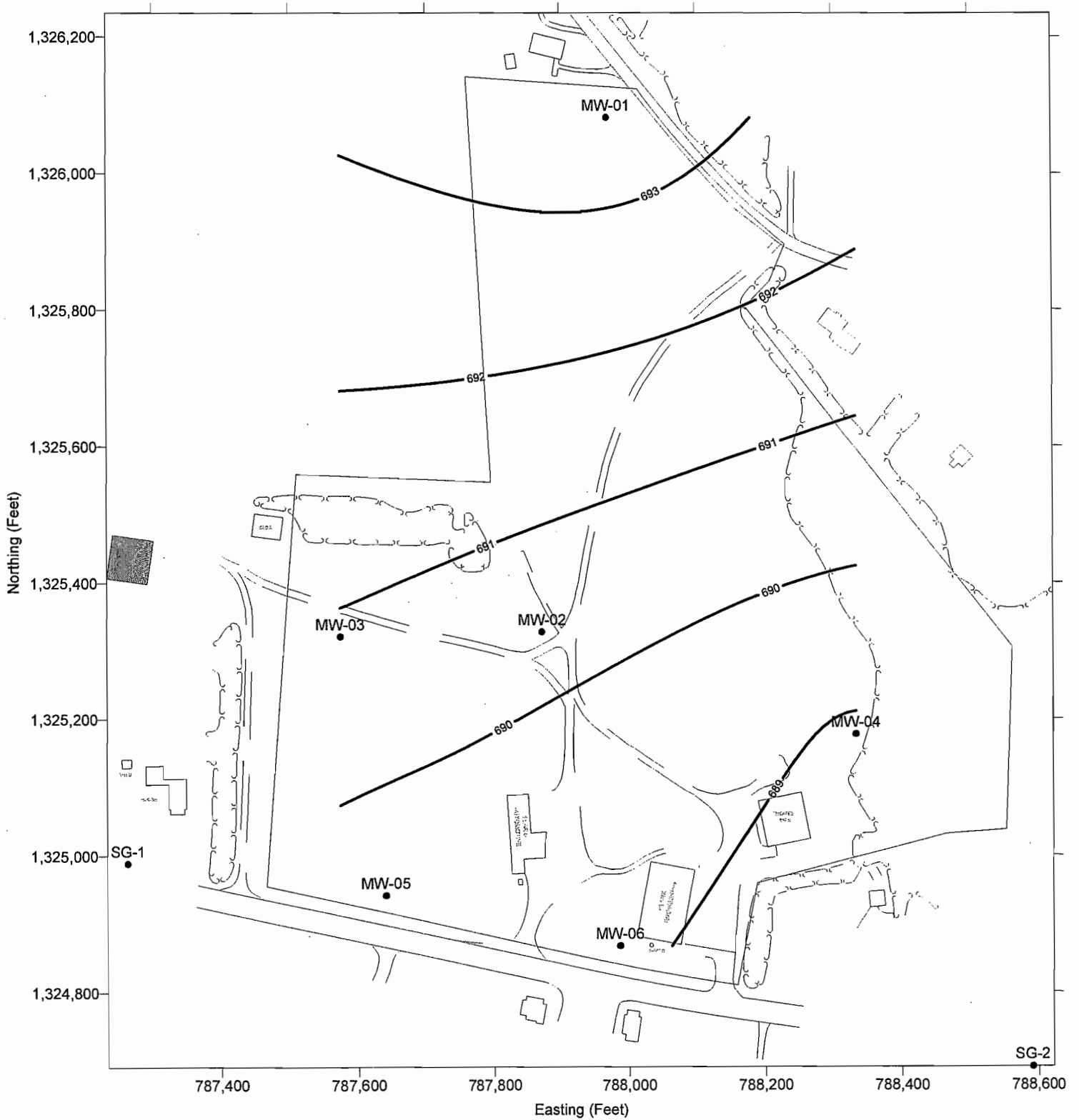
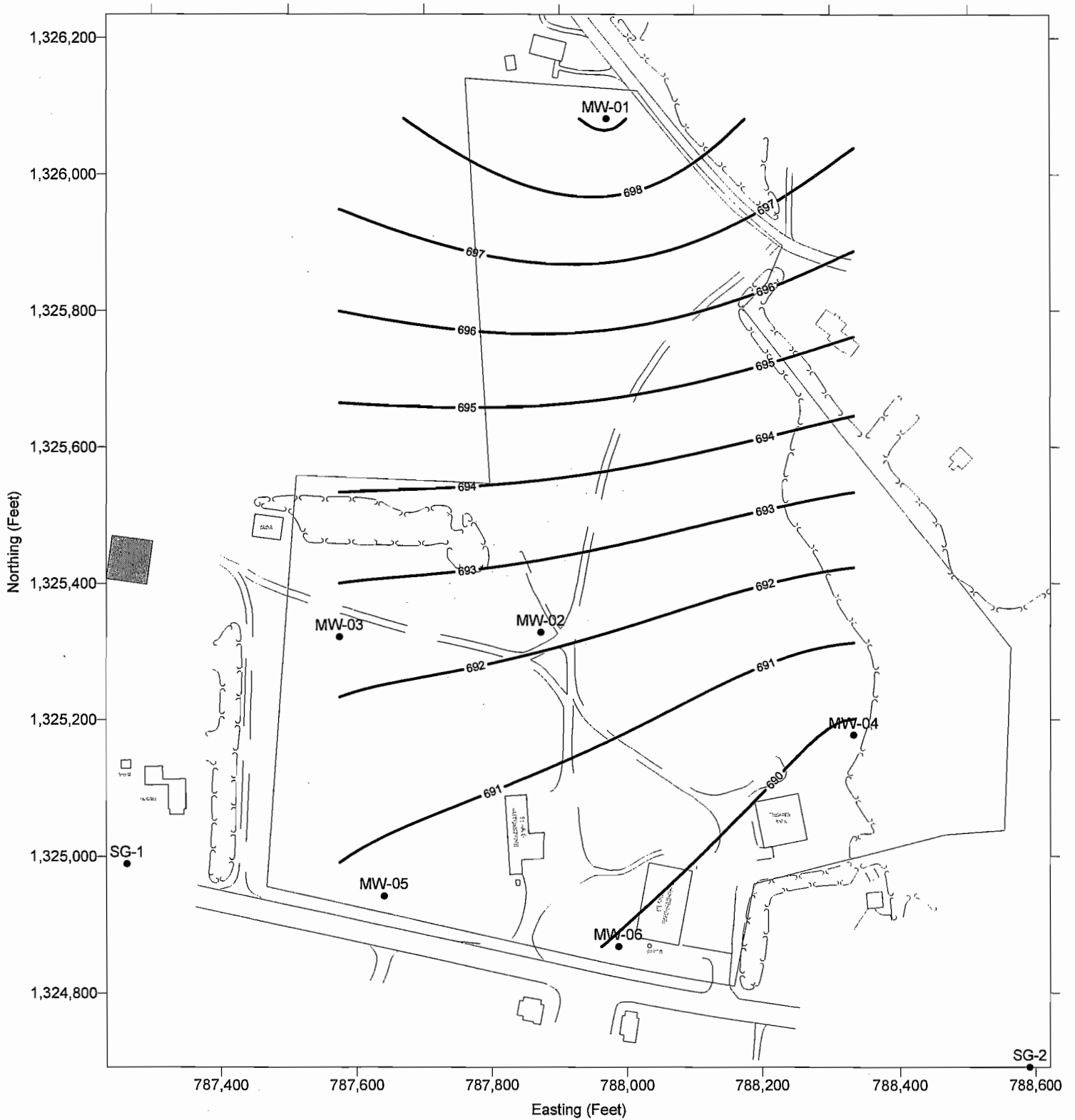


FIGURE D -4
FORMER BOUCHARD JUNKYARD SITE
WATER TABLE SURFACE ELEVATION
MARCH 31, 2005



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APPENDIX E

ANALYTICAL DATA

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Appendix E
Analytical Results
List of Tables

- 1a. Surface Soil Sample Results - November 2001, Volatile Organic Compounds
- 1b. Surface Soil Sample Results - November 2001, Semivolatile Organic Compounds
- 1c. Surface Soil Sample Results - November 2001, Pesticides/PCBs
- 1d. Surface Soil Sample Results - November 2001, Inorganic Parameters
- 1e. Surface Soil Sample Results - November 2001, PCBs, Field Analysis (RaPID Assay)
- 1f. Surface Soil Sample Results - November 2001, PCBs, Laboratory Confirmation
- 1g. Surface Soil Sample Results - May 2002, Pesticides/PCBs

- 2a. Subsurface Soil Sample Results - November 2001, Volatile Organic Compounds
- 2b. Subsurface Soil Sample Results - November 2001, Semivolatile Organic Compounds
- 2c. Subsurface Soil Sample Results - November 2001, Pesticides/PCBs
- 2d. Subsurface Soil Sample Results - November 2001, Inorganic Parameters
- 2e. Subsurface Soil Sample Results - November 2001, PCBs, Field Analysis (RaPID Assay)
- 2f. Subsurface Soil Sample Results - November 2001, PCBs, Laboratory Confirmation
- 2g. Subsurface Soil Sample Results - May 2002, Pesticides/PCBs

- 3a. Surface Water Sample Results - October 2001, Volatile Organic Compounds
- 3b. Surface Water Sample Results - October 2001, Semivolatile Organic Compounds
- 3c. Surface Water Sample Results - October 2001, Pesticides/PCBs
- 3d. Surface Water Sample Results - October 2001, Inorganic Parameters - Unfiltered

- 4a. Surface Water Sample Results - May 2002, Volatile Organic Compounds
- 4b. Surface Water Sample Results - May 2002, Semivolatile Organic Compounds
- 4c. Surface Water Sample Results - May 2002, Pesticides/PCBs
- 4d. Surface Water Sample Results - May 2002, Inorganic Parameters - Unfiltered

- 5a. Surface Water Sediment Sample Results - October 2001, Volatile Organic Compounds
- 5b. Surface Water Sediment Results - October 2001, Semivolatile Organic Compounds
- 5c. Surface Water Sediment Results - October 2001, Pesticides/PCBs
- 5d. Surface Water Sediment Results - October 2001, Inorganic Parameters
- 5e. Surface Water Sediment Results - October 2001, Total Organic Carbon

- 6a. Surface Water Sediment Sample Results - May 2002, Volatile Organic Compounds
- 6b. Surface Water Sediment Results - May 2002, Semivolatile Organic Compounds
- 6c. Surface Water Sediment Results - May 2002, Pesticides/PCBs
- 6d. Surface Water Sediment Results - May 2002, Total Organic Carbon

Appendix E
Analytical Results
List of Tables (Continued)

- 7a. Groundwater Sample Results - November 2001, Volatile Organic Compounds
- 7b. Groundwater Sample Results - November 2001, Semivolatile Organic Compounds
- 7c. Groundwater Sample Results - November 2001, Pesticides/PCBs
- 7d. Groundwater Sample Results - November 2001, Inorganic Parameters - Unfiltered

- 8a. Groundwater Sample Results – May 2002, Volatile Organic Compounds
- 8b. Groundwater Sample Results – May 2002, PCBs

- 9a. Water Supply Sample Results - November 2001, Volatile Organic Compounds
- 9b. Water Supply Sample Results - November 2001, Semivolatile Organic Compounds
- 9c. Water Supply Sample Results - November 2001, Pesticides/PCBs
- 9d. Water Supply Sample Results - November 2001, Inorganic Parameters – Unfiltered

- 10a. Water Supply Sample Results - May 2002, Volatile Organic Compounds
- 10b. Water Supply Sample Results - May 2002, Pesticides/PCBs
- 10c. Water Supply Sample Results - May 2002, Inorganic Parameters - Unfiltered

- 11a. Surface Soil Sample Results – March 2005, Polychlorinated Biphenyls
- 11b. Surface Soil Sample Results – March 2005, Total Organic Carbon

- 12a. Subsurface Soil Sample Results – March 2005, Polychlorinated Biphenyls
- 12b. Subsurface Soil Sample Results – March 2005, Total Organic Carbon

- 13a. Sediment Sample Results – March 2005, Polychlorinated Biphenyls
- 13b. Sediment Sample Results – March 2005, Semi-Volatile Organic Compounds
- 13c. Sediment Sample Results – March 2005, Total Organic Carbon

- 14a. Sieve Analysis Sample Results - March 2005, Polychlorinated Biphenyls

- 15a. Groundwater Sample Results – March 2005, Volatile Organic Compounds
- 15b. Groundwater Sample Results – March 2005, Semi-Volatile Organic Compounds
- 15c. Groundwater Sample Results – March 2005, Pesticides/PCBs
- 15d. Groundwater Sample Results – April 2005, Inorganic Parameters – Unfiltered

- 16a. Water Supply Well Sample Results – March 2005, Volatile Organic Compounds
- 16b. Water Supply Well Sample Results – March 2005, Semi-Volatile Organic Compounds
- 16c. Water Supply Well Sample Results – March 2005, Pesticides/PCBs
- 16d. Water Supply Well Sample Results – March 2005, Inorganic Parameters – Unfiltered

- 17a. Surface Water Sample Results – March 2005, Volatile Organic Compounds
- 17b. Surface Water Sample Results – March 2005, Semi-Volatile Organic Compounds
- 17c. Surface Water Sample Results – March 2005, Pesticides/PCBs
- 17d. Surface Water Sample Results – March 2005, Inorganic Parameters – Unfiltered

TABLE 1a.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
VOLATILE ORGANIC COMPOUNDS

Sample Identification	SS-S-12	SS-S-51	SS-S-79	SS-S-82	SS-S-90	SS-S-168	SS-S-171	SS-S-183	SS-S-240	SS-S-241	NYSDEC Recommended Soil Clean-Up
Location	C,6	G,1	H,15	H,21	I,10	N,11	N,17	O,14	Biased 1	Biased 2	
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	
Date of Collection	11/08/01	11/08/01	11/08/01	11/08/01	11/08/01	11/08/01	11/08/01	11/08/01	11/15/01	11/15/01	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Percent Moisture	18	10	16	19	7	24	22	15	31	11	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	Objective (ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	U	U	---
Chloromethane	U	U	U	U	U	U	U	U	U	U	---
Vinyl Chloride	U	U	U	U	U	U	U	U	U	U	200
Bromomethane	U	U	U	U	U	U	U	U	U	U	---
Chloroethane	U	U	U	U	U	U	U	U	U	U	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	U	U	---
1,1-Dichloroethene	U	U	U	U	U	U	U	U	U	U	400
1,1,2-Trichl.-1,2,2-trifluor.	U	U	U	U	U	U	U	U	U	U	---
Acetone	U*	U*	U*	U*	U	U	U*	U*	U	U	200
Carbon Disulfide	U	U	U	U	U	U	U	U	U	U	2,700
Methyl Acetate	U	U	U	U	U	U	U	U	U	U	---
Methylene Chloride	U*	U*	U	U	U	U	U*	U	U	U	100
trans-1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	---
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	U	U	---
1,1-Dichloroethane	U	U	U	U	U	U	U	U	U	U	200
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	U	U	---
2-Butanone	U	U	U	U	U	U	2	U	U	U	300
Chloroform	U	U	U	U	U	U	U	U	U	U	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	U	800
Cyclohexane	U	U	U	U	U	U	U	U	U	U	---
Carbon Tetrachloride	U	U	U	U	U	U	U	U	U	U	600
Benzene	U	U	U	U	U	U	U	U	U	U	100
1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	700
Trichloroethene	U	U	U	U	U	U	U	U	U	U	---
Methylcyclohexane	U	U	U	U	U	U	U	U	U	U	---
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	U	---
Bromodichloromethane	U	U	U	U	U	U	U	U	U	U	1,000
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	1,500
4-Methyl-2-Pentanone	U	U	U	U	U	U	U	U	U	U	---
Toluene	U	U	U	U	U	U	U	U	U	U	---
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	---
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	U	U	1,400
Tetrachloroethene	U	U	U	U	U	U	U	U	U	U	---
2-Hexanone	U	U	U	U	U	U	U	U	U	U	---
Dibromochloromethane	U	U	U	U	U	U	U	U	U	U	---
1,2-Dibromoethane	U	U	U	U	U	U	U	U	U	U	---
Chlorobenzene	U	U	U	U	U	U	U	U	U	U	1,700
Ethylbenzene	U	U	U	U	U	U	U	U	U	U	5,500
Total Xylenes	U	U	U	U	U	U	U	U	U	U	1,200
Styrene	U	U	U	U	U	U	U	U	U	U	---
Bromoform	U	U	U	U	U	U	U	U	U	U	---
Isopropylbenzene	U	U	U	U	U	U	U	U	U	U	---
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	U	600
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	U	U	---
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	U	3,400
Total VOCs	0	0	0	0	0	0	2	0	0	0	10,000
Total VOC TICs	0	0	0	0	0	0	0	0	0	0	

QUALIFIERS:
U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Qualified as non-detect based on validation criteria

NOTES:

Indicates value exceeds the NYSDEC recommended soil clean up objective.

TABLE 1a. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SOIL SAMPLE RESULTS - NOVEMBER 2001

VOLATILE ORGANIC COMPOUNDS													
Sample Identification	SS-S-242	SS-S-243	SS-S-244	SS-S-245	SS-S-246	SS-S-247	SS-S-248	SS-S-249	SS-S-250	SS-S-251	SS-S-252	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	Biased 3	Biased 4	Biased 5	Biased 6	Biased 1	Biased 7	Biased 2	Biased 8	Biased 9	Biased 3	Biased 10		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/16/01	11/16/01	11/16/01	11/16/01	11/16/01	11/16/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	25	14	2	21	17	19	27	14	19	11	22		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	U	U	U	10	---
Chloromethane	U	U	U	U	U	U	U	U	U	U	U	10	---
Vinyl Chloride	U	U	U	U	U	U	U	U	U	U	U	10	200
Bromomethane	U	U	U	U	U	U	U	U	U	U	U	10	---
Chloroethane	U	U	U	U	U	U	U	U	U	U	U	10	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	U	U	U	10	---
1,1-Dichloroethene	U	U	U	U	U	U	U	U	U	U	U	10	400
1,1,2-Trichl.-1,2,2-trifluor.	U	U	U	U	U	U	U	U	U	U	U	10	---
Acetone	U	U	U	U	U	U	U	U	U	U	U	10	200
Carbon Disulfide	U	U	U	U	U	U	U	U	U	U	U	10	2,700
Methyl Acetate	U	U	U	U	U	U	U	U	U	U	U	10	---
Methylene Chloride	U	U	U	U	U	U	U	U	U	U	U	10	100
Trans-1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	U	10	---
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	U	U	U	10	---
1,1-Dichloroethane	U	U	U	U	U	U	U	U	U	U	U	10	200
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	U	U	U	10	---
2-Butanone	U	U	U	U	U	U	U	U	U	U	U	10	300
Chloroform	U	U	U	U	U	U	U	U	U	U	U	10	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	U	U	10	800
Cyclohexane	U	U	U	U	U	U	U	U	U	U	U	10	---
Carbon Tetrachloride	U	U	U	U	U	U	U	U	U	U	U	10	600
Benzene	U	U	U	U	U	U	U	U	U	U	U	10	60
1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	U	10	100
Trichloroethene	U	U	U	U	U	U	U	U	U	U	U	10	700
Methylcyclohexane	U	U	U	U	U	U	U	U	U	U	U	10	---
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	U	U	10	---
Bromodichloromethane	U	U	U	U	U	U	U	U	U	U	U	10	---
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	U	10	---
4-Methyl-2-Pentanone	U	U	U	U	U	U	U	U	U	U	U	10	1,000
Toluene	U	U	U	U	U	U	U	U	U	U	U	10	1,500
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	U	10	---
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	U	U	U	10	1,400
Tetrachloroethene	U	U	U	U	U	U	U	U	U	U	U	10	---
2-Hexanone	U	U	U	U	U	U	U	U	U	U	U	10	---
Dibromochloromethane	U	U	U	U	U	U	U	U	U	U	U	10	---
1,2-Dibromoethane	U	U	U	U	U	U	U	U	U	U	U	10	---
Chlorobenzene	U	U	U	U	U	U	U	U	U	U	U	10	1,700
Ethylbenzene	U	U	U	U	U	U	U	U	U	U	U	10	5,500
Total Xylenes	U	U	U	U	U	U	U	U	U	U	U	10	1,200
Styrene	U	U	U	U	U	U	U	U	U	U	U	10	---
Bromoform	U	U	U	U	U	U	U	U	U	U	U	10	---
Isopropylbenzene	U	U	U	U	U	U	U	U	U	U	U	10	---
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	U	U	10	600
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	10	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	10	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	10	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	U	U	U	10	---
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	10	3,400
Total VOCs	0	0	0	0	0	0	0	0	0	0	0		10,000
Total VOC TICs	0	0	0	0	0	0	0	0	0	0	0		

QUALIFIERS:
 U: Compound analyzed for but not detected
 B: Compound found in the method blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated
 D: Result taken from reanalysis at dilution
 U*: Qualified as non-detect based on validation criteria

NOTES:
 Indicates value exceeds the NYSDEC recommended soil clean up objective.

TABLE 1b.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SS-S-12	SS-S-51	SS-S-79	SS-S-82	SS-S-90	SS-S-168	SS-S-171	SS-S-183	SS-S-240	SS-S-241	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Location	C,6	G,1	H,15	H,21	I,10	N,11	N,17	O,14	Biased 1	Biased 2		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	10/25/01	10/26/01	10/29/01	10/29/01	10/29/01	10/30/01	10/30/01	10/30/01	11/15/01	11/15/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	18	10	16	19	7	24	22	15	31	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		(ug/kg)
Benzaldehyde	U	U	U	U	U	U	180 J	U	U	U	550	---
Phenol	U	U	U	U	U	U	U	U	U	U	550	30 OR MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	U	U	550	---
2-Chlorophenol	U	U	U	U	U	U	U	U	U	U	550	800
2-Methylphenol	U	U	U	U	U	U	U	U	U	U	550	100 OR MDL
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	U	U	U	550	---
Acetophenone	U	U	U	U	U	U	U	U	U	U	550	---
4-Methylphenol	U	U	U	U	U	U	U	U	U	U	550	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	U	U	550	---
Hexachloroethane	U	U	U	U	U	U	U	U	U	U	550	---
Nitrobenzene	U	U	U	U	U	U	U	U	U	U	550	---
Isophorone	U	U	U	U	U	U	U	U	U	U	550	200 OR MDL
2-Nitrophenol	U	U	U	U	U	U	U	U	U	U	550	4,400
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	U	U	550	330 OR MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	U	U	550	---
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	U	U	550	---
Naphthalene	U	U	U	U	U	U	U	U	U	U	550	400
4-Chloroaniline	U	U	U	U	U	U	U	U	U	83 J	550	13,000
Hexachlorobutadiene	U	U	U	U	U	U	U	U	U	U	550	220 OR MDL
Caprolactum	U	U	U	U	U	U	U	U	U	U	550	---
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	U	U	550	---
2-Methylnaphthalene	U	U	40 J	U	U	U	U	U	U	U	550	240 OR MDL
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	U	U	550	36,400
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	550	---
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	550	100
1,1'-Biphenyl	U	U	U	U	U	U	U	U	U	U	1400	---
2-Chloronaphthalene	U	U	U	U	U	U	U	U	U	U	1400	---
2-Nitroaniline	U	U	U	U	U	U	U	U	U	U	550	430 OR MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	U	U	550	2,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	550	1,000
Acenaphthylene	U	U	U	U	U	U	U	U	U	U	550	41,000
3-Nitroaniline	U	U	U	U	U	U	U	U	U	U	1400	500 OR MDL
Acenaphthene	U	U	U	U	U	U	U	U	U	U	550	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	U	U	1400	200 OR MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	U	U	1400	100 OR MDL
Dibenzofuran	U	U	U	U	U	U	U	U	U	U	550	6,200

TABLE 1b. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMI-VOLATILE ORGANIC COMPOUNDS

Sample Identification	SS-S-12	SS-S-51	SS-S-79	SS-S-82	SS-S-90	SS-S-168	SS-S-171	SS-S-183	SS-S-240	SS-S-241	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Location	C,6	G,1	H,15	H,21	I,10	N,11	N,17	O,14	Biased 1	Biased 2		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	10/25/2001	10/26/2001	10/29/2001	10/29/2001	10/29/2001	10/30/2001	10/30/2001	10/30/2001	11/15/2001	11/15/2001		
Dilution Factor	1	1	1	1	1	1	1	1	1	1		
Percent Moisture	18	10	16	19	7	24	22	15	31	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		(ug/kg)
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	550	---
Diethylphthalate	U	U	U	U	U	U	U	U	U	U	550	7,100
Fluorene	U	U	U	U	U	U	U	U	U	U	550	50,000
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	550	---
4-Nitroaniline	U	U	U	U	U	U	U	U	U	U	1400	---
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	U	U	1400	---
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	U	U	550	---
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	550	---
Hexachlorobenzene	U	U	U	U	U	U	220 J	280 J	U	U	550	410
Atrazine	U	820	91 J	U	U	U	U	U	U	U	550	---
Pentachlorophenol	U	U	U	U	U	U	U	U	U	U	1400	1,000 OR MDL
Phenanthrene	U	U	64 J	U	U	U	U	40 J	U	140 J	550	50,000
Anthracene	U	U	U	U	U	U	U	U	U	U	550	50,000
Carbazole	U	U	U	U	U	U	U	U	U	U	550	---
Di-n-butylphthalate	U	61 J	650	U	U	360 J	U	99 J	U	U	550	8,100
Fluoranthene	U	59 J	100 J	U	U	66 J	U	70 J	51 J	280 J	550	50,000
Pyrene	U	110 J	120 J	U	U	78 J	10 J	77 J	58 J	300 J	550	50,000
Butylbenzylphthalate	U	U	U	U	U	160 J	U	U	U	U	550	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	U	U	550	---
Benzo (a) anthracene	U	U	U	U	U	50 J	U	57 J	U	140 J	550	224 OR MDL
Chrysene	U	U	130 J	U	U	72 J	U	78 J	U	180 J	550	400
bis(2-Ethylhexyl)phthalate	U	U	220 JB	U	U	530 B	56 JB	42 JB	U	U	550	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	U	U	550	50,000
Benzo(b)fluoranthene	U	220 J	170 J	U	U	78 J	U	73 J	U	270 J	550	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	60 J	U	90 J	550	1,100
Benzo(a)pyrene	U	49 J	U	U	U	50 J	U	39 J	U	160 J	550	61 OR MDL
Indeno(1,2,3-cd)pyrene	U	42 J	U	U	U	47 J	U	U	U	110 J	550	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	U	U	550	14 OR MDL
Benzo(g,h,i)perylene	U	62 J	40 J	U	U	63 J	U	U	U	110 J	550	50,000
Total PAHs	0	542	624	0	0	504	10	494	109	1,863		---
Total Carcinogen PAHs	0	311	300	0	0	297	0	307	0	950		10,000
Total SVOCs	0	1,423	1,625	0	0	1,554	466	915	109	1,863		500,000
Total SVOC TICs	4,196	151,800	19,660	20,080	2,352	22,520	46,180	115,230	8,380	5,543		

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution

NOTES:

To determine the detection limit for each sample, use the following equation:
(CRDL)*(DF)*(100/%S), where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.

---: not established

Indicates value exceeds NYSDEC recommended Soil Clean-up objective

TABLE 1b. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SS-S-242	SS-S-243	SS-S-244	SS-S-245	SS-S-246	SS-S-247	SS-S-248	SS-S-249	SS-S-250	SS-S-251	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Location	Biased 3	Biased 4	Biased 5	Biased 6	Backgrnd 1	Biased 7	Backgrnd 2	Biased 8	Biased 9	Backgrnd 3		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/16/01	11/16/01	11/16/01	11/16/01	11/16/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	25	14	2	21	17	19	27	14	19	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Benzaldehyde	U	U	U	U	97 J	790	290 J	U	U	U	550	---
Phenol	U	U	U	U	U	U	U	U	U	U	550	30 OR MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	U	U	550	---
2-Chlorophenol	U	U	U	U	U	U	U	U	U	U	550	800
2-Methylphenol	U	U	U	U	U	U	U	U	U	U	550	100 OR MDL
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	U	U	U	550	---
Acetophenone	U	U	U	U	U	U	U	U	U	U	550	---
4-Methylphenol	U	U	U	U	U	U	U	U	U	U	550	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	U	U	550	---
Hexachloroethane	U	U	U	U	U	U	U	U	U	U	550	---
Nitrobenzene	U	U	U	U	U	U	U	U	U	U	550	200 OR MDL
Isophorone	U	U	U	U	U	U	U	U	U	U	550	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	U	U	550	330 OR MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	U	U	550	---
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	U	U	550	---
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	U	U	550	400
Naphthalene	55 J	U	U	U	U	53 J	U	U	U	U	550	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	U	U	550	220 OR MDL
Hexachlorobutadiene	U	U	U	U	U	U	U	U	U	U	550	---
Caprolactum	U	U	U	U	U	U	U	U	U	U	550	---
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	U	U	550	240 OR MDL
2-Methylnaphthalene	U	U	U	U	U	U	U	U	U	U	550	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	69 J	U	U	U	U	550	---
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	1400	100
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	550	---
1,1'-Biphenyl	U	U	U	U	U	U	U	U	U	U	1400	---
2-Chloronaphthalene	U	U	U	U	U	U	U	U	U	U	1400	---
2-Nitroaniline	U	U	U	U	U	U	U	U	U	U	550	430 OR MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	U	U	550	2,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	550	1,000
Acenaphthylene	U	U	U	U	U	U	U	U	U	U	550	41,000
3-Nitroaniline	U	U	U	U	U	U	U	U	U	U	1400	500 OR MDL
Acenaphthene	U	U	U	U	U	U	U	U	U	U	550	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	U	U	1400	200 OR MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	U	U	1400	100 OR MDL
Dibenzofuran	U	U	U	U	U	U	U	U	U	U	550	6,200

TABLE 1b. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SS-S-242	SS-S-243	SS-S-244	SS-S-245	SS-S-246	SS-S-247	SS-S-248	SS-S-249	SS-S-250	SS-S-251	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Location	Biased 3	Biased 4	Biased 5	Biased 6	Backgrnd 1	Biased 7	Backgrnd 2	Biased 8	Biased 9	Backgrnd 3	(ug/kg)	(ug/kg)
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	11/15/2001	11/15/2001	11/15/2001	11/15/2001	11/15/2001	11/16/2001	11/16/2001	11/16/2001	11/16/2001	11/16/2001		
Dilution Factor	1	1	1	1	1	1	1	1	1	1		
Percent Moisture	25	14	2	21	17	19	27	14	19	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	550	---
Diethylphthalate	U	U	U	U	U	U	U	U	U	U	550	7,100
Fluorene	U	U	U	U	U	U	U	U	U	U	550	50,000
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	550	---
4-Nitroaniline	U	U	U	U	U	U	U	U	U	U	1400	---
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	U	U	1400	---
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	U	U	550	---
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	550	---
Hexachlorobenzene	U	U	U	U	U	U	U	U	U	U	550	410
Atrazine	U	U	U	U	U	U	U	U	U	U	550	---
Pentachlorophenol	U	U	U	U	U	U	U	U	U	U	1400	1,000 OR MDL
Phenanthrene	U	60 J	U	U	U	110 J	U	U	69 J	U	550	50,000
Anthracene	U	U	U	U	U	U	U	U	U	U	550	50,000
Carbazole	U	U	U	U	U	U	U	U	U	U	550	---
Di-n-butylphthalate	U	54 J	U	U	U	43 J	U	U	U	U	550	8,100
Fluoranthene	U	98 J	U	U	U	180 J	U	U	120 J	50 J	550	50,000
Pyrene	U	130 J	U	U	U	300 J	U	U	130 J	47 J	550	50,000
Butylbenzylphthalate	U	87 J	U	U	U	U	U	U	U	U	550	50,000
3,3'-Dichlorobenzidine	U	56 J	U	U	U	U	U	U	U	U	550	---
Benzo (a) anthracene	U	100 J	U	U	U	120 J	U	U	56 J	U	550	224 OR MDL
Chrysene	U	180 J	U	U	42 J	200 J	160 J	41 J	92 J	54 J	550	400
bis(2-Ethylhexyl)phthalate	51 J	U	U	U	U	650	U	U	U	U	550	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	U	U	550	50,000
Benzo(b)fluoranthene	U	130 J	U	U	U	290 J	U	U	110 J	64 J	550	1,100
Benzo(k)fluoranthene	U	42 J	U	U	U	91 J	U	U	43 J	U	550	1,100
Benzo(a)pyrene	U	60 J	U	U	U	150 J	U	U	62 J	U	550	61 OR MDL
Indeno(1,2,3-cd)pyrene	U	43 J	U	U	U	120 J	U	U	46 J	U	550	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	U	U	550	14 OR MDL
Benzo(g,h,i)perylene	U	60 J	U	U	U	120 J	U	U	41 J	U	550	50,000
Total PAHs	55	779	0	0	0	1,734	0	0	769	215		---
Total Carcinogen PAHs	0	431	0	0	0	971	0	0	409	118		10,000
Total SVOCs	106	1,100	0	0	139	3,286	450	41	769	215		500,000
Total SVOC TICs	6,332	13,253	785	6,450	3,690	19,894	15,315	0	16,020	1,984		

QUALIFIERS:

- U: Compound analyzed for but not detected
- B: Compound found in the method blank as well as the sample
- J: Compound found at a concentration below the CRDL, value estimated
- D: Result taken from reanalysis at dilution

NOTES:

To determine the detection limit for each sample, use the following equation:
 $(CRDL) * (DF) * (100\%S)$, where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.
 ---; not established
 Indicates value exceeds NYSDEC recommended Soil Clean-up objective

TABLE 1b. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification		SS-S-252	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location		Biased 10		
Sample Depth (feet)		0-0.2		
Date of Collection		11/16/01		
Dilution Factor		1.0	22	
Percent Moisture				
Units		(ug/kg)		
Benzaldehyde		U	550	---
Phenol		U	550	30 OR MDL
bis(2-Chloroethyl)ether		U	550	---
2-Chlorophenol		U	550	800
2-Methylphenol		U	550	100 OR MDL
2,2-Oxybis (1-Chloropropane)		U	550	---
Acetophenone		U	550	---
4-Methylphenol		U	550	900
N-Nitroso-di-n-propylamine		U	550	---
Hexachloroethane		U	550	---
Nitrobenzene		U	550	200 OR MDL
Isophorone		U	550	4,400
2-Nitrophenol		U	550	330 OR MDL
2,4-Dimethylphenol		U	550	---
bis(2-Chloroethoxy)methane		U	550	---
2,4-Dichlorophenol		U	550	400
Naphthalene		U	550	13,000
4-Chloroaniline		U	550	220 OR MDL
Hexachlorobutadiene		U	550	---
Caprolactum		U	550	---
4-Chloro-3-methylphenol		U	550	240 OR MDL
2-Methylnaphthalene		U	550	36,400
Hexachlorocyclopentadiene		U	550	---
2,4,6-Trichlorophenol		U	1400	---
2,4,5-Trichlorophenol		U	550	100
1,1'-Biphenyl		U	1400	---
2-Chloronaphthalene		U	1400	---
2-Nitroaniline		U	550	430 OR MDL
Dimethylphthalate		U	550	2,000
2,6-Dinitrotoluene		U	550	1,000
Acenaphthylene		U	550	41,000
3-Nitroaniline		U	1400	500 OR MDL
Acenaphthene		U	550	50,000
2,4-Dinitrophenol		U	1400	200 OR MDL
4-Nitrophenol		U	1400	100 OR MDL
Dibenzofuran		U	550	6,200

TABLE 1b. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SS-S-252		
Location	Biased 10		
Sample Depth (feet)	0-0.2		
Date of Collection	11/16/2001		
Dilution Factor	1		
Percent Moisture	22		
Units	(ug/kg)	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
2,4-Dinitrotoluene	U	550	---
Diethylphthalate	U	550	7,100
Fluorene	U	550	50,000
4-Chlorophenyl-phenylether	U	550	---
4-Nitroaniline	U	1400	---
4,6-Dinitro-2-methylphenol	U	1400	---
N-Nitrosodiphenylamine	U	550	---
4-Bromophenyl-phenylether	U	550	---
Hexachlorobenzene	U	550	410
Atrazine	U	550	---
Pentachlorophenol	U	1400	1,000 OR MDL
Phenanthrene	51 J	550	50,000
Anthracene	U	550	50,000
Carbazole	U	550	---
Di-n-butylphthalate	U	550	8,100
Fluoranthene	130 J	550	50,000
Pyrene	160 J	550	50,000
Butylbenzylphthalate	U	550	50,000
3,3'-Dichlorobenzidine	U	550	---
Benzo (a) anthracene	77 J	550	224 OR MDL
Chrysene	130 J	550	400
bis(2-Ethylhexyl)phthalate	160 J	550	50,000
Di-n-octylphthalate	U	550	50,000
Benzo(b)fluoranthene	160 J	550	1,100
Benzo(k)fluoranthene	52 J	550	1,100
Benzo(a)pyrene	83 J	550	61 OR MDL
Indeno(1,2,3-cd)pyrene	55 J	550	3,200
Dibenzo(a,h)anthracene	U	550	14 OR MDL
Benzo(g,h,i)perylene	50 J	550	50,000
Total PAHs	948		---
Total Carcinogen PAHs	557		10,000
Total SVOCs	1,108		500,000
Total SVOC TICs	8,502		

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Qualified as non-detect based on validation criteria

NOTES:
To determine the detection limit for each sample, use the
(CRDL)*(DF)*(100/%S), where CRDL = contract required
factor and %S = percent solids.
---: not established
[] Indicates value exceeds NYSDEC recommended Soil C

TABLE 1c.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBs

Sample Identification	SS-S-12	SS-S-51	SS-S-79	SS-S-82	SS-S-90	SS-S-168	SS-S-171	SS-S-183	SS-S-240	SS-S-241	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	C,6	G,1	H,15	H,21	I,10	N,11	N,17	O,14	Biased 1	Biased 2		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	10/25/01	10/26/01	10/29/01	10/29/01	10/29/01	10/30/01	10/30/01	10/30/01	11/15/01	11/15/01		
Dilution Factor	1.0	100.0	100.0	10.0	1.0	10.0	20.0	100.0	1.0	1.0		
Percent Moisture	18	10	16	19	7	24	22	15	31	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	0.05	900
Endosulfan II	23 P	4200 P	1300 P	110 P	92 P	400 P	760 P	U	U	U	0.10	44
4,4'-DDE	U	U	U	U	U	U	U	U	U	U	0.10	2100
Endrin	29 P	U	U	U	U	U	U	U	U	U	0.10	100
Endosulfan II	43 P	U	U	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	690 P	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	44 P	U	4500 P	U	7.8 P	600 P	2200 DP	U	U	U	0.10	1000
4,4'-DDT	U	5300 P	U	U	U	U	U	U	U	U	0.10	2100
Methoxychlor	74 P	24000 P	11000 P	950 P	U	1100 P	2800 P	6000 P	U	U	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	0.10	---
Endrin Aldehyde	38 P	13000 DP	4700 P	460 P	8.0 P	600 P	2200 DP	3500 P	U	5.0 P	0.10	---
alpha-Chlordane	3.5 P	U	U	U	U	U	U	U	U	U	0.05	540
gamma-Chlordane	28 P	14000 D	5900 D	460 DP	5.7 P	310 P	2100 D	3000	U	1.9 P	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	5.0	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	3800 D	1200000 D	580000 D	56000 D	910	55000 D	180000 D	410000 D	86	430	1.0	1000/10000*
Total Pesticides	283	61,190	27,400	1,980	21.5	2,702	9,700	13,260	0	6.9		10000
Total PCBs	3,800	1,200,000	580,000	56,000	910	55,000	180,000	410,000	86	430		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between

the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and

10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 1c. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBs

Sample Identification	SS-S-242	SS-S-243	SS-S-244	SS-S-245	SS-S-246	SS-S-247	SS-S-248	SS-S-249	SS-S-250	SS-S-251	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	Biased 3	Biased 4	Biased 5	Biased 6	Backgrnd 1	Biased 7	Backgrnd 2	Biased 8	Biased 9	Backgrnd 3		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/16/01	11/16/01	11/16/01	11/16/01	11/16/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	25	14	2	21	17	19	27	14	19	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	0.05	900
Dieldrin	U	34 P	U	U	U	21 P	100 D	U	13 P	U	0.10	44
4,4'-DDE	U	24	U	86 D	U	U	U	U	U	U	0.10	2100
Endrin	U	19 P	U	13 P	U	11 P	U	25 P	6.0 P	U	0.10	100
Endosulfan II	U	U	U	U	U	8.5 P	U	U	5.2 P	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	U	17 P	U	U	U	53 P	U	U	54 P	U	0.10	1000
4,4'-DDT	U	290 P	U	97 DP	U	110 P	44	98 DP	130 P	U	0.10	2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	0.10	---
Endrin Aldehyde	U	160 DP	U	8.9 P	U	62 P	U	6.8 P	71 DP	U	0.10	---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U	0.05	540
gamma-Chlordane	U	130 DP	U	4.1	U	46 DP	U	3.6	49 DP	U	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	5.0	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	79 P	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Total Pesticides	0	15000 D	110	680 P	0	6100 D	144	690 P	5900 D	55	1.0	10000
	0	674	0	209	0	312	0	253	328	0		
Total PCBs	79	15,000	110	680	0	6,100	0	690	5,900	55		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 1c. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBs

Sample Identification		SS-S-252	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	Biased 10			
Sample Depth (feet)	0-0.2			
Date of Collection	11/16/01			
Dilution Factor	1.0			
Percent Moisture	22			
Units	(ug/kg)			
alpha-BHC	U	0.05	110	
beta-BHC	U	0.05	200	
delta-BHC	U	0.05	300	
gamma-BHC (Lindane)	U	0.05	60	
Heptachlor	U	0.05	100	
Aldrin	U	0.05	41	
Heptachlor Epoxide	U	0.05	20	
Endosulfan I	U	0.05	900	
Dieldrin	U	0.10	44	
4,4'-DDE	15	0.10	2100	
Endrin	U	0.10	100	
Endosulfan II	U	0.10	900	
4,4'-DDD	U	0.10	2900	
Endosulfan Sulfate	U	0.10	1000	
4,4'-DDT	U	0.10	2100	
Methoxychlor	U	0.50	***	
Endrin Ketone	U	0.10	---	
Endrin Aldehyde	U	0.10	---	
alpha-Chlordane	U	0.05	540	
gamma-Chlordane	U	0.05	540	
Toxaphene	U	5.0	---	
Aroclor-1016	U	1.0	1000/10000*	
Aroclor-1221	U	2.0	1000/10000*	
Aroclor-1232	U	1.0	1000/10000*	
Aroclor-1242	U	1.0	1000/10000*	
Aroclor-1248	U	1.0	1000/10000*	
Aroclor-1254	U	1.0	1000/10000*	
Aroclor-1260	57 P	1.0	1000/10000*	
Total Pesticides	15		10000	
Total PCBs	57		1000/10000*	

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 1d.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
INORGANIC PARAMETERS

Sample Identification	SS-S-12	SS-S-51	SS-S-79	SS-S-82	SS-S-90	SS-S-168	SS-S-171	SS-S-183	SS-S-240	SS-S-241		
Location	C,6	G,1	H,15	H,21	I,10	N,11	N,17	O,14	Biased 1	Biased 2		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	10/25/01	10/26/01	10/29/01	10/29/01	10/29/01	10/30/01	10/30/01	10/30/01	11/15/01	11/15/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Solids	82	90	84	81	93	76	78	85	69	89		
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Aluminum	13,200	9,620	12,700	14,200	11,300	12,200	14,900	12,200	15,000	10,500		
Antimony	U	U	1.1 B	U	U	3.7 B	U	0.93 B	U	U		
Arsenic	5.4	5.6	10.2	6.4	5.0	12.5	7.9	6.6	4.9 N	5.0 N		
Barium	71.3	37.4	108	65.1	40.4	184	45.3 B	64.1	67.9	43.5		
Beryllium	0.35 B	0.25 B	0.35 B	0.37 B	0.32 B	0.30 B	0.35 B	0.32 B	0.35 B	0.26 B		
Cadmium	0.14 B	0.31 B	1.7	0.45 B	0.16 B	4.3	0.59 B	0.65 B	U	U		
Calcium	1,100	3,060	1,020	3,880	1,550	2,280	306 B	1,150	976 B	1,660		
Chromium	13.4	13.2	18.0	13.9	13.4	21.1	12.6	15.6	14.2	12.4		
Cobalt	9.7 B	9.1 B	10.4	8.8 B	10.9	12.0 B	10.9 B	9.3	8.0 B	9.0		
Copper	20.4	30.9	76.5	28.8	31.9	160	23.8	87.2	19.5 E	21.8 E		
Iron	28,200	22,300	34,300	28,800	24,700	64,900	28,300	31,000	26,300	22,600		
Lead	32.3	71.2	340	44.5	26.7	329	28.6	163	50.8	53.3		
Magnesium	4,790	6,350	5,230	4,910	5,760	4,860	3,610	4,920	4,230	4,910		
Manganese	1,370	656	782	795	658	818	820	809	297	676		
Mercury	U	U	0.14	U	U	0.061 B	0.11	0.057 B	0.10 B	0.26		
Nickel	16.9	21.4	51.0	18.6	21.2	42.7	18.3	20.9	18.7	19.0		
Potassium	683 BE	463 BE	644 BE	760 BE	540 BE	491 BE	466 BE	539 B	409 B	412 B		
Selenium	2.6	U	1.6	2.2	1.6	2.7	U	1.5	1.1	U		
Silver	U	U	U	U	U	U	U	U	U	U		
Sodium	37.1 B	56.9 B	50.0 B	34.9 B	36.7 B	51.3 B	31.3 B	30.4 B	280 B	28.2 B		
Thallium	5.1	1.8 B	2.6	2.8	2.3	4.6	2.1 B	3.3	1.5 B	2.5		
Vanadium	15.6	11.3	14.4	16.3	10.9	12.3	14.7	13.6	17.0	10.7		
Zinc	76.6	87.5	515	147	130	956	90.8	254	90.6	76.3		
Cyanide	0.24 B	0.18 B	0.33 B	0.45 B	U	U	0.25 B	0.33 B	0.30 B	U		

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL but greater than the IDL

E: Indicates an estimated value

N: Indicates spike sample recovery outside of control limits

NOTES:

To determine the detection limit for each sample, use the following equation:
 (CRDL)*(DF)*(100/%S) where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.

SB: Site background

---: not established

*: as per proposed 4/95 NYSDEC TAGM

Indicates value exceeds the NYSDEC Recommended Soil Cleanup Objective

TABLE 1d. (CONTINUED)

Sample Identification		SS-S-242	SS-S-243	SS-S-244	SS-S-245	SS-S-246	SS-S-247	SS-S-248	SS-S-249	SS-S-250	SS-S-251	Instrument Detection Limit (ug/l)	NYSDEC Recommended Soil Clean-Up Objective (mg/kg)
Location	Biased 3	Biased 4	Biased 5	Biased 6	Backgrnd 1	Biased 7	Backgrnd 2	Biased 8	Biased 9	Backgrnd 3			
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2			
Date of Collection	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/16/01	11/16/01	11/16/01	11/16/01	11/16/01			
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
Percent Solids		75	86	98	79	83	81	73	86	81	89		
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Aluminum	15,000	12,700	15,000	14,800	14,100	9,570	15,300	13,100	13,300	16,300	13	SB (16,300)	
Antimony	U	4.1 BN	U	0.87 BN	U	10.1 BN	U	U	U	1.0 BN	8	SB (1.0)	
Arsenic	6.6 N	11.9 N	7.7 N	8.9 N	6.2 N	13.2 N	7.9 N	7.6 N	6.8 N	7.5 N	3	7.5 or SB (7.9)	
Barium	65.9	454	59.1	80.6	63.3	653	80.2	69.8	85.4	60.7	1	300 or SB (80)	
Beryllium	0.43 B	0.32 B	0.49 B	0.43 B	0.33 B	0.23 B	0.46 B	0.32 B	0.37 B	0.43 B	1	0.16 or SB (0.46)	
Cadmium	U	6.9 N	U	U	U	9.6 N	U	U	U	U	1	10*	
Calcium	581 B	685 B	523 B	624 B	328 B	2,820	2,810	820 B	1,780	73.8 B	8	SB (2,810)	
Chromium	15.1	30.6	18.2	15.1	15.0	36.4	16.7	18.0	14.8	16.8	1	50*	
Cobalt	10.9 B	13.0	14.0	11.4	10.5	13.6	9.9 B	9.8	10.9	11.8	2	30 or SB (11.8)	
Copper	26.8 E	257 E	29.9 E	23.1 E	18.2 E	461 E	38.3 E	38.1 E	30.1	29.5 E	1	25 or SB (38.3)	
Iron	30,700	57,600	30,800	31,600	28,000	82,100	29,900	35,100	29,500	30,500	20	2,000 or SB (30,500)	
Lead	29.8	860	26.1	36.7	25.7	1,150	31.3	50.3	95.3	18.9	2	400	
Magnesium	4,960	5,220	6,840	4,880	4,220	5,210	5,340	4,970	4,820	5,840	8	SB (5,840)	
Manganese	726	977	1,000	1,430	1,320	803	1,060	1,050	1,040	961	4	SB (1,320)	
Mercury	0.08 B	0.15	0.077 B	U	0.057 B	0.18	0.14	0.34	0.10 B	U	0.2	0.1	
Nickel	21.3	136	26.3	19.5	19.2	89.8	20.9	24.9	24.1	23.8	2	13 or SB (23.8)	
Potassium	483 B	601 B	435 B	391 B	281 B	484 B	1,220 B	478 B	593 B	496 B	20	SB (1,220)	
Selenium	U	2.9	1.4	0.97	1.7	2.3	1.8	1.2	1.6	1.4	4	2 or SB (1.8)	
Silver	U	U	U	U	U	U	U	U	U	U	1	SB (ND)	
Sodium	53.9 B	66.8 B	40.3 B	36.7 B	49.2 B	89.2 B	69.4 B	29.1 B	40.8 B	30.6 B	9	SB (69.4)	
Thallium	2.8	4.1	3.4	4.6	4.2	3.4	3.9	3.7	3.3	3.4	5	SB (4.2)	
Vanadium	15.8	14.3	14.2	18.4	14.9	10.8 B	17.7	14.7	14.9	15.7	1	150 or SB (18)	
Zinc	80.0	5,660	84.2	82.1	76.1	6,470	119	138	168	73.4	1	20 or SB (119)	
Cyanide	0.31 B	0.24 B	0.18 B	0.27 B	0.22 B	0.37 B	0.69	0.27 B	1.3	0.47	10	----	

NOTES:

To determine the detection limit for each sample, use the following equation:
 $(CRDL) \cdot (DF) \cdot (100\% / S)$ where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.

SB: Site background

----: not established

*: as per proposed 4/95 NYSDEC TAGM

Indicates value exceeds the NYSDEC Recommended Soil Cleanup Objective

TABLE 1d. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
INORGANIC PARAMETERS

Sample Identification	SS-S-252		
Location	Blased 10		
Sample Depth (feet)	0-0.2		
Date of Collection	11/16/01		
Dilution Factor	1.0	Instrument	
Percent Solids	78	Detection	
Units	mg/kg	Limit	
Aluminum	11,400	(ug/l)	
Antimony	U	13	NYSDEC
Arsenic	11.2 N	8	SB (16,300)
Barium	151	3	SB (1.0)
Beryllium	0.26 B	1	7.5 or SB (7.9)
Cadmium	U	1	300 or SB (80)
Calcium	15,100	1	0.16 or SB (0.46)
Chromium	14.1	8	10*
Cobalt	7.9 B	1	SB (2,810)
Copper	35.4 E	2	50*
Iron	22,300	1	30 or SB (11.8)
Lead	54.2	20	25 or SB (38.3)
Magnesium	3,640	2	2,000 or SB (30,500)
Manganese	1130	8	400
Mercury	U	4	SB (5,840)
Nickel	15.5	0.2	SB (1,320)
Potassium	843 B	2	0.1
Selenium	2.4	2	13 or SB (23.8)
Silver	U	20	SB (1,220)
Sodium	54.1 B	4	2 or SB (1.8)
Thallium	3.4	1	SB (ND)
Vanadium	13	9	SB (69.4)
Zinc	103	5	SB (4.2)
Cyanide	0.45 B	1	150 or SB (18)
		10	20 or SB (119)
			—

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound concentration is less than the CRDL
but greater than the IDL.
E: Indicates an estimated value
N: Indicates spike sample recovery outside of control limits

NOTES:

To determine the detection limit for each sample, use the following equation:
 $(CRDL) * (DF) * (100\%S)$ where CRDL = contract required detection limit, DF = dilution
factor and %S = percent solids.
SB: Site background
---: not established
*: as per proposed 4/95 NYSDEC TAGM
Indicates value exceeds the NYSDEC Recommended Soil Cleanup Objective

TABLE 1e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SS-S-1-(0-0.2)	A 10	10/25/2001	1459	8.16	
SS-S-2-(0-0.2)	A 12	10/25/2001	1455	1.88	3.0
SS-S-3-(0-0.2)	B 1	10/25/2001	1410	11.76	
SS-S-4-(0-0.2)	B 3	10/25/2001	1418	1.04	
SS-S-5-(0-0.2)	B 5	10/25/2001	1423	1.6	
SS-S-6-(0-0.2)	B 7	10/25/2001	1427	7.9	
SS-S-7-(0-0.2)	B 9	10/25/2001	1432	5.98	
SS-S-8-(0-0.2)	B 11	10/25/2001	1437	18.06	
SS-S-9-(0-0.2)	B 13	10/25/2001	1451	ND<0.5	
SS-S-10-(0-0.2)	C 2	10/25/2001	1544	3.62	
SS-S-11-(0-0.2)	C 4	10/25/2001	1548	12.18	
SS-S-12-(0-0.2)	C 6	10/25/2001	1551	4.62	
SS-S-13-(0-0.2)	C 8	10/25/2001	1554	7.64	
SS-S-14-(0-0.2)	C 10	10/25/2001	1557	2.34	
SS-S-15-(0-0.2)	C 12	10/25/2001	1559	ND<0.5	0.59
SS-S-16-(0-0.2)	D 1	10/25/2001	1635	51.66	
SS-S-17-(0-0.2)	D 3	10/25/2001	1633	1.66	
SS-S-18-(0-0.2)	D 5	10/25/2001	1629	1.12	
SS-S-19-(0-0.2)	D 7	10/25/2001	1615	2.32	
SS-S-20-(0-0.2)	D 9	10/25/2001	1612	24.36	
SS-S-21-(0-0.2)	D 11	10/25/2001	1608	7.16	
SS-S-22-(0-0.2)	D 13	10/25/2001	1604	ND<0.5	
SS-S-23-(0-0.2)	D 23	10/26/2001	0931	6.24	
SS-S-24-(0-0.2)	D 25	10/26/2001	0927	0.64	0.94
SS-S-25-(0-0.2)	E 2	10/26/2001	0838	3.88	
SS-S-26-(0-0.2)	E 4	10/26/2001	0844	7.9	
SS-S-27-(0-0.2)	E 6	10/26/2001	0851	2.56	
SS-S-28-(0-0.2)	E 8	10/26/2001	0856	7.18	
SS-S-29-(0-0.2)	E 10	10/26/2001	0900	1.62	
SS-S-30-(0-0.2)	E 12	10/26/2001	0905	1.36	
SS-S-31-(0-0.2)	E 20	10/26/2001	0911	4.3	
SS-S-32-(0-0.2)	E 22	10/26/2001	0916	8.98	
SS-S-33-(0-0.2)	E 24	10/26/2001	0921	1.26	
SS-S-34-(0-0.2)	F 1	10/26/2001	1031	58.38	
SS-S-35-(0-0.2)	F 2	10/26/2001	1035	3.84	
SS-S-36-(0-0.2)	F 3	10/26/2001	1039	0.94	
SS-S-37-(0-0.2)	F 4	10/26/2001	1043	10	
SS-S-38-(0-0.2)	F 5	10/26/2001	1047	1.36	2.20
SS-S-39-(0-0.2)	F 6	10/26/2001	1051	ND<0.5	
SS-S-40-(0-0.2)	F 7	10/26/2001	1100	ND<0.5	
SS-S-41-(0-0.2)	F 8	10/26/2001	1105	10	
SS-S-42-(0-0.2)	F 9	10/26/2001	1110	17.64	40.0
SS-S-43-(0-0.2)	F 11	10/26/2001	1115	3.52	
SS-S-44-(0-0.2)	F 13	10/26/2001	1134	ND<0.5	
SS-S-45-(0-0.2)	F 15	10/26/2001	1139	ND<0.5	
SS-S-46-(0-0.2)	F 17	10/26/2001	1144	1.4	
SS-S-47-(0-0.2)	F 19	10/26/2001	1148	8.92	
SS-S-48-(0-0.2)	F 21	10/26/2001	1153	28.98	
SS-S-49-(0-0.2)	F 23	10/26/2001	1158	39.9	
SS-S-50-(0-0.2)	F 25	10/26/2001	1220	0.52	
SS-S-51-(0-0.2)	G 1	10/26/2001	1352	>200	
SS-S-52-(0-0.2)	G 2	10/26/2001	1348	6.64	
SS-S-53-(0-0.2)	G 3	10/26/2001	1344	0.88	1.30
SS-S-54-(0-0.2)	G 4	10/26/2001	1342	4.22	
SS-S-55-(0-0.2)	G 5	10/26/2001	1338	13.86	

TABLE 1e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SS-S-56-(0-0.2)	G 6	10/26/2001	1335	3.58	
SS-S-57-(0-0.2)	G 7	10/26/2001	1330	6.28	
SS-S-58-(0-0.2)	G 8	10/26/2001	1326	28.98	
SS-S-59-(0-0.2)	G 10	10/26/2001	1321	6.84	
SS-S-60-(0-0.2)	G 12	10/26/2001	1316	4.04	
SS-S-61-(0-0.2)	G 14	10/26/2001	1254	0.74	
SS-S-62-(0-0.2)	G 16	10/26/2001	1248	105	230
SS-S-63-(0-0.2)	G 18	10/26/2001	1244	7.44	
SS-S-64-(0-0.2)	G 20	10/26/2001	1241	63.42	
SS-S-65-(0-0.2)	G 22	10/26/2001	1236	9.26	
SS-S-66-(0-0.2)	G 24	10/26/2001	1232	ND<0.5	
SS-S-67-(0-0.2)	G 26	10/26/2001	1228	12.18	
SS-S-68-(0-0.2)	H 1	10/29/2001	1021	109.2	
SS-S-69-(0-0.2)	H 2	10/29/2001	1026	3.88	
SS-S-70-(0-0.2)	H 3	10/29/2001	1036	0.86	
SS-S-71-(0-0.2)	H 4	10/29/2001	1044	7.64	
SS-S-72-(0-0.2)	H 5	10/29/2001	1048	28.56	49.0
SS-S-73-(0-0.2)	H 6	10/29/2001	1054	4.64	
SS-S-74-(0-0.2)	H 7	10/29/2001	1058	17.22	
SS-S-75-(0-0.2)	H 8	10/29/2001	1102	99.12	120
SS-S-76-(0-0.2)	H 9	10/29/2001	1106	28.14	
SS-S-77-(0-0.2)	H 11	10/29/2001	1112	26.88	
SS-S-78-(0-0.2)	H 13	10/29/2001	1135	2.26	
SS-S-79-(0-0.2)	H 15	10/29/2001	1139	>200	
SS-S-80-(0-0.2)	H 17	10/29/2001	1141	21.42	
SS-S-81-(0-0.2)	H 19	10/29/2001	1145	4.52	
SS-S-82-(0-0.2)	H 21	10/29/2001	1149	86.94	95
SS-S-83-(0-0.2)	H 23	10/29/2001	1152	9.34	
SS-S-84-(0-0.2)	H 25	10/29/2001	1155	1.22	
SS-S-85-(0-0.2)	I 1	10/29/2001	1314	33.18	
SS-S-86-(0-0.2)	I 2	10/29/2001	1318	6.12	
SS-S-87-(0-0.2)	I 6	10/29/2001	1327	5.3	
SS-S-88-(0-0.2)	I 7	10/29/2001	1332	9.88	
SS-S-89-(0-0.2)	I 8	10/29/2001	1335	4.92	
SS-S-90-(0-0.2)	I 10	10/29/2001	1339	0.86	
SS-S-91-(0-0.2)	I 12	10/29/2001	1341	0.66	
SS-S-92-(0-0.2)	I 14	10/29/2001	1343	ND<0.5	0.77
SS-S-93-(0-0.2)	I 16	10/29/2001	1353	5.5	
SS-S-94-(0-0.2)	I 18	10/29/2001	1355	5.8	
SS-S-95-(0-0.2)	I 20	10/29/2001	1211	5.38	
SS-S-96-(0-0.2)	I 22	10/29/2001	1202	0.96	
SS-S-97-(0-0.2)	I 24	10/29/2001	1159	ND<0.5	
SS-S-98-(0-0.2)	J 1	10/29/2001	1411	0.58	
SS-S-99-(0-0.2)	J 2	10/29/2001	1414	0.72	
SS-S-100-(0-0.2)	J 3	10/29/2001	1417	4.5	
SS-S-101-(0-0.2)	J 4	10/29/2001	1419	9.88	
SS-S-102-(0-0.2)	J 5	10/29/2001	1422	0.92	2.50
SS-S-103-(0-0.2)	J 6	10/29/2001	1425	3.42	
SS-S-104-(0-0.2)	J 7	10/29/2001	1427	4.04	
SS-S-105-(0-0.2)	J 8	10/29/2001	1430	1.58	
SS-S-106-(0-0.2)	J 9	10/29/2001	1435	63.84	
SS-S-107-(0-0.2)	J 11	10/29/2001	1440	8.28	
SS-S-108-(0-0.2)	J 13	10/29/2001	1444	92.4	
SS-S-109-(0-0.2)	J 15	10/29/2001	1501	1.46	
SS-S-110-(0-0.2)	J 17	10/29/2001	1504	2.64	

TABLE 1e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SS-S-111-(0-0.2)	J 19	10/29/2001	1507	4.86	
SS-S-112-(0-0.2)	J 21	10/29/2001	1511	3.9	5.0
SS-S-113-(0-0.2)	J 23	10/29/2001	1516	ND<0.5	
SS-S-114-(0-0.2)	K 1	10/29/2001	1629	2.36	
SS-S-115-(0-0.2)	K 2	10/29/2001	1627	2.2	
SS-S-116-(0-0.2)	K 3	10/29/2001	1623	ND<0.5	
SS-S-117-(0-0.2)	K 4	10/29/2001	1620	ND<0.5	
SS-S-118-(0-0.2)	K 5	10/29/2001	1618	1.16	
SS-S-119-(0-0.2)	K 6	10/29/2001	1614	ND<0.5	
SS-S-120-(0-0.2)	K 7	10/29/2001	1611	6.42	
SS-S-121-(0-0.2)	K 8	10/29/2001	1608	1.7	
SS-S-122-(0-0.2)	K 10	10/29/2001	1604	7.64	
SS-S-123-(0-0.2)	K 12	10/29/2001	1553	29.4	
SS-S-124-(0-0.2)	K 14	10/29/2001	1534	2.86	
SS-S-125-(0-0.2)	K 16	10/29/2001	1530	6.96	
SS-S-126-(0-0.2)	K 18	10/29/2001	1528	17.64	
SS-S-127-(0-0.2)	K 20	10/29/2001	1524	1.2	
SS-S-128-(0-0.2)	K 22	10/29/2001	1520	ND<0.5	0.52
SS-S-129-(0-0.2)	I3	10/29/2001	1322	1.66	
SS-S-130-(0-0.2)	L 1	10/30/2001	0946	ND<0.5	
SS-S-131-(0-0.2)	L 2	10/30/2001	0949	ND<0.5	
SS-S-132-(0-0.2)	L 3	10/30/2001	0952	1.06	
SS-S-133-(0-0.2)	L 4	10/30/2001	0955	ND<0.5	
SS-S-134-(0-0.2)	L 5	10/30/2001	0957	0.88	
SS-S-135-(0-0.2)	L 6	10/30/2001	1000	2.88	
SS-S-136-(0-0.2)	L 7	10/30/2001	1002	0.52	
SS-S-137-(0-0.2)	L 8	10/30/2001	1005	5.52	
SS-S-138-(0-0.2)	L 9	10/30/2001	1007	36.12	29.0
SS-S-139-(0-0.2)	L 11	10/30/2001	1104	5.22	
SS-S-140-(0-0.2)	L 13	10/30/2001	1107	58.38	100
SS-S-141-(0-0.2)	L 15	10/30/2001	1110	39.48	
SS-S-142-(0-0.2)	L 17	10/30/2001	1113	15.54	
SS-S-143-(0-0.2)	L 19	10/30/2001	1117	2.96	
SS-S-144-(0-0.2)	L 21	10/30/2001	1121	ND<0.5	
SS-S-145-(0-0.2)	L 23	10/30/2001	1125	ND<0.5	
SS-S-146-(0-0.2)	M 1	10/30/2001	1137	0.64	
SS-S-147-(0-0.2)	M 2	10/30/2001	1139	ND<0.5	
SS-S-148-(0-0.2)	M 3	10/30/2001	1142	ND<0.5	
SS-S-149-(0-0.2)	M 4	10/30/2001	1145	ND<0.5	
SS-S-150-(0-0.2)	M 5	10/30/2001	1149	ND<0.5	
SS-S-151-(0-0.2)	M 6	10/30/2001	1153	0.64	
SS-S-152-(0-0.2)	M 7	10/30/2001	1156	0.88	
SS-S-153-(0-0.2)	M 8	10/30/2001	1200	4.53	
SS-S-154-(0-0.2)	M 10	10/30/2001	1203	3.24	
SS-S-155-(0-0.2)	M 12	10/30/2001	1206	15.96	
SS-S-156-(0-0.2)	M 14	10/30/2001	1228	27.72	28.0
SS-S-157-(0-0.2)	M 16	10/30/2001	1232	25.2	
SS-S-158-(0-0.2)	M 18	10/30/2001	1237	11.76	
SS-S-159-(0-0.2)	M 20	10/30/2001	1239	ND<0.5	
SS-S-160-(0-0.2)	M 22	10/30/2001	1242	ND<0.5	
SS-S-161-(0-0.2)	N 1	10/30/2001	1339	ND<0.5	
SS-S-162-(0-0.2)	N 4	10/30/2001	1336	ND<0.5	
SS-S-163-(0-0.2)	N 5	10/30/2001	1334	ND<0.5	0.28
SS-S-164-(0-0.2)	N 6	10/30/2001	1331	ND<0.5	
SS-S-165-(0-0.2)	N 7	10/30/2001	1328	2.34	

TABLE 1e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SS-S-166-(0-0.2)	N 8	10/30/2001	1325	0.94	
SS-S-167-(0-0.2)	N 9	10/30/2001	1323	3.52	
SS-S-168-(0-0.2)	N 11	10/30/2001	1254	43.68	
SS-S-169-(0-0.2)	N 13	10/30/2001	1252	31.92	
SS-S-170-(0-0.2)	N 15	10/30/2001	1250	38.22	
SS-S-171-(0-0.2)	N 17	10/30/2001	1247	>200	
SS-S-172-(0-0.2)	N 19	10/30/2001	1245	0.64	0.85
SS-S-173-(0-0.2)	O 1	10/30/2001	1341	0.5	
SS-S-174-(0-0.2)	O 2	10/30/2001	1344	ND<0.5	
SS-S-175-(0-0.2)	O 3	10/30/2001	1347	ND<0.5	
SS-S-176-(0-0.2)	O 4	10/30/2001	1358	ND<0.5	
SS-S-177-(0-0.2)	O 5	10/30/2001	1400	ND<0.5	
SS-S-178-(0-0.2)	O 6	10/30/2001	1402	ND<0.5	
SS-S-179-(0-0.2)	O 7	10/30/2001	1405	1	
SS-S-180-(0-0.2)	O 8	10/30/2001	1407	1.86	
SS-S-181-(0-0.2)	O 10	10/30/2001	1409	8.1	17.0
SS-S-182-(0-0.2)	O 12	10/30/2001	1412	18.48	
SS-S-183-(0-0.2)	O 14	10/30/2001	1414	>200	
SS-S-184-(0-0.2)	O 16	10/30/2001	1417	3.14	
SS-S-185-(0-0.2)	O 18	10/30/2001	1419	0.9	
SS-S-186-(0-0.2)	P 1	10/31/2001	1220	ND<0.5	
SS-S-187-(0-0.2)	P 2	10/31/2001	1225	ND<0.5	
SS-S-188-(0-0.2)	P 3	10/31/2001	1228	ND<0.5	
SS-S-189-(0-0.2)	P 4	10/31/2001	1230	ND<0.5	
SS-S-190-(0-0.2)	P 5	10/31/2001	1233	ND<0.5	
SS-S-191-(0-0.2)	P 7	10/31/2001	1238	ND<0.5	
SS-S-192-(0-0.2)	P 8	10/31/2001	1240	ND<0.5	
SS-S-193-(0-0.2)	P 9	10/31/2001	1243	ND<0.5	
SS-S-194-(0-0.2)	P 11	10/31/2001	1245	2.1	
SS-S-195-(0-0.2)	P 13	10/31/2001	1247	27.72	23.0
SS-S-196-(0-0.2)	P 15	10/31/2001	1250	ND<0.5	
SS-S-197-(0-0.2)	P 17	10/31/2001	1336	ND<0.5	
SS-S-198-(0-0.2)	Q 5	10/31/2001	1311	ND<0.5	
SS-S-199-(0-0.2)	Q 7	10/31/2001	1315	ND<0.5	
SS-S-200-(0-0.2)	Q 8	10/31/2001	1317	0.58	
SS-S-201-(0-0.2)	Q 10	10/31/2001	1320	9.02	
SS-S-202-(0-0.2)	Q 12	10/31/2001	1321	9.02	
SS-S-203-(0-0.2)	Q 14	10/31/2001	1325	0.5	
SS-S-204-(0-0.2)	Q 16	10/31/2001	1327	ND<0.5	
SS-S-205-(0-0.2)	R 5	11/1/2001	1200	ND<0.5	ND
SS-S-206-(0-0.2)	R 6	11/1/2001	1202	ND<0.5	
SS-S-207-(0-0.2)	R 7	11/1/2001	1204	11.76	
SS-S-208-(0-0.2)	R 8	11/1/2001	1207	2.4	
SS-S-209-(0-0.2)	R 9	11/1/2001	1211	4.82	
SS-S-210-(0-0.2)	R 11	11/1/2001	1215	36.96	
SS-S-211-(0-0.2)	R 13	11/1/2001	1217	ND<0.5	
SS-S-212-(0-0.2)	R 15	11/1/2001	1220	ND<0.5	
SS-S-213-(0-0.2)	S 6	11/1/2001	1259	ND<0.5	
SS-S-214-(0-0.2)	S 7	11/1/2001	1256	1.8	
SS-S-215-(0-0.2)	S 8	11/1/2001	1248	ND<0.5	
SS-S-216-(0-0.2)	S 10	11/1/2001	1244	ND<0.5	
SS-S-217-(0-0.2)	S 12	11/1/2001	1226	2.26	
SS-S-218-(0-0.2)	S 14	11/1/2001	1223	ND<0.5	
SS-S-219-(0-0.2)	T 6	11/1/2001	1302	ND<0.5	
SS-S-220-(0-0.2)	T 7	11/1/2001	1304	ND<0.5	

TABLE 1e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SS-S-221-(0-0.2)	T 8	11/1/2001	1310	1.48	
SS-S-222-(0-0.2)	T 9	11/1/2001	1315	ND<0.5	
SS-S-223-(0-0.2)	T 11	11/1/2001	1318	ND<0.5	
SS-S-224-(0-0.2)	T 13	11/1/2001	1322	ND<0.5	
SS-S-225-(0-0.2)	U 7	11/1/2001	1340	ND<0.5	
SS-S-226-(0-0.2)	U 8	11/1/2001	1404	3.2	7.4
SS-S-227-(0-0.2)	U 10	11/1/2001	1408	ND<0.5	
SS-S-228-(0-0.2)	U 12	11/1/2001	1415	ND<0.5	
SS-S-229-(0-0.2)	V 7	11/1/2001	1344	ND<0.5	
SS-S-230-(0-0.2)	V 8	11/1/2001	1356	ND<0.5	
SS-S-231-(0-0.2)	V 9	11/1/2001	1406	ND<0.5	
SS-S-232-(0-0.2)	V 11	11/1/2001	1412	ND<0.5	
SS-S-233-(0-0.2)	W 7	11/1/2001	1348	ND<0.5	
SS-S-234-(0-0.2)	W 8	11/1/2001	1401	ND<0.5	
SS-S-235-(0-0.2)	A4	11/8/2001	1305	7.00	
SS-S-236-(0-0.2)	A7	11/8/2001	1259	81.9	102
SS-S-237-(0-0.2)	D15	11/8/2001	1254	ND<0.5	
SS-S-238-(0-0.2)	E26	11/8/2001	1240	ND<0.5	
SS-S-239-(0-0.2)	F26	11/8/2001	1247	ND<0.5	
SS-S-240-(0-0.5)	Roberts	11/15/2001	1520	ND<0.5	
SS-S-241-(0-0.5)	Smith	11/15/2001	1531	ND<0.5	
SS-S-242-(0-0.5)	Baumli	11/15/2001	1539	ND<0.5	
SS-S-243-(0-0.5)	Chittenden	11/15/2001	1550	>10	
SS-S-244-(0-0.5)	Darcy Pile	11/15/2001	1552	ND<0.5	
SS-S-245-(0-0.5)	RC Pool	11/15/2001	1603	0.64	
SS-S-246-(0-0.5)	Tomchick	11/15/2001	1627	ND<0.5	
SS-S-247-(0-0.5)	O+35', 10+15'	11/16/2001	0900	NA	
SS-S-248-(0-0.5)	field NW	11/16/2001	0910	NA	
SS-S-249-(0-0.5)	site soil pile	11/16/2001	0925	NA	
SS-S-250-(0-0.5)	tree mound	11/16/2001	0940	NA	
SS-S-251-(0-0.5)	RR bed west	11/16/2001	1005	NA	
SS-S-252-(0-0.5)	Grey house	11/16/2001	0927	NA	

TABLE 1f.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PCBs

Sample Identification	SS-S-2	SS-S-15	SS-S-24	SS-S-38	SS-S-42	SS-S-53	SS-S-62	SS-S-72	SS-S-75	SS-S-82	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	A,12	C,12	D,25	F,5	F,9	G,3	G,16	H,5	H,8	H,21		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	10/25/01	10/25/01	10/26/01	10/26/01	10/26/01	10/26/01	10/26/01	10/29/01	10/29/01	10/29/01		
Dilution Factor	1.0	1.0	1.0	1.0	10.0	1.0	100.0	10.0	100.0	100.0		
Percent Moisture	13	12	21	27	15	24	23	15	15	19		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Atroclor-1016	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1221	U	U	U	U	U	U	U	U	U	U	67.0	1000/10000*
Atroclor-1232	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1242	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1248	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1254	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1260	U	590 P	940	2200	40000	1300	230000	49000	120000	95000	33.0	1000/10000*
Total PCBs	3,000	590	940	2,200	40,000	1,300	230,000	49,000	120,000	95,000		

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

---: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 1f. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PCBs

Sample Identification	SS-S-92	SS-S-102	SS-S-112	SS-S-128	SS-S-138	SS-S-140	SS-S-156	SS-S-163	SS-S-172	SS-S-181	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	I,14	J,5	J,21	K,22	L,9	L,13	M,14	N,5	N,19	O,10		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	10/29/01	10/29/01	10/29/01	10/29/01	10/30/01	10/30/01	10/30/01	10/30/01	10/30/01	10/30/01		
Dilution Factor	1.0	1.0	1.0	1.0	10.0	100.0	10.0	1.0	1.0	10.0		
Percent Moisture	9	4	17	16	19	17	15	12	14	14		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	67.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1260	770	2500	5000	520	29000	100000	28000	280	850	17000	33.0	1000/10000*
Total PCBs	770	2,500	5,000	520	29,000	100,000	28,000	280	850	17,000		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

—: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 1f. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PCBs

Sample Identification	SS-S-195	SS-S-205	SS-S-226	SS-S-236	
Location	P,13	R,5	U,8	A,7	
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	
Date of Collection	10/31/01	11/01/01	11/01/01	11/08/01	
Dilution Factor	10.0	1.0	1.0	50.0	
Percent Moisture	19	12	84	17	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
Aroclor-1016	U	U	U	U	1000/10000*
Aroclor-1221	U	U	U	U	1000/10000*
Aroclor-1232	U	U	U	U	1000/10000*
Aroclor-1242	U	U	U	U	1000/10000*
Aroclor-1248	U	U	U	28000	1000/10000*
Aroclor-1254	U	U	U	U	1000/10000*
Aroclor-1260	23000	U	7400	74000	1000/10000*
Total PCBs	23,000	0	7,400	102,000	1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

----: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 1g.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SS-S-253	SS-S-254	SS-S-255	SS-S-256	SS-S-257	SS-S-258	SS-S-259	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	C,9+23	ZA,1	ZA,2	ZA,3	YA,2	Biased 11	Biased 12		
Sample Depth (feet)	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2		
Date of Collection	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02		
Dilution Factor	50.0	1.0	10.0	1.0	5.0	1.0	5.0		
Percent Moisture	6	20	22	22	20	18	18		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	2.6 P	U	2.7 P	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	0.05	900
Dieldrin	670 P	33 P	U	14 P	U	U	U	0.10	44
4,4'-DDE	U	20 P	U	8.7 P	34 P	7.0 P	39 P	0.10	2100
Endrin	U	U	U	U	U	U	20	0.10	100
Endosulfan II	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	8700 DP	450 DP	940 DP	150 DP	1400 DP	240 DP	1400 DP	0.10	1000
4,4'-DDT	U	U	U	43 P	U	U	U	0.10	2100
Methoxychlor	1100 P	71 P	U	42	210 P	38 P	200 P	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	0.10	---
Endrin Aldehyde	2400 P	170 DP	330 P	43 P	540 DP	82 DP	550 DP	0.10	---
alpha-Chlordane	U	U	U	U	U	U	U	0.05	540
gamma-Chlordane	150 P	9.8 P	23 P	3.2 P	33 P	4.8 P	33 P	0.05	540
Toxaphene	U	U	U	U	U	U	U	5.0	---
Aroclor-1016	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	170000 D	10000 DP	19000	3400 D	32000 D	4900 D	33000 D	1.0	1000/10000*
Total Pesticides	13,020	756	1,293	307	2,217	372	2,242		10000
Total PCBs	170,000	10,000	19,000	3,400	32,000	4,900	33,000		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

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TABLE 2a.
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
VOLATILE ORGANIC COMPOUNDS

Sample Identification	SB-S-100	SB-S-200	TP-S-1	TP-S-2	TP-S-4	TP-S-6	TP-S-7	TP-S-8	TP-S-10	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Location	J-3	Q, 8	B, 10+25	E+10, 9+40	B+35, 4+15	E+40, 3+30	H, 9+15	G, 17+40	H+35, 20		
Sample Depth (feet)	2-2.5	2-2.5	3.0	6.0	3.0	3.5	3.0	6.0	6.0		
Date of Collection	11/07/01	11/08/01	11/12/01	11/12/01	11/12/01	11/12/01	11/12/01	11/12/01	11/13/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	20	14	11	7	10	10	7	21	23		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	U	10	---
Chloromethane	U	U	U	U	U	U	U	U	U	10	200
Vinyl Chloride	U	U	U	U	U	U	U	U	U	10	---
Bromomethane	U	U	U	U	U	U	U	U	U	10	---
Chloroethane	U	U	U	U	U	U	U	U	U	10	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	U	10	---
1,1-Dichloroethene	U	U	U	U	U	U	U	U	U	10	400
1,1,2-Trichl.-1,2,2-trifluor.	U	U	U	U	U	U	U	U	U	10	---
Acetone	240 B	U*	U	U	U	U	U	U	3 JB	10	200
Carbon Disulfide	U	U	U	U	U	U	U	U	U	10	2,700
Methyl Acetate	U	U	U	U	U	U	U	U	U	10	---
Methylene Chloride	U	U*	U	U*	U*	U	U*	U*	1 JB	10	100
trans-1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	10	---
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	U	10	---
1,1-Dichloroethane	U	U	U	U	U	U	U	U	U	10	200
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	U	10	---
2-Butanone	38	U	U	U	U	U	U	U	U	10	300
Chloroform	U	U	U	U	U	U	U	U	U	10	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	10	800
Cyclohexane	U	U	U	U	U	U	U	U	U	10	---
Carbon Tetrachloride	U	U	U	U	U	U	U	U	U	10	600
Benzene	U	U	U	U	U	U	U	U	U	10	---
1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	10	60
Trichloroethene	U	U	U	U	U	U	U	U	U	10	100
Methylcyclohexane	U	U	U	U	U	U	U	U	U	10	---
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	10	---
Bromodichloromethane	U	U	U	U	U	U	U	U	U	10	---
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	10	---
4-Methyl-2-Pentanone	U	U	U	U	U	U	U	U	U	10	1,000
Toluene	U	U	U	U	1 J	U	U	U	U	10	1,500
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	10	---
1,1,2-Trichloroethane	U	U	17	11	21	17	9 J	5 J	5 J	10	1,400
Tetrachloroethene	U	U	U	U	U	U	U	U	U	10	---
2-Hexanone	U	U	U	U	U	U	U	U	U	10	---
Dibromochloromethane	U	U	U	U	U	U	U	U	U	10	---
1,2-Dibromoethane	U	U	U	U	U	U	U	U	U	10	---
Chlorobenzene	U	U	U	U	U	U	U	U	U	10	1,700
Ethylbenzene	U	U	U	U	U	U	U	U	U	10	5,500
Total Xylenes	U	U	U	U	U	U	U	U	U	10	1,200
Styrene	U	U	U	U	U	U	U	U	U	10	---
Bromoform	U	U	U	U	U	U	U	U	U	10	---
Isopropylbenzene	U	U	U	U	U	U	U	U	U	10	---
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	10	600
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	U	10	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	10	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	10	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	U	10	---
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	10	3,400
Total VOCs	278	0	17	11	22	17	9	5	9		10,000
Total VOC TICs	0	0	0	0	0	0	0	0	0		

QUALIFIERS:
U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Qualified as non-detect based on validation criteria

NOTES:
Indicates value exceeds the NYSDEC recommended soil clean up objective.

TABLE 2a. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001

VOLATILE ORGANIC COMPOUNDS												
Sample Identification	TP-S-11	TP-S-12	TP-S-12	TP-S-13	TP-S-14	TP-S-15	TP-S-19	TP-S-20	TP-S-21	TP-S-22	NYSDEC Recommended Soil Clean-Up Objective	
Location	R-30.7	H+4,11+12	H+4,11+12	I+5,13	I+48,18+45	J+15,18+15	O+40,11+13	O+15,11+40	P+5,11+25	M+15,10+15	Contract Required Detection Limit	
Sample Depth (feet)	2.5	0.5	2.0	0.5	3.0	1.0	5.0	1.0	4.5	6.5		
Date of Collection	11/13/01	11/13/01	11/13/01	11/13/01	11/13/01	11/14/01	11/14/01	11/14/01	11/14/01	11/14/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	8	10	8	16	8	34	25	9	18	10		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	U	U	10	---
Chloromethane	U	U	U	U	U	U	U	U	U	U	10	---
Vinyl Chloride	U	U	U	U	U	U	U	U	U	U	10	200
Bromomethane	U	U	U	U	U	U	U	U	U	U	10	---
Chloroethane	U	U	U	U	U	U	U	U	U	U	10	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	U	U	10	---
1,1-Dichloroethene	U	U	U	U	U	U	U	U	U	U	10	400
1,1,2-Trichl.-1,2,2-Trifluor.	U	U	U	U	U	U	U	U	U	U	10	---
Acetone	U	U	U	U	U	U	5 J	U	39	U	10	200
Carbon Disulfide	U	U*	U	U	U	U	U	U	U	U	10	2,700
Methyl Acetate	U	U	U	U	U	U	U	U	U	U	10	---
Methylene Chloride	U	U	U	U*	U*	U	U	4 JB	U	4 JB	10	100
trans-1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	10	---
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	U	U	10	---
1,1-Dichloroethane	U	U	U	U	U	U	U	U	U	U	10	200
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	U	U	10	---
2-Butanone	U	U	U	U	U	U	U	U	2 J	U	10	300
Chloroform	U	U	U	U	U	U	U	U	U	U	10	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	U	10	800
Cyclohexane	U	U	U	U	U	U	U	U	U	U	10	---
Carbon Tetrachloride	U	U	U	U	U	U	U	U	U	U	10	600
Benzene	U	U	U	U	U	U	U	U	U	U	10	60
1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	10	100
Trichloroethene	U	U	U	U	U	U	U	U	U	U	10	---
Methylcyclohexane	U	U	U	U	U	U	U	U	U	U	10	---
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	U	10	---
Bromodichloromethane	U	U	U	U	U	U	U	U	U	U	10	---
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	10	---
4-Methyl-2-Pentanone	U	U	U	U	U	U	U	U	2 J	U	10	1,000
Toluene	U	U	U	U	U	U	U	U	U	U	10	1,500
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	10	---
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	U	U	10	---
Tetrachloroethene	3 J	20	2 J	27	11	21	10 J	84	90	24	10	1,400
2-Hexanone	U	U	U	U	U	U	U	U	U	U	10	---
Dibromochloromethane	U	U	U	U	U	U	U	U	U	U	10	---
1,2-Dibromoethane	U	U	U	U	U	U	U	U	U	U	10	---
Chlorobenzene	U	U	U	U	U	U	U	U	U	U	10	1,700
Ethylbenzene	U	U	U	U	U	U	U	U	U	U	10	5,500
Total Xylenes	U	U	U	U	U	U	U	U	U	U	10	1,200
Styrene	U	U	U	U	U	U	U	U	U	U	10	---
Bromoform	U	U	U	U	U	U	U	U	U	U	10	---
Isopropylbenzene	U	U	U	U	U	U	U	U	U	U	10	---
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	U	10	600
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	10	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	10	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	10	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	U	U	10	---
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	U	10	3,400
Total VOC's	3	20	2	27	11	21	15	88	133	28		10,000
Total VOC TICs	0	0	0	0	0	0	0	8	17	5		

QUALIFIERS:
U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Qualified as non-detected based on validation criteria

NOTES:
Indicates value exceeds the NYSDEC recommended soil clean up objective.

TABLE 2a. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
VOLATILE ORGANIC COMPOUNDS

Sample Identification	TP-S-23	TP-S-24	TP-S-25	TP-S-26	TP-S-27	TP-S-28	TP-S-29	TP-S-30	TP-S-31	TP-S-32	NYSDEC
Location	R+25,10+40	E+10,23+40	F+10,21	H+35,15+25	F+35,14	L+10,15	O,14	E+40,1+7	B+7,7	D+15,10+20	Contract
Sample Depth (feet)	4.5	4.5	4.0	4.0	2.0	4.0	5.0	5.0	8.0	10.0	Required
Date of Collection	11/14/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	Detection
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	Limit
Percent Moisture	63	21	6	8	19	11	21	12	5	5	Objective
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	U	U	10
Chloromethane	U	U	U	U	U	U	U	U	U	U	10
Vinyl Chloride	U	U	U	U	U	U	U	U	U	U	10
Bromomethane	U	U	U	U	U	U	U	U	U	U	10
Trichlorofluoromethane	U	U	U	U	U	U	U	U	U	U	10
1,1-Dichloroethane	U	U	U	U	U	U	U	U	U	U	10
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	U	U	U	10
Acetone	180	U	U	U	U	U	U	U	U	U	10
Carbon Disulfide	U	U	U	U	U	U	U	U	U	U	10
Methyl Acetate	U	U	U	U	U	U	U	U	U	U	10
Methylene Chloride	12 JB	3 JB	U	U	U	U	3 JB	U	U	2 JB	100
trans-1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	10
Methyl tert-Butyl Ether	4 J	U	U	U	U	U	U	U	U	U	10
1,1-Dichloroethane	U	U	U	U	U	U	U	U	U	U	10
cis-1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	10
2-Butanone	63	U	U	U	U	U	U	U	U	U	10
Chloroform	U	U	U	U	U	U	U	U	U	U	10
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	U	10
Cyclohexane	U	U	U	U	U	U	U	U	U	U	10
Carbon Tetrachloride	U	U	U	U	U	U	U	U	U	U	10
Benzene	U	U	U	U	U	U	U	U	U	U	10
1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	10
Trichloroethene	U	U	U	U	U	U	U	U	U	U	10
Methylcyclohexane	U	U	U	U	U	U	U	U	U	U	10
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	U	10
Bromodichloromethane	U	U	U	U	U	U	U	U	U	U	10
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	10
4-Methyl-2-Pentanone	U	U	U	U	U	U	U	U	U	U	10
Toluene	14 J	U	U	U	U	U	U	U	U	U	1,000
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	1,500
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	U	U	10
Tetrachloroethane	110 D	8 J	6 J	29	2 J	U	9 J	8 J	U	5 J	1,400
2-Hexanone	U	U	U	U	U	U	U	U	U	U	10
Dibromochloromethane	U	U	U	U	U	U	U	U	U	U	10
1,2-Dibromoethane	U	U	U	U	U	U	U	U	U	U	10
Chlorobenzene	U	U	U	U	U	U	U	U	U	U	1,700
Ethylbenzene	U	U	U	U	U	U	U	U	U	U	5,500
Total Xylenes	U	U	U	U	U	U	U	U	U	U	1,200
Styrene	U	U	U	U	U	U	U	U	U	U	10
Bromoform	U	U	U	U	U	U	U	U	U	U	10
Isopropylbenzene	U	U	U	U	U	U	U	U	U	U	10
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	U	600
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	U	U	10
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	U	10
Total VOCs	383	11	6	29	2	0	12	9	0	7	10,000
Total VOC TICs	160	0	0	0	0	0	24	18	0	17	

QUALIFIERS:
U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Qualified as non-detect based on validation criteria

NOTES:
Indicates value exceeds the NYSDEC recommended soil clean up objective.

TABLE 2a. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
VOLATILE ORGANIC COMPOUNDS

Sample Identification	TP-S-33	TP-S-34		
Location	N+35,8+40	K+5,6+15		
Sample Depth (feet)	5.5	4.5		
Date of Collection	11/15/01	11/15/01		
Dilution Factor	1.0	1.0		
Percent Moisture	6	23		
Units	(ug/kg)	(ug/kg)	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Dichlorodifluoromethane	U	U	10	—
Chloromethane	U	U	10	—
Vinyl Chloride	U	U	10	200
Bromomethane	U	U	10	—
Chloroethane	U	U	10	1,900
Trichlorofluoromethane	U	U	10	—
1,1-Dichloroethene	U	U	10	400
1,1,2-Trichl.-1,2,2-trifluor.	U	U	10	—
Acetone	U	U	10	200
Carbon Disulfide	U	U	10	2,700
Methyl Acetate	U	U	10	—
Methylene Chloride	U	U	10	100
trans-1,2-Dichloroethane	U	U	10	—
Methyl tert-Butyl Ether	U	U	10	—
1,1-Dichloroethane	U	U	10	200
cis-1,2-Dichloroethene	U	U	10	—
2-Butanone	U	U	10	300
Chloroform	U	U	10	300
1,1,1-Trichloroethane	U	U	10	800
Cyclohexane	U	U	10	—
Carbon Tetrachloride	U	U	10	600
Benzene	U	U	10	60
1,2-Dichloroethane	U	U	10	100
Trichloroethene	U	U	10	700
Methylcyclohexane	U	U	10	—
1,2-Dichloropropane	U	U	10	—
Bromodichloromethane	U	U	10	—
cis-1,3-Dichloropropene	U	U	10	—
4-Methyl-2-Pentanone	U	U	10	1,000
Toluene	U	U	10	1,500
Trans-1,3-Dichloropropene	U	U	10	—
1,1,2-Trichloroethane	U	U	10	—
Tetrachloroethene	U	U	10	1,400
2-Hexanone	U	U	10	—
Dibromochloromethane	U	U	10	—
1,2-Dibromoethane	U	U	10	—
Chlorobenzene	U	U	10	1,700
Ethylbenzene	U	U	10	5,500
Total Xylenes	U	U	10	1,200
Styrene	U	U	10	—
Bromoform	U	U	10	—
Isopropylbenzene	U	U	10	—
1,1,2,2-Tetrachloroethane	U	U	10	600
1,3-Dichlorobenzene	U	U	10	1,600
1,4-Dichlorobenzene	U	U	10	8,500
1,2-Dichlorobenzene	U	U	10	7,900
1,2-Dibromo-3-chloropropane	U	U	10	—
1,2,4-Trichlorobenzene	U	U	10	3,400
Total VOCs	0	0	10	10,000
Total VOC TICs	0	0		

QUALIFIERS:

- U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Qualified as non-detect based on validation criteria

NOTES:
Indicates value exceeds the NYSDEC recommended soil clean up objective.

TABLE 2b.
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SB-S-100	SB-S-200	TP-S-1	TP-S-2	TP-S-4	TP-S-6	TP-S-7	TP-S-8	TP-S-10	NYSDEC Recommended Soil Clean-Up Objective
Location	J,3	Q,8	B, 10+25	E+10,9+40	B+35,4+15	E+40,3+30	H,9+15	G,17+40	H+35,20	
Sample Depth (feet)	2-2.5	2-2.5	3.0	6.0	3.0	3.5	3.0	6.0	6.0	
Date of Collection	11/07/01	11/08/01	11/12/01	11/12/01	11/12/01	11/12/01	11/12/01	11/12/01	11/13/01	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Percent Moisture	20	14	11	7	10	10	7	21	23	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Benzaldehyde	U	U	U	U	U	U	U	U	U	550
Phenol	U	U	U	U	U	U	U	U	U	550
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	U	550
2-Chlorophenol	U	U	U	U	U	U	U	U	U	800
2-Methylphenol	U	U	U	U	U	U	U	U	U	100 OR MDL
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	U	U	550
Acetophenone	U	U	U	U	U	U	U	U	U	550
4-Methylphenol	U	U	U	U	U	U	U	U	U	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	U	550
Hexachloroethane	U	U	U	U	U	U	U	U	U	550
Nitrobenzene	U	U	U	U	U	U	U	U	U	200 OR MDL
Isophorone	U	U	U	U	U	U	U	U	U	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	U	330 OR MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	U	550
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	U	550
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	U	550
Naphthalene	U	U	U	280 J	U	U	U	U	U	400
4-Chloroaniline	U	U	U	U	U	U	U	U	U	13,000
Hexachlorobutadiene	U	U	U	U	U	U	U	U	U	220 OR MDL
Caprolactum	U	U	U	U	U	U	U	U	U	550
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	U	240 OR MDL
2-Methylnaphthalene	U	U	U	220 J	U	U	U	U	U	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	U	550
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	U	1400
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	U	100
1,1'-Biphenyl	U	U	U	54 J	U	U	U	U	U	1400
2-Chloronaphthalene	U	U	U	U	U	U	U	U	U	430 OR MDL
2-Nitroaniline	U	U	U	U	U	U	U	U	U	2,000
Dimethylphthalate	U	U	U	U	U	U	U	U	U	1,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	U	41,000
Acenaphthylene	U	U	U	150 J	U	U	U	U	U	500 OR MDL
3-Nitroaniline	U	U	U	U	U	U	U	U	U	50,000
Acenaphthene	U	U	U	470	U	U	U	U	U	200 OR MDL
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	U	100 OR MDL
4-Nitrophenol	U	U	U	450	U	U	U	U	U	6,200
Dibenzofuran	U	U	U	U	U	U	U	U	U	

TABLE 2b. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SB-S-100	SB-S-200	TP-S-1	TP-S-2	TP-S-4	TP-S-6	TP-S-7	TP-S-8	TP-S-10	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	J,3	Q,8	B, 10+25	E+10,9+40	B+35,4+15	E+40,3+30	H,9+15	G,17+40	H+35,20	
Sample Depth (feet)	2-2.5	2-2.5	3.0	6.0	3.0	3.5	3.0	6.0	6.0	
Date of Collection	11/7/2001	11/8/2001	11/12/2001	11/12/2001	11/12/2001	11/12/2001	11/12/2001	11/12/2001	11/13/2001	
Dilution Factor	1	1	1	1	1	1	1	1	1	
Percent Moisture	20	14	11	7	10	10	7	21	23	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	U	550
Diethylphthalate	U	U	U	490	U	U	U	U	U	550
Fluorene	U	U	U	U	U	U	U	U	U	550
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	U	550
4-Nitroaniline	U	U	U	U	U	U	U	U	U	1400
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	U	1400
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	U	550
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	U	550
Hexachlorobenzene	U	U	U	U	U	U	U	U	U	550
Atrazine	U	U	U	U	U	U	U	U	U	410
Pentachlorophenol	U	U	U	U	U	U	U	U	U	550
Phenanthrene	U	43 J	U	7,900 D	U	U	U	U	U	1,000 OR MDL
Anthracene	U	U	U	1,400	U	U	U	U	U	50,000
Carbazole	U	U	U	540	U	U	U	U	U	550
Di-n-butylphthalate	U	U	U	U	U	U	U	U	U	550
Fluoranthene	110 J	100 J	U	8,500 D	49 J	U	U	U	U	8,100
Pyrene	100 J	100 J	U	9,500 D	50 J	U	U	U	U	50,000
Butylbenzylphthalate	U	U	U	U	U	U	U	U	U	550
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	U	550
Benzo (a) anthracene	75 J	60 J	U	4,100 D	U	U	U	U	U	224 OR MDL
Chrysene	90 J	100 J	U	4,100 D	U	U	U	U	U	400
bis(2-Ethylhexyl)phthalate	U	43 JB	U	U*	U*	U*	U*	U*	U*	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	U	50,000
Benzo(b)fluoranthene	89 J	97 J	U	5,500 D	42 J	U	U	U	U	550
Benzo(k)fluoranthene	U	43 J	U	1,500	U	U	U	U	U	550
Benzo(a)pyrene	76 J	55 J	U	3,500 D	U	U	U	U	U	1,100
Indeno(1,2,3-cd)pyrene	49 J	44 J	U	1,400	U	U	U	U	U	61 OR MDL
Dibenzo(a,h)anthracene	U	U	U	270 J	U	U	U	U	U	3,200
Benzo(g,h,i)perylene	46 J	40 J	U	1,300	U	U	U	U	U	14 OR MDL
Total PAHs	635	682	0	50,360	141	0	0	0	0	50,000
Total Carcinogen PAHs	379	399	0	20,370	42	0	0	0	0	10,000
Total SVOCs	635	725	0	51,624	141	0	0	0	0	500,000
Total SVOC TICs	1,340	1,999	5,364	5,698	1,766	1,440	2,080	1,590	2,149	

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Qualified as non-detect based on validation criteria

NOTES:

To determine the detection limit for each sample, use the following equation:
(CRDL)*(DF)*(100/%S), where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.
---: not established
Indicates value exceeds NYSDEC recommended Soil Clean-up objective

TABLE 2b. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	TP-S-11	TP-S-12	TP-S-12	TP-S-13	TP-S-14	TP-S-15	TP-S-19	TP-S-20	TP-S-21	TP-S-22	Contract	NYSDEC
Location	R+30,7	H+4,11+12	H+4,11+12	I+5,13	I+48,18+45	J+15,18+15	O+40,11+13	O+15,11+40	P+5,11+25	M+15,10+15	Required	Recommended
Sample Depth (feet)	2.5	0.5	2.0	0.5	3.0	1.0	5.0	1.0	4.5	6.5	Detection	Soil Clean-Up
Date of Collection	11/13/01	11/13/01	11/13/01	11/13/01	11/13/01	11/14/01	11/14/01	11/14/01	11/14/01	11/14/01	Limit	Objective
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	8	10	8	16	8	34	25	9	18	10		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Benzaldehyde	U	U	U	U	U	U	U	U	U	U	550	---
Phenol	U	U	U	U	U	210 J	U	U	U	U	550	30 OR MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	U	U	550	---
2-Chlorophenol	U	U	U	U	U	U	U	U	U	U	550	800
2-Methylphenol	U	U	U	U	U	50 J	U	U	U	U	550	100 OR MDL
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	U	U	U	550	---
Acetophenone	U	U	U	U	U	U	U	U	U	U	550	---
4-Methylphenol	U	U	U	U	U	140 J	U	U	U	U	550	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	U	U	550	---
Hexachloroethane	U	U	U	U	U	U	U	U	U	U	550	---
Nitrobenzene	U	U	U	U	U	U	U	U	U	U	550	200 OR MDL
Isophorone	U	U	U	U	U	U	U	U	U	U	550	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	U	U	550	330 OR MDL
2,4-Dimethylphenol	U	U	U	U	U	87 J	U	U	U	U	550	---
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	U	U	550	---
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	U	U	550	400
Naphthalene	U	U	U	U	U	110 J	U	U	U	U	550	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	U	U	550	220 OR MDL
Hexachlorobutadiene	U	U	U	U	U	U	U	U	U	U	550	---
Caprolactum	U	U	U	U	U	U	U	U	U	U	550	240 OR MDL
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	U	U	550	36,400
2-Methylnaphthalene	U	U	U	U	U	140 J	U	U	U	U	550	---
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	U	U	1400	---
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	550	100
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	1400	---
1,1'-Biphenyl	U	U	U	U	U	U	U	U	U	U	1400	---
2-Chloronaphthalene	U	U	U	U	U	U	U	U	U	U	550	430 OR MDL
2-Nitroaniline	U	U	U	U	U	U	U	U	U	U	550	2,000
Dimethylphthalate	U	U	U	U	U	U	U	U	U	U	550	1,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	68 J	U	U	550	41,000
Acenaphthylene	U	U	U	U	U	340 J	U	U	U	U	1400	500 OR MDL
3-Nitroaniline	U	U	U	U	U	U	U	U	U	U	550	50,000
Acenaphthene	U	U	U	U	U	52 J	U	U	U	U	1400	200 OR MDL
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	U	U	1400	100 OR MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	U	U	550	6,200
Dibenzofuran	U	U	U	U	U	91 J	U	U	U	U		

TABLE 2b. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	TP-S-11	TP-S-12	TP-S-12	TP-S-13	TP-S-14	TP-S-15	TP-S-19	TP-S-20	TP-S-21	TP-S-22	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Location	R+30.7	H+4,11+12	H+4,11+12	I+5,13	I+48,18+45	J+15,18+15	O+40,11+13	O+15,11+40	P+5,11+25	M+15,10+15		
Sample Depth (feet)	2.5	0.5	2.0	0.5	3.0	1.0	5.0	1.0	4.5	6.5		
Date of Collection	11/13/2001	11/13/2001	11/13/2001	11/13/2001	11/13/2001	11/14/2001	11/14/2001	11/14/2001	11/14/2001	11/14/2001		
Dilution Factor	1	1	1	1	1	1	1	1	1	1		
Percent Moisture	8	10	8	16	8	34	25	9	18	10		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	550	---
Diethylphthalate	U	U	U	U	U	U	U	U	U	U	550	7,100
Fluorene	U	U	U	U	U	70 J	U	U	U	U	550	50,000
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	550	---
4-Nitroaniline	U	U	U	U	U	U	U	U	U	U	1400	---
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	U	U	550	---
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	U	U	550	---
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	550	---
Hexachlorobenzene	U	38 J	U	U	U	U	U	U	U	U	550	410
Atrazine	U	U	U	U	U	U	U	U	U	U	550	---
Pentachlorophenol	U	U	U	U	U	U	U	U	U	U	1400	1,000 OR MDL
Phenanthrene	U	60 J	U	55 J	U	1,100	U	100 J	U	U	550	50,000
Anthracene	U	U	U	U	U	310 J	U	43 J	U	U	550	50,000
Carbazole	U	U	U	U	U	250 J	U	U	U	U	550	---
Di-n-butylphthalate	U	U	U	U	U	66 J	U	U	U	U	550	8,100
Fluoranthene	U	110 J	U	240 J	U	1,900	U	230 J	U	U	550	50,000
Pyrene	U	190 J	U	290 J	U	1,700	U	210 J	U	U	550	50,000
Butylbenzylphthalate	U	U	U	U	U	120 J	U	U	U	U	550	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	U	U	550	---
Benzo (a) anthracene	U	83 J	U	120 J	U	690	U	100 J	U	U	550	224 OR MDL
Chrysene	U	100 J	U	170 J	U	1,200	U	220 J	U	U	550	400
bis(2-Ethylhexyl)phthalate	U*	U*	U	U*	U	180,000 D	110 J	51 J	94 J	U	550	50,000
Di-n-octylphthalate	U	U	U	U	U	2,700	U	U	U	U	550	50,000
Benzo(b)fluoranthene	U	130 J	U	260 J	U	2,000	U	310 J	U	U	550	1,100
Benzo(k)fluoranthene	U	U	U	73 J	U	780	U	130 J	U	U	550	1,100
Benzo(a)pyrene	U	87 J	U	90 J	U	830	U	140 J	U	U	550	61 OR MDL
Indeno(1,2,3-cd)pyrene	U	46 J	U	69 J	U	580	U	110 J	U	U	550	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	180 J	U	U	U	U	550	14 OR MDL
Benzo(g,h,i)perylene	U	47 J	U	55 J	U	460 J	U	120 J	U	U	550	50,000
Total PAHs	0	853	0	1,422	0	12,302	0	1,781	0	0		---
Total Carcinogen PAHs	0	446	0	782	0	6,260	0	1,010	0	0		10,000
Total SVOCs	0	891	0	1,422	0	196,156	110	1,832	94	0		500,000
Total SVOC TICs	1,270	21,220	550	8,642	1,770	18,640	4,390	4,577	1,511	3,959		

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Qualified as non-detect based on validation criteria

NOTES:

To determine the detection limit for each sample, use the following equation:
(CRDL)*(DF)*(100/%S), where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.
---: not established
Indicates value exceeds NYSDEC recommended Soil Clean-up objective

TABLE 2b. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	TP-S-23	TP-S-24	TP-S-25	TP-S-26	TP-S-27	TP-S-28	TP-S-29	TP-S-30	TP-S-31	TP-S-32	NYSDEC Recommended Soil Clean-Up Objective
Location	R+25,10+40	E+10,23+40	F+10,21	H+35,15+25	F+35,14	L+10,15	O,14	E+40,1+7	B+7,7	D+15,10+20	
Sample Depth (feet)	4.5	4.5	4.0	4.0	2.0	4.0	5.0	5.0	8.0	10.0	
Date of Collection	11/14/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Percent Moisture	63	21	6	8	19	11	21	12	5	5	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Benzaldehyde	220 J	U	U	U	U	U	U	U	U	49 J	550
Phenol	U	U	U	U	U	U	U	U	U	U	550
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	U	U	550
2-Chlorophenol	U	U	U	U	U	U	U	U	U	U	550
2-Methylphenol	U	U	U	U	U	U	U	U	U	U	550
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	U	U	U	550
Acetophenone	U	U	U	U	U	U	U	U	U	U	550
4-Methylphenol	U	U	U	U	U	U	U	U	U	U	550
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	U	U	550
Hexachloroethane	U	U	U	U	U	U	U	U	U	U	550
Nitrobenzene	U	U	U	U	U	U	U	U	U	U	550
Isophorone	U	U	U	U	U	U	U	U	U	U	550
2-Nitrophenol	U	U	U	U	U	U	U	U	U	U	550
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	U	U	550
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	U	U	550
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	U	U	550
Naphthalene	U	U	U	U	U	U	U	U	U	U	550
4-Chloroaniline	U	U	U	U	U	U	U	U	U	U	550
Hexachlorobutadiene	U	U	U	U	U	U	U	U	U	U	550
Caprolactum	U	U	U	U	U	U	U	U	U	U	550
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	U	U	550
2-Methylnaphthalene	U	U	U	U	U	U	U	U	U	U	550
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	U	U	550
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	550
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	550
1,1'-Biphenyl	U	U	U	U	U	U	U	U	U	U	550
2-Chloronaphthalene	U	U	U	U	U	U	U	U	U	U	550
2-Nitroaniline	U	U	U	U	U	U	U	U	U	U	550
Dimethylphthalate	U	U	U	U	U	U	U	U	U	U	550
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	550
Acenaphthylene	U	U	U	U	U	U	U	U	U	U	550
3-Nitroaniline	U	U	U	U	U	U	U	U	U	U	550
Acenaphthene	U	U	U	U	U	U	U	U	U	U	550
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	U	U	550
4-Nitrophenol	U	U	U	U	U	U	U	U	U	U	550
Dibenzofuran	U	U	U	U	U	U	U	U	U	U	550
											30 OR MDL
											800
											100 OR MDL
											900
											200 OR MDL
											4,400
											330 OR MDL
											400
											13,000
											220 OR MDL
											240 OR MDL
											36,400
											100
											430 OR MDL
											2,000
											1,000
											41,000
											500 OR MDL
											50,000
											200 OR MDL
											100 OR MDL
											6,200

TABLE 2b. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	TP-S-23	TP-S-24	TP-S-25	TP-S-26	TP-S-27	TP-S-28	TP-S-29	TP-S-30	TP-S-31	TP-S-32	NYSDEC Recommended Soil Clean-Up Objective
Location	R+25,10+40	E+10,23+40	F+10,21	H+35,15+25	F+35,14	L+10,15	O,14	E+40,1+7	B+7,7	D+15,10+20	
Sample Depth (feet)	4.5	4.5	4.0	4.0	2.0	4.0	5.0	5.0	8.0	10.0	
Date of Collection	11/14/2001	11/15/2001	11/15/2001	11/15/2001	11/15/2001	11/15/2001	11/15/2001	11/15/2001	11/15/2001	11/15/2001	
Dilution Factor	1	1	1	1	1	1	1	1	1	1	
Percent Moisture	63	21	6	8	19	11	21	12	5	5	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	550
Diethylphthalate	U	U	U	U	U	U	U	U	U	U	550
Fluorene	U	U	U	U	U	U	U	U	U	U	550
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	550
4-Nitroaniline	U	U	U	U	U	U	U	U	U	U	1400
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	U	U	1400
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	U	U	550
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	550
Hexachlorobenzene	U	U	U	U	U	U	U	U	U	U	550
Atrazine	U	U	U	U	U	U	U	U	U	U	410
Pentachlorophenol	U	U	U	U	U	U	U	U	U	U	1,000 OR MDL
Phenanthrene	U	U	U	U	U	U	U	U	U	U	550
Anthracene	U	U	U	U	U	U	U	U	U	U	550
Carbazole	U	U	U	U	U	U	U	U	U	U	550
Di-n-butylphthalate	U	U	U	U	U	39 J	U	U	U	U	550
Fluoranthene	U	U	U	U	U	U	U	U	U	U	550
Pyrene	U	U	U	U	U	U	U	U	U	U	550
Butylbenzylphthalate	U	U	U	U	U	U	U	U	U	U	550
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	U	U	550
Benzo (a) anthracene	U	U	U	U	U	U	U	U	U	U	550
Chrysene	U	U	U	U	U	U	U	U	U	U	550
bis(2-Ethylhexyl)phthalate	180 J	U	U	U	U	43 JB	U	U	U	U	224 OR MDL
Di-n-octylphthalate	U	U	U	U	U	U	U	U	U	U	400
Benzo(b)fluoranthene	U	U	U	U	U	U	U	U	U	U	50,000
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	U	U	50,000
Benzo(a)pyrene	U	U	U	U	U	U	U	U	U	U	1,100
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	U	U	1,100
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	U	U	61 OR MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U	U	U	3,200
Total PAHs	0	0	0	0	0	0	0	0	0	0	14 OR MDL
Total Carcinogen PAHs	0	0	0	0	0	0	0	0	0	0	50,000
Total SVOCs	400	0	0	0	0	82	0	0	0	49	
Total SVOC TICs	33,160	1,410	3,410	1,970	3,855	2,840	4,009	3,010	1,260	3,175	

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound found in the method blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated
 D: Result taken from reanalysis at dilution

NOTES:

To determine the detection limit for each sample, use the following equation:
 (CRDL)*(DF)*(100/%S), where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.

---: not established

Indicates value exceeds NYSDEC recommended Soil Clean-up objective

TABLE 2b. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	TP-S-33	TP-S-34		
Location	N+35,8+40	K+5,6+15		
Sample Depth (feet)	5.5	4.5		
Date of Collection	11/15/01	11/15/01		
Dilution Factor	1.0	1.0		
Percent Moisture	6	23		
Units	(ug/kg)	(ug/kg)	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Benzaldehyde	U	U	550	---
Phenol	U	U	550	30 OR MDL
bis(2-Chloroethyl)ether	U	U	550	---
2-Chlorophenol	U	U	550	800
2-Methylphenol	U	U	550	100 OR MDL
2,2-Oxybis (1-Chloropropane)	U	U	550	---
Acetophenone	U	U	550	---
4-Methylphenol	U	U	550	900
N-Nitroso-di-n-propylamine	U	U	550	---
Hexachloroethane	U	U	550	---
Nitrobenzene	U	U	550	200 OR MDL
Isophorone	U	U	550	4,400
2-Nitrophenol	U	U	550	330 OR MDL
2,4-Dimethylphenol	U	U	550	---
bis(2-Chloroethoxy)methane	U	U	550	---
2,4-Dichlorophenol	U	U	550	400
Naphthalene	U	U	550	13,000
4-Chloroaniline	U	U	550	220 OR MDL
Hexachlorobutadiene	U	U	550	---
Caprolactum	U	U	550	---
4-Chloro-3-methylphenol	U	U	550	240 OR MDL
2-Methylnaphthalene	U	U	550	36,400
Hexachlorocyclopentadiene	U	U	550	---
2,4,6-Trichlorophenol	U	U	1400	---
2,4,5-Trichlorophenol	U	U	550	100
1,1'-Biphenyl	U	U	1400	---
2-Chloronaphthalene	U	U	1400	---
2-Nitroaniline	U	U	550	430 OR MDL
Dimethylphthalate	U	U	550	2,000
2,6-Dinitrotoluene	U	U	550	1,000
Acenaphthylene	U	U	550	41,000
3-Nitroaniline	U	U	1400	500 OR MDL
Acenaphthene	U	U	550	50,000
2,4-Dinitrophenol	U	U	1400	200 OR MDL
4-Nitrophenol	U	U	1400	100 OR MDL
Dibenzofuran	U	U	550	6,200

TABLE 2b. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	TP-S-33	TP-S-34		
Location	N+35,8+40	K+5,6+15		
Sample Depth (feet)	5.5	4.5		
Date of Collection	11/15/2001	11/15/2001		
Dilution Factor	1	1		
Percent Moisture	6	23		
Units	(ug/kg)	(ug/kg)	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
2,4-Dinitrotoluene	U	U	550	---
Diethylphthalate	U	U	550	7,100
Fluorene	U	U	550	50,000
4-Chlorophenyl-phenylether	U	U	550	---
4-Nitroaniline	U	U	1400	---
4,6-Dinitro-2-methylphenol	U	U	1400	---
N-Nitrosodiphenylamine	U	U	550	---
4-Bromophenyl-phenylether	U	U	550	---
Hexachlorobenzene	U	U	550	410
Atrazine	U	U	550	---
Pentachlorophenol	U	U	1400	1,000 OR MDL
Phenanthrene	U	U	550	50,000
Anthracene	U	U	550	50,000
Carbazole	U	U	550	---
Di-n-butylphthalate	U	U	550	8,100
Fluoranthene	U	U	550	50,000
Pyrene	U	U	550	50,000
Butylbenzylphthalate	U	U	550	50,000
3,3'-Dichlorobenzidine	U	U	550	---
Benzo (a) anthracene	U	U	550	224 OR MDL
Chrysene	U	U	550	400
bis(2-Ethylhexyl)phthalate	U	U	550	50,000
Di-n-octylphthalate	U	U	550	50,000
Benzo(b)fluoranthene	U	U	550	1,100
Benzo(k)fluoranthene	U	U	550	1,100
Benzo(a)pyrene	U	U	550	61 OR MDL
Indeno(1,2,3-cd)pyrene	U	U	550	3,200
Dibenzo(a,h)anthracene	U	U	550	14 OR MDL
Benzo(g,h,i)perylene	U	U	550	50,000
Total PAHs	0	0		
Total Carcinogen PAHs	0	0		10,000
Total SVOCs	0	61		500,000
Total SVOC TICs	615	1,830		

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution

NOTES:

To determine the detection limit for each sample, use the following equation:

$$(\text{CRDL}) \times (\text{DF}) \times (100\%)$$
, where CRDL = contract required detection limit, DF = dil.
factor and %S = percent solids.

---: not established

Indicates value exceeds NYSDEC recommended Soil Clean-up objective

TABLE 2c.
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBs

Sample Identification	SB-S-100	SB-S-200	TP-S-1	TP-S-2	TP-S-4	TP-S-6	TP-S-7	TP-S-8	TP-S-10	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	J,3	Q,8	B, 10+25	E+10,9+40	B+35,4+15	E+40,3+30	H,9+15	G,17+40	H+35,20		
Sample Depth (feet)	2-2.5	2-2.5	3.0	6.0	3.0	3.5	3.0	6.0	6.0		
Date of Collection	11/07/01	11/08/01	11/12/01	11/12/01	11/12/01	11/12/01	11/12/01	11/12/01	11/13/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	20	14	11	7	10	10	7	21	23		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	3.2	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	4.1 P	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	0.05	900
Dieldrin	7.3 P	11 P	12	U	U	U	U	U	U	0.10	44
4,4'-DDE	4.2 P	12 P	U	24 P	U	U	U	U	U	0.10	2100
Endrin	5.1 P	5.5 P	U	U	U	U	U	U	U	0.10	100
Endosulfan II	U	U	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	8.9 P	21 P	17 P	15 P	U	U	U	U	U	0.10	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	0.10	2100
Methoxychlor	U	52 P	U	13 P	U	U	U	U	U	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	0.10	---
Endrin Aldehyde	5.3 P	21 P	6.1 P	U	U	U	4.5 P	U	U	0.10	---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	0.05	540
gamma-Chlordane	11 P	13 P	U	U	U	2.4	U	U	U	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	5.0	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	660 P	2400 D	740	100 P	58	210	410	U	U	1.0	1000/10000*
Total Pesticides	42	136	35	59	0	2	5	0	0		10000
Total PCBs	660	2,400	740	100	58	210	410	0	0		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2c. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBS

Sample Identification	TP-S-11	TP-S-12	TP-S-12	TP-S-12	TP-S-13	TP-S-14	TP-S-15	TP-S-19	TP-S-20	TP-S-21	TP-S-22	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	R+30,7	H+4,11+12	H+4,11+12	H+4,11+12	I+5,13	I+48,18+45	J+15,18+15	O+40,11+13	O+15,11+40	P+5,11+25	M+15,10+15		
Sample Depth (feet)	2.5	0.5	2.0	2.0	0.5	3.0	1.0	5.0	1.0	4.5	6.5		
Date of Collection	11/13/01	11/13/01	11/13/01	11/13/01	11/13/01	11/13/01	11/14/01	11/14/01	11/14/01	11/14/01	11/14/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	8	10	8	8	16	8	34	25	9	18	10		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
alpha-BHC	U	U	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	U	0.05	900
Dieldrin	U	550 P	U	U	20 P	U	34	U	11 P	U	U	0.10	44
4,4'-DDE	U	U	U	U	9.6 P	U	25 P	U	11 P	U	U	0.10	2100
Endrin	U	U	U	U	U	U	8.4 P	U	U	U	U	0.10	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	U	U	U	U	U	U	100 DP	U	24 P	U	U	0.10	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U	U	0.50	2100
Methoxychlor	U	3600 P	U	U	140 P	U	180 P	U	49 P	U	U	0.10	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	U	0.10	---
Endrin Aldehyde	U	1700 P	U	6.0 P	110 DP	U	110 DP	U	27 P	U	U	0.10	---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U	U	0.05	540
gamma-Chlordane	U	2400 D	U	U	78 DP	U	80 DP	U	22	U	U	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	U	5.0	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	U	230000 D	U	570	10000 DP	260	10000 D	100	3100 D	U	130	1.0	1000/10000*
Total Pesticides	0	8,250	6	570	358	0	537	0	144	0	0		10000
Total PCBs	0	230,000			10,000	260	10,000	100	3,100	0	130		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2c. (CONTINUED)
BOUGHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBs

Sample Identification	TP-S-23	TP-S-24	TP-S-25	TP-S-26	TP-S-27	TP-S-28	TP-S-29	TP-S-30	TP-S-31	TP-S-32	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	R+25,10+40	E+10,23+40	F+10,21	H+35,15+25	F+35,14	L+10,15	O,14	E+40,1+7	B+7,7	D+15,10+20	
Sample Depth (feet)	4.5	4.5	4.0	4.0	2.0	4.0	5.0	5.0	8.0	10.0	
Date of Collection	11/14/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Percent Moisture	63	21	6	8	19	11	21	12	5	5	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
alpha-BHC	U	U	U	U	U	U	U	U	U	U	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	100
Aldrin	U	U	U	U	U	U	U	U	U	U	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	900
Dieldrin	24 P	U	U	U	U	8.6 P	U	U	U	U	44
4,4'-DDE	U	U	U	U	4.4	U	U	U	U	U	2100
Endrin	9.4 P	U	U	U	U	U	U	U	U	U	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	2900
Endosulfan Sulfate	87 P	U	U	U	12 P	32 P	U	U	U	U	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U	2100
Methoxychlor	160 P	U	U	U	U	59 P	U	U	U	U	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	---
Endrin Aldehyde	95 P	U	U	U	U	37 P	U	U	U	U	---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U	540
gamma-Chlordane	70	U	U	U	U	37 D	2.3 P	U	U	U	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1260	U	U	U	U	120 P	3100 D	290	U	U	U	1000/10000*
Total Pesticides	445	0	0	0	16	174	2	0	0	0	10000
Total PCBs	11,000	0	0	0	120	3,100	290	0	0	0	1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2c. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBs

Sample Identification	TP-S-33	TP-S-34		
Location	N+35,8+40	K+5,6+15		
Sample Depth (feet)	5.5	4.5		
Date of Collection	11/15/01	11/15/01		
Dilution Factor	1.0	1.0		
Percent Moisture	6	23		
Units	(ug/kg)	(ug/kg)	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
alpha-BHC	U	U	0.05	110
beta-BHC	U	U	0.05	200
delta-BHC	U	U	0.05	300
gamma-BHC (Lindane)	U	U	0.05	60
Heptachlor	U	U	0.05	100
Aldrin	U	U	0.05	41
Heptachlor Epoxide	U	U	0.05	20
Endosulfan I	U	U	0.05	900
Dieldrin	U	U	0.10	44
4,4'-DDE	U	U	0.10	2100
Endrin	U	U	0.10	100
Endosulfan II	U	U	0.10	900
4,4'-DDD	U	U	0.10	2900
Endosulfan Sulfate	U	U	0.10	1000
4,4'-DDT	U	U	0.10	2100
Methoxychlor	U	U	0.50	***
Endrin Ketone	U	U	0.10	---
Endrin Aldehyde	U	U	0.10	---
alpha-Chlordane	U	U	0.05	540
gamma-Chlordane	U	U	0.05	540
Toxaphene	U	U	5.0	---
Aroclor-1016	U	U	1.0	1000/10000*
Aroclor-1221	U	U	2.0	1000/10000*
Aroclor-1232	U	U	1.0	1000/10000*
Aroclor-1242	U	U	1.0	1000/10000*
Aroclor-1248	U	U	1.0	1000/10000*
Aroclor-1254	U	U	1.0	1000/10000*
Aroclor-1260	U	46	1.0	1000/10000*
Total Pesticides	0	0		10000
Total PCBs	0	46		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2d.
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
INORGANIC PARAMETERS

Sample Identification	SB-S-100	SB-S-200	TP-S-1	TP-S-2	TP-S-4	TP-S-6	TP-S-7	TP-S-8	TP-S-10	Instrument Detection Limit (ug/l)	NYSDEC Recommended Soil Clean-Up Objective (mg/kg)
Location	J,3	Q,8	B, 10+25	E+10,9+40	B+35,4+15	E+40,3+30	H,9+15	G,17+40	H+35,20		
Sample Depth (feet)	2-2.5	2-2.5	3.0	6.0	3.0	3.5	3.0	6.0	6.0		
Date of Collection	11/07/01	11/08/01	11/12/01	11/12/01	11/12/01	11/12/01	11/12/01	11/12/01	11/13/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Solids	80	86	89	93	90	90	93	79	77		
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Aluminum	13,200	11,100	12,000	12,400	11,700	13,000	11,200	18,200	25,400	13	SB (16,300)
Antimony		6.9 B	U	U	U	U	U	U	U	8	SB (1.0)
Arsenic	6.2	6.6	5.8	6.3	5.9	7.1	5.6	11.7	12.5	3	7.5 or SB (7.9)
Barium	72.5	95.9	49.7	30.0 B	32.0 B	34.4	24.7 B	99.9	96.2	1	300 or SB (80)
Beryllium	0.33 B	0.28 B	0.29 B	0.24 B	0.29 B	0.27 B	0.29 B	0.73 B	0.75 B	1	0.16 or SB (0.46)
Cadmium	0.20 B	1.4	U	U	U	U	U	U	U	1	10*
Calcium	1,100	1,150	U	171 B	1,440	412 B	124 B	404 B	U	8	SB (2,810)
Chromium	13.9	14.2	11.8	14.4	12.4	12.0	12.8	22.6	28.5	1	50*
Cobalt	10.4	8.7 B	7.1 B	10.2	8.7 B	10.5	8.3 B	19.9	17.1	2	30 or SB (11.8)
Copper	24.6	207	16.1 E	39.0 E	23.8 E	30.5 E	23.8 E	28.9 E	36.8 E	1	25 or SB (38.3)
Iron	24,800	32,400	24,300	28,000	24,800	29,100	20,300	39,500	50,700	20	2,000 or SB (30,500)
Lead	84.3	208	34.3	29.1	17.5	20.8	12.0	18.0	22.1	2	400
Magnesium	4,080	3,620	4,110	6,450	5,410	5,210	4,680	6,710	8,980	8	SB (5,840)
Manganese	678	586	901	837	679	1,130	469	863	780	4	SB (1,320)
Mercury	0.28	0.073 B	0.088 B	U	0.060 B	U	0.060 B	U	U	0.2	0.1
Nickel	19.1	26.4	14.6	26.3	18.8	29.4	19.5	31.9	39.3	2	13 or SB (23.8)
Potassium	476 BE	260 BE	328 B	393 B	344 B	257 B	239 B	1,490	1,500	20	SB (1,220)
Selenium	3.1	2.7	1.8 N	2.5 N	1.4 N	1.4 N	U	1.8 N	U	4	2 or SB (1.8)
Silver	U	U	U	U	U	U	U	U	U	1	SB (ND)
Sodium	76.6 B	46.9 B	26.7 B	29.5 B	35.0 B	28.3 B	26.6 B	58.6 B	56.1 B	9	SB (69.4)
Thallium	2.3	2.2	2.8	2.2	1.7 B	2.4	U	4.0	2.4 B	5	SB (4.2)
Vanadium	12.5	11.9	13.7	10.9	11.5	9.9	9.8 B	16.9	22.6	1	150 or SB (18)
Zinc	115	358	61.8	141	68.8	82.2	51.5	97.7	114	1	20 or SB (119)
Cyanide	U	0.20 B	0.50 B	0.50	0.53	0.21 B	0.20 B	0.28 B	0.24 B	10	----

QUALIFIERS:
 U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL but greater than the IDL.

NOTES:
 To determine the detection limit for each sample, use the following equation:
 $(CRDL) * (DF)^{(100\%/S)}$ where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.
 SB: Site background
 ----: not established
 *: as per proposed 4/95 NYSDEC TAGM
 Indicates value exceeds the NYSDEC Recommended Soil Cleanup Objective

TABLE 2d. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
INORGANIC PARAMETERS

Sample Identification	TP-S-11	TP-S-12	TP-S-12	TP-S-12	TP-S-13	TP-S-14	TP-S-15	TP-S-19	TP-S-20	TP-S-21	TP-S-22	NYSDEC Recommended Soil Clean-Up Objective (mg/kg)
Location	R+30,7	H+4,11+12	H+4,11+12	H+4,11+12	I+5,13	I+48,18+45	J+15,18+15	O+40,11+13	O+15,11+40	P+5,11+25	M+15,10+15	
Sample Depth (feet)	2.5	0.5	2.0	2.0	0.5	3.0	1.0	5.0	1.0	4.5	6.5	
Date of Collection	11/13/01	11/13/01	11/13/01	11/13/01	11/13/01	11/13/01	11/14/01	11/14/01	11/14/01	11/14/01	11/14/01	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Percent Solids	92	90	92	92	84	92	66	75	91	82	90	
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Aluminum	8,970	11,800	11,800	11,800	12,400	9,670	166,000	12,600	11,600	11,600	8,460	SB (16,300)
Antimony	U	0.75 BN	U	U	2.0 BN	U	17.0 N	U	U	U	2.7 BN	SB (1.0)
Arsenic	U	8.4	5.7	5.7	8.5	5.4	8.0	3.9	7.1	4.9	7.6	7.5 or SB (7.9)
Barium	35.3	87.0	21.0 B	21.0 B	110	16.5 B	102	28.4 B	85.5	41.7	105	300 or SB (80)
Beryllium	0.13 B	0.29 BN	0.24 B	0.24 B	0.39 B	0.20 B	0.19 B	0.23 B	0.32 B	0.39 B	0.29 B	0.16 or SB (0.46)
Cadmium	U	0.87	U	U	0.70 B	U	8.8	U	0.41 B	U	1.7	10*
Calcium	219 B	656 BN	U	U	1,020 B	U	754 B	281 B	217 B	82.9 B	95.1 B	SB (2,810)
Chromium	8.7	17.3	12.7	12.7	15.7	11.4	79.2 E	15.0 E	13.7 E	14.3 E	36.2 E	50*
Cobalt	4.6 B	10.8	10.2	10.2	12.0	8.0 B	7.4 B	9.0 B	8.6 B	7.1 B	9.6	30 or SB (11.8)
Copper	3.6 BE	219 E	23.5 E	23.5 E	43.3 E	34.5 E	6,950 E	42.1 E	43.1 E	19.8 E	95.6 E	25 or SB (38.3)
Iron	14,600	32,900	23,900	23,900	30,100	20,400	14,000	27,200	26,000	23,200	32,000	2,000 or SB (30,500)
Lead	5.7	190	14.1	14.1	158	20.3	3,460	14.1	266	20.3	239	400
Magnesium	3,070	5,750	5,510	5,510	5,060	4,060	1,860	6,970	4,080	4,780	3,290	SB (5,840)
Manganese	180	888	701	701	1,640	414	807	539	623	493	737	SB (1,320)
Mercury	U	0.086 BN	U	U	0.099 B	U	U	U	U	0.053 B	U	0.1
Nickel	13.1	37.0	22.9	22.9	25.2	17.5	956	25.1	20.9	16.1	47.8	13 or SB (23.8)
Potassium	270 B	455 B	326 B	326 B	542 B	262 B	259 B	424 B	326 B	385 B	396 B	SB (1,220)
Selenium	U	U	U	U	3.0 N	1.0 N	U	U	1.7 N	1.3 N	1.3 N	2 or SB (1.8)
Silver	U	U	U	U	U	U	2.9	U	U	U	U	SB (ND)
Sodium	31.6 B	38.4 B	23.2 B	23.2 B	41.1 B	22.0 B	43.5 B	29.7 B	54.2 B	46.7 B	34.9 B	SB (69.4)
Thallium	U	2.4	1.8 B	1.8 B	4.0	U	U	2.3	2.4	1.9 B	3.4	SB (4.2)
Vanadium	6.0 B	12.0	9.6 B	9.6 B	13.4	7.5 B	17.7	11.4	11.1	11.5	7.9	150 or SB (18)
Zinc	38.9	629	58.8	58.8	208	71.9	1,650	74.7	597	57.4	951	20 or SB (119)
Cyanide	0.2 B	0.32 B	0.22 B	0.22 B	0.38 B	0.17 B	0.32 B	0.24 B	U	U	U	---

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL
 but greater than the IDL.

NOTES:

To determine the detection limit for each sample, use the following equation:
 (CRDL)*(DF)*(100/%S) where CRDL = contract required detection limit, DF = dilution
 factor and %S = percent solids.
 SB: Site background
 ---: not established
 *: as per proposed 4/95 NYSDEC TAGM

Indicates value exceeds the NYSDEC Recommended Soil Cleanup Objective

TABLE 2d. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
INORGANIC PARAMETERS

Sample Identification	TP-S-23	TP-S-24	TP-S-25	TP-S-26	TP-S-27	TP-S-28	TP-S-29	TP-S-30	TP-S-31	TP-S-32		NYSDEC Recommended Soil Clean-Up Objective (mg/kg)
Location	R+25,10+40	E+10,23+40	F+10,21	H+35,15+25	F+35,14	L+10,15	O,14	E+40,1+7	B+7,7	D+15,10+20		
Sample Depth (feet)	4.5	4.5	4.0	4.0	2.0	4.0	5.0	5.0	8.0	10.0		
Date of Collection	11/14/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01	11/15/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Solids	37	79	94	92	81	89	79	88	95	95		
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Aluminum	9,640	19,500	11,400	9,940	1,300	11,200	13,400	15,300	8,250	8,850	13	SB (16,300)
Antimony	U	U	U	U	U	U	U	U	U	U	8	SB (1.0)
Arsenic	U	8.6	4.4	5.7	6.4	5.3	6.4	8.2	5.1	5.1	3	7.5 or SB (7.9)
Barium	119	72.4	18.7 B	19.1 B	54.2	49.3	20.8 B	82.8	20.8 B	20.0 B	1	300 or SB (80)
Beryllium	0.46 B	0.71 B	0.22 B	0.24 B	0.37 B	0.37 B	0.24 B	0.48 B	0.26 B	0.14 B	1	0.16 or SB (0.46)
Cadmium	1.2 B	U	U	U	U	U	U	U	U	U	1	10*
Calcium	4,100	156 B	198 B	241 B	28.2 B	U	U	1,030	244 B	239 B	8	SB (2,810)
Chromium	11.7 E	21.5 E	13.0 E	11.8 E	13.5 E	11.8 E	15.8 E	17.9 E	10 E	9.5 E	1	50*
Cobalt	4.7 B	18.1	8.5	9.1 B	9.0 B	8.8 B	9.7 B	13.9	8.6	7.9 B	2	30 or SB (11.8)
Copper	16.1 E	29.3 E	30.3 E	25.4	17.7	20.7	41.8	25.4	23.2	22.3	1	25 or SB (38.3)
Iron	11,900	37,100	24,000	21,100	25,200	23,800	28,500	32,800	20,900	20,300	20	2,000 or SB (30,500)
Lead	55.4	15.5	11.1	14.4 N	18.3 N	13.7 N	12.8 N	11.4 N	15.2	12.8 N	2	400
Magnesium	2,900	6,990	5,950	4,900	4,270	4,070	6,940	6,170	3,320	4,540	8	SB (5,840)
Manganese	194	11,400	657	698	954	1,080	434	835	712	1,500	4	SB (1,320)
Mercury	U	U	U	U	U	U	U	U	U	U	0.2	0.1
Nickel	11.4 B	32.4	22.6	19.9	17.8	20.1	26.2	29.9	15.0	18.0	2	13 or SB (23.8)
Potassium	490 B	994 B	310 B	272 B	378 B	237 B	416 B	438 B	326 B	215 B	20	SB (1,220)
Selenium	4.5 N	1.5 N	U	1.2	1.7	2.2	U	U	1.2	U	4	2 or SB (1.8)
Silver	U	U	U	U	U	U	U	U	U	U	1	SB (ND)
Sodium	74.9 B	91.5 B	25.6 B	27.3 B	32.2 B	27.4 B	34.3 B	51.5 B	35.8 B	23.0 B	9	SB (69.4)
Thallium	U	4.5	2.4	2.7	3.9 N	4.5 N	2.1 BN	4.0 N	3.3 N	5.8 N	5	SB (4.2)
Vanadium	8.6 B	16.4	9.3	8.5 B	14.6	9.9	11.7 B	13.1	7.3 B	7.4 B	1	150 or SB (18)
Zinc	99.5	98.4	58.4	47.6	218	54.2	70.7	82.7	52.5	47.4	1	20 or SB (119)
Cyanide	U	U	U	U	U	U	U	U	0.19 B	U	10	---

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL
 but greater than the IDL.

NOTES:

To determine the detection limit for each sample, use the following equation:
 $(CRDL) \times (DF) \times (100\%/S)$ where CRDL = contract required detection limit, DF = dilution
 factor and %S = percent solids.

SB: Site background

---: not established

*: as per proposed 4/95 NYSDEC TAGM

Indicates value exceeds the NYSDEC Recommended Soil Cleanup Objective

TABLE 2d. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
INORGANIC PARAMETERS

Sample Identification	TP-S-33	TP-S-34		
Location	N+35,8+40	K+5,6+15		
Sample Depth (feet)	5.5	4.5		
Date of Collection	11/15/01	11/15/01		
Dilution Factor	1.0	1.0		
Percent Solids	94	77		
Units	mg/kg	mg/kg		
Aluminum	11,100	15,000	13	NYSDEC Recommended Soil Clean-Up Objective (mg/kg)
Antimony		U	8	SB (16,300)
Arsenic	4.8 N	7.4 N	3	SB (1.0)
Barium	19.2 B	63.8	1	7.5 or SB (7.9)
Beryllium	0.22 B	0.46 B	1	300 or SB (80)
Cadmium	U	U	1	0.16 or SB (0.46)
Calcium	315 B	530 B	8	10*
Chromium	11.5	18.0	1	SB (2,810)
Cobalt	9.6	16.5	2	50*
Copper	34.2 E	30.4 E	1	30 or SB (11.8)
Iron	22,700	32,700	20	25 or SB (38.3)
Lead	10.1	14.8	2	2,000 or SB (30,500)
Magnesium	4,770	5,940	8	400
Manganese	699	708	4	SB (5,840)
Mercury	U	U	0.2	SB (1,320)
Nickel	23.8	28.1	2	0.1
Potassium	279 B	886 B	20	13 or SB (23.8)
Selenium	U	U	4	SB (1,220)
Silver	U	U	1	2 or SB (1.8)
Sodium	28.5 B	120 B	9	SB (ND)
Thallium	2.6	3.0	5	SB (69.4)
Vanadium	8.0	14.4	1	SB (4.2)
Zinc	63.6	79.6	1	150 or SB (18)
Cyanide	0.14 B	0.16 B	10	20 or SB (119)

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound concentration is less than the CRDL
but greater than the IDL.

NOTES:

To determine the detection limit for each sample, use the following equation:
(CRDL)*(DF)*(100/%S) where CRDL = contract required detection limit, DF = dilution
factor and %S = percent solids.

SB: Site background

---: not established

*: as per proposed 4/95 NYSDEC TAGM

Indicates value exceeds the NYSDEC Recommended Soil Cleanup Objective

TABLE 2e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SB-S-1-(2-2.5)	A 10	11/5/2001	1111	ND<0.5	
SB-S-2-(2-2.5)	A 12	11/5/2001	1115	ND<0.5	ND<0.1
SB-S-3-(2-2.5)	B 1	11/5/2001	1037	39.5	54.0
SB-S-4-(2-2.5)	B 3	11/5/2001	1046	ND<0.5	
SB-S-5-(2-2.5)	B 5	11/5/2001	1052	ND<0.5	
SB-S-6-(2-2.5)	B 7	11/5/2001	1058	ND<0.5	
SB-S-7-(2-2.5)	B 9	11/5/2001	1104	ND<0.5	
SB-S-8-(2-2.5)	B 11	11/5/2001	1126	ND<0.5	
SB-S-9-(2-2.5)	B 13	11/5/2001	1557	ND<0.5	
SB-S-10-(2-2.5)	C 2	11/5/2001	1155	ND<0.5	
SB-S-11-(2-2.5)	C 4	11/5/2001	1149	ND<0.5	
SB-S-12-(2-2.5)	C 6	11/5/2001	1143	ND<0.5	
SB-S-13-(2-2.5)	C 8	11/5/2001	1137	ND<0.5	
SB-S-14-(2-2.5)	C 10	11/5/2001	1132	ND<0.5	
SB-S-15-(2-2.5)	C 12	11/6/2001	1606	ND<0.5	
SB-S-16-(2-2.5)	D 1	11/5/2001	1202	0.58	1.10
SB-S-17-(2-2.5)	D 3	11/5/2001	1215	ND<0.5	
SB-S-18-(2-2.5)	D 5	11/5/2001	1222	ND<0.5	
SB-S-19-(2-2.5)	D 7	11/5/2001	1316	ND<0.5	
SB-S-20-(2-2.5)	D 9	11/5/2001	1321	ND<0.5	
SB-S-21-(2-2.5)	D 11	11/5/2001	1325	ND<0.5	
SB-S-22-(2-2.5)	D 13	11/5/2001	1550	ND<0.5	
SB-S-23-(2-2.5)	D 23	11/6/2001	0739	1.08	1.60
SB-S-24-(2-2.5)	D 25	11/6/2001	0747	ND<0.5	
SB-S-25-(2-2.5)	E 2	11/5/2001	1357	ND<0.5	
SB-S-26-(2-2.5)	E 4	11/5/2001	1350	ND<0.5	
SB-S-27-(2-2.5)	E 6	11/5/2001	1342	ND<0.5	
SB-S-28-(2-2.5)	E 8	11/5/2001	1337	ND<0.5	
SB-S-29-(2-2.5)	E 10	11/5/2001	1331	ND<0.5	
SB-S-30-(2-2.5)	E 12	11/5/2001	1555	ND<0.5	ND<0.1
SB-S-31-(2-2.5)	E 20	11/6/2001	0812	ND<0.5	
SB-S-32-(2-2.5)	E 22	11/6/2001	0758	ND<0.5	
SB-S-33-(2-2.5)	E 24	11/6/2001	0804	ND<0.5	
SB-S-34-(2-2.5)	F 1	11/5/2001	1408	28.1	44.0
SB-S-35-(2-2.5)	F 2	11/5/2001	1415	ND<0.5	
SB-S-36-(2-2.5)	F 3	11/5/2001	1420	ND<0.5	
SB-S-37-(2-2.5)	F 4	11/5/2001	1426	ND<0.5	
SB-S-38-(2-2.5)	F 5	11/5/2001	1434	ND<0.5	
SB-S-39-(2-2.5)	F 6	11/5/2001	1447	ND<0.5	
SB-S-40-(2-2.5)	F 7	11/5/2001	1450	ND<0.5	
SB-S-41-(2-2.5)	F 8	11/5/2001	1457	ND<0.5	
SB-S-42-(2-2.5)	F 9	11/5/2001	1503	ND<0.5	
SB-S-43-(2-2.5)	F 11	11/5/2001	1511	ND<0.5	
SB-S-44-(2-2.5)	F 13	11/5/2001	1516	ND<0.5	
SB-S-45-(2-2.5)	F 15	11/6/2001	0724	ND<0.5	
SB-S-46-(2-2.5)	F 17	11/6/2001	0820	ND<0.5	
SB-S-47-(2-2.5)	F 19	11/6/2001	0830	ND<0.5	
SB-S-48-(2-2.5)	F 21	11/6/2001	0837	ND<0.5	
SB-S-49-(2-2.5)	F 23	11/6/2001	0841	ND<0.5	

TABLE 2e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SB-S-50-(2-2.5)	F 25	11/6/2001	0850	ND<0.5	
SB-S-51-(2-2.5)	G 1	11/6/2001	1057	37.0	59.0
SB-S-52-(2-2.5)	G 2	11/6/2001	1050	ND<0.5	
SB-S-53-(2-2.5)	G 3	11/6/2001	1045	ND<0.5	
SB-S-54-(2-2.5)	G 4	11/6/2001	1039	ND<0.5	
SB-S-55-(2-2.5)	G 5	11/6/2001	1033	ND<0.5	
SB-S-56-(2-2.5)	G 6	11/6/2001	1012	ND<0.5	
SB-S-57-(2-2.5)	G 7	11/6/2001	1005	ND<0.5	
SB-S-58-(2-2.5)	G 8	11/6/2001	0957	ND<0.5	
SB-S-59-(2-2.5)	G 10	11/6/2001	0948	ND<0.5	
SB-S-60-(2-2.5)	G 12	11/6/2001	0942	1.30	2.0
SB-S-61-(2-2.5)	G 14	11/6/2001	0936	ND<0.5	
SB-S-62-(2-2.5)	G 16	11/6/2001	0930	ND<0.5	
SB-S-63-(2-2.5)	G 18	11/6/2001	0922	ND<0.5	
SB-S-64-(2-2.5)	G 20	11/6/2001	0918	ND<0.5	
SB-S-65-(2-2.5)	G 22	11/6/2001	0912	ND<0.5	
SB-S-66-(2-2.5)	G 24	11/6/2001	0906	ND<0.5	
SB-S-67-(2-2.5)	G 26	11/6/2001	0900	ND<0.5	ND<0.098
SB-S-68-(2-2.5)	H 1	11/6/2001	1058	4.10	
SB-S-69-(2-2.5)	H 2	11/6/2001	1103	ND<0.5	
SB-S-70-(2-2.5)	H 3	11/6/2001	1110	0.52	0.51
SB-S-71-(2-2.5)	H 4	11/6/2001	1115	ND<0.5	
SB-S-72-(2-2.5)	H 5	11/6/2001	1124	ND<0.5	
SB-S-73-(2-2.5)	H 6	11/6/2001	1238	ND<0.5	
SB-S-74-(2-2.5)	H 7	11/6/2001	1243	0.54	0.45
SB-S-75-(2-2.5)	H 8	11/6/2001	1250	54.2	100
SB-S-76-(2-2.5)	H 9	11/6/2001	1300	ND<0.5	
SB-S-77-(2-2.5)	H 11	11/6/2001	1304	ND<0.5	
SB-S-78-(2-2.5)	H 13	11/6/2001	1311	1.28	2.0
SB-S-79-(2-2.5)	H 15	11/6/2001	1314	ND<0.5	0.16
SB-S-80-(2-2.5)	H 17	11/6/2001	1323	ND<0.5	
SB-S-81-(2-2.5)	H 19	11/6/2001	1331	ND<0.5	
SB-S-82-(2-2.5)	H 21	11/6/2001	1335	ND<0.5	
SB-S-83-(2-2.5)	H 23	11/6/2001	1341	ND<0.5	
SB-S-84-(2-2.5)	H 25	11/6/2001	1346	ND<0.5	
SB-S-85-(2-2.5)	I 1	11/6/2001	1521	ND<0.5	
SB-S-86-(2-2.5)	I 2	11/6/2001	1526	ND<0.5	
SB-S-87-(2-2.5)	I 6	11/6/2001	1511	ND<0.5	
SB-S-88-(2-2.5)	I 7	11/6/2001	1505	ND<0.5	
SB-S-89-(2-2.5)	I 8	11/6/2001	1445	ND<0.5	
SB-S-90-(2-2.5)	I 10	11/6/2001	1452	ND<0.5	
SB-S-91-(2-2.5)	I 12	11/6/2001	1431	ND<0.5	
SB-S-92-(2-2.5)	I 14	11/6/2001	1425	ND<0.5	
SB-S-93-(2-2.5)	I 16	11/6/2001	1419	ND<0.5	
SB-S-94-(2-2.5)	I 18	11/6/2001	1415	ND<0.5	
SB-S-95-(2-2.5)	I 20	11/6/2001	1409	ND<0.5	
SB-S-96-(2-2.5)	I 22	11/6/2001	1400	ND<0.5	
SB-S-97-(2-2.5)	I 24	11/6/2001	1453	ND<0.5	
SB-S-98-(2-2.5)	J 1	11/7/2001	1010	ND<0.5	

TABLE 2e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SB-S-99-(2-2.5)	J 2	11/7/2001	1005	ND<0.5	
SB-S-100-(2-2.5)	J 3	11/7/2001	0930	0.58	
SB-S-101-(2-2.5)	J 4	11/7/2001	0925	ND<0.5	
SB-S-102-(2-2.5)	J 5	11/7/2001	0920	ND<0.5	
SB-S-103-(2-2.5)	J 6	11/7/2001	0915	ND<0.5	
SB-S-104-(2-2.5)	J 7	11/7/2001	0905	ND<0.5	
SB-S-105-(2-2.5)	J 8	11/7/2001	0900	ND<0.5	
SB-S-106-(2-2.5)	J 9	11/7/2001	0855	ND<0.5	
SB-S-107-(2-2.5)	J 11	11/7/2001	0850	ND<0.5	
SB-S-108-(2-2.5)	J 13	11/7/2001	0846	ND<0.5	
SB-S-109-(2-2.5)	J 15	11/7/2001	0840	ND<0.5	
SB-S-110-(2-2.5)	J 17	11/7/2001	0836	ND<0.5	
SB-S-111-(2-2.5)	J 19	11/7/2001	0827	ND<0.5	
SB-S-112-(2-2.5)	J 21	11/7/2001	0823	ND<0.5	
SB-S-113-(2-2.5)	J 23	11/7/2001	0817	ND<0.5	
SB-S-114-(2-2.5)	K 1	11/6/2001	1614	ND<0.5	
SB-S-115-(2-2.5)	K 2	11/6/2001	1617	0.90	1.4
SB-S-116-(2-2.5)	K 3	11/6/2001	1620	ND<0.5	
SB-S-117-(2-2.5)	K 4	11/6/2001	1624	7.70	5.70
SB-S-118-(2-2.5)	K 5	11/6/2001	1632	ND<0.5	
SB-S-119-(2-2.5)	K 6	11/6/2001	1640	32.0	6.80
SB-S-120-(2-2.5)	K 7	11/7/2001	0717	ND<0.5	
SB-S-121-(2-2.5)	K 8	11/7/2001	0724	ND<0.5	
SB-S-122-(2-2.5)	K 10	11/7/2001	0730	ND<0.5	
SB-S-123-(2-2.5)	K 12	11/7/2001	0736	ND<0.5	
SB-S-124-(2-2.5)	K 14	11/7/2001	0740	ND<0.5	
SB-S-125-(2-2.5)	K 16	11/7/2001	0750	ND<0.5	
SB-S-126-(2-2.5)	K 18	11/7/2001	0755	ND<0.5	
SB-S-127-(2-2.5)	K 20	11/7/2001	0803	ND<0.5	
SB-S-128-(2-2.5)	K 22	11/7/2001	0807	ND<0.5	
SB-S-129-(2-2.5)	I3	11/6/2001	1532	0.52	0.24
SB-S-130-(2-2.5)	L 1	11/7/2001	1015	ND<0.5	
SB-S-131-(2-2.5)	L 2	11/7/2001	1027	ND<0.5	
SB-S-132-(2-2.5)	L 3	11/7/2001	1030	ND<0.5	
SB-S-133-(2-2.5)	L 4	11/7/2001	1035	ND<0.5	
SB-S-134-(2-2.5)	L 5	11/7/2001	1045	ND<0.5	
SB-S-135-(2-2.5)	L 6	11/7/2001	1050	ND<0.5	
SB-S-136-(2-2.5)	L 7	11/7/2001	1055	ND<0.5	
SB-S-137-(2-2.5)	L 8	11/7/2001	1100	ND<0.5	
SB-S-138-(2-2.5)	L 9	11/7/2001	1105	ND<0.5	
SB-S-139-(2-2.5)	L 11	11/7/2001	1110	ND<0.5	
SB-S-140-(2-2.5)	L 13	11/7/2001	1115	ND<0.5	
SB-S-141-(2-2.5)	L 15	11/7/2001	1120	ND<0.5	
SB-S-142-(2-2.5)	L 17	11/7/2001	1125	ND<0.5	
SB-S-143-(2-2.5)	L 19	11/7/2001	1130	ND<0.5	
SB-S-144-(2-2.5)	L 21	11/7/2001	1138	ND<0.5	
SB-S-145-(2-2.5)	L 23	11/7/2001	1145	ND<0.5	
SB-S-146-(2-2.5)	M 1	11/7/2001	1339	ND<0.5	
SB-S-147-(2-2.5)	M 2	11/7/2001	1334	ND<0.5	

TABLE 2e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SB-S-148-(2-2.5)	M 3	11/7/2001	1330	ND<0.5	
SB-S-149-(2-2.5)	M 4	11/7/2001	1324	ND<0.5	
SB-S-150-(2-2.5)	M 5	11/7/2001	1320	ND<0.5	
SB-S-151-(2-2.5)	M 6	11/7/2001	1325	ND<0.5	
SB-S-152-(2-2.5)	M 7	11/7/2001	1315	ND<0.5	
SB-S-153-(2-2.5)	M 8	11/7/2001	1305	ND<0.5	
SB-S-154-(2-2.5)	M 10	11/7/2001	1215	2.74	4.40
SB-S-155-(2-2.5)	M 12	11/7/2001	1210	ND<0.5	
SB-S-156-(2-2.5)	M 14	11/7/2001	1205	ND<0.5	
SB-S-157-(2-2.5)	M 16	11/7/2001	1200	ND<0.5	
SB-S-158-(2-2.5)	M 18	11/7/2001	1155	ND<0.5	
SB-S-159-(2-2.5)	M 20	11/7/2001	1150	ND<0.5	
SB-S-160-(2-2.5)	M 22	11/7/2001	1342	ND<0.5	
SB-S-161-(2-2.5)	N 1	11/7/2001	1345	ND<0.5	
SB-S-162-(2-2.5)	N 4	11/7/2001	1350	ND<0.5	
SB-S-163-(2-2.5)	N 5	11/7/2001	1355	ND<0.5	
SB-S-164-(2-2.5)	N 6	11/7/2001	1400	ND<0.5	
SB-S-165-(2-2.5)	N 7	11/7/2001	1405	ND<0.5	
SB-S-166-(2-2.5)	N 8	11/7/2001	1410	ND<0.5	
SB-S-167-(2-2.5)	N 9	11/7/2001	1415	ND<0.5	
SB-S-168-(2-2.5)	N 11	11/7/2001	1420	ND<0.5	
SB-S-169-(2-2.5)	N 13	11/7/2001	1426	ND<0.5	
SB-S-170-(2-2.5)	N 15	11/7/2001	1430	ND<0.5	
SB-S-171-(2-2.5)	N 17	11/7/2001	1435	ND<0.5	
SB-S-172-(2-2.5)	N 19	11/7/2001	1440	ND<0.5	
SB-S-173-(2-2.5)	O 1	11/7/2001	1630	ND<0.5	
SB-S-174-(2-2.5)	O 2	11/7/2001	1625	ND<0.5	
SB-S-175-(2-2.5)	O 3	11/7/2001	1620	ND<0.5	
SB-S-176-(2-2.5)	O 4	11/7/2001	1615	ND<0.5	
SB-S-177-(2-2.5)	O 5	11/7/2001	1610	ND<0.5	
SB-S-178-(2-2.5)	O 6	11/7/2001	1605	ND<0.5	
SB-S-179-(2-2.5)	O 7	11/7/2001	1600	ND<0.5	
SB-S-180-(2-2.5)	O 8	11/7/2001	1555	ND<0.5	
SB-S-181-(2-2.5)	O 10	11/7/2001	1550	1.94	
SB-S-182-(2-2.5)	O 12	11/7/2001	1545	ND<0.5	
SB-S-183-(2-2.5)	O 14	11/7/2001	1540	71.4	260
SB-S-184-(2-2.5)	O 16	11/7/2001	1535	ND<0.5	
SB-S-185-(2-2.5)	O 18	11/7/2001	1530	ND<0.5	
SB-S-186-(2-2.5)	P 1	11/7/2001	1635	ND<0.5	
SB-S-187-(2-2.5)	P 2	11/7/2001	1640	ND<0.5	
SB-S-188-(2-2.5)	P 3	11/7/2001	1635	ND<0.5	
SB-S-189-(2-2.5)	P 4	11/8/2001	0715	ND<0.5	
SB-S-190-(2-2.5)	P 5	11/8/2001	0720	ND<0.5	
SB-S-191-(2-2.5)	P 7	11/8/2001	0729	ND<0.5	
SB-S-192-(2-2.5)	P 8	11/8/2001	0735	ND<0.5	
SB-S-193-(2-2.5)	P 9	11/8/2001	0740	ND<0.5	
SB-S-194-(2-2.5)	P 11	11/8/2001	0745	ND<0.5	
SB-S-195-(2-2.5)	P 13	11/8/2001	0752	ND<0.5	
SB-S-196-(2-2.5)	P 15	11/8/2001	0800	ND<0.5	

TABLE 2e.
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - OCTOBER/NOVEMBER 2001
PCBS, FIELD ANALYSIS (RAPID ASSAY)

SAMPLE ID	GRID LOCATION	DATE COLLECTED	TIME COLLECTED	ANALYSES	
				RaPID (mg/kg)	Lab (mg/kg)
SB-S-197-(2-2.5)	P 17	11/8/2001	0805	ND<0.5	
SB-S-198-(2-2.5)	Q 5	11/8/2001	0844	ND<0.5	
SB-S-199-(2-2.5)	Q 7	11/8/2001	0840	ND<0.5	
SB-S-200-(2-2.5)	Q 8	11/8/2001	0835	2.06	
SB-S-201-(2-2.5)	Q 10	11/8/2001	0829	ND<0.5	
SB-S-202-(2-2.5)	Q 12	11/8/2001	0825	ND<0.5	
SB-S-203-(2-2.5)	Q 14	11/8/2001	0817	4.00	13.0
SB-S-204-(2-2.5)	Q 16	11/8/2001	0810	ND<0.5	
SB-S-205-(2-2.5)	R 5	11/8/2001	0855	ND<0.5	
SB-S-206-(2-2.5)	R 6	11/8/2001	0903	ND<0.5	
SB-S-207-(2-2.5)	R 7	11/8/2001	0908	ND<0.5	
SB-S-208-(2-2.5)	R 8	11/8/2001	0913	ND<0.5	
SB-S-209-(2-2.5)	R 9	11/8/2001	0918	ND<0.5	
SB-S-210-(2-2.5)	R 11	11/8/2001	0924	ND<0.5	
SB-S-211-(2-2.5)	R 13	11/8/2001	0940	ND<0.5	
SB-S-212-(2-2.5)	S 6	11/8/2001	0948	ND<0.5	
SB-S-213-(2-2.5)	S 7	11/8/2001	1000	ND<0.5	
SB-S-214-(2-2.5)	S 8	11/8/2001	1008	ND<0.5	
SB-S-215-(2-2.5)	S 10	11/8/2001	1125	ND<0.5	
SB-S-216-(2-2.5)	S 12	11/8/2001	1130	1.18	
SB-S-217-(2-2.5)	T 6	11/8/2001	1010	ND<0.5	
SB-S-218-(2-2.5)	T 7	11/8/2001	1015	ND<0.5	
SB-S-219-(2-2.5)	T 8	11/8/2001	1020	ND<0.5	
SB-S-220-(2-2.5)	U 7	11/8/2001	1025	ND<0.5	
SB-S-221-(2-2.5)	U 8	11/8/2001	1038	2.86	
SB-S-222-(2-2.5)	V 7	11/8/2001	1034	ND<0.5	0.16
SB-S-223-(2-2.5)	W 7	11/8/2001	1040	ND<0.5	

TABLE 2f.
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PCBs

Sample Identification	SB-S-2	SB-S-3	SB-S-16	SB-S-23	SB-S-30	SB-S-34	SB-S-51	SB-S-60	SB-S-67	SB-S-70	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	A,12	B,1	D,1	D,23	E,12	F,1	G,1	G,12	G,26	H,3		
Sample Depth (feet)	2-2.5	2-2.5	2-2.5	2-2.5	2-2.5	2-2.5	2-2.5	2-2.5	2-2.5	2-2.5		
Date of Collection	11/05/01	11/05/01	11/05/01	11/06/01	11/05/01	11/05/01	11/06/01	11/06/01	11/06/01	11/06/01		
Dilution Factor	1.0	10.0	1.0	1.0	1.0	10.0	50.0	1.0	1.0	1.0		
Percent Moisture	4	16	19	11	4	12	14	11	3	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Atroclor-1016	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1221	U	U	U	U	U	U	U	U	U	U	67.0	1000/10000*
Atroclor-1232	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1242	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1248	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1254	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Atroclor-1260	U	U	1100	1600	U	U	U	U	U	U	33.0	1000/10000*
Total PCBs	0	54,000	1,100	1,600	0	44,000	59,000	2,000	0	510		

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

---: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2f. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PCBs

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

---: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2f. (CONTINUED)
BOUCHARDS JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - NOVEMBER 2001
PCBs

Sample Identification	SB-S-203	SB-S-222	
Location	Q,14	V,7	
Sample Depth (feet)	2-2.5	2-2.5	
Date of Collection	11/08/01	11/08/01	
Dilution Factor	10.0	1.0	
Percent Moisture	11	22	
Units	(ug/kg)	(ug/kg)	
Aroclor-1016	U	U	1000/10000*
Aroclor-1221	U	U	1000/10000*
Aroclor-1232	U	U	1000/10000*
Aroclor-1242	U	U	1000/10000*
Aroclor-1248	U	U	1000/10000*
Aroclor-1254	U	U	1000/10000*
Aroclor-1260	13000	160	1000/10000*
Total PCBs	13,000	160	1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

-----: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 29.
BOUCHARD JUNKYARD
REMEDIATION INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-224	SB-S-225	SB-S-226	SB-S-227	SB-S-228	SB-S-229	SB-S-230	SB-S-231	SB-S-232	SB-S-233	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	A4	A7	A 10	A 12	B 3	B 5	B 7	B 9	B 11	C 2	
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	
Date of Collection	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	
Dilution Factor	1.0	1.0	5.0	1.0	1.0	1.0	5.0	1.0	1.0	1.0	
Percent Moisture	18	7	9	8	21	7	16	16	14	26	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
alpha-BHC	U	U	U	U	U	U	U	U	U	U	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	100
Aldrin	U	U	U	U	U	U	U	U	U	U	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	900
Dieldrin	U	U	150	U	U	U	400 DP	U	7.6	U	44
4,4'-DDE	U	U	U	7.2	U	U	320 P	U	17	U	2100
Endrin	U	U	U	U	U	U	U	U	U	U	100
Endosulfan II	U	U	400 DP	U	U	U	U	U	U	U	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	2900
Endosulfan Sulfate	18 P	U	1400 DP	U	U	U	U	U	5.7 P	U	1000
4,4'-DDT	15 P	U	U	6.4 P	U	U	U	U	54 P	U	2100
Methoxychlor	U	U	280 P	U	U	U	U	U	U	U	***
Endrin Ketone	6.8 P	U	U	U	U	U	U	U	U	U	---
Endrin Aldehyde	4.4 P	U	340 DP	U	U	U	U	U	U	U	---
alpha-Chlordane	U	U	37 P	U	U	U	U	U	U	U	540
gamma-Chlordane	U	U	U	U	U	U	U	U	U	U	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1260	310	U	30000 D	44 P	U	70	32000 D	240	870	U	1000/10000*
Total Pesticides	44.2	0	2,607	13.6	0	0	720	0	84.3	0	10000
Total PCBs	310	0	30,000	44	0	70	32,000	240	870	0	1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-234	SB-S-235	SB-S-236	SB-S-237	SB-S-238	SB-S-239	SB-S-240	SB-S-241	SB-S-242	SB-S-243		NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	C 4	C 6	C 8	C 10	D 1	D 3	D 5	D 7	D 9	D 11		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	15	6	4	12	10	12	7	8	14	17		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U		110
beta-BHC	U	U	U	U	U	U	U	U	U	U		200
delta-BHC	U	U	U	U	U	U	U	U	U	U		300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U		60
Heptachlor	U	U	U	U	U	U	U	U	U	U		100
Aldrin	U	U	U	U	U	U	U	U	U	U		41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U		20
Endosulfan I	U	U	U	U	U	U	U	U	U	U		900
Dieldrin	U	U	7.3 P	U	U	U	U	U	73 DP	U		44
4,4'-DDE	U	U	7.2 P	5.0	U	U	U	U	5.0 P	110 D		2100
Endrin	U	U	U	U	U	U	U	U	17 P	U		100
Endosulfan II	U	U	U	U	U	U	U	U	U	U		900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U		2900
Endosulfan Sulfate	4.8 P	U	U	U	U	U	U	U	58 DP	U		1000
4,4'-DDT	15 P	U	3.5 P	4.6	U	U	U	U	U	130 DP		2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U		***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U		----
Endrin Aldehyde	U	U	11 P	U	U	U	U	U	U	U		----
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U		540
gamma-Chlordane	U	U	U	U	U	U	U	U	17 P	U		540
Toxaphene	U	U	U	U	U	U	U	U	U	U		----
Aroclor-1016	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1248	U	U	640	U	U	U	U	U	U	U		1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1260	450	U	U	U	U	U	U	270	9800 D	250		1000/10000*
Total Pesticides	19.8	0	29.0	9.6	0	0	0	0	170	240		10000
Total PCBs	450	0	640	0	0	0	0	270	9,800	250		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

----: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIATION INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-244	SB-S-245	SB-S-246	SB-S-247	SB-S-248	SB-S-249	SB-S-250	SB-S-251	SB-S-252	SB-S-253		NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	D 23	E 2	E 4	E 6	E 8	E 10	E 12	E 20	E 22	E 24		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	5.0	1.0	1.0	1.0	1.0		
Percent Moisture	17	28	11	7	11	15	5	21	11	19		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U		110
beta-BHC	U	U	U	U	U	U	U	U	U	U		200
delta-BHC	U	U	U	U	U	U	U	U	U	U		300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U		60
Heptachlor	U	U	U	U	U	U	U	U	U	U		100
Aldrin	U	U	U	U	U	U	U	U	U	U		41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U		20
Endosulfan I	U	U	U	U	U	U	U	U	U	U		900
Endosulfan II	U	U	U	U	U	U	U	U	U	U		44
4,4'-DDE	59	8.1	U	U	U	160	U	U	U	U		2100
Endrin	5.9 P	U	U	U	U	U	U	U	U	U		100
Endosulfan II	U	U	U	U	U	U	U	U	U	U		900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U		2900
Endosulfan Sulfate	58 DP	7.6 P	U	U	U	1300 DP	U	U	U	U		1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U		2100
Methoxychlor	25 P	U	U	U	U	160 P	U	U	U	U		---
Endrin Ketone	U	U	U	U	U	U	U	U	U	U		---
Endrin Aldehyde	U	U	U	U	U	250 P	U	U	U	U		540
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U		540
gamma-Chlordane	10 P	U	U	U	U	38 P	U	U	U	U		---
Toxaphene	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1016	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1260	7500 D	1200	U	U	U	27000 D	82	220	38	65		1000/10000*
Total Pesticides	157.9	16	0	0	0	1,908	0	0	0	0		10000
Total PCBs	7,500	1,200	0	0	0	27,000	82	220	38	65		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBS

Sample Identification	SB-S-254	SB-S-255	SB-S-256	SB-S-257	SB-S-258	SB-S-259	SB-S-260	SB-S-261	SB-S-262	SB-S-263	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	F 2	F 4	F 5	F 8	F 9	F 11	F 17	F 19	F 21	F 23		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	20	14	15	11	15	6	5	5	5	17		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	0.05	900
Dieldrin	U	U	U	U	3.7 J	U	U	U	U	7.0	0.10	44
4,4'-DDE	U	U	U	U	U	6.0	U	U	U	U	0.10	2100
Endrin	U	U	U	U	U	U	U	U	U	U	0.10	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	U	4.2 P	U	31 P	28 P	U	U	U	U	4.9 P	0.10	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U	0.10	2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	0.10	---
Endrin Aldehyde	U	U	U	5.9 P	5.1 P	U	U	U	U	U	0.10	---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U	0.05	540
gamma-Chlordane	U	U	U	U	U	U	U	U	U	U	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	5.0	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	42	68	U	520	490	U	35	52	74	680	1.0	1000/10000*
Total Pesticides	0	4.2	0	36.9	36.8	6.0	0	0	0	11.9		10000
Total PCBs	42	68	0	520	490	0	35	52	74	680		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-264	SB-S-265	SB-S-266	SB-S-267	SB-S-268	SB-S-269	SB-S-270	SB-S-271	SB-S-272	SB-S-273	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	G 2	G 4	G 5	G 6	G 7	G 8	G 10	G 12	G 16	G 18		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	11	15	20	11	6	7	11	11	14	10		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	0.05	900
Dieldrin	U	7.9 P	U	U	12 P	U	U	U	6.3	U	0.10	44
4,4'-DDE	U	U	U	U	6.4 P	U	U	U	U	U	0.10	2100
Endrin	U	U	U	U	U	U	U	U	U	U	0.10	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	11 P	96 DP	U	U	73 DP	13 P	U	U	4.0 P	U	0.10	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U	0.10	2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	0.10	---
Endrin Aldehyde	U	18 P	U	U	17 P	2.6 JP	U	U	U	U	0.10	---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U	0.05	540
gamma-Chlordane	U	2.5 P	U	U	3.3 P	U	U	U	1.4 JP	U	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	5.0	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	200	1600	U	U	1500	230	U	U	750	41	1.0	1000/10000*
Total Pesticides	11	124.4	0	0	111.7	15.6	0	0	11.7	0		10000
Total PCBs	200	1,600	0	0	1,500	230	0	0	750	41		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-274	SB-S-275	SB-S-276	SB-S-277	SB-S-278	SB-S-279	SB-S-280	SB-S-281	SB-S-282	SB-S-283	
Location	G 20	G 22	G 26	H 1	H 2	H 4	H 5	H 6	H 7	H 9	
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	
Date of Collection	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Percent Moisture	10	6	21	15	7	11	24	17	26	19	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
alpha-BHC	U	U	U	U	U	U	U	U	U	U	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	100
Aldrin	U	U	U	U	U	U	U	U	U	U	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	900
Dieldrin	U	U	U	U	U	U	U	U	U	U	44
4,4'-DDE	U	U	U	U	U	U	U	U	U	U	2100
Endrin	U	U	U	6.5 P	U	U	U	U	U	U	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	2900
Endosulfan Sulfate	U	U	U	7.9 P	U	U	U	U	U	U	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U	2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U	---
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	---
Endrin Aldehyde	U	U	U	U	U	U	U	U	U	U	---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U	540
gamma-Chlordane	U	U	U	U	U	U	U	U	U	U	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1260	260	U	78 P	810	57	U	80	370	490	520	1000/10000*
	0	0	0	14.4	0	0	0	0	0	10.0	
Total Pesticides	260	0	78	810	57	0	80	370	490	520	
Total PCBs											

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-284	SB-S-285	SB-S-286	SB-S-287	SB-S-288	SB-S-289	SB-S-290	SB-S-291	SB-S-292	SB-S-293		NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	H 11	H 13	H 15	H 17	H 19	H 21	H 23	H 25	I 1	I 2		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	7	7	16	8	12	6	15	2	9	9		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U		110
beta-BHC	U	U	U	U	U	U	U	U	U	U		200
delta-BHC	U	U	U	U	U	U	U	U	U	U		300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U		60
Heptachlor	U	U	U	U	U	U	U	U	U	U		100
Aldrin	U	U	U	U	U	U	U	U	U	U		41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U		20
Endosulfan I	U	U	U	U	U	U	U	U	U	U		900
Dieldrin	U	U	32	U	U	U	U	U	11 P	U		44
4,4'-DDE	U	U	U	U	U	U	U	U	U	U		2100
Endrin	U	U	U	U	U	U	U	U	6.8 P	U		100
Endosulfan II	U	U	U	U	U	U	U	U	U	U		900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U		2900
Endosulfan Sulfate	U	U	22 P	3.6 P	U	U	U	U	5.6 P	U		1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U		2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U		---
Endrin Ketone	U	U	U	U	U	U	U	U	U	U		---
Endrin Aldehyde	U	U	U	U	U	U	U	U	U	U		---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U		540
gamma-Chlordane	U	U	7.1 P	U	U	U	U	U	U	U		540
Toxaphene	U	U	U	U	U	U	U	U	U	U		---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1260	63	240	3200 D	480 P	110	390	180	U	790	65		1000/10000*
Total Pesticides	0	0	61.1	3.6	0	0	0	0	23.4	0		10000
Total PCBs	63	240	3,200	480	110	390	180	0	790	65		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-294	SB-S-295	SB-S-296	SB-S-297	SB-S-298	SB-S-299	SB-S-300	SB-S-301	SB-S-302	SB-S-303	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	16	17	18	116	118	120	J3	J4	J6	J7	
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	
Date of Collection	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/22/02	05/22/02	05/22/02	05/22/02	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Percent Moisture	20	7	11	16	5	12	8	20	11	13	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
alpha-BHC	U	U	U	U	U	U	U	U	U	U	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	100
Aldrin	U	U	U	U	U	U	U	U	U	U	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	900
Endosulfan II	U	U	U	U	U	U	U	U	U	U	44
4,4'-DDE	U	U	U	1.2 JP	U	U	49	8.7 P	U	9.1	2100
Endrin	U	U	U	U	U	U	7.5 P	8.6 P	U	U	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	2900
Endosulfan Sulfate	U	U	U	U	U	U	28 P	U	U	4.8 P	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U	2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	---
Endrin Aldehyde	U	U	U	U	U	U	U	U	U	U	---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U	540
gamma-Chlordane	U	U	0.59 J	U	U	U	12 P	2.2 P	U	2.5 P	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1260	150	45	U	62	U	34 J	5700 D	740	120	780	1000/10000*
Total Pesticides	0	0	0.59	1.2	0	0	97	19.5	0	16.4	10000
Total PCBs	150	45	0	62	0	34	5,700	740	120	780	1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-304	SB-S-305	SB-S-306	SB-S-307	SB-S-308	SB-S-309	SB-S-310	SB-S-311	SB-S-312	SB-S-313		
Location	J 8	J 9	J 11	J 13	J 15	J 17	J 19	J 21	K 1	K 2		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/22/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/21/02	05/22/02	05/22/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	11	24	12	7	14	14	13	17	10	23		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U		110
beta-BHC	U	U	U	U	U	U	U	U	U	U		200
delta-BHC	U	U	U	U	U	U	U	U	U	U		300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U		60
Heptachlor	U	U	U	U	U	U	U	U	U	U		100
Aldrin	U	U	U	U	U	U	U	U	U	U		41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U		20
Endosulfan I	U	U	U	U	U	U	U	U	U	U		900
Dieldrin	11 P	3.7 J	1.6 JP	1.5 JP	U	U	11 P	7.2 P	U	U		44
4,4'-DDE	U	U	U	U	U	U	2.5 JP	3.2 JP	5.9 P	U		2100
Endrin	U	U	U	U	U	U	U	1.9 J	U	U		100
Endosulfan II	U	U	U	U	U	U	U	U	U	U		900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U		2900
Endosulfan Sulfate	3.8 P	10 P	U	U	U	U	9.2 P	5.9 P	U	U		1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U		2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U		***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U		---
Endrin Aldehyde	U	U	U	U	U	U	U	U	U	U		---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U		---
gamma-Chlordane	2.4 P	U	U	U	U	U	2.0 P	1.4 JP	U	U		540
Toxaphene	U	U	U	U	U	U	U	U	U	U		540
Aroclor-1016	U	U	U	U	U	U	U	U	U	U		---
Aroclor-1221	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1260	540	220	460	280	U	170	1300	1000	90	54		1000/10000*
Total Pesticides	17.2	10	5.3	1.5	0	0	24.7	19.6	5.9	0		10000
Total PCBs	540	220	460	280	0	170	1,300	1,000	90	54		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-314	SB-S-315	SB-S-316	SB-S-317	SB-S-318	SB-S-319	SB-S-320	SB-S-321	SB-S-322	SB-S-323	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	K 5	K 7	K 8	K 10	K 12	K 14	K 16	K 18	K 20	I3		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/21/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	9	12	17	12	6	5	6	6	11	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	0.05	900
Dieldrin	U	U	4.4 P	U	U	U	U	U	U	1.4 JP	0.10	44
4,4'-DDE	U	U	U	U	U	U	U	U	U	U	0.10	2100
Endrin	U	U	U	U	U	U	U	U	U	U	0.10	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	U	U	U	U	U	U	U	U	U	U	0.10	1000
4,4'-DDT	U	U	16 P	U	U	U	20 P	10 P	U	0.76 JP	0.10	2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	0.10	---
Endrin Aldehyde	U	U	U	U	U	U	U	U	U	U	0.10	---
alpha-Chlordane	U	U	U	U	U	U	6.6 P	U	U	U	0.05	540
gamma-Chlordane	U	U	U	U	U	U	U	U	U	U	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	5.0	---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	87	60	120	61	120	47	370	200	U	100	1.0	1000/10000*
Total Pesticides	0	0	20.4	0	0	0	26.6	10	0	2.16		10000
Total PCBs	87	60	120	61	120	47	370	200	0	100		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBS

Sample Identification	SB-S-324	SB-S-325	SB-S-326	SB-S-327	SB-S-328	SB-S-329	SB-S-330	SB-S-331	SB-S-332	SB-S-333	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	L 3	L 6	L 8	L 9	L 11	L 13	L 15	L 17	L 19	M 8		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	14	3	25	24	21	6	10	6	20	11		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	0.05	900
Dieldrin	U	U	U	U	U	U	U	U	U	U	0.10	44
4,4'-DDE	U	U	U	U	U	U	U	U	U	U	0.10	2100
Endrin	U	U	U	U	U	U	U	U	U	U	0.10	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	17 P	U	U	U	5.0 P	10 P	11 P	U	U	U	0.10	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U	0.10	2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	0.10	----
Endrin Aldehyde	6.3 P	U	U	U	U	U	3.6 JP	U	U	U	0.10	----
alpha-Chlordane	U	U	U	U	2.2	U	U	U	U	U	0.05	540
gamma-Chlordane	U	U	U	U	U	U	U	U	U	U	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	5.0	----
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	360	U	U	44	120 P	160	210	U	U	U	1.0	1000/10000*
Total Pesticides	23.3	0	0	0	7.2	10	14.6	0	0	0		10000
Total PCBs	360	0	0	44	120	160	210	0	0	0		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

----: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-334	SB-S-335	SB-S-336	SB-S-337	SB-S-338	SB-S-339	SB-S-340	SB-S-341	SB-S-342	SB-S-343		NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	M 10	M 12	M 14	M 16	M 18	N 7	N 9	N 11	N 13	N 15		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	7	20	11	4	7	22	18	16	7	23		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U		110
beta-BHC	U	U	U	U	U	U	U	U	U	U		200
delta-BHC	U	U	U	U	U	U	U	U	U	U		300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U		60
Heptachlor	U	U	U	U	U	U	U	U	U	U		100
Aldrin	U	U	U	U	U	U	U	U	U	U		41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U		20
Endosulfan I	U	U	U	U	U	U	U	U	U	U		900
Dieldrin	13 P	5.7 P	U	14 P	U	U	26	U	U	U		44
4,4'-DDE	U	U	U	U	U	U	5.4 P	U	U	U		2100
Endrin	U	U	U	U	U	U	U	U	U	7.8 P		100
Endosulfan II	U	U	U	U	U	U	U	U	U	U		900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U		2900
Endosulfan Sulfate	140 DP	73 DP	8.9 P	250 DP	U	U	17 P	U	U	U		1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U		2100
Methoxychlor	23 P	U	U	44 P	U	U	U	U	U	U		***
Endrin Ketone	U	U	U	U	U	U	U	U	U	19 P		---
Endrin Aldehyde	45 P	24 P	U	76 DP	U	U	U	U	U	U		---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U		540
gamma-Chlordane	3.4 P	2.4 P	U	3.7 P	U	U	3.2 P	U	U	U		540
Toxaphene	U	U	U	U	U	U	U	U	U	U		---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1260	2900 D	1400	180	4500 D	U	86	3500 D	270	140	270		1000/10000*
Total Pesticides	224	105	9	388	0	0	51.6	0	0	27		10000
Total PCBs	2,900	1,400	180	4,500	0	86	3,500	270	140	270		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-344	SB-S-345	SB-S-346	SB-S-347	SB-S-348	SB-S-349	SB-S-350	SB-S-351	SB-S-352	SB-S-353		NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	N 17	O 8	O 10	O 12	O 16	P 11	P 13	Q 10	Q 12	R 7		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		
Date of Collection	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	5	7	12	19	20	16	11	15	18	10		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U		110
beta-BHC	U	U	U	U	U	U	U	U	U	U		200
delta-BHC	U	U	U	U	U	U	U	U	U	U		300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U		60
Heptachlor	U	U	U	U	U	U	U	U	U	U		100
Aldrin	U	U	U	U	U	U	U	U	U	U		41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U		20
Endosulfan I	U	U	U	U	U	U	U	U	U	U		900
Dieldrin	U	53 P	U	25	U	41	21 P	U	U	U		44
4,4'-DDE	U	14 P	U	U	U	U	7.9 P	U	U	4.0 P		2100
Endrin	U	U	U	U	U	U	U	U	U	U		100
Endosulfan II	U	U	U	U	U	U	U	U	U	U		900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U		2900
Endosulfan Sulfate	U	44 P	U	13 P	U	21 P	9.9 P	U	U	U		1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U		2100
Methoxychlor	U	U	U	U	U	U	U	U	U	U		***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U		---
Endrin Aldehyde	U	U	U	U	U	U	U	U	U	U		---
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U		540
gamma-Chlordane	U	13 P	U	5.4 P	U	7.0 P	3.2 P	U	U	U		540
Toxaphene	U	U	U	U	U	U	U	U	U	U		---
Aroclor-1016	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U		1000/10000*
Aroclor-1260	60 P	6200 D	U	2500 D	U	4500 D	1500 P	U	U	300		1000/10000*
	0	124	0	43.4	0	69	42.0	0	0	4		10000
Total Pesticides	60	6,200	0	2,500	0	4,500	1,500	0	0	300		1000/10000*
Total PCBs	60	6,200	0	2,500	0	4,500	1,500	0	0	300		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-354	SB-S-355	SB-S-356	SB-S-357	SB-S-358	SB-S-361	SB-S-362	SB-S-363	SB-S-364	SB-S-365	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	R 8	R 9	R 11	S 7	S 12	Chittenden	B 1	F 1	G 1	H 8		
Sample Depth (feet)	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	4.5-5.0	4.5-5.0	4.5-5.0	4.5-5.0		
Date of Collection	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02	05/22/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.0		
Percent Moisture	28	12	19	8	67	6	14	13	8	15		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
alpha-BHC	U	U	U	U	U	U	U	U	U	U	0.05	110
beta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	200
delta-BHC	U	U	U	U	U	U	U	U	U	U	0.05	300
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	U	0.05	60
Heptachlor	U	U	U	U	U	U	U	U	U	U	0.05	100
Aldrin	U	U	U	U	U	U	U	U	U	U	0.05	41
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	U	0.05	20
Endosulfan I	U	U	U	U	U	U	U	U	U	U	0.05	900
Dieldrin	U	U	U	U	U	U	U	U	10 P	U	0.10	44
4,4'-DDE	U	U	U	U	U	U	U	U	U	U	0.10	2100
Endrin	U	U	U	U	U	U	U	U	U	U	0.10	100
Endosulfan II	U	U	U	U	U	U	U	U	U	U	0.10	900
4,4'-DDD	U	U	U	U	U	U	U	U	U	U	0.10	2900
Endosulfan Sulfate	U	U	20 P	U	U	U	U	U	54 P	2700 DP	0.10	1000
4,4'-DDT	U	U	U	U	U	U	U	U	U	U	0.10	2100
Methoxychlor	U	U	U	U	U	U	U	U	U	350 P	0.50	***
Endrin Ketone	U	U	U	U	U	U	U	U	U	U	0.10	-----
Endrin Aldehyde	U	U	7.3 P	U	U	U	U	U	20 P	930 DP	0.10	-----
alpha-Chlordane	U	U	U	U	U	U	U	U	U	U	0.05	540
gamma-Chlordane	U	U	U	U	U	U	U	U	2.5 P	70 P	0.05	540
Toxaphene	U	U	U	U	U	U	U	U	U	U	5.0	-----
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	2.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	1.0	1000/10000*
Aroclor-1260	U	480	400	U	U	130	U	140	1200	58000 D	1.0	1000/10000*
Total Pesticides	0	0	27	0	0	0	0	0	86.5	4,050		10000
Total PCBs	0	480	400	0	0	130	0	140	1,200	58,000		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 2g. (CONTINUED)
BOUCHARD JUNKYARD
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SUBSURFACE SOIL SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SB-S-366	SB-S-367		
Location	K 6	O 14		
Sample Depth (feet)	4.5-5.0	4.5-5.0		
Date of Collection	05/22/02	05/22/02		
Dilution Factor	1.0	1.0		
Percent Moisture	19	13		
Units	(ug/kg)	(ug/kg)	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
alpha-BHC	U	U	0.05	110
beta-BHC	U	U	0.05	200
delta-BHC	U	U	0.05	300
gamma-BHC (Lindane)	U	U	0.05	60
Heptachlor	U	U	0.05	100
Aldrin	U	U	0.05	41
Heptachlor Epoxide	U	U	0.05	20
Endosulfan I	U	U	0.05	900
Dieldrin	U	130 P	0.10	44
4,4'-DDE	U	U	0.10	2100
Endrin	U	U	0.10	100
Endosulfan II	U	U	0.10	900
4,4'-DDD	U	U	0.10	2900
Endosulfan Sulfate	14 P	1400 DP	0.10	1000
4,4'-DDT	U	U	0.10	2100
Methoxychlor	U	150 P	0.50	***
Endrin Ketone	U	U	0.10	----
Endrin Aldehyde	U	440 DP	0.10	----
alpha-Chlordane	U	U	0.05	540
gamma-Chlordane	2.4 P	29 P	0.05	540
Toxaphene	U	U	5.0	---
Aroclor-1016	U	U	1.0	1000/10000*
Aroclor-1221	U	U	2.0	1000/10000*
Aroclor-1232	U	U	1.0	1000/10000*
Aroclor-1242	U	U	1.0	1000/10000*
Aroclor-1248	U	U	1.0	1000/10000*
Aroclor-1254	U	U	1.0	1000/10000*
Aroclor-1260	260	26000 D	1.0	1000/10000*
Total Pesticides	16	2,149		10000
Total PCBs	260	26,000		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

NOTES:

----: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

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TABLE 3a.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SAMPLE RESULTS - OCTOBER 2001
VOLATILE ORGANIC COMPOUNDS

Sample Identification	SW-5	SW-6	SW-7	SW-8	SW-9	Contract Required Detection Limit	NYSDEC Class C Surface Water Standard or Guidance Value
Date of Collection	10/25/01	10/25/01	10/24/01	10/24/01	10/24/01	Limit	Guidance Value
Dilution Factor	1.0	1.0	1.0	1.0	1.0	(ug/l)	(ug/l)
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)		
Dichlorodifluoromethane	U	U	U	U	U	10	—
Chloromethane	U	U	U	U	U	10	—
Vinyl Chloride	U	U	U	U	U	10	—
Bromomethane	U	U	U	U	U	10	—
Chloroethane	U	U	U	U	U	10	—
Trichlorofluoromethane	U	U	U	U	U	10	—
1,1-Dichloroethene	U	U	U	U	U	10	—
1,1,2-trichloro-1,2,2-trifluoroethane	U	U	U	U	U	10	—
Acetone	U	U	U	U	U	10	—
Carbon Disulfide	U	U	U	U	U	10	—
Methyl Acetate	U	U	U	U	U	10	—
Methylene Chloride	U	U	U	U	U	10	200 ST
trans-1,2-dichloroethane	U	U	U	U	U	10	—
Methyl tert-Butyl Ether	U	U	U	U	U	10	—
1,1-Dichloroethane	U	U	U	U	U	10	—
cis-1,2-Dichloroethene	U	U	U	U	U	10	—
2-Butanone	U	U	U	U	U	10	—
Chloroform	U	U	U	U	U	10	—
1,1,1-Trichloroethane	U	U	U	U	U	10	—
Cyclohexane	U	U	U	U	U	10	—
Carbon Tetrachloride	U	U	U	U	U	10	—
Benzene	U	U	U	U	U	10	10 ST
1,2-Dichloroethane	U	U	U	U	U	10	40 ST
Trichloroethene	U	U	U	U	U	10	—
Methylcyclohexane	U	U	U	U	U	10	—
1,2-Dichloropropane	U	U	U	U	U	10	—
Bromodichloromethane	U	U	U	U	U	10	—
cis-1,3-Dichloropropene	U	U	U	U	U	10	—
4-Methyl-2-Pentanone	U	U	U	U	U	10	—
Toluene	U	U	U	U	U	10	100 GV
trans-1,3-Dichloropropene	U	U	U	U	U	10	—
1,1,2-Trichloroethane	U	U	U	U	U	10	1 GV
Tetrachloroethene	U	U	U	U	U	10	—
2-Hexanone	U	U	U	U	U	10	—
Dibromochloromethane	U	U	U	U	U	10	—
1,2-Dibromoethane	U	U	U	U	U	10	5 ST
Chlorobenzene	U	U	U	U	U	10	17 GV
Ethylbenzene	U	U	U	U	U	10	65 GV*
Total Xylenes	U	U	U	U	U	10	—
Styrene	U	U	U	U	U	10	—
Bromoform	U	U	U	U	U	10	2.6 GV
Isopropylbenzene	U	U	U	U	U	10	—
1,1,2,2-Tetrachloroethane	U	U	U	U	U	10	—
1,3-Dichlorobenzene	U	U	U	U	U	10	5 ST*
1,4-Dichlorobenzene	U	U	U	U	U	10	5 ST*
1,2-Dichlorobenzene	U	U	U	U	U	10	5 ST*
1,2-Dibromo-3-chloropropane	U	U	U	U	U	10	—
1,2,4-Trichlorobenzene	U	U	U	U	U	10	5 ST
Total VOCs	0	0	0	0	0	10	—
Total VOC TICs	0	0	0	0	0	—	—

QUALIFIERS:
 U: Compound analyzed for but not detected
 B: Compound found in the method blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated

NOTES:
 *: Value pertains to the sum of isomers.
 GV: Guidance Value
 ST: Standard
 —: Not established
 Indicates value exceeds standard or guidance value.

TABLE 3b.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SAMPLE RESULTS - OCTOBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SW-5	SW-6	SW-7	SW-8	SW-9	Contract Required Detection Limit	NYSDEC Class C Standard or Guidance Value
Date of Collection	10/25/01	10/25/01	10/24/01	10/24/01	10/24/01	(ug/L)	(ug/l)
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)		
Benzaldehyde	U	U	U	U	U	10	---
Phenol	U	1 J	U	U	U	10	1 ST **
bis(2-Chloroethyl)ether	U	U	U	U	U	10	---
2-Chlorophenol	U	U	U	U	U	10	1 ST *
2-Methylphenol	U	U	U	U	U	10	1 ST *
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	10	---
Acetophenone	U	U	U	U	U	10	---
4-Methylphenol	U	3 J	U	U	U	10	1 ST *
N-Nitroso-di-n-propylamine	U	U	U	U	U	10	---
Hexachloroethane	U	U	U	U	U	10	0.6 ST
Nitrobenzene	U	U	U	U	U	10	---
Isophorone	U	U	U	U	U	10	---
2-Nitrophenol	U	U	U	U	U	10	1 ST *
2,4-Dimethylphenol	U	U	U	U	U	10	1 ST *
bis(2-Chloroethoxy)methane	U	U	U	U	U	10	---
2,4-Dichlorophenol	U	U	U	U	U	10	1 ST *
Naphthalene	U	U	U	U	U	10	13 GV
4-Chloroaniline	U	U	U	U	U	10	---
Hexachlorobutadiene	U	U	U	U	U	10	0.01 ST
Caprolactum	U	U	U	U	U	10	---
4-Chloro-3-methylphenol	U	U	U	U	U	10	1 ST *
2-Methylnaphthalene	U	U	U	U	U	10	4.7 GV
Hexachlorocyclopentadiene	U	U	U	U	U	10	0.45 ST
2,4,6-Trichlorophenol	U	U	U	U	U	10	1 ST *
2,4,5-Trichlorophenol	U	U	U	U	U	25	1 ST *
1-1'-Biphenyl	U	U	U	U	U	10	---
2-Chloronaphthalene	U	U	U	U	U	10	---
2-Nitroaniline	U	U	U	U	U	25	---
Dimethylphthalate	U	U	U	U	U	10	---
2,6-Dinitrotoluene	U	U	U	U	U	10	---
Acenaphthylene	U	U	U	U	U	10	---
3-Nitroaniline	U	U	U	U	U	25	---
Acenaphthene	U	U	U	U	U	10	5.3 GV
2,4-Dinitrophenol	U	U	U	U	U	25	5 ST **
4-Nitrophenol	U	U	U	U	U	25	1 ST *
Dibenzofuran	U	U	U	U	U	10	---

TABLE 3b. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SAMPLE RESULTS - OCTOBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SW-5	SW-6	SW-7	SW-8	SW-9	Contract Required Detection Limit	NYSDEC Class C Standard or Guidance Value
Date of Collection	10/25/2001	10/25/2001	10/24/2001	10/24/2001	10/24/2001		
Dilution Factor	1	1	1	1	1		
Units	ug/l	ug/l	ug/l	ug/l	ug/l	(ug/l)	(ug/l)
2,4-Dinitrotoluene	U	U	U	U	U	10	—
Diethylphthalate	U	U	U	U	U	10	—
Fluorene	U	U	U	U	U	10	0.54 GV
4-Chlorophenyl-phenylether	U	U	U	U	U	10	—
4-Nitroaniline	U	U	U	U	U	25	—
4,6-Dinitro-2-methylphenol	U	U	U	U	U	25	1 ST *
N-Nitrosodiphenylamine	U	U	U	U	U	10	—
4-Bromophenyl-phenylether	U	U	U	U	U	10	—
Hexachlorobenzene	U	U	U	U	U	10	3E-5 ST
Atrazine	U	U	U	U	U	10	—
Pentachlorophenol	U	U	U	U	U	25	1 ST ****
Phenanthrene	U	U	U	U	U	10	5 GV
Anthracene	U	U	U	U	U	10	3.8 GV
Carbazole	U	U	U	U	U	10	—
Di-n-butylphthalate	U	U	U	U	U	10	—
Fluoranthene	U	U	U	U	U	10	—
Pyrene	U	U	U	U	U	10	4.6 GV
Butylbenzylphthalate	U	U	U	U	U	10	—
3,3'-Dichlorobenzidine	U	U	U	U	U	10	—
Benzo (a) anthracene	U	U	U	U	U	10	0.03 GV
Chrysene	U	U	U	U	U	10	—
bis(2-Ethylhexyl)phthalate	U	U	U	U	U	10	0.6 ST
Di-octylphthalate	U	U	U	U	U	10	—
Benzo(b)fluoranthene	U	U	U	U	U	10	—
Benzo(k)fluoranthene	U	U	U	U	U	10	—
Benzo(a)pyrene	U	U	U	U	U	10	—
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	10	1.2E-3 GV
Dibenzo(a,h)anthracene	U	U	U	U	U	10	—
Benzo(g,h,i)perylene	U	U	U	U	U	10	—
Total PAHs	0	0	0	0	0		
Total Carcinogen PAHs	0	0	0	0	0		
Total SVOCs	0	4	0	0	0		
Total SVOC TICs	3	32	0	0	0		

QUALIFIERS:

U: Compound analyzed for but not detected

B: Compound found in the method blank as well as the sample

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

* : Applies to Total Phenols

** : Applies to the sum of Unchlorinated Phenols

***: Applies to the sum of 1,2-, 1,3- and 1,4-Dichlorobenzene

**** : Applies to the sum of Chlorinated Phenols

Indicates value exceeds standard or guidance value.

TABLE 3c.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SAMPLE RESULTS - OCTOBER 2001
PESTICIDE/PCBs

Sample Identification	SW-5	SW-6	SW-7	SW-8	SW-9	Contract	NYSDEC
Date of Collection	10/25/01	10/25/01	10/24/01	10/24/01	10/24/01	Required	Class C
Dilution Factor	1.0	1.0	1.0	1.0	1.0	Detection	Standard or
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	Limit	Guidance Value
alpha-BHC	U	U	U	U	U	0.05	---
beta-BHC	U	U	U	U	U	0.05	---
delta-BHC	U	U	U	U	U	0.05	---
gamma-BHC (Lindane)	U	U	U	U	U	0.05	---
Heptachlor	U	U	U	U	U	0.05	2E-4 ST
Aldrin	U	U	U	U	U	0.05	1E-3 ST **
Heptachlor Epoxide	U	U	U	U	U	0.05	3E-4 ST
Endosulfan I	U	U	U	U	U	0.05	9E-3 ST ***
Dieldrin	U	U	U	U	U	0.10	6E-7 ST
4,4'-DDE	U	U	U	U	U	0.10	7E-6 ST
Endrin	U	U	U	U	U	0.10	2E-3 ST
Endosulfan II	U	U	U	U	U	0.10	9E-3 ST ***
4,4'-DDD	U	U	U	U	U	0.10	1E-5 ST
Endosulfan Sulfate	U	U	U	U	U	0.10	9E-3 ST ***
4,4'-DDT	U	U	U	U	U	0.10	1E-5 ST
Methoxychlor	U	U	U	U	U	0.50	0.03 ST
Endrin Ketone	U	U	U	U	U	0.10	---
Endrin Aldehyde	U	U	U	U	U	0.10	---
alpha-Chlordane	U	U	U	U	U	0.05	2E-5 ST ****
gamma-Chlordane	U	U	U	U	U	0.05	2E-5 ST ****
Toxaphene	U	U	U	U	U	5.0	6E-6 ST
Aroclor-1016	U	U	U	U	U	1.0	1E-6 ST *
Aroclor-1221	U	U	U	U	U	2.0	1E-6 ST *
Aroclor-1232	U	U	U	U	U	1.0	1E-6 ST *
Aroclor-1242	U	U	U	U	U	1.0	1E-6 ST *
Aroclor-1248	U	U	U	U	U	1.0	1E-6 ST *
Aroclor-1254	U	U	U	U	U	1.0	1E-6 ST *
Aroclor-1260	U	U	U	U	U	1.0	1E-6 ST *
Total PCBs	0	0	0	0	0		

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound found in the method blank as well as the sample
 J: Compound found at a concentration below the CRDL,
 value estimated

NOTES:

*: Applies to the sum of the isomers
 **: Applies to the sum of Aldrin and Dieldrin
 ***: The value is the one listed for "Endosulfan"
 ****: The value is the one listed for "Chlordane"
 GV: Guidance Value
 ST: Standard
 ---: Not established
 [] Indicates value exceeds standard or guidance value.

TABLE 3d.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SAMPLE RESULTS - OCTOBER 2001
INORGANICS

Sample Identification	SW-5	SW-6	SW-7	SW-8	SW-9	Instrument Detection Limit	NYSDEC Class C Surface Water Standard or Guidance Value
Date of Collection	10/25/01	10/25/01	10/24/01	10/24/01	10/24/01	(ug/l)	(ug/l)
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)		
Aluminum	1,430 N	21,300 N	7,660 N	40.7 BN	98.6 BN	9	100 ST
Antimony	2.2 B	1.9 B	1.4 B	U	U	4	---
Arsenic	5.3 B	9.2 B	5.0 B	U	2.5 B	2	150 ST *
Barium	338	699	327	53.5 B	36.8 B	2	---
Beryllium	0.12 B	1.9 B	0.48 B	U	U	0.2	1,100 **
Cadmium	U	0.28 BN	3.7 BN	0.27 BN	U	0.2	***
Calcium	47,100	42,900	39,100	29,900	33,500	234	---
Chromium	4.4 B	27.1	12.4	1.6 B	0.87 B	0.6	^
Cobalt	13.0 BE	39.5 BE	14.7 BE	0.92 BE	0.46 BE	0.7	5 ST
Copper	26.2	41.4	18.2 B	1.5 B	1.6 B	5	^
Iron	36,100	47,300	19,000	1,720	353	2	300 ST
Lead	U	158 N	60.2 N	3.4 N	U	2	^
Magnesium	10,800	12,600	10,300	7,410	7,020	2	^
Manganese	6100	9,390	5,410	1,670	376	0.9	---
Mercury	U	0.38	0.19 B	U	U	0.1	0.0007 ST
Nickel	7.8 B	52.9	20.5 B	U	U	0.9	---
Potassium	15,500	5,380	4,530	4,380 B	7,450	320	---
Selenium	5.8	5.9	6.0	U	U	3	4.6 ST
Silver	U	U	U	U	U	2	0.1 ST
Sodium	16,500 E	10,700 E	9,940 E	9,160 E	42,700 E	132	---
Thallium	15.7 N	23.3 N	14.6 N	2.2 BN	3.3 BN	2	8 ST
Vanadium	11.8 B	47.0 B	19.0 B	5.7 B	5.6 B	0.6	14 ST
Zinc	296	276	234	8.1 B	5.3 B	2	---
Cyanide	3.9 B	4.4 B	19.1	4.2 B	U	2	5.2 ST ~
Hardness (as CaCO3)	160,000	160,000	140,000	110,000	110,000	4,000	---

QUALIFIERS:

U: Compound analyzed for but not detected

B: Compound concentration is less than the CRDL but greater than the IDL

N: Indicates spike sample recovery not within control limits

E: Indicates value estimated

NOTES:

* : Dissolved arsenic form

** : 11 ug/l when hardness is less than or equal to 75 ppm and 1,100 ug/l when hardness is greater than 75 ppm

*** : (0.85) exp(1.128 [ln (ppm hardness)] - 3.6867)

^ : (0.316) exp(0.819 [ln (ppm hardness)] + 3.7256)

^^ : (0.96) exp(0.9422 [ln (ppm hardness)] - 1.7)

^^^ : {1.46203 - [ln (hardness) (0.145712)]} exp (1.273 [ln (hardness)] - 1.052)

~ : (0.998) exp (0.846 [ln (hardness)] + 2.255)

~~ : 0.978 exp(0.8473 [ln (ppm hardness)] + 0.884)

~~~ : As free cyanide: the sum of HCN and CN- expressed as CN

Indicates value exceeds standard or guidance value.

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**TABLE 4a.**  
**BOUCHARD JUNKYARD SITE**  
**REMEDIAL INVESTIGATION AND FEASIBILITY STUDY**  
**SURFACE WATER SAMPLE RESULTS - MAY 2002**  
**VOLATILE ORGANIC COMPOUNDS**

| Sample Identification                 | SW-3     | SW-4     | SW-5     | SW-6     | SW-7     | SW-8     | SW-9     | Contract Required Detection Limit | NYSDEC Class C Surface Water Standard or Guidance Value |
|---------------------------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------------|---------------------------------------------------------|
| Date of Collection                    | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 |                                   |                                                         |
| Dilution Factor                       | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      |                                   |                                                         |
| Units                                 | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   |                                   | (ug/l)                                                  |
| Dichlorodifluoromethane               | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Chloromethane                         | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Vinyl Chloride                        | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Bromomethane                          | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Chloroethane                          | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Trichlorofluoromethane                | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,1-Dichloroethene                    | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,1,2-trichloro-1,2,2-trifluoroethane | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Acetone                               | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Carbon Disulfide                      | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Methyl Acetate                        | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Methylene Chloride                    | U        | U        | U        | U        | U        | U        | U        | 10                                | 200 ST                                                  |
| trans-1,2-dichloroethane              | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Methyl tert-Butyl Ether               | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,1-Dichloroethane                    | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| cis-1,2-Dichloroethene                | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 2-Butanone                            | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Chloroform                            | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,1,1-Trichloroethane                 | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Cyclohexane                           | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Carbon Tetrachloride                  | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Benzene                               | U        | U        | U        | U        | U        | U        | U        | 10                                | 10 ST                                                   |
| 1,2-Dichloroethane                    | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Trichloroethene                       | U        | U        | U        | U        | U        | U        | U        | 10                                | 40 ST                                                   |
| Methylcyclohexane                     | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,2-Dichloropropane                   | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Bromodichloromethane                  | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| cis-1,3-Dichloropropene               | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 4-Methyl-2-Pentanone                  | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Toluene                               | U        | U        | U        | U        | U        | U        | U        | 10                                | 100 GV                                                  |
| trans-1,3-Dichloropropene             | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,1,2-Trichloroethane                 | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Tetrachloroethene                     | U        | U        | U        | U        | U        | U        | U        | 10                                | 1 GV                                                    |
| 2-Hexanone                            | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Dibromochloromethane                  | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,2-Dibromomethane                    | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Chlorobenzene                         | U        | U        | U        | U        | U        | U        | U        | 10                                | 5 ST                                                    |
| Ethylbenzene                          | U        | U        | U        | U        | U        | U        | U        | 10                                | 17 GV                                                   |
| Total Xylenes                         | U        | U        | U        | U        | U        | U        | U        | 10                                | 65 GV *                                                 |
| Styrene                               | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Bromoform                             | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| Isopropylbenzene                      | U        | U        | U        | U        | U        | U        | U        | 10                                | 2.6 GV                                                  |
| 1,1,2,2-Tetrachloroethane             | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,3-Dichlorobenzene                   | U        | U        | U        | U        | U        | U        | U        | 10                                | 5 ST*                                                   |
| 1,4-Dichlorobenzene                   | U        | U        | U        | U        | U        | U        | U        | 10                                | 5 ST*                                                   |
| 1,2-Dichlorobenzene                   | U        | U        | U        | U        | U        | U        | U        | 10                                | 5 ST*                                                   |
| 1,2-Dibromo-3-chloropropane           | U        | U        | U        | U        | U        | U        | U        | 10                                | —                                                       |
| 1,2,4-Trichlorobenzene                | U        | U        | U        | U        | U        | U        | U        | 10                                | 5 ST                                                    |
| <b>Total VOCs</b>                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        |                                   | —                                                       |
| <b>Total VOC TICs</b>                 | 0        | 0        | 11       | 0        | 0        | 0        | 0        |                                   | —                                                       |

**QUALIFIERS:**  
 U: Compound analyzed for but not detected  
 B: Compound found in the method blank as well as the sample  
 J: Compound found at a concentration below the CRDL, value estimated

**NOTES:**  
 \*: Value pertains to the sum of isomers.  
 GV: Guidance Value  
 ST: Standard  
 —: Not established  
 Indicates value exceeds standard or guidance value.

**TABLE 4b.**  
**BOUCHARD JUNKYARD SITE**  
**REMEDIAL INVESTIGATION AND FEASIBILITY STUDY**  
**SURFACE WATER SAMPLE RESULTS - MAY 2002**  
**SEMIVOLATILE ORGANIC COMPOUNDS**

| Sample Identification        | SW-3     | SW-4     | SW-5     | SW-6     | SW-7     | SW-8     | SW-9     | Contract<br>Required<br>Detection<br>Limit | NYSDEC<br>Class C<br>Standard or<br>Guidance Value |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|--------------------------------------------|----------------------------------------------------|
| Date of Collection           | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 |                                            |                                                    |
| Dilution Factor              | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      |                                            |                                                    |
| Units                        | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/L)                                     | (ug/l)                                             |
| Benzaldehyde                 | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| Phenol                       | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST **                                            |
| bis(2-Chloroethyl)ether      | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 2-Chlorophenol               | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST *                                             |
| 2-Methylphenol               | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST *                                             |
| 2,2-Oxybis (1-Chloropropane) | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| Acetophenone                 | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 4-Methylphenol               | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST *                                             |
| N-Nitroso-di-n-propylamine   | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| Hexachloroethane             | U        | U        | U        | U        | U        | U        | U        | 10                                         | 0.6 ST                                             |
| Nitrobenzene                 | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| Isophorone                   | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 2-Nitrophenol                | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST *                                             |
| 2,4-Dimethylphenol           | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST *                                             |
| bis(2-Chloroethoxy)methane   | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 2,4-Dichlorophenol           | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST *                                             |
| Naphthalene                  | U        | U        | U        | U        | U        | U        | U        | 10                                         | 13 GV                                              |
| 4-Chloroaniline              | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| Hexachlorobutadiene          | U        | U        | U        | U        | U        | U        | U        | 10                                         | 0.01 ST                                            |
| Caprolactum                  | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 4-Chloro-3-methylphenol      | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST *                                             |
| 2-Methylnaphthalene          | U        | U        | U        | U        | U        | U        | U        | 10                                         | 4.7 GV                                             |
| Hexachlorocyclopentadiene    | U        | U        | U        | U        | U        | U        | U        | 10                                         | 0.45 ST                                            |
| 2,4,6-Trichlorophenol        | U        | U        | U        | U        | U        | U        | U        | 10                                         | 1 ST *                                             |
| 2,4,5-Trichlorophenol        | U        | U        | U        | U        | U        | U        | U        | 25                                         | 1 ST *                                             |
| 1-1'-Biphenyl                | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 2-Chloronaphthalene          | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 2-Nitroaniline               | U        | U        | U        | U        | U        | U        | U        | 25                                         | —                                                  |
| Dimethylphthalate            | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 2,6-Dinitrotoluene           | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| Acenaphthylene               | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |
| 3-Nitroaniline               | U        | U        | U        | U        | U        | U        | U        | 25                                         | —                                                  |
| Acenaphthene                 | U        | U        | U        | U        | U        | U        | U        | 10                                         | 5.3 GV                                             |
| 2,4-Dinitrophenol            | U        | U        | U        | U        | U        | U        | U        | 25                                         | 5 ST **                                            |
| 4-Nitrophenol                | U        | U        | U        | U        | U        | U        | U        | 25                                         | 1 ST *                                             |
| Dibenzofuran                 | U        | U        | U        | U        | U        | U        | U        | 10                                         | —                                                  |

**TABLE 4b. (CONTINUED)**  
**BOUCHARD JUNKYARD SITE**  
**REMEDIAL INVESTIGATION AND FEASIBILITY STUDY**  
**SURFACE WATER SAMPLE RESULTS - MAY 2002**  
**SEMIVOLATILE ORGANIC COMPOUNDS**

| Sample Identification        | SW-3      | SW-4      | SW-5      | SW-6      | SW-7      | SW-8      | SW-9      | Contract Required Detection Limit | NYSDEC Class C Standard or Guidance Value |
|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------------------|-------------------------------------------|
| Date of Collection           | 5/24/2002 | 5/24/2002 | 5/24/2002 | 5/24/2002 | 5/24/2002 | 5/24/2002 | 5/24/2002 | (ug/l)                            | (ug/l)                                    |
| Dilution Factor              | 1.0       | 1.0       | 1.0       | 1.0       | 1.0       | 1.0       | 1.0       |                                   |                                           |
| Units                        | ug/l      | ug/l      | ug/l      | ug/l      | ug/l      | ug/l      | ug/l      |                                   |                                           |
| 2,4-Dinitrotoluene           | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Diethylphthalate             | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Fluorene                     | U         | U         | U         | U         | U         | U         | U         | 10                                | 0.54 GV                                   |
| 4-Chlorophenyl-phenylether   | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| 4-Nitroaniline               | U         | U         | U         | U         | U         | U         | U         | 25                                | —                                         |
| 4,6-Dinitro-2-methylphenol   | U         | U         | U         | U         | U         | U         | U         | 25                                | 1 ST *                                    |
| N-Nitrosodiphenylamine       | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| 4-Bromophenyl-phenylether    | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Hexachlorobenzene            | U         | U         | U         | U         | U         | U         | U         | 10                                | 3E-5 ST                                   |
| Atrazine                     | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Pentachlorophenol            | U         | U         | U         | U         | U         | U         | U         | 10                                | 1 ST ****                                 |
| Phenanthrene                 | U         | U         | U         | U         | U         | U         | U         | 25                                | 5 GV                                      |
| Anthracene                   | U         | U         | U         | U         | U         | U         | U         | 10                                | 3.8 GV                                    |
| Carbazole                    | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Di-n-butylphthalate          | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Fluoranthene                 | U         | U         | U         | U         | U         | U         | U         | 10                                | 4.6 GV                                    |
| Pyrene                       | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Butylbenzylphthalate         | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| 3,3'-Dichlorobenzidine       | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Benzo (a) anthracene         | U         | U         | U         | U         | U         | U         | U         | 10                                | 0.03 GV                                   |
| Chrysene                     | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| bis(2-Ethylhexyl)phthalate   | U         | U         | U         | U         | U         | U         | U         | 10                                | 0.6 ST                                    |
| Di-octylphthalate            | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Benzo(b)fluoranthene         | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Benzo(k)fluoranthene         | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Benzo(a)pyrene               | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Indeno(1,2,3-cd)pyrene       | U         | U         | U         | U         | U         | U         | U         | 10                                | 1.2E-3 GV                                 |
| Dibenzo(a,h)anthracene       | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| Benzo(g,h,i)perylene         | U         | U         | U         | U         | U         | U         | U         | 10                                | —                                         |
| <b>Total PAHs</b>            | 0         | 0         | 0         | 0         | 0         | 0         | 0         |                                   |                                           |
| <b>Total Carcinogen PAHs</b> | 0         | 0         | 0         | 0         | 0         | 0         | 0         |                                   |                                           |
| <b>Total SVOCs</b>           | 0         | 0         | 0         | 0         | 0         | 0         | 0         |                                   |                                           |
| <b>Total SVOC TICs</b>       | 0         | 0         | 0         | 0         | 2         | 0         | 0         |                                   |                                           |

**QUALIFIERS:**  
 U: Compound analyzed for but not detected  
 B: Compound found in the method blank as well as the sample  
 J: Compound found at a concentration below the CRDL, value estimated

**NOTES:**  
 \*: Applies to Total Phenols  
 \*\*: Applies to the sum of Unchlorinated Phenols  
 \*\*\*: Applies to the sum of 1,2-, 1,3- and 1,4-Dichlorobenzene  
 \*\*\*\*: Applies to the sum of Chlorinated Phenols  
 [ ] Indicates value exceeds standard or guidance value.

**TABLE 4c.**  
**BOUCHARD JUNKYARD SITE**  
**REMEDIAL INVESTIGATION AND FEASIBILITY STUDY**  
**SURFACE WATER SAMPLE RESULTS - MAY 2002**  
**PESTICIDE/PCBs**

| Sample Identification | SW-3     | SW-4     | SW-5     | SW-6     | SW-7     | SW-8     | SW-9     | Contract Required Detection Limit | NYSDEC Class C Standard or Guidance Value |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------------|-------------------------------------------|
| Date of Collection    | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | (ug/l)                            | (ug/l)                                    |
| Dilution Factor       | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      |                                   |                                           |
| Units                 | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   |                                   |                                           |
| alpha-BHC             | U        | U        | U        | U        | U        | U        | U        | 0.05                              | ---                                       |
| beta-BHC              | U        | U        | U        | U        | U        | U        | U        | 0.05                              | ---                                       |
| delta-BHC             | U        | U        | U        | U        | U        | U        | U        | 0.05                              | ---                                       |
| gamma-BHC (Lindane)   | U        | U        | U        | U        | U        | U        | U        | 0.05                              | ---                                       |
| Heptachlor            | U        | U        | U        | U        | U        | U        | U        | 0.05                              | 2E-4 ST                                   |
| Aldrin                | U        | U        | U        | U        | U        | U        | U        | 0.05                              | 1E-3 ST **                                |
| Heptachlor Epoxide    | U        | U        | U        | U        | U        | U        | U        | 0.05                              | 3E-4 ST                                   |
| Endosulfan I          | U        | U        | 0.037 JP | U        | U        | U        | U        | 0.05                              | 9E-3 ST ***                               |
| Dieldrin              | U        | U        | U        | U        | U        | U        | U        | 0.10                              | 6E-7 ST                                   |
| 4,4'-DDE              | U        | U        | U        | U        | U        | U        | U        | 0.10                              | 7E-6 ST                                   |
| Endrin                | U        | U        | U        | U        | U        | U        | U        | 0.10                              | 2E-3 ST                                   |
| Endosulfan II         | U        | U        | U        | U        | U        | U        | U        | 0.10                              | 9E-3 ST ***                               |
| 4,4'-DDD              | U        | U        | U        | U        | U        | U        | U        | 0.10                              | 1E-5 ST                                   |
| Endosulfan Sulfate    | U        | U        | U        | U        | U        | U        | U        | 0.10                              | 9E-3 ST ***                               |
| 4,4'-DDT              | U        | U        | U        | U        | U        | U        | U        | 0.10                              | 1E-5 ST                                   |
| Methoxychlor          | U        | U        | U        | U        | U        | U        | U        | 0.50                              | 0.03 ST                                   |
| Endrin Ketone         | U        | U        | U        | U        | U        | U        | U        | 0.10                              | ---                                       |
| Endrin Aldehyde       | U        | U        | U        | U        | U        | U        | U        | 0.10                              | ---                                       |
| alpha-Chlordane       | U        | U        | U        | U        | U        | U        | U        | 0.05                              | 2E-5 ST ****                              |
| gamma-Chlordane       | U        | U        | U        | U        | U        | U        | U        | 0.05                              | 2E-5 ST ****                              |
| Toxaphene             | U        | U        | U        | U        | U        | U        | U        | 5.0                               | 6E-6 ST                                   |
| Aroclor-1016          | U        | U        | U        | U        | U        | U        | U        | 1.0                               | 1E-6 ST *                                 |
| Aroclor-1221          | U        | U        | U        | U        | U        | U        | U        | 2.0                               | 1E-6 ST *                                 |
| Aroclor-1232          | U        | U        | U        | U        | U        | U        | U        | 1.0                               | 1E-6 ST *                                 |
| Aroclor-1242          | U        | U        | U        | U        | U        | U        | U        | 1.0                               | 1E-6 ST *                                 |
| Aroclor-1248          | U        | U        | U        | U        | U        | U        | U        | 1.0                               | 1E-6 ST *                                 |
| Aroclor-1254          | U        | U        | U        | U        | U        | U        | U        | 1.0                               | 1E-6 ST *                                 |
| Aroclor-1260          | U        | U        | U        | U        | U        | U        | U        | 1.0                               | 1E-6 ST *                                 |
| <b>Total PCBs</b>     | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |                                   |                                           |

**QUALIFIERS:**

U: Compound analyzed for but not detected  
 B: Compound found in the method blank as well as the sample  
 J: Compound found at a concentration below the CRDL, value estimated

**NOTES:**

\*: Applies to the sum of the isomers  
 \*\*: Applies to the sum of Aldrin and Dieldrin  
 \*\*\*: The value is the one listed for "Endosulfan"  
 \*\*\*\*: The value is the one listed for "Chlordane"  
 GV: Guidance Value  
 ST: Standard  
 ---: Not established  
 [ ] Indicates value exceeds standard or guidance value.

**TABLE 4d.**  
**BOUCHARD JUNKYARD SITE**  
**REMEDIAL INVESTIGATION AND FEASIBILITY STUDY**  
**SURFACE WATER SAMPLE RESULTS - MAY 2002**  
**INORGANICS**

| Sample Identification | SW-3     | SW-4     | SW-5     | SW-6     | SW-7     | SW-8     | SW-9     | Instrument Detection Limit | NYSDEC Class C Surface Water Standard or Guidance Value |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|---------------------------------------------------------|
| Date of Collection    | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | 05/24/02 | (ug/l)                     | (ug/l)                                                  |
| Dilution Factor       | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | (ug/l)                     | (ug/l)                                                  |
| Units                 | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)   | (ug/l)                     | (ug/l)                                                  |
| Aluminum              | U        | U        | 5,310    | 170 B    | 28.9 B   | 881      | 33.7 B   | 9                          | 100 ST                                                  |
| Antimony              | U        | U        |          | U        | U        |          | U        | 4                          | —                                                       |
| Arsenic               | U        | 1.1 B    | 8.4 B    | 1.4 B    | 1.1 B    |          | U        | 2                          | 150 ST *                                                |
| Barium                | 8.1 B    | 7.4 B    | 418      | 54.1 B   | 47.8 B   | 98.2 B   | 27.3 B   | 2                          | —                                                       |
| Beryllium             | U        | U        | U        | U        | U        | U        | U        | 0.2                        | 1,100 **                                                |
| Cadmium               | U        | U        | U        | U        | U        | 0.34 B   | U        | 0.2                        | ***                                                     |
| Calcium               | 5,590    | 5,660    | 22,400   | 17,100   | 23,300   | 25,300   | 22,800   | 234                        | —                                                       |
| Chromium              | U        | U        | 9.8 B    | 0.33 B   | U        | 1.1 B    | U        | 0.6                        | A                                                       |
| Cobalt                | 1.4 B    | 1.1 B    | 8.3 B    | 1.2 B    | 0.85 B   | 2.5 B    | 0.73 B   | 0.7                        | 5 ST                                                    |
| Copper                | 8.0 B    | 4.2 B    | 16.0 B   | 2.6 B    | 5.0 B    | 1.9 B    | 2.8 B    | 5                          | AA                                                      |
| Iron                  | 37.2 B   | 32.1 B   | 38,200   | 345      | 86.0 B   | 4,330    | 133      | 2                          | 300 ST                                                  |
| Lead                  | U        | U        | 16.9     | 0.68 B   | U        | 5.5      | U        | 2                          | AAA                                                     |
| Magnesium             | 1,360 B  | 1,390 B  | 7,520    | 4,700 B  | 6,230    | 6,680    | 5,260    | 2                          | —                                                       |
| Manganese             | 13.9 B   | 13.1 B   | 2,930    | 119      | 43.6     | 1,690    | 120      | 0.9                        | —                                                       |
| Mercury               | U        | U        | U        | U        | U        | U        | U        | 0.1                        | 0.0007 ST                                               |
| Nickel                | 0.83 B   | U        | 11.2 B   | 0.91 B   | 0.71 B   | 2.5 B    | U        | 0.9                        | —                                                       |
| Potassium             | 600 B    | 597 B    | 2,280 B  | 1,690 B  | 1,150 B  | 1,180 B  | 3,730 B  | 320                        | —                                                       |
| Selenium              | U        | U        | 5.7      | U        | U        | 5.0      | U        | 3                          | 4.6 ST                                                  |
| Silver                | 1.4 B    | 1.1 B    | U        | 0.89 B   | 1.1 B    | 0.61 B   | 0.83 B   | 2                          | 0.1 ST                                                  |
| Sodium                | 2,790 B  | 2,670 B  | 6,770    | 7,940    | 8,390    | 8,200    | 28,500   | 132                        | —                                                       |
| Thallium              | 3.0 BN   | U        | U        | U        | U        | U        | U        | 2                          | 8 ST                                                    |
| Vanadium              | U        | U        | 10.3 B   | U        | U        | 0.97 B   | U        | 0.6                        | 14 ST                                                   |
| Zinc                  | U        | U        | 257      | U        | 12.3 B   | 44.4     | U        | 2                          | —                                                       |
| Cyanide               | 5.1 BN   | 13.5 N   | U        | U        | U        | 4.3 BN   | U        | 2                          | 5.2 ST ~~~                                              |
| Hardness (as CaCO3)   | 20,000   | 20,000   | 87,000   | 62,000   | 84,000   | 91,000   | 79,000   | 4,000                      | —                                                       |

**QUALIFIERS:**

U: Compound analyzed for but not detected

B: Compound concentration is less than the CRDL but greater than the IDL

N: Indicates spike sample recovery not within control limits

E: Indicates value estimated

**NOTES:**

\*: Dissolved arsenic form

\*\* : 11 ug/l when hardness is less than or equal to 75 ppm and 1,100 ug/l when hardness is greater than 75 ppm

\*\*\* : (0.85) exp(1.128 [ln (ppm hardness)] - 3.6867)

A : (0.316) exp(0.819 [ln (ppm hardness)] + 3.7256)

AA : (0.96) exp(0.9422 [ln (ppm hardness)] - 1.7)

AAA : {1.46203 - [ln (hardness) (0.145712)]} exp (1.273 [ln (hardness)] - 1.052)

~ : (0.998) exp (0.846 [ln (hardness)] + 2.255)

~~ : 0.978 exp(0.8473 [ln (ppm hardness)] + 0.884)

~~~ : As free cyanide: the sum of HCN and CN- expressed as CN

Indicates value exceeds standard or guidance value.

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TABLE 5a.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
VOLATILE ORGANICS

Sample Identification	SD-1	SD-2	SD-3	SD-4	SD-5		
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'		
Date of Collection	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Percent Solids	72	91	67	96	42		
Total Organic Carbon (%)	1.88	5.11	2.40	0.20	2.20	Contract Required Detection Limit (ug/kg)	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	N	
Dichlorodifluoromethane	U	U	U	U	U	10	
Chloromethane	U	U	U	U	U	10	
Vinyl Chloride	1.32	0.78	1.68	0.14	1.54	10	HHB
Bromomethane	U	U	U	U	U	10	
Chloroethane	U	U	U	U	U	10	
Trichlorofluoromethane	U	U	U	U	U	10	
1,1-Dichloroethane	0.38	0.22	0.48	0.04	0.44	10	HHB
1,1,2-trichloro-1,2,2-trifluoroethane	U	U	U	U	U	10	
Acetone	6 J	5 J	9 J	U	310	10	
Carbon Disulfide	U	U	U	U	5 J	10	
Methyl Acetate	U	U	U	U	U	10	
Methylene Chloride	U	U	U	U	U	10	
trans-1,2-dichloroethane	U	U	U	U	U	10	
Methyl tert-Butyl Ether	U	U	U	U	U	10	
1,1-Dichloroethane	U	U	U	U	U	10	
cis-1,2-Dichloroethane	U	U	U	U	U	10	
2-Butanone	U	U	U	U	87	10	
Chloroform	U	U	U	U	U	10	
1,1,1-Trichloroethane	U	U	U	U	U	10	
Cyclohexane	U	U	U	U	U	10	
Carbon Tetrachloride	11.3	6.66	14.4	1.20	13.2	10	HHB
Benzene	11.3	6.66	14.4	1.20	13.2	10	HHB
1,2-Dichloroethane	13.2	7.77	16.8	1.40	15.4	10	HHB
Trichloroethene	37.6	22.2	48.0	4.00	44.0	10	HHB
Methylcyclohexane	U	U	U	U	U	10	
1,2-Dichloropropane	U	U	U	U	U	10	
Bromodichloromethane	U	U	U	U	U	10	
cis-1,3-Dichloropropene	U	U	U	U	U	10	
4-Methyl-2-Pentanone	U	U	U	U	U	10	
Toluene	921.2	543.9	1176	98	1078	10	BALCT
Trans-1,3-Dichloropropene	U	U	U	U	U	10	
1,1,2-Trichloroethane	11.3	6.66	14.4	1.20	13.2	10	HHB
Tetrachloroethene	15.0	8.88	19.2	1.60	17.6	10	HHB
2-Hexanone	U	U	U	U	U	10	
Dibromochloromethane	U	U	U	U	U	10	
1,2-Dibromoethane	U	U	U	U	U	10	
Chlorobenzene	65.8	38.9	84.0	7.00	77.0	10	BALCT
Ethylbenzene	451	266.4	576	48	528	10	BALCT
Total Xylenes	1730	1021	2208	184.0	2024	10	BALCT
Styrene	U	U	U	U	U	10	
Bromoform	U	U	U	U	U	10	
Isopropylbenzene	226	133	288	24.0	264	10	BALCT
1,1,2,2-Tetrachloroethane	5.64	3.33	7.20	0.600	6.60	10	HHB
1,3-Dichlorobenzene	226	133	288	24.0	264	10	BALCT
1,4-Dichlorobenzene	226	133	288	24.0	264	10	BALCT
1,2-Dichlorobenzene	226	133	288	24.0	264	10	BALCT
1,2-Dibromo-3-chloropropane	U	U	U	U	U	10	
1,2,4-Trichlorobenzene	U	U	U	U	U	10	
Total VOCs	6	5	9	0	402		

Qualifiers:
 U: Compound analyzed for but not detected
 B: Compound found in the blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated
 Notes:
 N - Total organic carbon normalized criteria
 HHB - Human Health Bioaccumulation
 BALCT - Benthic Aquatic Life Chronic Toxicity
 —: not established
 Indicates value exceeds NYSDEC sediment criteria.

TABLE 5a. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
VOLATILE ORGANICS

Sample Identification	SD-6	SD-7	SD-8	SD-9	SD-10	
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	
Date of Collection	10/25/01	10/24/01	10/24/01	10/24/01	11/16/01	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	
Percent Solids:	11	9	47	36	76	
Total Organic Carbon (%)	2.26	3.54	0.95	1.99	0.80	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
Dichlorodifluoromethane	U	U	U	U	U	10
Chloromethane	U	U	U	U	U	10
Vinyl Chloride	1.58	2.48	0.665	1.39	0.56	10
Bromomethane	U	U	U	U	U	10
Chloroethane	U	U	U	U	U	10
Trichlorofluoromethane	U	U	U	U	U	10
1,1-Dichloroethene	0.452	0.708	0.190	0.398	0.16	10
1,1,2-trichloro-1,2,2-trifluoroethane	U	U	U	U	U	10
Acetone	38	97 J	17 J	100	U	10
Carbon Disulfide	U	U	U	U	U	10
Methyl Acetate	U	U	U	U	U	10
Methylene Chloride	U	U	U	U	U	10
trans-1,2-dichloroethane	U	U	U	U	U	10
Methyl tert-Butyl Ether	U	U	U	U	U	10
1,1-Dichloroethane	U	U	U	U	U	10
cis-1,2-Dichloroethane	U	U	U	U	U	10
2-Butanone	U	U	U	24 J	U	10
Chloroform	U	U	U	U	U	10
1,1,1-Trichloroethane	U	U	U	U	U	10
Cyclohexane	U	U	U	U	U	10
Carbon Tetrachloride	13.6	21.2	5.70	11.9	4.8	10
Benzene	13.6	21.2	5.70	11.9	4.8	10
1,2-Dichloroethane	15.8	24.8	6.65	13.9	5.6	10
Trichloroethene	45.2	70.8	19.0	39.8	16	10
Methylcyclohexane	U	U	U	U	U	10
1,2-Dichloropropane	U	U	U	U	U	10
Bromodichloromethane	U	U	U	U	U	10
cis-1,3-Dichloropropene	U	U	U	U	U	10
4-Methyl-2-Pentanone	U	U	U	U	U	10
Toluene	1107.4	1734.6	465.5	975.1	392	10
Trans-1,3-Dichloropropene	U	U	U	U	U	10
1,1,2-Trichloroethane	13.6	21.2	5.70	11.9	4.8	10
Tetrachloroethene	18.1	28.3	7.60	15.9	6.4	10
2-Hexanone	U	U	U	U	U	10
Dibromochloromethane	U	U	U	U	U	10
1,2-Dibromoethane	U	U	U	U	U	10
Chlorobenzene	79.1	124	33.3	69.7	28	10
Ethylbenzene	542	850	228	478	192	10
Total Xylenes	2079	3257	874	1831	736	10
Styrene	U	U	U	U	U	10
Bromoform	U	U	U	U	U	10
Isopropylbenzene	271	425	114	239	96	10
1,1,2,2-Tetrachloroethane	6.78	10.6	2.85	5.97	2.4	10
1,3-Dichlorobenzene	271	425	114	239	96	10
1,4-Dichlorobenzene	271	425	114	239	96	10
1,2-Dichlorobenzene	271	425	114	239	96	10
1,2-Dibromo-3-chloropropane	U	U	U	U	U	10
1,2,4-Trichlorobenzene	U	U	U	U	U	10
Total VOCs	38	97	17	124	0	

Qualifiers:
 U: Compound analyzed for but not detected
 B: Compound found in the blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated

Notes:
 N - Total organic carbon normalized criteria
 HHB - Human Health Bioaccumulation
 BALCT - Benthic Aquatic Life Chronic Toxicity
 ---: not established

Indicates value exceeds NYSDEC sediment criteria.

TABLE 5b.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SD-1		SD-2		SD-3		SD-4		SD-5		Contract Required Detection Limit	NYSDEC Sediment Criteria (ug/gOC)	Protection Level
	1.88 (ug/kg)	72 N (ug/kg)	1.11 (ug/kg)	91 N (ug/kg)	2.40 (ug/kg)	67 N (ug/kg)	0.20 (ug/kg)	96 N (ug/kg)	2.20 (ug/kg)	42 N (ug/kg)			
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'			
Date of Collection	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01			
Dilution Factor	1	1	1	1	1	1	1	1	1	1			
Percent Solids													
Total Organic Carbon (%)													
Units											(ug/kg)		
Benzaldehyde	U	U	U	U	U	U	U	U	130 J	U	330	—	BALCT
Phenol	11.3	6.66	U	U	14.4	U	U	1.20	U	13.2	330	0.6	HHB
bis (2-Chloroethyl) ether	0.564	0.333	U	U	0.720	U	U	0.060	U	0.660	330	0.03	
2-Chlorophenol	U	U	U	U	U	U	U	U	U	U	330	—	
2-Methylphenol	U	U	U	U	U	U	U	U	U	U	330	—	
2,2'-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	U	U	U	330	—	
Acetophenone	U	U	U	U	U	U	U	U	U	U	330	—	
4-Methylphenol	U	U	U	U	U	U	U	U	U	U	330	—	
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	U	U	330	—	
Hexachloroethane	U	U	U	U	U	U	U	U	U	U	330	—	
Nitrobenzene	U	U	U	U	U	U	U	U	U	U	330	—	
Isophorone	U	U	U	U	U	U	U	U	U	U	330	—	
2-Nitrophenol	U	U	U	U	U	U	U	U	U	U	330	—	
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	U	U	330	—	
bis (2-Chloroethoxy) methane	U	U	U	U	U	U	U	U	U	U	330	—	
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	U	U	330	—	
Naphthalene	564	333	U	U	720	U	U	60.0	U	660	330	30	BALCT
4-Chloroaniline	U	U	U	U	U	U	U	U	U	U	330	—	
Hexachlorobutadiene	5.64	3.33	U	U	7.2	U	U	0.600	U	6.60	330	0.3	HHB
Caprolactum	U	U	U	U	U	U	U	U	U	U	330	—	
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	U	U	330	—	
2-Methylnaphthalene	639	377	U	U	816	U	U	68.0	U	748	330	34	BALCT
Hexachlorocyclopentadiene	82.7	48.8	U	U	106	U	U	8.80	U	96.8	330	4.4	BALCT
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	330	—	
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	800	—	
1-1'-Biphenyl	U	U	U	U	U	U	U	U	U	U	330	—	
2-Chloronaphthalene	U	U	U	U	U	U	U	U	U	U	330	—	
2-Nitroaniline	U	U	U	U	U	U	U	U	U	U	800	—	
Dimethylphthalate	U	U	U	U	U	U	U	U	U	U	330	—	
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	330	—	
Acenaphthylene	2632	1554	U	U	3360	U	U	280	U	3080	330	140	BALCT
3-Nitroaniline	U	U	U	U	U	U	U	U	U	U	800	—	
Acenaphthene	2632	1554	U	U	3360	U	U	280	U	3080	330	140	BALCT
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	U	U	800	—	
4-Nitrophenol	U	U	U	U	U	U	U	U	U	U	800	—	

TABLE 5b. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SD-1	SD-2	SD-3	SD-4	SD-5	Contract Required Detection Limit	NYSDEC Sediment Criteria (ug/gOC)	Protection Level
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'			
Date of Collection	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01			
Dilution Factor	1	1	1	1	1			
Percent Solids	72	91	67	96	42			
Total Organic Carbon (%)	1.88	1.11	2.40	0.20	2.20			
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Dibenzofuran	U	U	U	U	U	330	---	
2,4-Dinitrotoluene	U	U	U	U	U	330	---	
Diethylphthalate	U	U	U	U	U	330	---	
Fluorene	150	88.8	192	16.0	176	330	8	BALCT
4-Chlorophenyl-phenylether	U	U	U	U	U	330	---	
4-Nitroaniline	U	U	U	U	U	330	---	
4,6-Dinitro-2-methylphenol	U	U	U	U	U	330	---	
N-Nitrosodiphenylamine	U	U	U	U	U	330	---	
4-Bromophenyl-phenylether	U	U	U	U	U	330	---	
Hexachlorobenzene	2.82	1.67	3.60	0.300	3.30	330	0.15	HHB
Atrazine	U	U	U	U	U	330	---	
Pentachlorophenol	752	444	960	80.0	880	330	40	BALCT
Phenanthrene	2256	1332	2880	240	2640	330	120	BALCT
Anthracene	2012	1188	2568	214	2354	330	107	BALCT
Carbazole	U	U	U	U	U	330	---	
Di-n-butylphthalate	U	U	U	U	U	330	---	
Fluoranthene	19176	11322	24480	2040	22440	330	1020	BALCT
Pyrene	18067	10667	23064	1922	21142	330	961	BALCT
Butylbenzylphthalate	U	U	U	U	U	330	---	
3,3'-Dichlorobenzidine	U	U	U	U	U	330	---	
Benzo (a) anthracene	226	133	288	24.0	264	330	12	BALCT
Chrysene	24.4	14.4	31.2	2.60	28.6	330	1.3	HHB
bis (2-Ethylhexyl) phthalate	3751	2214	4788	399	4389	330	199.5	BALCT
Di-n-octylphthalate	U	U	U	U	U	330	---	
Benzo (b) fluoranthene	24.4	14.4	31.2	2.60	28.6	330	1.3	HHB
Benzo (k) fluoranthene	24.4	14.4	31.2	2.60	28.6	330	1.3	HHB
Benzo (a) pyrene	24.4	14.4	31.2	2.60	28.6	330	1.3	HHB
Indeno (1,2,3-cd) pyrene	24.4	14.4	31.2	2.60	28.6	330	1.3	HHB
Dibenzo (a,h) anthracene	U	U	U	U	U	330	---	
Benzo (g,h,i) perylene	U	U	U	U	U	330	---	
Total PAHs	0	0	0	0	512			
Total Carcinogen PAHs	0	0	0	0	202			
Total SVOCs	0	0	0	0	512			
Total SVOC TICs	4990	650	2490	530	25380			

Notes:
N - Total organic carbon normalized criteria
HHB - Human Health Bioaccumulation
BALCT - Benthic Aquatic Life Chronic Toxicity
MDL - method detection limit
---; not established
[] Indicates value exceeds NYSDEC sediment criteria.

Qualifiers:
U: Compound analyzed for but not detected
B: Compound found in the blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated
U*: Qualified as non-detect based on validation criteria

TABLE 5b. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SD-6	SD-7	SD-8	SD-9	SD-10	Contract Required Detection Limit	NYSDEC Sediment Criteria (ug/gOC)	Protection Level
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'			
Date of Collection	10/25/01	10/24/01	10/24/01	10/24/01	11/16/01			
Dilution Factor	1	1	1	1	1			
Percent Solids	11	9	47	36	76			
Total Organic Carbon (%)	2.26	3.54	0.95	1.99	0.8			
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/gOC)	
Benzaldehyde	U	U	U	160 J	160 J	330	—	BALCT
Phenol	U	U	21.2	U	U	330	0.6	HHB
bis (2-Chloroethyl) ether	U	U	1.062	U	U	330	0.03	
2-Chlorophenol	U	U	U	U	U	330	—	
2-Methylphenol	U	U	U	U	U	330	—	
2,2'-Oxybis (1-Chloropropane)	U	U	U	U	U	330	—	
Acetophenone	U	U	U	U	U	330	—	
4-Methylphenol	U	U	U	U	130 J	330	—	
N-Nitroso-di-n-propylamine	U	U	U	U	U	330	—	
Hexachloroethane	U	U	U	U	U	330	—	
Nitrobenzene	U	U	U	U	U	330	—	
Isophorone	U	U	U	U	U	330	—	
2-Nitrophenol	U	U	U	U	U	330	—	
2,4-Dimethylphenol	U	U	U	U	U	330	—	
bis (2-Chloroethoxy) methane	U	U	U	U	U	330	—	
2,4-Dichlorophenol	U	U	U	U	U	330	—	
Naphthalene	U	U	1062	U	U	330	30	BALCT
4-Chloroaniline	U	U	U	285	U	330	—	
Hexachlorobutadiene	U	U	10.6	U	U	330	0.3	HHB
Caprolactum	U	U	U	2.85	U	330	—	
4-Chloro-3-methylphenol	U	U	U	U	U	330	—	
2-Methylnaphthalene	U	U	1203.6	U	U	330	—	
Hexachlorocyclopentadiene	U	U	155.76	U	U	330	34	BALCT
2,4,6-Trichlorophenol	U	U	U	41.8	U	330	4.4	BALCT
2,4,5-Trichlorophenol	U	U	U	U	U	800	—	
1-1'-Biphenyl	U	U	U	U	U	330	—	
2-Chloronaphthalene	U	U	U	U	U	330	—	
2-Nitroaniline	U	U	U	U	U	330	—	
Dimethylphthalate	U	U	U	U	U	330	—	
2,6-Dinitrotoluene	U	U	U	U	U	330	—	
Acenaphthylene	U	U	4956	U	U	330	140	BALCT
3-Nitroaniline	U	U	U	U	U	800	—	
Acenaphthene	U	U	4956	U	U	330	140	BALCT
2,4-Dinitrophenol	U	U	U	2786	U	800	—	
4-Nitrophenol	U	U	U	2786	U	800	—	

TABLE 5b. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SD-6	SD-7	SD-8	SD-9	SD-10		
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'		
Date of Collection	10/25/01	10/24/01	10/24/01	10/24/01	11/16/01		
Dilution Factor	1	1	1	1	1		
Percent Solids	11	9	47	36	76		
Total Organic Carbon (%)	2.26	3.54	0.95	1.99	0.80		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
	N	N	N	N	N		
Dibenzofuran	U	U	U	U	U	330	
2,4-Dinitrotoluene	U	U	U	U	U	330	
Diethylphthalate	U	U	U	U	U	330	
Fluorene	181	283	76.0	159	64	330	
4-Chlorophenyl-phenylether	U	U	U	U	U	330	
4-Nitroaniline	U	U	U	U	U	330	
4,6-Dinitro-2-methylphenol	U	U	U	U	U	330	
N-Nitrosodiphenylamine	U	U	U	U	U	330	
4-Bromophenyl-phenylether	U	U	U	U	U	330	
Hexachlorobenzene	3.39	5.31	1.43	2.99	1.2	330	
Atrazine	U	U	U	U	U	330	
Pentachlorophenol	904	1416	380	796	320	330	
Phenanthrene	2712	4248	340 J	2388	260 J	330	
Anthracene	2418	3787.8	72 J	2129	66 J	330	
Carbazole	U	U	U	U	U	330	
Di-n-butylphthalate	U	U	U	U	U	330	
Fluoranthene	23052	36108	570 J	20298	560	330	
Pyrene	21719	34019	650 J	19124	620	330	
Butylbenzylphthalate	U	U	U	U	U	330	
3,3'-Dichlorobenzidine	U	U	U	U	U	330	
Benzo (a) anthracene	271	425	114	239	96	330	
Chrysene	29.4	46.0	12.4	25.9	10.4	330	
bis (2-Ethylhexyl) phthalate	4509	7062.3	1895	3970	1596	330	
Di-n-octylphthalate	U	U	U	U	U	330	
Benzo (b) fluoranthene	29.4	46.0	12.4	25.9	10.4	330	
Benzo (k) fluoranthene	29.4	46.0	12.4	25.9	10.4	330	
Benzo (a) pyrene	29.4	46.0	12.4	25.9	10.4	330	
Indeno (1,2,3-cd) pyrene	29.4	46.0	12.4	25.9	10.4	330	
Dibenzo (a,h) anthracene	U	U	U	U	U	330	
Benzo (g,h,i) perylene	U	U	94 J	U	77 J	330	
Total PAHs	0	0	3166	1220	3173		
Total Carcinogen PAHs	0	0	1440	660	1590		
Total SVOCs	0	0	3166	1220	3303		
Total SVOC TICs	31600	119000	4500	14060	10630		

Notes:
N - Total organic carbon normalized criteria
HHB - Human Health Bioaccumulation
BALCT - Benthic Aquatic Life Chronic Toxicity
MDL - method detection limit
---: not established
[] Indicates value exceeds NYSDEC sediment criteria.

Qualifiers:
U: Compound analyzed for but not detected
B: Compound found in the blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated
U*: Qualified as non-detect based on validation criteria

TABLE 5c.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
PESTICIDE/PCBs

Sample Identification	SD-1		SD-2		SD-3		SD-4		SD-5		Contract Required Detection Limit	NYSDEC Sediment Criteria (ug/gOC)	Protection Level
Sample Depth	0-0.5'		0-0.5'		0-0.5'		0-0.5'		0-0.5'				
Date of Collection	10/25/01		10/25/01		10/25/01		10/25/01		10/25/01				
Dilution Factor	1	1	1	1	1	1	1	1	1	1			
Percent Solids	72	91	67	96	42								
Total Organic Carbon (%)	1.88	N	N	N	N	N	N	N	N	N			
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)			
alpha-BHC	U	U	U	U	U	U	U	U	U	1.67			
beta-BHC	U	U	U	U	U	U	U	U	U	1.67			
delta-BHC	U	U	U	U	U	U	U	U	U	1.67			
gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	U	1.67			
Heptachlor	U	U	U	U	U	U	U	U	U	1.67			
Aldrin	U	U	U	U	U	U	U	U	U	1.67			
Heptachlor Epoxide	U	U	U	U	U	U	U	U	U	1.67			
Endosulfan I	U	U	U	U	U	U	U	U	U	1.67			
Dieldrin	U	U	U	U	U	U	U	U	U	1.67			
4,4'-DDE	U	U	U	U	U	U	U	U	U	1.67			
Endrin	U	U	U	U	U	U	U	U	U	1.67			
Endosulfan II	U	U	U	U	U	U	U	U	U	1.67			
4,4'-DDD	U	U	U	U	U	U	U	U	U	1.67			
Endosulfan Sulfate	U	U	U	U	U	U	U	U	U	1.67			
4,4'-DDT	U	U	U	U	U	U	U	U	U	1.67			
Methoxychlor	U	U	U	U	U	U	U	U	U	1.67			
Endrin Ketone	U	U	U	U	U	U	U	U	U	1.67			
Endrin Aldehyde	U	U	U	U	U	U	U	U	U	1.67			
alpha-Chlordane	U	U	U	U	U	U	U	U	U	1.67			
gamma-Chlordane	U	U	U	U	U	U	U	U	U	1.67			
Toxaphene	U	U	U	U	U	U	U	U	U	1.67			
Aroclor-1016	U	U	U	U	U	U	U	U	U	1.67			
Aroclor-1221	U	U	U	U	U	U	U	U	U	1.67			
Aroclor-1232	U	U	U	U	U	U	U	U	U	1.67			
Aroclor-1242	U	U	U	U	U	U	U	U	U	1.67			
Aroclor-1248	U	U	U	U	U	U	U	U	U	1.67			
Aroclor-1254	U	U	U	U	U	U	U	U	U	1.67			
Aroclor-1260	U	U	U	U	U	U	U	U	U	1.67			
Total PCBs	120	0	0	130	0	130	0	0	0	33.0	0.0008	HHB	

Qualifiers:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

Notes:

N - Total organic carbon normalized criteria

HHB - Human Health Bioaccumulation

BALCT - Benthic Aquatic Life Chronic Toxicity

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds

Indicates value exceeds NYSDEC sediment criteria.

TABLE 5c. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
PESTICIDE/PCBs

Sample Identification	SD-6		SD-7		SD-8		SD-9		SD-10		Contract Required Detection Limit	NYSDEC Sediment Criteria (ug/gOC)	Protection Level
Sample Depth	0-0.5'	10/25/01	0-0.5'	10/24/01	0-0.5'	10/24/01	0-0.5'	10/24/01	0-0.5'	11/16/01			
Date of Collection	1.0	11	1.0	9	1.0	47	1.0	36	1.0	42			
Dilution Factor	1.0	11	1.0	9	1.0	47	1.0	36	1.0	42			
Percent Solids	11	11	9	9	47	47	36	36	42	42			
Total Organic Carbon (%)	2.26	N	3.54	N	0.95	N	1.99	N	0.80	N			
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)			
alpha-BHC	U	---	U	---	U	---	U	---	U	---	1.67	---	---
beta-BHC	U	---	U	---	U	---	U	---	U	---	1.67	---	---
delta-BHC	U	---	U	---	U	---	U	---	U	---	1.67	---	---
gamma-BHC (Lindane)	U	---	U	---	U	---	U	---	U	---	1.67	---	---
Heptachlor	U	0.0181	U	0.028	U	0.008	U	0.016	U	0.006	1.67	0.0008	HHB
Aldrin	U	2.26	U	3.54	U	0.95	U	1.990	U	0.80	1.67	0.1	HHB
Heptachlor Epoxide	U	---	U	---	U	---	U	---	U	---	1.67	---	---
Endosulfan I	U	0.678	U	1.062	U	0.285	U	0.597	U	0.240	1.67	0.03	BALCT
Dieldrin	U	2.26	U	3.54	U	0.95	U	1.990	U	0.80	3.33	0.1	HHB
4,4'-DDE	U	0.226	U	0.354	U	0.095	U	0.199	U	0.080	3.33	0.01	HHB
Endrin	U	18.1	U	28.32	U	7.6	U	15.92	U	6.4	3.33	0.8	HHB
Endosulfan II	U	---	U	---	U	---	U	---	U	---	3.33	---	---
4,4'-DDD	U	0.226	U	0.354	U	0.095	U	0.199	U	0.080	3.33	0.01	HHB
Endosulfan Sulfate	U	---	U	---	U	---	U	---	U	---	3.33	---	---
4,4'-DDT	U	0.226	U	0.354	U	0.095	U	0.199	U	0.080	3.33	0.01	HHB
Methoxychlor	U	13.6	U	21.24	U	5.7	U	11.94	U	4.8	16.70	0.6	BALCT
Endrin Ketone	U	---	U	---	U	---	U	---	U	---	3.33	---	---
Endrin Aldehyde	51 P	---	U	---	U	---	U	---	U	---	3.33	---	---
alpha-Chlordane	U	0.023	U	0.035	U	0.0095	U	0.0199	U	0.008	1.67	0.001	HHB
gamma-Chlordane	U	0.023	U	0.035	U	0.0095	U	0.0199	U	0.008	1.67	0.001	HHB
Toxaphene	U	0.226	U	0.354	U	0.095	U	0.199	U	0.080	167.0	0.01	BALCT
Aroclor-1016	U	0.0181	U	0.028	U	0.008	U	0.016	U	0.006	33.0	0.0008	HHB
Aroclor-1221	U	0.0181	U	0.028	U	0.008	U	0.016	U	0.006	67.0	0.0008	HHB
Aroclor-1232	U	0.0181	U	0.028	U	0.008	U	0.016	U	0.006	33.0	0.0008	HHB
Aroclor-1242	U	0.0181	U	0.028	U	0.008	U	0.016	U	0.006	33.0	0.0008	HHB
Aroclor-1248	U	0.0181	U	0.028	U	0.008	U	0.016	U	0.006	33.0	0.0008	HHB
Aroclor-1254	U	0.0181	U	0.028	U	0.008	U	0.016	U	0.006	33.0	0.0008	HHB
Aroclor-1260	U	0.0181	U	0.028	U	0.008	U	0.016	U	0.006	33.0	0.0008	HHB
Total PCBs	3800	3800	1700	1700	77	77	0	0	6700	6700			

Qualifiers:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

D: Result is taken from reanalysis at a secondary dilution

Notes:

N - Total organic carbon normalized criteria

HHB - Human Health Bioaccumulation

BALCT - Benthic Aquatic Life Chronic Toxicity

---: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds

Indicates value exceeds NYSDEC sediment criteria.

TABLE 5d.
BOUCHARD JUNKYARD SITE
REMEDIATION INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
INORGANICS

Sample Identification	SD-1	SD-2	SD-3	SD-4	SD-5	Instrument	NYSDEC Sediment Criteria for Metals* Lowest Effect Level (mg/kg)	NYSDEC Sediment Criteria for Metals* Severe Effect Level (mg/kg)
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'			
Date of Collection	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01			
Dilution Factor	1	1	1	1	1	Detection Limit (ug/l)		
Percent Solids	72	91	67	96	42			
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			
Aluminum	13,100	12,700	15,400	10,000	6,800	13		
Antimony	0.35 BN	0.27 BN	0.37 BN	0.20 BN	0.53 BN	8	2	25
Arsenic	7.0	7.0	8.7	7.6	11.1	3	6	33
Barium	57.5	32.1 B	68.5	19.5 B	63.1 B	1		
Beryllium	0.4 B	0.31 B	0.55 B	0.24 B	0.29 B	1		
Cadmium	U	U	U	U	U	1	0.6	9
Calcium	612 B	902 B	1,120 B	419 B	1,350 B	8		
Chromium	16.0	14.9	18.0	13.4	8.8	1	26	110
Cobalt	10.9 B	12.7	17.2	9.3 B	12.5 B	2		
Copper	12.8	22.9	29.4	27.3	19.0	1	16	110
Iron	27,600	25,900	29,400	23,200	16,400	20	20,000	40,000
Lead	7.6 N	8.6 N	11.8 N	8.3 N	26.2 N	2	31	110
Magnesium	4,930	6,110	6,320	5,640	2,450	8		
Manganese	1,010	936	1,260	580	414	4	460	1100
Mercury	U	0.05 B	0.33	U	U	0.2	0.15	1.3
Nickel	19.9	25.9	28.6	21.1	16.6	2	16	50
Potassium	839 B	475 B	953 B	323 B	323 B	20		
Selenium	4.4	3.0	4.3	3.0	3.5	4		
Silver	U	U	U	U	U	1	1	2.2
Sodium	U	U	U	U	U	9		
Thallium	1.5 BN	1.1 BN	1.7 BN	U	U	5		
Vanadium	17.0	14.3	17.6	12.8	12.9 B	1		
Zinc	72.3	66.9	86.7	77.6	80.4	1	120	270
Cyanide	0.24 B	0.18 B	0.28 B	0.17 B	0.29 B	10		

Qualifiers:
 U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL but greater than the IDL.
 N: Indicates spike sample recovery not within control limits
 E: Indicates value estimated

Notes:
 To determine the detection limit for each sample, use the following equation: $(CRDL) \times (DF) \times (100\%S)$, where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.
 *: as per January 22, 1999 NYSDEC Technical Guidance for Screening Contaminated Sediment
 --: not established

Indicates value exceeds NYSDEC sediment criteria.

TABLE 5d. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
INORGANICS

Sample Identification	SD-6	SD-7	SD-8	SD-9	SD-10	Instrument Detection Limit (ug/l)	NYSDEC Sediment Criteria for Metals* Lowest Effect Level (mg/kg)	NYSDEC Sediment Criteria for Metals* Severe Effect Level (mg/kg)
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'			
Date of Collection	10/25/01	10/24/01	10/24/01	10/24/01	11/16/01			
Dilution Factor	1	1	1	1	1			
Percent Solids	11	9	47	36	76			
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			
Aluminum	12,200	15,300	11,300	10,600	9,960	13		
Antimony	1.3 BN	2.4 BN	0.76 BN	0.7 BN	U	8	2	25
Arsenic	7.8 B	8.7 B	8.5	4.4	7.2 N	3	6	33
Barium	198 B	412	124	119	59.2	1		
Beryllium	0.80 B	0.86 B	0.35 B	0.42 B	0.32 B	1		
Cadmium	3.6 BN	5.1 BN	U	U	0.22 BN	1	0.6	9
Calcium	10,200	23,400	1,700	5,620	18,800	8		
Chromium	21.1	21.4	13.7	15.9	16.9	1	26	110
Cobalt	7.5 B	14.7 B	11.2 B	11.6 B	10.3	2		
Copper	27.9 B	38.7 B	20.3	23.8	39.9 E	1	16	110
Iron	24,900	27,200	37,800	24,300	23,600	20	20,000	40,000
Lead	92.9 N	118 N	10.1 N	44.8 N	67.1	2	31	110
Magnesium	4,480 B	5,780 B	4,690	4,730	7,170	8		
Manganese	658	784	784	1,150	856	4	460	1100
Mercury	U	U	U	0.39	U	0.2	0.15	1.3
Nickel	28.5 B	27.7 B	23.6	20.5	26.2	2	16	50
Potassium	977 B	924 B	356 B	792 B	773 B	20		
Selenium	6.5	12.7	6.9	4.1	1.5	4		
Silver	U	U	U	U	U	1	1	2.2
Sodium	U	U	U	U	147 B	9		
Thallium	U	U	U	1.7 BN	3.0	5		
Vanadium	18.4 B	25.8 B	15.2 B	16.0 B	60.3	1		
Zinc	83.1	261	142	250	358	1	120	270
Cyanide	1.5 B	4.6	0.27 B	U	0.56 B	10		

Qualifiers:
 U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL but greater than the IDL.
 N: Indicates spike sample recovery not within control limits
 E: Indicates value estimated

Notes:
 To determine the detection limit for each sample, use the following equation: (CRDL)*(DF)*(100/%S), where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.
 *: as per January 22, 1999 NYSDEC Technical Guidance for Screening Contaminated Sediment
 -: not established

Indicates value exceeds NYSDEC sediment criteria.

TABLE 5a.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - OCTOBER 2001
TOTAL ORGANIC CARBON

Sample Identification	SD-1	SD-2	SD-3	SD-4	SD-5	Instrument
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	Detection
Date of Collection	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	Limit
Units	%	%	%	%	%	%
Total Organic Carbon	1.88	1.11	2.40	0.20	2.20	0.10

Sample Identification	SD-6	SD-7	SD-8	SD-9	SD-10	Instrument
Sample Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	Detection
Date of Collection	10/25/01	10/24/01	10/24/01	10/24/01	11/16/01	Limit
Units	%	%	%	%	%	%
Total Organic Carbon	2.26	3.54	0.95	1.99	0.80	0.10

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TABLE 6a.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - MAY 2002
SEMI-VOLATILE ORGANIC COMPOUNDS

Sample Identification	SD-11	SD-12	SD-13	Contract Required Detection Limit	NYSDEC Sediment Criteria (ug/gOC)	Protection Level
Sample Depth (feet)	0-0.5'	0-0.5'	0-0.5'			
Date of Collection	05/23/02	05/22/02	05/22/02			
Dilution Factor	1	1	1			
Percent Solids	57	83	64			
Total Organic Carbon (%)	7.60	0.50	2.90			
Units	N	N	N	(ug/kg)	(ug/kg)	(ug/kg)
Benzaldehyde	U	U	U	---	---	330
Phenol	U	45.6	U	---	---	330
bis (2-Chloroethyl) ether	U	2.280	U	3.00	17.4	330
2-Chlorophenol	U	---	U	0.15	0.870	330
2-Methylphenol	U	---	U	---	---	330
2,2'-Oxybis (1-Chloropropane)	U	---	U	---	---	330
Acetophenone	U	---	U	---	---	330
4-Methylphenol	U	---	U	---	---	330
N-Nitroso-di-n-propylamine	U	---	U	---	---	330
Hexachloroethane	U	---	U	---	---	330
Nitrobenzene	U	---	U	---	---	330
Isophorone	U	---	U	---	---	330
2-Nitrophenol	U	---	U	---	---	330
2,4-Dimethylphenol	U	---	U	---	---	330
bis (2-Chloroethoxy) methane	U	---	U	---	---	330
2,4-Dichlorophenol	U	---	U	---	---	330
Naphthalene	U	---	U	---	---	330
4-Chloroaniline	U	2280	U	150	870	330
Hexachlorobutadiene	U	---	U	---	---	330
Caprolactum	U	22.8	U	1.5	8.7	330
4-Chloro-3-methylphenol	U	---	U	---	---	330
2-Methylnaphthalene	U	---	U	---	---	330
Hexachlorocyclopentadiene	U	2584	U	170	986	330
2,4,6-Trichlorophenol	U	334.4	U	22.0	128	330
2,4,5-Trichlorophenol	U	---	U	---	---	800
1-1'-Biphenyl	U	---	U	---	---	330
2-Chloronaphthalene	U	---	U	---	---	330
2-Nitroaniline	U	---	U	---	---	800
Dimethylphthalate	U	---	U	---	---	330
2,6-Dinitrotoluene	U	---	U	---	---	330
Acenaphthylene	U	10640	U	700	4060	330
3-Nitroaniline	U	---	U	---	---	800
Acenaphthene	U	10640	U	700	4060	330
2,4-Dinitrophenol	U	---	U	---	---	800
4-Nitrophenol	U	---	U	---	---	800

TABLE 6a. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - MAY 2002
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	SD-11		SD-12		SD-13		Contract Required Detection Limit	NYSDEC Sediment Criteria (ug/gOC)	Protection Level
	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'			
Date of Collection	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02			
Dilution Factor	1	1	1	1	1	1			
Percent Solids	57	83	64						
Total Organic Carbon (%)	7.60	0.50	0.50	0.50	0.50	0.50			
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)			
Dibenzofuran	U	U	U	U	U	U	330	---	
2,4-Dinitrotoluene	U	U	U	U	U	U	330	---	
Diethylphthalate	U	U	U	U	U	U	330	---	
Fluorene	U	608	U	40.0	U	232	330	8	BALCT
4-Chlorophenyl-phenylether	U	---	U	---	U	---	330	---	
4-Nitroaniline	U	---	U	---	U	---	330	---	
4,6-Dinitro-2-methylphenol	U	---	U	---	U	---	330	---	
N-Nitrosodiphenylamine	U	---	U	---	U	---	330	---	
4-Bromophenyl-phenylether	U	---	U	---	U	---	330	---	
Hexachlorobenzene	U	11.4	U	0.75	U	4.35	330	0.15	HHB
Atrazine	U	---	U	---	U	---	330	---	
Pentachlorophenol	U	3040	U	200	U	1160	330	40	BALCT
Phenanthrene	U	9120	U	600	U	3480	330	120	BALCT
Anthracene	U	8132	U	535	U	3103	330	107	BALCT
Carbazole	U	---	U	---	U	---	330	---	
Di-n-butylphthalate	65 J	---	U	---	U	---	330	---	
Fluoranthene	80 J	77520	U	5100	U	29580	330	1020	BALCT
Pyrene	83 J	73036	U	4805	U	27869	330	961	BALCT
Butylbenzylphthalate	U	---	U	---	U	---	330	---	
3,3'-Dichlorobenzidine	U	---	U	---	U	---	330	---	
Benzo (a) anthracene	U	912	U	60	U	348	330	12	BALCT
Chrysene	60 J	98.8	U	6.5	U	37.7	330	1.3	HHB
bis (2-Ethylhexyl) phthalate	79 J	15162	U	998	U	5786	330	199.5	BALCT
Di-n-octylphthalate	U	---	U	---	U	---	330	---	
Benzo (b) fluoranthene	74 J	98.8	U	6.5	U	37.7	330	1.3	HHB
Benzo (k) fluoranthene	U	98.8	U	6.5	U	37.7	330	1.3	HHB
Benzo (a) pyrene	U	98.8	U	6.5	U	37.7	330	1.3	HHB
Indeno (1,2,3-cd) pyrene	U	98.8	U	6.5	U	37.7	330	1.3	HHB
Dibenzo (a,h) anthracene	U	---	U	---	U	---	330	---	
Benzo (g,h,i) perylene	U	---	U	---	U	---	330	---	
Total PAHs	297	0	1404						
Total Carcinogen PAHs	134	0	567						
Total SVOCs	441	0	1467						
Total SVOC TICs	15020	2700	11050						

Qualifiers:
 U: Compound analyzed for but not detected
 B: Compound found in the blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated
 U*: Qualified as non-detected based on validation criteria

Notes:
 N - Total organic carbon normalized criteria
 HHB - Human Health Bioaccumulation
 BALCT - Benthic Aquatic Life Chronic Toxicity
 MDL - method detection limit
 ---: not established

Indicates value exceeds NYSDEC sediment criteria.

TABLE 6b.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - MAY 2002
PESTICIDE/PCBs

Sample Identification	SD-11		SD-12		SD-13		Contract Required Detection Limit
Sample Depth (feet)	0-0.5'		0-0.5'		0-0.5'		
Date of Collection	05/23/02		05/22/02		05/22/02		
Dilution Factor	1		1		1		
Percent Solids	57		83		64		
Total Organic Carbon (%)	7.60		0.50		2.90		
Units	(ug/kg)	N	(ug/kg)	N	(ug/kg)	N	(ug/kg)
alpha-BHC	U	—	U	—	U	—	1.67
beta-BHC	U	—	U	—	U	—	1.67
delta-BHC	U	—	U	—	U	—	1.67
gamma-BHC (Lindane)	U	—	U	—	U	—	1.67
Heptachlor	U	0.0608	U	0.004	U	0.023	0.0008
Aldrin	U	7.6	U	0.5	U	2.90	0.1
Heptachlor Epoxide	U	—	U	—	U	—	—
Endosulfan I	U	2.28	U	0.15	U	0.870	0.03
Dieldrin	U	7.6	U	0.5	U	2.90	0.1
4,4'-DDE	U	0.76	U	0.05	U	0.290	0.01
Endrin	U	60.8	U	4.00	U	23.2	0.8
Endosulfan II	U	—	U	—	U	—	—
4,4'-DDD	U	0.76	U	0.05	U	0.290	0.01
Endosulfan Sulfate	U	—	U	—	U	—	—
4,4'-DDT	U	0.76	U	0.05	U	0.290	0.01
Methoxychlor	U	45.6	U	3.00	U	17.4	0.6
Endrin Ketone	U	—	U	—	U	—	—
Endrin Aldehyde	U	—	U	—	U	—	—
alpha-Chlordane	U	0.076	U	0.005	U	0.029	0.001
gamma-Chlordane	U	0.076	U	0.005	U	0.029	0.001
Toxaphene	U	0.76	U	0.05	U	0.290	0.01
Aroclor-1016	U	0.0608	U	0.004	U	0.023	0.0008
Aroclor-1221	U	0.0608	U	0.004	U	0.023	0.0008
Aroclor-1232	U	0.0608	U	0.004	U	0.023	0.0008
Aroclor-1242	U	0.0608	U	0.004	U	0.023	0.0008
Aroclor-1248	U	0.0608	U	0.004	U	0.023	0.0008
Aroclor-1254	U	0.0608	U	0.004	U	0.023	0.0008
Aroclor-1260	U	0.0608	U	0.004	U	0.023	0.0008
Total PCBs	0	0	0	0	0	0	33.0

Notes:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

P: Greater than 25% difference for detected concentrations between the two GC columns

N - Total organic carbon normalized criteria

HHB - Human Health Bioaccumulation

BALCT - Benthic Aquatic Life Chronic Toxicity

—: not established

***: Total pesticides not to exceed 10,000 ug/kg

*: Value refers to the sum of these compounds

Indicates value exceeds NYSDEC sediment criteria.

TABLE 6c.
BOUCHARD JUNKYARD SITE
REMEDIATION INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - MAY 2002
INORGANICS

Sample Identification		SD-11	SD-12	SD-13	Instrument Detection Limit (ug/l)	NYSDEC Sediment Criteria for Metals* Lowest Effect Level (mg/kg)	NYSDEC Sediment Criteria for Metals* Severe Effect Level (mg/kg)
Sample Depth (feet)		0-0.5'	0-0.5'	0-0.5'			
Date of Collection	05/23/02	05/22/02	05/22/02	05/22/02			
Dilution Factor	1	1	83	1			
Percent Solids	57			64			
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			
Aluminum	9,790	12,000	U	13,200	13	—	—
Antimony	U	U	U	U	8	2	25
Arsenic	3.0 B	3.8	4.0	4.0	3	6	33
Barium	64.7	24.8 B	41.1 B	41.1 B	1	—	—
Beryllium	0.24 B	0.23 B	0.28 B	0.28 B	1	—	—
Cadmium	U	U	U	U	1	0.6	9
Calcium	1,320 B	460 B	2,170	2,170	8	—	—
Chromium	11.1	14.4	14.6	14.6	1	26	110
Cobalt	9.4 BE	10.3 BE	12.5 BE	12.5 BE	2	—	—
Copper	15.6	19.6	19.6	19.6	1	16	110
Iron	20,900	25,800	27,100	27,100	20	20,000	40,000
Lead	23.9	17.5	17.1	17.1	2	31	110
Magnesium	4,110	6,760	5,170	5,170	8	—	—
Manganese	827	925	935	935	4	460	1100
Mercury	0.36 B	U	0.11 B	0.11 B	0.2	0.15	1.3
Nickel	17.8	23.5	23.6	23.6	2	16	50
Potassium	469 B	418 B	465 B	465 B	20	—	—
Selenium	U	U	1.8 N	1.8 N	4	—	—
Silver	U	U	U	U	1	1	2.2
Sodium	164 B	58.9 B	149 B	149 B	9	—	—
Thallium	U	U	U	U	5	—	—
Vanadium	10.4 B	13.3	12.8 B	12.8 B	1	—	—
Zinc	94.4	70.4	86.5	86.5	1	120	270
Cyanide	U	U	U	U	10	—	—

Qualifiers:
 U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL
 but greater than the IDL.
 N: Indicates spike sample recovery not within control limits
 E: Indicates value estimated

Notes:
 To determine the detection limit for each sample, use the following equation: (CRDL)*(DF)*(100/%S), where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.
 *: as per January 22, 1999 NYSDEC Technical Guidance for Screening Contaminated Sediment
 --: not established

Indicates value exceeds NYSDEC sediment criteria.

TABLE 6d.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
SURFACE WATER SEDIMENT SAMPLE RESULTS - MAY 2002
TOTAL ORGANIC CARBON

Sample Identification	SD-11	SD-12	SD-13	Instrument
Sample Depth (feet)	0-0.5'	0-0.5'	0-0.5'	Detection
Date of Collection	05/23/02	05/22/02	05/22/02	Limit
Units	%	%	%	%
Total Organic Carbon	7.60	0.50	2.90	0.10

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TABLE 7a.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GROUNDWATER SAMPLE RESULTS - NOVEMBER 2001
VOLATILE ORGANIC COMPOUNDS

Sample Identification	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Contract Required Detection Limit	NYSDEC Class GA Groundwater Standard or Guidance Value
Date of Collection	11/26/01	11/27/01	11/26/01	11/26/01	11/27/01	11/27/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)		(ug/l)
Dichlorodifluoromethane	U	U	U	U	U	U	10	5 ST
Chloromethane	U	U	U	U	U	U	10	5 ST
Vinyl Chloride	U	U	U	U	U	U	10	2 ST
Bromomethane	U	U	U	U	U	U	10	5 ST
Chloroethane	U	U	U	U	U	U	10	5 ST
Trichlorofluoromethane	U	U	U	U	U	U	10	5 ST
1,1-Dichloroethene	U	U	U	U	U	U	10	5 ST
1,1,2-trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	10	5 ST
Acetone	U	U	U	U	U	U	10	50GV
Carbon Disulfide	U	U	U	U	U	U	10	60GV
Methyl Acetate	U	U	U	U	U	U	10	5 ST
Methylene Chloride	U	U	U	U	U	U	10	5 ST
trans-1,2-dichloroethene	U	U	U	U	U	U	10	10GV
Methyl tert-Butyl Ether	U	U	U	U	U	U	10	5 ST
1,1-Dichloroethane	U	U	U	U	U	U	10	5 ST
cis-1,2-Dichloroethene	U	U	U	U	U	U	10	50GV
2-Butanone	U	U	U	U	U	U	10	7 ST
Chloroform	U	U	U	U	U	U	10	5 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	10	5 ST
Cyclohexane	U	U	U	U	U	U	10	1 ST
Carbon Tetrachloride	U	U	U	U	U	U	10	0.6 ST
Benzene	U	U	U	U	U	U	10	5 ST
1,2-Dichloroethane	U	U	U	U	U	U	10	5 ST
Trichloroethene	U	U	U	U	U	U	10	5 ST
Methylcyclohexane	U	U	U	U	U	U	10	5 ST
1,2-Dichloropropane	U	U	U	U	U	U	10	1 ST
Bromodichloromethane	U	U	U	U	U	U	10	50GV
cis-1,3-Dichloropropene	U	U	U	U	U	U	10	0.4 ST *
4-Methyl-2-Pentanone	U	U	U	U	U	U	10	5 ST
Toluene	U	U	U	U	U	U	10	5 ST
Trans-1,3-Dichloropropene	U	U	U	U	U	U	10	0.4 ST *
1,1,2-Trichloroethane	U	U	U	U	U	U	10	1 ST
Tetrachloroethene	U	U	U	U	U	U	10	5 ST
2-Hexanone	U	U	U	U	U	U	10	50GV
Dibromochloromethane	U	U	U	U	U	U	10	50GV
1,2-Dibromoethane	U	U	U	U	U	U	10	5 ST
Chlorobenzene	U	U	U	U	U	U	10	5 ST
Ethylbenzene	U	U	U	U	U	U	10	5 ST
Total Xylenes	U	U	U	U	U	U	10	50GV
Styrene	U	U	U	U	U	U	10	5 ST
Bromoforn	U	U	U	U	U	U	10	50GV
Isopropylbenzene	U	U	U	U	U	U	10	5 ST
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	10	5 ST
1,3-Dichlorobenzene	U	U	U	U	U	U	10	3 ST
1,4-Dichlorobenzene	U	U	U	U	U	U	10	3 ST
1,2-Dichlorobenzene	U	U	U	U	U	U	10	3 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	10	0.04 ST
1,2,4-Trichlorobenzene	U	U	U	U	U	U	10	5 ST
Total VOCs	0	0	0	0	0	0		---
Total VOC TICs	0	0	0	0	0	0		---

NOTES:
 *; Value pertains to the sum of the isomers
 GV: Guidance Value
 ST: Standard
 ---: Not established
 Indicates value exceeds standard or guidance value.

QUALIFIERS:
 U: Compound analyzed for but not detected
 B: Compound found in the blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated

TABLE 7b.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GROUNDWATER SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Contract Required Detection Limit	NYSDEC Class GA Groundwater Standard or Guidance Value
Date of Collection	11/26/01	11/27/01	11/26/01	11/26/01	11/27/01	11/27/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)		(ug/l)
Benzaldehyde	U	U	U	U	U	U	10	---
Phenol	U	U	U	U	U	U	10	1 ST *
bis(2-Chloroethyl)ether	U	U	U	U	U	U	10	1 ST
2-Chlorophenol	U	U	U	U	U	U	10	1 ST *
2-Methylphenol	U	U	U	U	U	U	10	---
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	U	10	---
Acetophenone	U	U	U	U	U	U	10	---
4-Methylphenol	U	U	U	U	U	U	10	---
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	10	---
Hexachloroethane	U	U	U	U	U	U	10	5 ST
Nitrobenzene	U	U	U	U	U	U	10	0.4 ST
Isophorone	U	U	U	U	U	U	10	50 GV
2-Nitrophenol	U	U	U	U	U	U	10	---
2,4-Dimethylphenol	U	U	U	U	U	U	10	1 ST *
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	10	5 ST
2,4-Dichlorophenol	U	U	U	U	U	U	10	1 ST *
Naphthalene	U	U	U	U	U	U	10	10 GV
4-Chloroaniline	U	U	U	U	U	U	10	5 ST
Hexachlorobutadiene	U	U	U	U	U	U	10	0.5 ST
Caprolactum	U	U	U	U	U	U	10	---
4-Chloro-3-methylphenol	U	U	U	U	U	U	10	---
2-Methylnaphthalene	U	U	U	U	U	U	10	5 ST
Hexachlorocyclopentadiene	U	U	U	U	U	U	10	---
2,4,6-Trichlorophenol	U	U	U	U	U	U	25	---
2,4,5-Trichlorophenol	U	U	U	U	U	U	10	---
1-1'-Biphenyl	U	U	U	U	U	U	10	5 ST
2-Chloronaphthalene	U	U	U	U	U	U	10	5 ST
2-Nitroaniline	U	U	U	U	U	U	25	5 ST
Dimethylphthalate	U	U	U	U	U	U	10	5 ST
2,6-Dinitrotoluene	U	U	U	U	U	U	6	50 GV
Acenaphthylene	U	U	U	U	U	U	10	5 ST
3-Nitroaniline	U	U	U	U	U	U	10	---
Acenaphthene	U	U	U	U	U	U	25	5 ST
2,4-Dinitrophenol	U	U	U	U	U	U	10	20 GV
4-Nitrophenol	U	U	U	U	U	U	25	1 ST *
Dibenzofuran	U	U	U	U	U	U	10	---

TABLE 7b. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GROUNDWATER SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Contract Required Detection Limit (ug/l)	NYSDEC Class GA Groundwater Standard or Guidance Value (ug/l)
Date of Collection	11/26/2001	11/27/2001	11/26/2001	11/26/2001	11/27/2001	11/27/2001		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0		
Units (ug/l)								
2,4-Dinitrotoluene	U	U	U	U	U	U	10	5 ST
Diethylphthalate	U	U	U	U	U	U	10	50 GV
Fluorene	U	U	U	U	U	U	10	50 GV
4-Chlorophenyl-phenylether	U	U	U	U	U	U	10	---
4-Nitroaniline	U	U	U	U	U	U	25	5 ST
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	25	---
N-Nitrosodiphenylamine	U	U	U	U	U	U	10	50 GV
4-Bromophenyl-phenylether	U	U	U	U	U	U	10	---
Hexachlorobenzene	U	U	U	U	U	U	10	0.04 ST
Atrazine	U	U	U	U	U	U	10	7.5 ST
Pentachlorophenol	U	U	U	U	U	U	25	1 ST *
Phenanthrene	U	U	U	U	U	U	10	50 GV
Anthracene	U	U	U	U	U	U	10	50 GV
Carbazole	U	U	U	U	U	U	10	---
Di-n-butylphthalate	U	U	U	U	U	U	10	50 ST
Fluoranthene	U	U	U	U	U	U	10	50 GV
Pyrene	U	U	U	U	U	U	10	50 GV
Butylbenzylphthalate	U	U	U	U	U	U	10	5 ST
3,3'-Dichlorobenzidine	U	U	U	U	U	U	10	0.002 GV
Benzo (a) anthracene	U	U	U	U	U	U	10	0.002 GV
Chrysene	U	U	U	U	U	U	10	5 ST
bis(2-Ethylhexyl)phthalate	2 J	U	U	U	U	U	10	50 GV
Di-octylphthalate	U	U	U	U	U	U	10	0.002 GV
Benzo(b)fluoranthene	U	U	U	U	U	U	10	0.002 GV
Benzo(k)fluoranthene	U	U	U	U	U	U	10	ND ST
Benzo(a)pyrene	U	U	U	U	U	U	10	0.002 GV
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	10	---
Dibenzo(a,h)anthracene	U	U	U	U	U	U	10	---
Benzo(g,h,i)perylene	U	U	U	U	U	U	10	---
Total PAHs	0	0	0	0	0	0		
Total Carcinogen PAHs	0	0	0	0	0	0		
Total SVOCs	2	0	0	0	0	6		
Total SVOC TICs	19	24	0	0	0	0		

QUALIFIERS:

U: Compound analyzed for but not detected

B: Compound found in the method blank as well as the sample

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

* : Applies to Total Phenols

** : Applies to the sum of Unchlorinated Phenols

*** : Applies to the sum of Chlorinated Phenols

Indicates value exceeds standard or guidance value.

TABLE 7c.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GROUNDWATER SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBs

Sample Identification	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Contract Required Detection Limit	NYSDEC Class GA Groundwater Standard or Guidance Value
Date of Collection	11/26/01	11/27/01	11/26/01	11/26/01	11/27/01	11/27/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
alpha-BHC	U	U	U	U	U	U	0.05	0.01 ST
beta-BHC	U	U	U	U	U	U	0.05	0.04 ST
delta-BHC	U	U	U	U	U	U	0.05	0.04 ST
gamma-BHC (Lindane)	U	U	U	U	U	U	0.05	0.05 ST
Heptachlor	U	U	U	U	U	U	0.05	0.04 ST
Aldrin	U	U	U	U	U	U	0.05	ND ST
Heptachlor Epoxide	U	U	U	U	U	U	0.05	0.03 ST
Endosulfan I	U	U	U	U	U	U	0.05	---
Dieldrin	U	U	U	U	U	U	0.10	0.004 ST
4,4'-DDE	U	U	U	U	U	U	0.10	0.2 ST
Endrin	U	U	U	U	U	U	0.10	ND ST
Endosulfan II	U	U	U	U	U	U	0.10	---
4,4'-DDD	U	U	U	U	U	U	0.10	0.3 ST
Endosulfan Sulfate	U	U	U	U	U	U	0.10	---
4,4'-DDT	U	U	U	U	U	U	0.10	0.2 ST
Methoxychlor	U	U	U	U	U	U	0.50	35 ST
Endrin Ketone	U	U	U	U	U	U	0.10	5 ST
Endrin Aldehyde	U	U	U	U	U	U	0.10	5 ST
alpha-Chlordane	U	U	U	U	U	U	0.05	0.05 ST
gamma-Chlordane	U	U	U	U	U	U	0.05	0.05 ST
Toxaphene	U	U	U	U	U	U	5.0	0.06 ST
Atroclor-1016	U	U	U	U	U	U	1.0	0.09 ST *
Atroclor-1221	U	U	U	U	U	U	2.0	0.09 ST *
Atroclor-1232	U	U	U	U	U	U	1.0	0.09 ST *
Atroclor-1242	U	U	U	U	U	U	1.0	0.09 ST *
Atroclor-1248	U	U	U	U	U	U	1.0	0.09 ST *
Atroclor-1254	U	U	U	U	U	U	1.0	0.09 ST *
Atroclor-1260	U	U	U	U	U	U	1.0	0.09 ST *
Total PCBs	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.09 ST *

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound found in the method blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated

NOTES:

*: Applies to the sum of the isomers
 **: Applies to the sum of Aldrin and Dieldrin
 ***: The value is the one listed for "Endosulfan"
 ****: The value is the one listed for "Chlordane"
 GV: Guidance Value
 ST: Standard
 —: Not established
 Indicates value exceeds standard or guidance value.

TABLE 7d.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GROUNDWATER SAMPLE RESULTS - NOVEMBER 2001
INORGANIC PARAMETERS - UNFILTERED

Sample Identification	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Instrument	NYSDEC Class GA
Date of Collection	11/27/01	11/27/01	11/27/01	11/27/01	11/27/01	11/27/01	Detection	Groundwater
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	Limit	Standard or Guidance Value
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Aluminum	4,730	243	464	19.6 B	368	1,570	9	—
Antimony	U	U	U	U	U	U	4	3 ST
Arsenic	U	U	U	U	U	U	2	25 ST
Barium	44.1 B	35.1 B	28.6 B	38.5 B	40.9 B	24.6 B	2	1,000 ST
Beryllium	0.18 B	U	U	U	U	U	0.2	3 GV
Cadmium	0.66 B	0.18 B	0.17 B	U	0.14 B	0.20 B	0.2	5 ST
Calcium	11,300	24,500	18,000	23,700	21,600	5,840	234	—
Chromium	6.2 B	1.1 B	1.5 B	0.65 B	1.6 B	2.5 B	0.6	50 ST
Cobalt	5.3 B	3.1 B	1.4 B	0.84 B	1.4 B	2.2 B	0.7	—
Copper	13.0 B	2.8 B	2.6 B	1.4 B	1.8 B	2.6 B	5	200 ST
Iron	7,000 E	408 E	678 E	84.4 BE	494 E	2,160 E	2	300 ST ^A
Lead	5.1	U	U	U	U	U	2	25 ST
Magnesium	4,460 B	6,110	3,590 B	6,560	5,310	2,750 B	2	35,000 GV
Manganese	268	2,370	229	12.0 B	219	125	0.9	300 ST ^A
Mercury	U	U	U	U	U	U	0.1	0.7 ST
Nickel	7.3 B	4.8 B	3.3 B	0.87 B	2.9 B	2.5 B	0.9	100 ST
Potassium	2,720 B	7,430	2,490 B	938 B	1,720 B	1,360 B	320	—
Selenium	U	5.7	5.3	U	6.8	U	3	10 ST
Silver	U	U	U	U	U	U	2	50 ST
Sodium	3,410 BE	9,050 E	5,690 E	9,340 E	7,690 E	37,400 E	132	20,000 ST
Thallium	U	10.2	U	U	U	U	2	0.5 GV
Vanadium	5.4 B	U	0.60 B	U	U	1.9 B	0.6	—
Zinc	21.8	9.8 B	6.6 B	U	U	15.6 B	2	2,000 GV
Cyanide	4.2 B	3.1 B	3.0 B	U	U	U	2	200 ST

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL
 but greater than the IDL.

NOTES:

^A: The combined standard for iron and manganese is 500 ug/l
 Indicates value exceeds NYSDEC Class GA groundwater standard
 or guidance value

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TABLE 8a.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GROUNDWATER SAMPLE RESULTS - MAY 2002
VOLATILE ORGANIC COMPOUNDS

Sample Identification	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Contract	NYSDEC
Date of Collection	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02	Required	Class GA
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	Detection	Standard or
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	Limit	Guidance Value
Dichlorodifluoromethane	U	U	U	U	U	U	0.5	5 ST
Chloromethane	U	U	U	U	U	U	0.5	5 ST
Vinyl Chloride	U	U	U	U	U	U	0.5	2 ST
Bromomethane	U	U	U	U	U	U	0.5	5 ST
Chloroethane	U	U	U	U	U	U	0.5	5 ST
Trichlorofluoromethane	U	U	U	U	U	U	0.5	5 ST
1,1-Dichloroethene	U	U	U	U	U	U	0.5	5 ST
Methylene Chloride	U	U	U	U	U	U	0.5	5 ST
trans-1,2-dichloroethene	U	U	U	U	U	U	0.5	5 ST
Methyl tert-Butyl Ether	U	U	U	U	U	U	0.5	10 GV
1,1-Dichloroethane	U	U	U	U	U	U	0.5	5 ST
cis-1,2-Dichloroethane	U	U	U	U	U	U	0.5	5 ST
2,2-Dichloropropane	U	U	U	U	U	U	0.5	5 ST
Bromochloromethane	U	U	U	U	U	U	0.5	5 ST
Chloroform	U	U	U	U	U	U	0.5	7 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	0.5	5 ST
1,1-Dichloropropane	U	U	U	U	U	U	0.5	5 ST
Carbon Tetrachloride	U	U	U	U	U	U	0.5	5 ST
1,2-Dichloroethane	U	U	U	U	U	U	0.5	0.8 ST
Benzene	U	U	U	U	U	U	0.5	1 ST
Trichloroethene	U	U	U	U	U	U	0.5	5 ST
1,2-Dichloropropane	U	U	U	U	U	U	0.5	1 ST
Dibromomethane	U	U	U	U	U	U	0.5	5 ST
Bromodichloromethane	U	U	U	U	U	U	0.5	50 GV
cis-1,3-Dichloropropene	U	U	U	U	U	U	0.5	0.4 ST*
Toluene	U	U	U	U	U	U	0.5	5 ST
Trans-1,3-Dichloropropene	U	U	U	U	U	U	0.5	0.4 ST*
1,1,2-Trichloroethane	U	U	U	U	U	U	0.5	1 ST
1,3-Dichloropropane	U	U	U	U	U	U	0.5	5 ST
Tetrachloroethene	U	U	U	U	U	U	0.5	5 ST
Dibromochloromethane	U	U	U	U	U	U	0.5	50 GV
1,2-Dibromochloroethane	U	U	U	U	U	U	0.5	—
Chlorobenzene	U	U	U	U	U	U	0.5	5 ST
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	0.5	5 ST
Ethylbenzene	U	U	U	U	U	U	0.5	5 ST
m,p-Xylenes	U	U	U	U	U	U	0.5	5 ST
o-Xylene	U	U	U	U	U	U	0.5	5 ST
Xylenes (total)	U	U	U	U	U	U	0.5	5 ST
Styrene	U	U	U	U	U	U	0.5	50 GV
Bromoforn	U	U	U	U	U	U	0.5	5 ST
Isopropylbenzene	U	U	U	U	U	U	0.5	5 ST
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	0.5	5 ST
Bromobenzene	U	U	U	U	U	U	0.5	5 ST
1,2,3-Trichloropropane	U	U	U	U	U	U	0.5	5 ST
n-Propylbenzene	U	U	U	U	U	U	0.5	5 ST
2-Chlorotoluene	U	U	U	U	U	U	0.5	5 ST
1,3,5-Trimethylbenzene	U	U	U	U	U	U	0.5	5 ST
4-Chlorotoluene	U	U	U	U	U	U	0.5	5 ST
tert-Butylbenzene	U	U	U	U	U	U	0.5	5 ST
1,2,4-Trimethylbenzene	U	U	U	U	U	U	0.5	5 ST
sec-Butylbenzene	U	U	U	U	U	U	0.5	5 ST
4-Isopropyltoluene	U	U	U	U	U	U	0.5	5 ST
1,3-Dichlorobenzene	U	U	U	U	U	U	0.5	3 ST
1,4-Dichlorobenzene	U	U	U	U	U	U	0.5	3 ST
n-Butylbenzene	U	U	U	U	U	U	0.5	5 ST
1,2-Dichlorobenzene	U	U	U	U	U	U	0.5	5 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	0.5	0.04 ST
1,2,4-Trichlorobenzene	U	U	U	U	U	U	0.5	5 ST
Hexachlorobutadiene	U	U	U	U	U	U	0.5	0.5 ST
Naphthalene	U	U	U	U	U	U	0.5	10 GV
1,2,3-Trichlorobenzene	U	U	U	U	U	U	0.5	5 ST
Total VOCs	0	0	0	0	0	0	—	—
Total VOC TICs	0	0	0	0	0	0	—	—

NOTES:
 * Value pertains to the sum of the isomers
 GV: Guidance Value
 ST: Standard
 —: Not established
 Indicates value exceeds standard or guidance value.

QUALIFIERS:
 U: Compound analyzed for but not detected
 B: Compound found in the blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated

TABLE 8b.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GROUNDWATER SAMPLE RESULTS - MAY 2002
PCBs

Sample Identification	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Contract Required Detection Limit	NYSDEC Class GA Groundwater Standard or Guidance Value
Date of Collection	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Aroclor-1016	U	U	U	U	U	U	0.05	0.09 ST *
Aroclor-1221	U	U	U	U	U	U	0.05	0.09 ST *
Aroclor-1232	U	U	U	U	U	U	0.05	0.09 ST *
Aroclor-1242	U	U	U	U	U	U	0.05	0.09 ST *
Aroclor-1248	U	U	U	U	U	U	0.05	0.09 ST *
Aroclor-1254	U	U	U	U	U	U	0.05	0.09 ST *
Aroclor-1260	U	U	U	U	U	U	0.05	0.09 ST *
Total PCBs	0.0	0.25	0.0	0.0	0.0	0.0	0.05	0.09 ST *

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated

NOTES:

*: Applies to the sum of the isomers
GV: Guidance Value
ST: Standard
---: Not established
 Indicates value exceeds standard or guidance value.

TABLE 9a.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
WATER SUPPLY WELL SAMPLE RESULTS - NOVEMBER 2001
VOLATILE ORGANIC COMPOUNDS

Sample Identification	WSW-1 11/27/01	WSW-2 11/27/01	WSW-3 11/27/01	WSW-4 11/28/01	WSW-5 11/27/01	Contract Required Detection Limit	NYSDOH Drinking Water Maximum Contaminant Level
Date of Collection	1.0	1.0	1.0	1.0	1.0		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Dichlorodifluoromethane	U	U	U	U	U	10	5
Chloromethane	U	U	U	U	U	10	5
Vinyl Chloride	U	U	U	U	U	10	5
Bromomethane	U	U	U	U	U	10	5
Chloroethane	U	U	U	U	U	10	5
Trichlorofluoromethane	U	U	U	U	U	10	5
1,1-Dichloroethene	U	U	U	U	U	10	5
1,1,2-trichloro-1,2,2-trifluoroethane	U	U	U	U	U	10	5
Acetone	U	U	U	U	U	10	5
Carbon Disulfide	U	U	U	U	U	10	5
Methyl Acetate	U	U	U	U	U	10	5
Methylene Chloride	U	U	U	U	U	10	5
trans-1,2-dichloroethene	U	U	U	U	U	10	5
Methyl tert-Butyl Ether	U	U	U	U	U	10	5
1,1-Dichloroethane	U	U	U	U	U	10	5
cis-1,2-Dichloroethene	U	U	U	U	U	10	5
2-Butanone	U	U	U	U	U	10	5
Chloroform	U	U	U	U	U	10	5
1,1,1-Trichloroethane	U	U	U	U	U	10	5
Cyclohexane	U	U	U	U	U	10	5
Carbon Tetrachloride	U	U	U	U	U	10	5
Benzene	U	U	U	U	U	10	5
1,2-Dichloroethane	U	U	U	U	U	10	5
Trichloroethene	U	U	U	U	U	10	5
Methylcyclohexane	U	U	U	U	U	10	5
1,2-Dichloropropane	U	U	U	U	U	10	5
Bromodichloromethane	U	U	U	U	U	10	5
cis-1,3-Dichloropropene	U	U	U	U	U	10	5
4-Methyl-2-Pentanone	U	U	U	U	U	10	5
Toluene	U	U	5 J	U	U	10	5
Trans-1,3-Dichloropropene	U	U	U	U	U	10	5
1,1,2-Trichloroethane	U	U	U	U*	U	10	5
Tetrachloroethene	U	U	44	U	U	10	5
2-Hexanone	U	U	U	U	U	10	5
Dibromochloromethane	U	U	U	U	U	10	5
1,2-Dibromoethane	U	U	U	U	U	10	5
Chlorobenzene	U	U	U	U	U	10	5
Ethylbenzene	U	U	U	U	U	10	5
Total Xylenes	U	U	U	U	U	10	5
Styrene	U	U	U	U	U	10	5
Bromoform	U	U	U	U	U	10	5
Isopropylbenzene	U	U	U	U	U	10	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	10	5
1,3-Dichlorobenzene	U	U	U	U	U	10	5
1,4-Dichlorobenzene	U	U	U	U	U	10	5
1,2-Dichlorobenzene	U	U	U	U	U	10	5
1,2-Dibromo-3-chloropropane	U	U	U	U	U	10	5
1,2,4-Trichlorobenzene	U	U	U	U	U	10	5
Total VOCs	0	0	49	0	0	10	100
Total VOC TICs	0	0	0	0	0	—	—

QUALIFIERS:

U: Compound analyzed for but not detected

B: Compound found in the blank as well as the sample

J: Compound found at a concentration below the CRDL, value estimated

U*: Qualified as non-detect based on validation criteria

NOTES:

—: Not established

Indicates value exceeds standard or guidance value.

TABLE 9b.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
WATER SUPPLY WELL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	WSW-1	WSW-2	WSW-3	WSW-4	WSW-5	Contract Required Detection Limit	NYSDOH Drinking Water Maximum Contaminant Level
Date of Collection	11/27/01	11/27/01	11/27/01	11/28/01	11/27/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/L)	(ug/l)
Benzaldehyde	U	U	U	U	U	10	5
Phenol	U	U		U	U	10	5
bis(2-Chloroethyl)ether	U	U	U	U	U	10	5
2-Chlorophenol	U	U	U	U	U	10	5
2-Methylphenol	U	U	U	U	U	10	5
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	10	5
Acetophenone	U	U	U	U	U	10	5
4-Methylphenol	U	U	U	U	U	10	5
N-Nitroso-di-n-propylamine	U	U	U	U	U	10	5
Hexachloroethane	U	U	U	U	U	10	5
Nitrobenzene	U	U	U	U	U	10	5
Isophorone	U	U	U	U	U	10	5
2-Nitrophenol	U	U	U	U	U	10	5
2,4-Dimethylphenol	U	U	U	U	U	10	5
bis(2-Chloroethoxy)methane	U	U	U	U	U	10	5
2,4-Dichlorophenol	U	U	U	U	U	10	5
Naphthalene	U	U	U	U	U	10	5
4-Chloroaniline	U	U	U	U	U	10	5
Hexachlorobutadiene	U	U	U	U	U	10	5
Caprolactum	U	U	U	U	U	10	5
4-Chloro-3-methylphenol	U	U	U	U	U	10	5
2-Methylnaphthalene	U	U	U	U	U	10	5
Hexachlorocyclopentadiene	U	U	U	U	U	10	5
2,4,6-Trichlorophenol	U	U	U	U	U	10	5
2,4,5-Trichlorophenol	U	U	U	U	U	25	5
1-1'-Biphenyl	U	U	U	U	U	10	5
2-Chloronaphthalene	U	U	U	U	U	10	5
2-Nitroaniline	U	U	U	U	U	25	5
Dimethylphthalate	U	U	U	U	U	10	5
2,6-Dinitrotoluene	U	U	U	U	U	10	5
Acenaphthylene	U	U	U	U	U	10	5
3-Nitroaniline	U	U	U	U	U	25	5
Acenaphthene	U	U	U	U	U	10	5
2,4-Dinitrophenol	U	U	U	U	U	25	5
4-Nitrophenol	U	U	U	U	U	25	5
Dibenzofuran	U	U	U	U	U	10	5

TABLE 9b. (CONTINUED)
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
WATER SUPPLY WELL SAMPLE RESULTS - NOVEMBER 2001
SEMIVOLATILE ORGANIC COMPOUNDS

Sample Identification	WSW-1	WSW-2	WSW-3	WSW-4	WSW-5	Contract Required Detection Limit	NYSDOH Drinking Water Maximum Contaminant Level
Date of Collection	11/27/2001	11/27/2001	11/27/2001	11/28/2001	11/27/2001		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)		(ug/l)
2,4-Dinitrotoluene	U	U	U	U	U	10	5
Diethylphthalate	U	U	U	U	U	10	5
Fluorene	U	U	U	U	U	10	5
4-Chlorophenyl-phenylether	U	U	U	U	U	10	5
4-Nitroaniline	U	U	U	U	U	25	5
4,6-Dinitro-2-methylphenol	U	U	U	U	U	25	5
N-Nitrosodiphenylamine	U	U	U	U	U	10	5
4-Bromophenyl-phenylether	U	U	U	U	U	10	5
Hexachlorobenzene	U	U	U	U	U	10	5
Atrazine	U	U	U	U	U	10	5
Pentachlorophenol	U	U	U	U	U	25	5
Phenanthrene	U	U	U	U	U	10	5
Anthracene	U	U	U	U	U	10	5
Carbazole	U	U	U	U	U	10	5
Di-n-butylphthalate	1 J	U	U	U	U	10	5
Fluoranthene	U	U	U	U	U	10	5
Pyrene	U	U	U	U	U	10	5
Butylbenzylphthalate	U	U	U	U	U	10	5
3,3'-Dichlorobenzidine	U	U	U	U	U	10	5
Benzo (a) anthracene	U	U	U	U	U	10	5
Chrysene	U	U	U	U	U	10	5
bis(2-Ethylhexyl)phthalate	U	U	2 J	U	U	10	5
Di-octylphthalate	U	U	U	U	U	10	5
Benzo(b)fluoranthene	U	U	U	U	U	10	5
Benzo(k)fluoranthene	U	U	U	U	U	10	5
Benzo(a)pyrene	U	U	U	U	U	10	5
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	10	5
Dibenzo(a,h)anthracene	U	U	U	U	U	10	5
Benzo(g,h,i)perylene	U	U	U	U	U	10	5
Total PAHs	0	0	0	0	0		
Total Carcinogen PAHs	0	0	0	0	0		
Total SVOCs	1	0	2	0	0		
Total SVOC TICs	0	0	0	0	0		

QUALIFIERS:
 U: Compound analyzed for but not detected
 B: Compound found in the method blank as well as the sample
 J: Compound found at a concentration below the CRDL, value estimated

NOTES:
 Indicates value exceeds standard or guidance value.

TABLE 9c.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
WATER SUPPLY WELL SAMPLE RESULTS - NOVEMBER 2001
PESTICIDE/PCBs

Sample Identification	WSW-1	WSW-2	WSW-3	WSW-4	WSW-5	Contract Required Detection Limit	NYSDOH Drinking Water Maximum Contaminant Level
Date of Collection	11/27/01	11/27/01	11/27/01	11/28/01	11/27/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
alpha-BHC	U	U	U	U	U	0.05	---
beta-BHC	U	U	U	U	U	0.05	---
delta-BHC	U	U	U	U	U	0.05	---
gamma-BHC (Lindane)	U	U	U	U	U	0.05	0.2
Heptachlor	U	U	U	U	U	0.05	0.4
Aldrin	U	U	U	U	U	0.05	---
Heptachlor Epoxide	U	U	U	U	U	0.05	0.2
Endosulfan I	U	U	U	U	U	0.05	---
Dieldrin	U	U	U	U	U	0.10	---
4,4'-DDE	U	U	U	U	U	0.10	---
Endrin	U	U	U	U	U	0.10	2.0
Endosulfan II	U	U	U	U	U	0.10	---
4,4'-DDD	U	U	U	U	U	0.10	---
Endosulfan Sulfate	U	U	U	U	U	0.10	---
4,4'-DDT	U	U	U	U	U	0.10	---
Methoxychlor	U	U	U	U	U	0.50	40
Endrin Ketone	U	U	U	U	U	0.10	---
Endrin Aldehyde	U	U	U	U	U	0.10	---
alpha-Chlordane	U	U	U	U	U	0.05	---
gamma-Chlordane	U	U	U	U	U	0.05	---
Toxaphene	U	U	U	U	U	5.0	3.0
Aroclor-1016	U	U	U	U	U	1.0	0.5
Aroclor-1221	U	U	U	U	U	2.0	0.5
Aroclor-1232	U	U	U	U	U	1.0	0.5
Aroclor-1242	U	U	U	U	U	1.0	0.5
Aroclor-1248	U	U	U	U	U	1.0	0.5
Aroclor-1254	U	U	U	U	U	1.0	0.5
Aroclor-1260	U	U	U	U	U	1.0	0.5
Total PCBs	0.0	0.0	0.0	0.0	0.0	1.0	0.5

QUALIFIERS:

U: Compound analyzed for but not detected

B: Compound found in the method blank as well as the sample

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

---: Not established

Indicates value exceeds standard or guidance value.

TABLE 9d.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
WATER SUPPLY WELL SAMPLE RESULTS - NOVEMBER 2001
INORGANIC PARAMETERS - UNFILTERED

Sample Identification	WSW-1	WSW-2	WSW-3	WSW-4	WSW-5	Instrument Detection Limit	NYSDOH Drinking Water Maximum Contaminant Level
Date of Collection	11/27/01	11/27/01	11/27/01	11/28/01	11/27/01		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Aluminum	U	U	U	U	U	9	—
Antimony	U	U	U	U	U	4	6
Arsenic	U	U	U	U	U	2	50
Barium	19.9 B	18.0 B	34.4 B	6.0 B	52.6 B	2	2,000
Beryllium	U	U	U	U	U	0.2	4
Cadmium	U	U	0.51 B	U	U	0.2	5
Calcium	40,200	30,200	22,200	876 B	36,000	234	—
Chromium	0.83 B	0.52 B	1.4 B	1.9 B	0.82 B	0.6	100
Cobalt	0.69 B	0.72 B	1.4 B	U	0.83 B	0.7	—
Copper	31.7	7.5 B	72.6	48.5	8.2 B	5	—
Iron	543 E	189 E	7,820 E	51.6 B	404 E	2	300 ^A
Lead	U	U	6.0	U	2.1 B	2	—
Magnesium	7,060	4,940 B	6,020	167 B	11,200	2	—
Manganese	284	369	91.2	2.8 B	175	0.9	300 ^A
Mercury	U	U	U	U	U	0.1	2
Nickel	0.43 B	U	3.0 B	0.51 B	0.60 B	0.9	—
Potassium	669 B	420 B	1,450 B	U	624 B	320	—
Selenium	6.5	7.4	5.7	U	6.3	3	50
Silver	U	U	U	U	U	2	100
Sodium	21,700 E	8,950 E	8,270 E	31,500	27,600 E	132	— ^{AA}
Thallium	U	U	U	U	U	2	2
Vanadium	U	U	U	U	U	0.6	—
Zinc	16.4 B	U	124	19.2 B	148	2	5,000
Cyanide	U	U	3.6 B	27.8	U	2	200

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL but greater than the IDL.

NOTES:

— no designated limit
^A: The combined standard for iron and manganese is 500 ug/l
^{AA} - Water with > 20,000 ug/l should not be consumed by people with severely restricted sodium diets
 Indicates value exceeds standard or guidance value.

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TABLE 10a.

BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
WATER SUPPLY WELL SAMPLE RESULTS - MAY 2002
VOLATILE ORGANIC COMPOUNDS

Sample Identification	WSW-1 05/23/02	WSW-2 05/23/02	WSW-3 05/23/02	WSW-4 05/23/02	WSW-5 05/23/02	Contract Required Detection Limit	NYSDOH Drinking Water Maximum Contaminant Level
Date of Collection	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)		(ug/l)
Dichlorodifluoromethane	U	U	U	U	U	0.5	5
Chloromethane	U	U	U	U	U	0.5	5
Vinyl Chloride	U	U	U	U	U	0.5	5
Bromomethane	U	U	U	U	U	0.5	5
Chloroethane	U	U	U	U	U	0.5	5
Trichlorofluoromethane	U	U	U	U	U	0.5	5
1,1-Dichloroethene	U	U	U	U	U	0.5	5
Methylene Chloride	U	U	U	U	U	0.5	5
trans-1,2-dichloroethene	U	U	U	U	U	0.5	5
Methyl tert-Butyl Ether	U	U	U	U	U	0.5	5
1,1-Dichloroethane	U	U	U	U	U	0.5	5
cis-1,2-Dichloroethene	U	U	U	U	U	0.5	5
2,2-Dichloropropane	U	U	U	U	U	0.5	5
Bromochloromethane	U	U	U	U	U	0.5	5
Chloroform	U	U	U	U	U	0.5	5
1,1,1-Trichloroethane	U	U	U	U	U	0.5	5
1,1-Dichloropropene	U	U	U	U	U	0.5	5
Carbon Tetrachloride	U	U	U	U	U	0.5	5
1,2-Dichloroethane	U	U	U	U	U	0.5	5
Benzene	U	U	U	U	U	0.5	5
Trichloroethene	U	U	U	U	U	0.5	5
1,2-Dichloropropane	U	U	U	U	U	0.5	5
Dibromomethane	U	U	U	U	U	0.5	5
Bromodichloromethane	U	U	U	U	U	0.5	5
cis-1,3-Dichloropropene	U	U	U	U	U	0.5	5
Toluene	U	U	U	U	U	0.5	5
Trans-1,3-Dichloropropene	U	U	U	U	U	0.5	5
1,1,2-Trichloroethane	U	U	U	U	U	0.5	5
1,3-Dichloropropane	U	U	U	U	U	0.5	5
Tetrachloroethene	U	U	U	U	U	0.5	5
Dibromochloromethane	U	U	U	U	U	0.5	5
1,2-Dibromoethane	U	U	U	U	U	0.5	5
Chlorobenzene	U	U	U	U	U	0.5	5
1,1,1,2-Tetrachloroethane	U	U	U	U	U	0.5	5
Ethylbenzene	U	U	U	U	U	0.5	5
m,p-Xylenes	U	U	U	U	U	0.5	5
o-Xylene	U	U	U	U	U	0.5	5
Xylenes (total)	U	U	U	U	U	0.5	5
Styrene	U	U	U	U	U	0.5	5
Bromoform	U	U	U	U	U	0.5	5
Isopropylbenzene	U	U	U	U	U	0.5	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	0.5	5
Bromobenzene	U	U	U	U	U	0.5	5
1,2,3-Trichloropropane	U	U	U	U	U	0.5	5
n-Propylbenzene	U	U	U	U	U	0.5	5
2-Chlorotoluene	U	U	U	U	U	0.5	5
1,3,5-Trimethylbenzene	U	U	U	U	U	0.5	5
4-Chlorotoluene	U	U	U	U	U	0.5	5
tert-Butylbenzene	U	U	U	U	U	0.5	5
1,2,4-Trimethylbenzene	U	U	U	U	U	0.5	5
sec-Butylbenzene	U	U	U	U	U	0.5	5
4-Isopropyltoluene	U	U	U	U	U	0.5	5
1,3-Dichlorobenzene	U	U	U	U	U	0.5	5
1,4-Dichlorobenzene	U	U	U	U	U	0.5	5
n-Butylbenzene	U	U	U	U	U	0.5	5
1,2-Dichlorobenzene	U	U	U	U	U	0.5	5
1,2-Dibromo-3-chloropropane	U	U	U	U	U	0.5	5
1,2,4-Trichlorobenzene	U	U	U	U	U	0.5	5
Hexachlorobutadiene	U	U	U	U	U	0.5	5
Naphthalene	U	U	U	U	U	0.5	5
1,2,3-Trichlorobenzene	U	U	U	U	U	0.5	5
Total VOCs	0	0	0	0	0	0.5	—
Total VOC TICs	0	0	0	0	0	0.5	—

QUALIFIERS:

U: Compound analyzed for but not detected

B: Compound found in the blank as well as the sample

J: Compound found at a concentration below the CRDL, value estimated

U*: Qualified as non-detected based on validation criteria

NOTES:

—: Not established

Indicates value exceeds standard or guidance value.

TABLE 10b.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
WATER SUPPLY WELL SAMPLE RESULTS - MAY 2002
PCBs

Sample Identification	WSW-1	WSW-2	WSW-3	WSW-4	WSW-5	Contract Required Detection Limit	NYSDOH Drinking Water Maximum Contaminant Level
Date of Collection	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)		(ug/l)
Aroclor-1016	U	U	U	U	U	1.0	0.5
Aroclor-1221	U	U	U	U	U	2.0	0.5
Aroclor-1232	U	U	U	U	U	1.0	0.5
Aroclor-1242	U	U	U	U	U	1.0	0.5
Aroclor-1248	U	U	U	U	U	1.0	0.5
Aroclor-1254	U	U	U	U	U	1.0	0.5
Aroclor-1260	U	U	U	U	U	1.0	0.5
Total PCBs	0.0	0.0	0.0	0.0	0.0		

QUALIFIERS:

U: Compound analyzed for but not detected

B: Compound found in the method blank as well as the sample

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

—: Not established

Indicates value exceeds standard or guidance value.

TABLE 10c.
BOUCHARD JUNKYARD SITE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
WATER SUPPLY WELL SAMPLE RESULTS - MAY 2002
INORGANIC PARAMETERS - UNFILTERED

Sample Identification	WSW-1	WSW-2	WSW-3	WSW-4	WSW-5	Instrument	NYSDOH
Date of Collection	05/23/02	05/23/02	05/23/02	05/23/02	05/23/02	Detection	Drinking Water
Dilution Factor	1.0	1.0	1.0	1.0	1.0	Limit	Maximum
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	Contaminant Level
Aluminum	U	1.5	5.4	1.5	1.3	9	---
Antimony	U	U	U	U	U	4	6
Arsenic	U	1.9	U	U	U	2	50
Barium	16	14	27	U	47	2	2,000
Beryllium	U	U	U	U	U	0.2	4
Cadmium	U	U	U	U	U	0.2	5
Calcium	45000	30000	22000	U	37000	234	---
Chromium	U	U	U	U	U	0.6	100
Cobalt	U	U	U	U	U	0.7	---
Copper	14	8	46	53	13	5	---
Iron	760	150	4600	U	400	2	300 ^A
Lead	U	1	3.1	1.2	2.2	2	---
Magnesium	7400	4400	5400	U	11000	2	---
Manganese	380	380	62	1.6	190	0.9	300 ^A
Mercury	U	U	U	U	U	0.1	2
Nickel	2.1	1.2	2.6	U	1.4	0.9	---
Potassium	U	U	1300	U	U	320	---
Selenium	U	U	U	U	U	3	50
Silver	U	U	U	U	U	2	100
Sodium	22000	8600	7700	19000	29000	132	---
Thallium	U	U	U	U	U	2	2
Vanadium	U	U	U	U	1.2	0.6	---
Zinc	12	4.2	23	29	110	2	5,000

QUALIFIERS:

U: Compound analyzed for but not detected
 B: Compound concentration is less than the CRDL
 but greater than the IDL.

NOTES:

— no designated limit
^A: The combined standard for iron and manganese is 500 ug/l
^{AA} - Water with > 20,000 ug/l should not be consumed by
 people with severely restricted sodium diets
 Indicates value exceeds standard or guidance value.

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TABLE 11a.
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SURFACE SOIL SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SS-RD-1	SS-RD-2	SS-RD-2	SS-RD-3	SS-RD-4	SS-RD-5	SS-RD-5	SS-RD-6	SS-RD-6	SS-RD-7	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	Rental	Rental	Rental	Chittenden	Chittenden	Chittenden	Chittenden	Chittenden	Chittenden	Chittenden		
Sample Depth (feet)	0-0.1	0-0.1	0.5-1.5	0-0.1	0-0.1	0.5-1.5	0.5-1.5	0-0.1	0.5-1.5	0-0.1		
Date of Collection	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	50.0	5.0	1.0		
Percent Moisture	27	38	36	31	16	11	11	18	12	10		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	67.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1260	250		100	99	840			25,000	2,700	350	33.0	1000/10000*
Total PCBs	250	2,100	100	99	840	6,700	0	25,000	2,700	350		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

----: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 11a (continued).
FORMER BOUGHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SURFACE SOIL SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification		SS-RD-8		SS-RD-8		SS-RD-9		SS-RD-10		SS-RD-10		Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location		Chittenden		Chittenden		Chittenden		Chittenden		Chittenden			
Sample Depth (feet)		0-0.1		0.5-1.5		0-0.1		0-0.1		0.5-1.5			
Date of Collection		03/30/05		03/30/05		03/30/05		03/30/05		03/30/05			
Dilution Factor		1.0		1.0		1.0		20.0		20.0			
Percent Moisture		23		24		7		27		22			
Units		(ug/kg)		(ug/kg)		(ug/kg)		(ug/kg)		(ug/kg)			
Aroclor-1016		U		U		U		U		U		33.0	1000/10000*
Aroclor-1221		U		U		U		U		U		67.0	1000/10000*
Aroclor-1232		U		U		U		U		U		33.0	1000/10000*
Aroclor-1242		U		U		U		U		U		33.0	1000/10000*
Aroclor-1248		U		U		U		U		U		33.0	1000/10000*
Aroclor-1254		U		U		U		U		U		33.0	1000/10000*
Aroclor-1260		1,700		59		260		8,900		17,000		33.0	1000/10000*
Total PCBs		1,700		59		260		8,900		17,000			1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

---: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils
 Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 11b.
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SURFACE SOIL SAMPLE RESULTS - MARCH 2005
TOTAL ORGANIC CARBON

Sample Identification	SS-RD-11	SS-RD-12	SS-RD-13	SS-RD-14	SS-RD-15
Location	P, 11	K, 11	F, 11	H, 21	D+25, 6+12
Sample Depth (feet)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date of Collection	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Total Organic Carbon	>30,000	>64,000	>37,000	>33,000	1,100

NOTES:

>#: Indicates that total organic carbon concentration exceeded the linear range and due to the limited sample used for the analysis, dilutions could not be performed , value estimated

TABLE 12a.
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SUBSURFACE SOIL SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SB-RD-1	SB-RD-1	SB-RD-1	SB-RD-2	SB-RD-2	SB-RD-2	SB-RD-2	SB-RD-2	SB-RD-3	SB-RD-4	SB-RD-5	SB-RD-6	
Location	B, 1	B, 1	B, 1	G, 1	G, 1	G, 1	G, 1	H, 8	O, 13	N, 14	R, 14		
Sample Depth (feet)	4-4.5	6-6.5	8-8.5	4-4.5	6-6.5	8-8.5	3/28/2005	6-6.5	2-2.5	2-2.5	2-2.5		
Date of Collection	03/28/05	03/28/05	3/28/2005	03/28/05	03/28/05	3/28/2005	03/28/05	03/28/05	03/29/05	03/29/05	03/29/05		
Dilution Factor	40.0	500.0	1.0	40.0	20.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	13	22	13	11	16	21	17	13	12	11			
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	U	U	67.0
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	U	U	33.0
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1260	U	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Total PCBs	25,000	340,000	1,400	36,000	26,000	240	1,200	1,400	290	0			1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

----: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 12a. (continued)
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SUBSURFACE SOIL SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SB-RD-7	SB-RD-7	SB-RD-8	
Location	O, 14	O, 14	O, 15	
Sample Depth (feet)	6-6.5	8-8.5	2-2.5	
Date of Collection	03/29/05	03/29/05	03/29/05	
Dilution Factor	10.0	20.0	1.0	
Percent Moisture	14	18	10	
Units	(ug/kg)	(ug/kg)	(ug/kg)	
Atroclor-1016	U	U	U	1000/10000*
Atroclor-1221	U	U	U	1000/10000*
Atroclor-1232	U	U	U	1000/10000*
Atroclor-1242	U	U	U	1000/10000*
Atroclor-1248	U	U	U	1000/10000*
Atroclor-1254	U	U	U	1000/10000*
Atroclor-1260	3,300	12,000	U	1000/10000*
Total PCBs	3,300	12,000	0	1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected
J: Compound found at a concentration below the CRDL, value estimated

NOTES:

----: not established
*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils
Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 12b.
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SUBSURFACE SOIL SAMPLE RESULTS - MARCH 2005
TOTAL ORGANIC CARBON

Sample Identification	SB-RD-1	SB-RD-2	SB-RD-3	SB-RD-8	SB-RD-8
Location	B, 1	G, 1	H-8	O, 15	O, 15
Sample Depth (feet)	2-2.5	2-2.5	4-4.5	2-4	4-6
Date of Collection	03/28/05	03/28/05	03/28/05	03/29/05	03/29/05
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Total Organic Carbon	>14,000	>81,000	>37,000	3,600	590

NOTES:

>#: Indicates that total organic carbon concentration exceeded the linear range and due to the limited sample used for the analysis, dilutions could not be performed , value estimated

TABLE 13a.
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SEDIMENT SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SD-RD-1	SD-RD-2	SD-RD-3	SD-RD-3	SD-RD-4	SD-RD-5	SD-RD-6	SD-RD-7	SD-RD-8	SD-RD-9	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	U, 13	V, 13	T, 12	T, 12	V, 12	W, 12	W, 11	X, 11	V, 10	W, 10		
Sample Depth (feet)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1		
Date of Collection	03/29/05	03/29/05	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05	03/29/05	03/30/05	03/30/05		
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	62	17	88	83	88	80	86	63	84	85		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	67.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1260	U	U	180 J	180 J	700	280	440	U	490	U	33.0	1000/10000*
Total PCBs	0	0	2,000	180	700	280	440	0	490	0		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

---: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 13a. (continued)
FORMER BOUCHARD JUNKYARD SITE
FORMER PRE-DESIGN INVESTIGATION REPORT
SEDIMENT SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SD-RD-10	SD-RD-11	SD-RD-11	SD-RD-11	SD-RD-12	SD-RD-13	SD-RD-14	SD-RD-14	SD-RD-15	SD-RD-16	SD-RD-17	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	X, 10	W, 9	W, 9	W, 9	X, 9	Y, 9	W, 8	W, 8	Y, 8	Z, 8	X, 7	
Sample Depth (feet)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0.5-1.5	0-0.1	0-0.1	0-0.1	
Date of Collection	3/30/2005	3/29/2005	3/29/2005	3/29/2005	03/29/05	03/29/05	3/30/2005	03/30/05	03/29/05	03/29/05	03/29/05	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Percent Moisture	69	86	81	87	87	85	86	87	87	88	21	
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
Aroclor-1016	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Aroclor-1260	U	U	U	U	U	U	U	U	U	U	U	1000/10000*
Total PCBs	0	1,800	300	300	0	0	3,400	0	0	0	0	1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

---: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 13a. (continued)
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SEDIMENT SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SD-RD-18		SD-RD-19		NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
	Y, 7	Z, 7	Y, 7	Z, 7	
Location					
Sample Depth (feet)	0-0.1	0-0.1	0-0.1	0-0.1	
Date of Collection	03/29/05	03/29/05	03/29/05	03/29/05	
Dilution Factor	1.0	1.0	1.0	1.0	
Percent Moisture	81	69			
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
Aroclor-1016	U	U	U	U	1000/10000*
Aroclor-1221	U	U	U	U	1000/10000*
Aroclor-1232	U	U	U	U	1000/10000*
Aroclor-1242	U	U	U	U	1000/10000*
Aroclor-1248	U	U	U	U	1000/10000*
Aroclor-1254	U	U	U	U	1000/10000*
Aroclor-1260	460	460	U	U	1000/10000*
Total PCBs	460	0			1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

NOTES:

---: not established

Indicates value exceeds NYSDEC
recommended soil clean-up objective

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and
10,000 ug/kg for subsurface soils

TABLE 13b.
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SEDIMENT SAMPLE RESULTS - MARCH 2005
SEMI-VOLATILE ORGANIC COMPOUNDS

Sample Identification	SD-RD-4	SD-RD-6	SD-RD-9	SD-RD-12	SD-RD-15	Contract Required Detection Limit	NYSDEC Recommended Soil Clean-Up Objective
Sample Depth (feet)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1		
Date of Collection	03/30/05	03/30/05	03/30/05	03/29/05	03/29/05		
Dilution Factor	1.0	1.0	1.0	1.0	1.0		
Percent Moisture	88	86	85	87	87		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Benzaldehyde	U	U	U	U	U	550	—
Phenol	U	U	U	U	U	550	30 OR MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	550	—
2-Chlorophenol	U	U	U	U	U	550	800
2-Methylphenol	U	U	U	U	U	550	100 OR MDL
2,2-Oxybis (1-Chloropropane)	U	U	U	U	U	550	—
Acetophenone	U	U	U	U	U	550	—
4-Methylphenol	U	1,700 J	U	U	U	550	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	550	—
Hexachloroethane	U	U	U	U	U	550	—
Nitrobenzene	U	U	U	U	U	550	200 OR MDL
Isophorone	U	U	U	U	U	550	4,400
2-Nitrophenol	U	U	U	U	U	550	330 OR MDL
2,4-Dimethylphenol	U	U	U	U	U	550	—
bis(2-Chloroethoxy)methane	U	U	U	U	U	550	—
2,4-Dichlorophenol	U	U	U	U	U	550	400
Naphthalene	U	U	U	U	U	550	13,000
4-Chloroaniline	U	U	U	U	U	550	220 OR MDL
Hexachlorobutadiene	U	U	U	U	U	550	—
Caprolactum	U	U	U	U	U	550	—
4-Chloro-3-methylphenol	U	U	U	U	U	550	240 OR MDL
2-Methylnaphthalene	U	U	U	U	U	550	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	550	—
2,4,6-Trichlorophenol	U	U	U	U	U	1400	—
2,4,5-Trichlorophenol	U	U	U	U	U	550	100
1,1'-Biphenyl	U	U	U	U	U	1400	—
2-Chloronaphthalene	U	U	U	U	U	1400	—
2-Nitroaniline	U	U	U	U	U	550	430 OR MDL
Dimethylphthalate	U	U	U	U	U	550	2,000
2,6-Dinitrotoluene	U	U	U	U	U	550	1,000
Acenaphthylene	U	U	U	U	U	550	41,000
3-Nitroaniline	U	U	U	U	U	1400	500 OR MDL
Acenaphthene	U	U	U	U	U	550	50,000
2,4-Dinitrophenol	U	U	U	U	U	1400	200 OR MDL
4-Nitrophenol	U	U	U	U	U	1400	100 OR MDL
Dibenzofuran	U	U	U	U	U	550	6,200

TABLE 13b. (continued)
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SEDIMENT SAMPLE SAMPLE RESULTS - MARCH 2005
SEMI-VOLATILE ORGANIC COMPOUNDS

Sample Identification	SD-RD-4	SD-RD-6	SD-RD-9	SD-RD-12	SD-RD-15	Contract	NYSDEC
Sample Depth (feet)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	Required	Recommended
Date of Collection	3/30/2005	3/30/2005	3/30/2005	3/29/2005	3/29/2005	Detection	Soil Clean-Up
Dilution Factor	1	1	1	1	1	Limit	Objective
Percent Moisture	88.0	86.0	85.0	87.0	87.0		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
2,4-Dinitrotoluene	U	U	U	U	U	550	---
Diethylphthalate	U	U	U	U	U	550	7,100
Fluorene	U	U	U	U	U	550	50,000
4-Chlorophenyl-phenylether	U	U	U	U	U	550	---
4-Nitroaniline	U	U	U	U	U	1400	---
4,6-Dinitro-2-methylphenol	U	U	U	U	U	1400	---
N-Nitrosodiphenylamine	U	U	U	U	U	550	---
4-Bromophenyl-phenylether	U	U	U	U	U	550	---
Hexachlorobenzene	U	U	U	U	U	550	410
Atrazine	U	U	U	U	U	550	---
Pentachlorophenol	U	U	U	U	U	1400	1,000 OR MDL
Phenanthrene	U	U	U	U	U	550	50,000
Anthracene	U	U	U	U	U	550	50,000
Carbazole	U	U	U	U	U	550	---
Di-n-butylphthalate	U	U	U	U	U	550	8,100
Fluoranthene	U	U	300 J	U	U	550	50,000
Pyrene	U	U	240 J	U	U	550	50,000
Butylbenzylphthalate	U	U	U	U	U	550	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	550	---
Benzo (a) anthracene	U	U	U	U	U	550	224 OR MDL
Chrysene	U	U	U	U	U	550	400
bis(2-Ethylhexyl)phthalate	U*	12,000	U*	U*	U*	550	50,000
Di-n-octylphthalate	U	U	U	U	U	550	50,000
Benzo(b)fluoranthene	U	U	260 J	U	U	550	1,100
Benzo(k)fluoranthene	U	U	U	U	U	550	1,100
Benzo(a)pyrene	U	U	U	U	U	550	61 OR MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	550	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	550	14 OR MDL
Benzo(g,h,i)perylene	U	U	U	330 J	U	550	50,000
Total PAHs	0	0	800	330	0		---
Total Carcinogen PAHs	0	0	260	0	0		10,000
Total SVOCs	0	13,700	800	330	0		500,000
Total SVOC TICs	121,130	145,800	65,910	443,100	331,000		

QUALIFIERS:

U: Compound analyzed for but not detected
B: Compound found in the method blank as well as the sample
J: Compound found at a concentration below the CRDL, value estimated
D: Result taken from reanalysis at dilution
U*: Result qualified as estimated based on validation criteria

NOTES:

To determine the detection limit for each sample, use the following equation: (CRDL)*(DF)*(100/%S), where CRDL = contract required detection limit, DF = dilution factor and %S = percent solids.

---: not established

Indicates value exceeds NYSDEC recommended Soil Clean-up objective

TABLE 13c.
BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SEDIMENT SAMPLE RESULTS - MARCH 2005
TOTAL ORGANIC CARBON

Sample Identification	SD-RD-1	SD-RD-5	SD-RD-8	SD-RD-11	SD-RD-17
Location	U, 13	W, 12	V-10	W, 9	X, 7
Sample Depth (feet)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date of Collection	03/29/05	03/30/05	03/30/05	03/29/05	03/29/05
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Total Organic Carbon	>76,000	>89,000	>103,000 E	>92,000	>31,000

QUALIFIERS:

E: Concentration exceeds quantitation range of 100,000 mg/kg

NOTES:

>#: Indicates that total organic carbon concentration exceeded the linear range and due to the limited sample used for the analysis, dilutions could not be performed, value estimated

TABLE 14a. (continued)
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SIEVE ANALYSIS SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SD-RD-18C	SD-RD-18G	SD-RD-18S	SD-RD-18F	SS-RD-13C	SS-RD-13G	SS-RD-13S	SS-RD-13F		
Location	Y, 7	Y, 7	Y, 7	Y, 7	F, 11	F, 11	F, 11	F, 11		
Sample Depth (feet)	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0-1.0	0-1.0	0-1.0	0-1.0		
Date of Collection	03/29/05	03/29/05	03/29/05	03/29/05	03/30/05	03/30/05	03/30/05	03/30/05		
Dilution Factor	1.0	1.0	1.0	1.0	5.0	1.0	1.0	5.0		
Percent Moisture	82	6	5	5	18	0	1	1		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Aroclor-1016	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	U	67.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1260	270	220	180	370	3,400	U	790	2,500	33.0	1000/10000*
Total PCBs	270	220	180	370	3,400	0	790	2,500		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

D: Result is taken from reanalysis at a secondary dilution

NOTES:

---: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and

10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 14a. (continued)
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SIEVE ANALYSIS SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SS-RD-15C	SS-RD-15G	SS-RD-15F	SS-RD-17C	SS-RD-17G	SS-RD-17S	SS-RD-17F		NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	D+25, 6+12	D+25, 6+12	D+25, 6+12	N, 11	N, 11	N, 11	N, 11		
Sample Depth (feet)	0-1.0	0-1.0	0-1.0	0-1.0	0-1.0	0-1.0	0-1.0		
Date of Collection	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05	03/30/05		
Dilution Factor	50.0	1.0	20.0	100.0	1.0	50.0	50.0		
Percent Moisture	19	0	1	25	0	0	2		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Aroclor-1016	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	67.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1260	U	U	U	U	U	U	U	33.0	1000/10000*
Total PCBs	21,000	380	11,000	110,000 D	740	22,000	38,000		
			5,600	110,000	740	22,000	38,000		

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

D: Result is taken from reanalysis at a secondary dilution

NOTES:

—: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 14a. (continued)
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SIEVE ANALYSIS SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SB-RD-8C	SB-RD-8S	SB-RD-8F	
Location	O, 15	O, 15	O, 15	
Sample Depth (feet)	4-6	4-6	4-6	
Date of Collection	03/29/05	03/29/05	03/29/05	
Dilution Factor	1.0	1.0	1.0	
Percent Moisture	18	0	1	
Units	(ug/kg)	(ug/kg)	(ug/kg)	
Aroclor-1016	U	U	U	1000/10000*
Aroclor-1221	U	U	U	1000/10000*
Aroclor-1232	U	U	U	1000/10000*
Aroclor-1242	U	U	U	1000/10000*
Aroclor-1248	U	U	U	1000/10000*
Aroclor-1254	U	U	U	1000/10000*
Aroclor-1260	U	200	430	1000/10000*
Total PCBs	0	200	430	1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

D: Result is taken from reanalysis at a secondary dilution

Indicates value exceeds
clean-up objective

NOTES:

—: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils
Indicates value exceeds NYSDEC recommended soil clean-up objective

TABLE 4-1.
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SUMMARY OF PCB CONCENTRATIONS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	Sample Information				Sample Results					Recommended Soil Clean-Up Objective (ug/kg)
	Collection Date	Sample Depth (feet bgs)	Sample Type	Grid Coordinate	Aroclor	Gravel Fraction (ug/kg)	Sand Fraction (ug/kg)	Fines Fraction (ug/kg)	Complete Sample (ug/kg)	
SS-RD-13	03/30/05	0-1.0	Surface soil	F, 11	Aroclor 1260	ND	790	2,500	3,400	1000/10000*
SS-RD-15	03/30/05	0-1.0	Surface soil	D+25; 6+12	Aroclor 1260	380	5,600	11,000	21,000	1000/10000*
SS-RD-17	03/30/05	0-1.0	Surface soil	N, 11	Aroclor 1260	740	22,000	38,000	110,000	1000/10000*
SB-RD-2	03/28/05	2-4	Subsurface soil	G, 1	Aroclor 1260	2,700	28,000	82,000	51,000	1000/10000*
SB-RD-3	03/28/05	2-4	Subsurface soil	H, 8	Aroclor 1260	2,800	24,000	120,000	40,000	1000/10000*
SB-RD-8	03/29/05	4-6	Subsurface soil	O, 15	Aroclor 1260	NS	200	430	ND	1000/10000*
SD-RD-18	03/29/05	0.5-1.5	Sediment	Y, 7	Aroclor 1260	220	180	370	270	1000/10000*

NOTES:

ND: Compound analyzed for but not detected

NS: Not sampled

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

TABLE _____
FORMER BOUCHARD JUNKYARD SITE
PRE-DESIGN INVESTIGATION REPORT
SIEVE ANALYSIS SAMPLE RESULTS - MARCH 2005
POLYCHLORINATED BIPHENYLS

Sample Identification	SB-RD-2C	SB-RD-3C	SB-RD-8C	SS-RD-13C	SS-RD-15C	SS-RD-17C	SD-RD-18C	Contract Required Detection Limit (ug/kg)	NYSDEC Recommended Soil Clean-Up Objective (ug/kg)
Location	G, 1	H, 8	O, 15	F, 11	D+25, 6+12	N, 11	Y, 7		
Sample Depth (feet)	2-4	2-4	4-6	0-1.0	0-1.0	0-1.0	0.5-1.5		
Date of Collection	03/28/05	03/28/05	03/29/05	03/30/05	03/30/05	03/30/05	03/29/05		
Dilution Factor	50.0	50.0	1.0	5.0	50.0	100.0	1.0		
Percent Moisture	17	9	18	18	19	25	82		
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)		
Aroclor-1016	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1221	U	U	U	U	U	U	U	67.0	1000/10000*
Aroclor-1232	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1242	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1248	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1254	U	U	U	U	U	U	U	33.0	1000/10000*
Aroclor-1260	U	U	U	U	U	U	U	33.0	1000/10000*
Total PCBs	51,000	40,000	0	3,400	21,000	110,000 D	270		
	51,000	40,000		3,400	21,000	110,000	270		1000/10000*

QUALIFIERS:

U: Compound analyzed for but not detected

J: Compound found at a concentration below the CRDL, value estimated

D: Result is taken from reanalysis at a secondary dilution

NOTES:

—: not established

*: Value refers to the sum of these compounds; 1,000 ug/kg for surface soils and 10,000 ug/kg for subsurface soils

Indicates value exceeds NYSDEC recommended soil clean-up objective